Durham University

Durham E-Theses

Three Essays on the Empirical Market Microstructure of Money Market Derivatives

NIE, JING

How to cite:

NIE, JING (2016) *Three Essays on the Empirical Market Microstructure of Money Market Derivatives*, Durham theses, Durham University. Available at Durham E-Theses Online: http://etheses.dur.ac.uk/11614/

Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a link is made to the metadata record in Durham E-Theses
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the full Durham E-Theses policy for further details.

Academic Support Office, The Palatine Centre, Durham University, Stockton Road, Durham, DH1 3LE
e-mail: e-theses.admin@durham.ac.uk Tel: +44 0191 334 6107
http://etheses.dur.ac.uk

Online Appendix to
Three Essays on the Empirical Market Microstructure of Money Market Derivatives

This online appendix provides complementary analyses to the main tables and figures in *Three Essays on the Empirical Market Microstructure of Money Market Derivatives*. This online appendix contains the following content to support the analysis contained within this thesis:

Appendix A contains additional details and supplemental results for Chapter 2 *High speed quoting and excess volatility: evidence from money market derivatives*, including the summary statistics tables, the additional quotes volatility tables and wavelet quotes variance plots.

- Appendix A.1 shows the descriptive statistics of quotes (inside quotes and entire limit order book) and transactions for all Eurodollar contracts (see Table A.1 – Table A.4).
- Appendix A.2 provides the median results of bid variance, ask variance, covariance and correlations at all timescales (see Table A.5 – Table A.20).
- Appendix A.3 includes other types of wavelet variance-covariance results, including bootstrap mean, mean ,max, min and standard deviation (see Table A.21 – Table A.60).
- Appendix A.4 presents year-long median value of the daily bid-ask wavelets variance, covariance and correlations (see Table A.61 – Table A.98).
- Appendix A.5 shows the estimation results of high speeding quotes. Table A.99 – Table A.102 contains the average high speed quoting results from top 10% days with the highest number of bids. Table A.103 – Table A.106 provide the supplementary tables for variance ratio and timescales of the most active day).
- Appendix A.6 depicts the wavelet decomposition with bids and asks variance ratio for all 9 timescale levels. Here I present wavelet variance plots for the March, June, September and December delivery contracts groups (see Figure A.1 – Figure A.4) and wavelet variance plots for each Eurodollar contract (see Figure A.5 – Figure A.44).

Appendix B is complementary to the Chapter 4 *High frequency trading and execution risk dynamics: evidence from eurodollar limited order book data*. This section presents a significant number of ancillary treatments for the robustness check, including marginal effects plots with algorithmic trading proxies at various thresholds and different instrumental variables.

- Appendix B.1 shows some examples of the impacts of AT proxy thresholded at 200 ms on the execution risks by the implementation of the conventional Robinson estimator using the *semipar* command in Stata 13. These plots from Stata provide complementary information for the robustness of the marginal effects plots from Matlab in the thesis (see Figure B.45 – Figure B.61).

- Appendix B.2 presents the marginal effects of algorithmic trading on the execution risk dynamics that proxy for execution risk utilizing the partially-linear semi-parametric model. Figure B.62 to Figure B.71 show the marginal effects of AT proxy thresholded at 25 ms. Figure B.72 to Figure B.80 show the the marginal effects of AT proxy thresholded at 200 ms.

- Appendix B.3 illustrates the robust check for the marginal effects of algorithmic trading on market quality indicators. For the robust check, I employ two different instruments instead of the total messages. Firstly, I use the number of traders as the instruments for the proxy of algorithmic traders thresholded at 25ms (see Table B.107 and Figure B.81 to Figure B.97). I also use the number of traders as the instruments for the proxy of algorithmic traders thresholded at 200ms (see Table B.108 and Figure B.98 to Figure B.114). Alternatively, I also use the volume to message ratio as the instruments for the proxy of algorithmic traders thresholded at 25ms (see Table B.109 and Figure B.115 to Figure B.131); and the results and plots the of marginal effects of AT proxy thresholded at 200ms using the volume to message ratio as instrument are in Table B.110 and Figure B.132 to Figure B.148.

Appendix C provides additional supplemental results for Chapter 5 *High-frequency price discovery and price efficiency on interest rate futures*. This section contains the return autocorrelation, liquidity spreads, spreads autocorrelation and regression results tables to support the analysis of Chapter 5.

- Appendix C.1 illustrates the mid-quote return autocorrelations from 30 days before maturity subsample to 1800 days before maturity subsample (see Table C.111 – Table C.120).

- Appendix C.2 depicts the daily first-order, fifth-order, and tenth-order autocorrelations of the mid-quote returns at various time intervals sorted by the days to maturity across 40 Eurodollar contracts (see Figure C.149 – Figure C.152).

- Appendix C.3 describes the average and median of a range of market liquidity spreads of the Eurodollar future market, including bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). This section includes all the spreads from 30 days before maturity subsample to 1800 days before maturity subsample (see Table C.121 – Table C.130).

- Appendix C.4 contains the first-order, fifth-order and tenth-order autocorrelations of liquidity spreads with the 30 days before maturity subsample to the 1800 days before maturity subsample (see Table C.131 – Table C.160).

- Appendix C.5 represents the daily first-order, fifth-order, and tenth-order autocorrelations of a set of liquidity spreads sorted by the days to maturity across 40 Eurodollar contracts. , includes quoted half spreads, realized spreads and adverse selection (see Figure C.153 – Figure C.161).

- Appendix C.6 shows the impulse response plots of five variables, including the trade direction, trade volume, square root of trade volume, and asks and bids market concentration for the 10-year full sample period, one-year tenor group, three-year tenor group, and five-year tenor group (see Figure C.162 – Figure C.171).

- Appendix C.7 summarizes the multivariate linear regression results on a set of market activities indicators, price discovery factors, mid-quote return autocorrelations, market liquidity spreads and spreads autocorrelations, within the 10-year full sample period, one-year tenor group, three-year tenor group, and five-year tenor group (see Table C.161 – Table C.184).

Appendix A. Supplemental Materials for Chapter 2 – High Speed Quoting and Excess Volatility: Evidence from Money Market Derivatives

Appendix A.1. Descriptive Statistics

Table A.1: EDH sample characteristics and descriptive statistics

Panel A: Size data sample for both time and sale data and order book data

Time and Sale Data								Order Book Data					
		Trades		Asks		Bids				Asks		Bids	
RIC	Duration	Volume ($ trillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)	RIC	Maturity	Volume ($ quadrillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)
EDH0	2000-2010	32.89	1.70	38.74	23.14	38.89	23.10	GEH0	2010	23.45	15.26	23.49	15.26
EDH1	2001-2011	17.91	1.52	76.30	23.04	78.27	23.04	GEH1	2011	125.50	27.15	123.73	27.15
EDH2	2002-2012	13.25	1.48	54.33	23.58	53.52	23.79	GEH2	2012	137.96	42.45	137.74	42.45
EDH3	2003-2013	11.33	1.31	136.79	24.49	139.30	24.66	GEH3	2013	206.90	39.29	205.93	39.29
EDH4	2004-2014	15.17	1.50	221.23	24.33	191.44	24.16	GEH4	2014	524.63	42.13	513.57	42.13
EDH5	1995-2005	31.85	1.81	108.49	25.40	104.85	25.55	GEH5	2015	529.13	53.03	528.15	53.03
EDH6	1996-2006	40.82	1.82	55.23	25.97	56.23	26.07	GEH6	2016	214.88	51.69	216.60	51.69
EDH7	1997-2007	42.85	1.38	71.66	23.03	72.41	23.16	GEH7	2017	57.08	29.74	57.14	29.74
EDH8	1998-2008	73.21	1.48	46.38	21.25	46.98	21.31	GEH8	2008	9.54	13.07	9.45	13.07
EDH9	1999-2009	58.73	1.95	20.25	22.97	20.46	23.00	GEH9	2009	3.51	10.82	3.47	10.82

Panel B: EDH? contracts statistic description

RIC	Mean spread (bps)	Median spread (bps)	Mode spread (bps)	Max spread	St.dev spread (bps)	Skewness spread	Kurtosis spread	Mean returns (one millionth)	Max returns	Min returns	St.dev returns (bps)	Skewness returns	Kurtosis returns
Period A: Januray 1996 - July 2007													
EDH0	1.4575	1.0567	1.0510	0.0547	3.2725	42.3113	2,717.6928	0.0943	0.0138	-0.0198	2.0361	-9.6647	2,681.4828
EDH1	2.1979	2.1042	0.0000	0.0525	4.3642	27.4068	1,242.8045	0.0994	0.0108	-0.0201	1.7563	-17.4171	3,318.1755
EDH2	2.2185	0.5353	0.0000	0.0726	8.4861	23.6435	805.8972	0.0811	0.0109	-0.0563	2.2065	-165.9489	42,328.8565
EDH3	2.1448	0.5242	0.0000	0.0425	7.4073	14.8266	333.8133	0.0595	0.0092	-0.0556	1.8320	-199.0733	60,534.4976
EDH4	1.6973	1.0106	0.5059	0.1115	4.7529	37.7851	6,385.3045	0.0616	0.0081	-0.0623	1.9863	-224.2629	70,600.9591
EDH5	0.9052	0.5142	0.5153	2.2516	27.9470	798.4578	643,162.1358	0.0162	0.0279	-0.0302	0.9041	-74.3419	60,354.1097
EDH6	0.6091	0.5216	0.5250	0.0579	1.0275	83.0071	18,832.3889	-0.0123	0.0400	-0.0405	0.8555	-36.9462	133,763.0831
EDH7	0.6685	0.5271	0.5284	0.0620	2.7869	67.0657	6,077.5817	-0.0166	0.0043	-0.0260	0.6268	-101.5777	39,998.7236
EDH8	0.6715	0.5267	0.5258	0.0620	1.1519	134.6662	41,984.5674	0.0094	0.0059	-0.0097	0.5780	-8.6882	2,470.0066
EDH9	0.8650	0.5277	0.5246	0.1156	1.8810	152.5455	68,286.2488	0.0389	0.0442	-0.0442	1.5691	-7.0558	51,223.3289
Period B: August 2007 - December 2013													
EDH0	0.9609	0.5170	0.5014	0.1553	1.9434	131.6144	70,698.0733	0.0033	0.0079	-0.0567	0.5704	-609.5429	607,831.4673
EDH1	1.3179	0.5118	0.5021	0.1848	3.9274	87.3828	27,614.9045	0.0044	0.0076	-0.0533	0.5814	-535.1033	493,029.1265
EDH2	1.3079	0.5138	0.5026	0.1830	3.7880	93.1862	29,520.3413	0.0047	0.0033	-0.0363	0.4512	-376.3398	302,626.1256
EDH3	1.6970	0.5112	0.5015	0.0559	3.7869	9.5710	295.9432	0.0055	0.0368	-0.0368	0.6860	-121.5284	205,078.3878
EDH4	1.4035	0.5098	0.5021	0.1769	6.5587	38.2543	4,722.5535	0.0422	0.0232	-0.0231	0.9732	0.3991	4,965.5213
EDH5	1.5816	0.5080	0.5031	0.4767	16.1712	136.3680	30,338.9690	0.0451	0.0055	-0.0046	0.6486	0.4279	296.7271
EDH6	1.3777	0.5101	0.5053	0.0420	9.1739	19.5081	409.5095	0.0481	0.0050	-0.0066	0.8672	0.2047	205.7452
EDH7	1.9253	0.5149	0.5088	0.1839	12.8469	30.6996	2,336.8586	0.0625	0.0081	-0.0072	1.0535	0.1052	256.5061
EDH8	1.8702	0.5246	0.5230	0.1876	10.6464	29.6438	2,167.1580	0.0163	0.0053	-0.0308	0.9274	-44.8187	15,030.5633
EDH9	1.1304	0.5188	0.5159	0.1553	9.7657	64.4546	4,384.0072	0.0037	0.0067	-0.0313	0.4439	-205.5758	147,461.4013

Notes: Panel A depicts EDH data sample size for both time and sale data and order book data. The roll-over dates of the 10 Eurodollar quarterly trade futures and the average number of observations plus the average volume of bids, asks and trades. The time and sale data are from the Thomson Reuters Tick History database for January 1, 1996 to January 1, 2014, labelled by the Reuters Instrument Code (RIC; EDH0, EDH1, ..., EDH9, the exchange ticker is GE, which is the RIC for the globex only trades and quotes). Note, that the minimum tick size on the exchange is 1/4 of a basis point for the nearest expiring contract and 1/2 otherwise. The order book data is from July 1, 2008 to January 1, 201, labelled by the RIC as GEH0, GEH1, ..., GEH9. Panel B illustrates 10 EDH contracts descriptive statistics between 1996 and 2013 for 10 Eurodollar Futures with maturity in March. The mean, median and mode of the bid-ask spread are presented in basis points and mean returns reported in one millionths in contrast to the yearly deliveries I now cut one quarterly delivery date (H for March) by year of delivery.

Table A.2: EDM sample characteristics and descriptive statistics

Panel A: Size data sample for both time and sale data and order book data

Time and Sale Data								Order Book Data					
		Trades		Asks		Bids				Asks		Bids	
RIC	Duration	Volume ($ trillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)	RIC	Maturity	Volume ($ quadrillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)
EDM0	2000-2010	29.89	1.67	44.88	23.02	44.82	22.85	GEM0	2010	43.05	18.64	43.27	18.64
EDM1	2001-2011	14.54	1.49	86.78	23.42	82.94	23.38	GEM1	2011	140.34	29.43	139.42	29.43
EDM2	2002-2012	12.39	1.48	60.65	23.93	58.12	24.02	GEM2	2012	147.29	43.25	144.90	43.25
EDM3	2003-2013	11.67	1.30	175.84	23.87	166.10	23.95	GEM3	2013	284.33	36.74	270.78	36.74
EDM4	2004-2014	18.54	1.55	177.54	24.26	185.79	24.36	GEM4	2014	647.21	45.48	632.62	45.48
EDM5	1995-2005	37.56	1.92	86.66	25.56	82.15	25.74	GEM5	2015	448.50	57.33	449.72	57.33
EDM6	1996-2006	43.83	1.76	51.51	25.52	51.55	25.59	GEM6	2016	167.80	48.14	168.92	48.14
EDM7	1997-2007	49.16	1.31	69.95	22.11	69.83	22.22	GEM7	2017	35.09	23.67	35.30	23.67
EDM8	1998-2008	68.73	1.55	39.14	21.55	39.71	21.77	GEM8	2008	5.43	9.71	5.45	9.71
EDM9	1999-2009	52.61	1.93	16.89	23.29	16.99	23.39	GEM9	2009	5.32	12.10	5.22	12.10

Panel B: EDM? contracts statistic description

RIC	Mean spread (bps)	Median spread (bps)	Mode spread (bps)	Max spread	St.dev spread (bps)	Skewness spread	Kurtosis spread	Mean returns (one millionth)	Max returns	Min returns	St.dev returns (bps)	Skewness returns	Kurtosis returns
Period A: Janurary 1996 - July 2007													
EDM0	1.6383	1.5763	0.0000	0.0475	2.3620	51.6498	6,882.8248	0.1050	0.0107	-0.0107	1.8128	-1.6482	1,432.0690
EDM1	2.2749	2.1074	0.0000	0.0494	4.6374	26.4958	1,073.5842	0.0982	0.0108	-0.0375	2.1054	-65.2915	12,384.3492
EDM2	1.7062	0.5242	0.0000	0.0541	5.5188	20.3069	689.8420	0.0762	0.0106	-0.0539	2.2643	-123.8264	29,914.1115
EDM3	2.2123	1.0124	0.0000	0.0477	6.4289	23.3946	1,082.7445	0.0635	0.0106	-0.0486	1.8413	-142.9567	37,739.8787
EDM4	1.4033	0.5089	0.5067	0.0851	3.4483	37.0650	5,655.6265	0.0499	0.0081	-0.0554	1.5845	-234.5042	82,308.3453
EDM5	0.7157	0.5164	0.5169	0.0437	1.7824	34.6546	2,570.2504	0.0221	0.0317	-0.0322	0.7979	-32.7647	86,621.5394
EDM6	0.6112	0.5231	0.5253	0.0359	1.1723	128.1221	25,788.7206	-0.0153	0.0421	-0.0430	0.8880	-50.7317	142,748.9165
EDM7	0.6732	0.5271	0.5281	0.0435	2.6510	57.0176	3,836.6821	-0.0148	0.0167	-0.0202	0.7028	-37.0650	24,936.1284
EDM8	0.7202	0.5266	0.5246	0.0550	1.6897	84.3953	13,153.2718	0.0151	0.0049	-0.0087	0.6447	-8.5123	1,793.5358
EDM9	0.9827	0.5287	0.5248	0.0514	1.9776	44.9957	4,633.6334	0.0572	0.0096	-0.0256	1.2664	-49.2469	10,722.6352
Period B: August 2007 - December 2013													
EDM0	0.9996	0.5130	0.5020	0.0842	2.2005	44.8274	5,649.5748	0.0035	0.0077	-0.0449	0.5071	-437.4116	388,799.0669
EDM1	1.4589	0.5125	0.5022	0.1815	5.1364	45.2210	8,734.1548	0.0041	0.0077	-0.0522	0.5712	-546.4407	500,906.5221
EDM2	1.4196	0.5146	0.5024	0.0681	3.4341	33.2298	3,023.6522	0.0046	0.0042	-0.0272	0.4078	-219.3210	145,104.2175
EDM3	1.5853	0.5114	0.5016	0.0405	4.2226	16.0177	557.4474	0.0056	0.0032	-0.0452	0.6582	-277.0242	190,224.5388
EDM4	1.4671	0.5066	0.5023	0.0876	7.0132	21.3081	593.4317	0.0420	0.0050	-0.0041	0.8626	0.2468	153.4856
EDM5	1.2971	0.5079	0.5035	0.6284	9.5574	44.0385	11,160.9088	0.0397	0.0067	-0.0058	0.6961	0.9677	376.9413
EDM6	1.4259	0.5110	0.5062	0.0421	9.5215	19.0541	395.3889	0.0495	0.1388	-0.1388	2.2593	0.0429	301,006.4841
EDM7	4.4510	0.5168	0.5097	4.6132	349.0857	131.9951	17,438.8113	0.0683	0.0069	-0.0074	1.1596	0.2395	200.4623
EDM8	1.4842	0.5233	0.5124	2.3126	19.2040	899.1402	1,072,364.8036	0.0103	0.0063	-0.0332	0.8149	-66.9993	27,438.2746
EDM9	1.0030	0.5179	0.5170	0.1556	2.1138	110.2242	49,876.3150	0.0032	0.0053	-0.0499	0.5177	-511.8291	492,049.9281

Notes: Panel A depicts EDM data sample size for both time and sale data and order book data. The roll-over dates of the 10 Eurodollar quarterly trade futures and the average number of observations plus the average volume of bids, asks and trades. The time and sale data are from the Thomson Reuters Tick History database for January 1, 1996 to January 1, 2014, labelled by the Reuters Instrument Code (RIC; EDM0, EDM1, . . . , EDM9, the exchange ticker is GE, which is the RIC for the globex only trades and quotes). Note, that the minimum tick size on the exchange is 1/4 of a basis point for the nearest expiring contract and 1/2 otherwise. The order book data is from July 1, 2008 to January 1, 201, labelled by the RIC as GEM0, GEM1, . . . , GEM9. Panel B illustrates 10 EDM contracts descriptive statistics between 1996 and 2013 for 10 Eurodollar Futures with maturity in June. The mean, median and mode of the bid-ask spread are presented in basis points and mean returns reported in one millionths in contrast to the yearly deliveries I now cut one quarterly delivery date (M for June) by year of delivery.

Table A.3: EDU sample characteristics and descriptive statistics

Panel A: Size data sample for both time and sale data and order book data

Time and Sale Data								Order Book Data					
		Trades		Asks		Bids				Asks		Bids	
RIC	Duration	Volume ($ trillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)	RIC	Maturity	Volume ($ quadrillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)
EDU0	2000-2010	26.70	1.63	41.58	22.86	40.25	22.79	GEU0	2010	65.74	22.47	65.79	22.47
EDU1	2001-2011	13.40	1.49	73.63	23.34	75.70	23.47	GEU1	2011	142.18	32.27	140.74	32.27
EDU2	2002-2012	12.13	1.44	64.36	24.33	64.95	24.55	GEU2	2012	155.53	42.75	155.20	42.75
EDU3	2003-2013	12.62	1.39	202.35	23.84	207.59	23.94	GEU3	2013	352.30	38.37	341.82	38.37
EDU4	2004-2014	23.72	1.64	152.33	24.40	157.42	24.60	GEU4	2014	710.56	48.38	691.69	48.38
EDU5	1995-2005	40.68	1.93	72.93	25.71	71.34	25.73	GEU5	2015	343.43	55.87	345.14	55.87
EDU6	1996-2006	44.19	1.60	55.45	24.98	55.80	25.00	GEU6	2016	114.28	40.35	114.76	40.35
EDU7	1997-2007	63.12	1.32	66.24	21.30	68.15	21.35	GEU7	2017	22.34	19.45	22.30	19.45
EDU8	1998-2008	67.04	1.61	32.50	21.88	32.99	22.05	GEU8	2008	3.88	7.78	3.86	7.78
EDU9	1999-2009	46.55	1.91	17.17	23.32	16.83	23.35	GEU9	2009	8.37	13.26	7.95	13.26

Panel B: EDU? contracts statistic description

RIC	Mean spread (bps)	Median spread (bps)	Mode spread (bps)	Max spread	St.dev spread (bps)	Skewness spread	Kurtosis spread	Mean returns (one millionth)	Max returns	Min returns	St.dev returns (bps)	Skewness returns	Kurtosis returns
Period A: Januray 1996 - July 2007													
EDU0	1.8107	1.5802	0.0000	0.0346	2.5486	31.9701	1,890.2629	0.1042	0.0109	-0.0136	2.0895	-3.8039	1,522.7639
EDU1	2.5906	2.1068	0.0000	0.0716	9.0482	28.8298	1,341.7978	0.0886	0.0107	-0.0413	2.0549	-87.9905	17,865.6427
EDU2	1.4259	0.5172	0.0000	0.0504	4.5400	29.4658	1,520.1979	0.0648	2.2263	-2.2263	87.7029	-0.0012	64,402.9090
EDU3	2.3770	1.0111	0.5055	0.0230	6.6919	8.8901	130.6286	0.0673	0.0081	-0.0595	2.0091	-201.6683	60,071.6004
EDU4	1.1004	0.5100	0.5099	0.0633	2.7933	44.9377	5,681.3427	0.0370	0.0080	-0.0454	1.1687	-219.7026	85,682.1938
EDU5	0.6415	0.5184	0.5194	0.0304	1.1900	64.3719	7,310.4422	0.0117	0.0351	-0.0355	0.7847	-20.3991	115,008.0145
EDU6	0.6347	0.5251	0.5282	0.0425	2.2279	83.6551	9,009.0298	-0.0165	0.0440	-0.0447	0.9126	-41.1121	149,022.0227
EDU7	0.6282	0.5270	0.5282	0.0541	0.9904	270.0848	113,041.2740	0.0010	0.0095	-0.0176	0.5956	-39.6688	12,696.5357
EDU8	0.7354	0.5267	0.5243	0.0419	1.2388	85.9842	15,598.6827	0.0216	0.0055	-0.0108	0.7249	-11.0652	2,295.5810
EDU9	1.1142	1.0500	0.5251	0.0548	2.5286	37.4324	2,714.3147	0.0692	0.0105	-0.0273	1.3958	-55.7667	11,565.7364
Period B: August 2007 - December 2013													
EDU0	1.0888	0.5103	0.5029	0.0736	2.2242	27.6328	2,217.2881	0.0036	0.0076	-0.0435	0.4974	-429.9318	377,590.8865
EDU1	1.4362	0.5130	0.5017	0.1815	6.0919	40.6183	5,930.5627	0.0045	0.0062	-0.0359	0.4620	-335.2305	261,479.0752
EDU2	1.5113	0.5130	0.5027	12.9154	26.5386	4,774.4206	23,234,597.5895	0.0052	0.0033	-0.0303	0.4294	-270.6159	190,969.5070
EDU3	1.4752	0.5105	0.5018	0.0420	5.6182	20.7231	585.6673	0.0052	0.0240	-0.0478	1.0455	-75.6077	39,028.3487
EDU4	1.5974	0.5069	0.5026	0.1857	9.6466	23.2418	1,508.3639	0.0418	0.0048	-0.0046	0.7684	0.1544	171.5709
EDU5	1.1856	0.5085	0.5041	0.0398	7.7548	22.9288	566.2516	0.0461	0.0101	-0.0101	0.7051	0.0807	984.3082
EDU6	1.5563	0.5124	0.5070	0.0673	10.7313	19.0099	403.8976	0.0546	0.1691	-0.1692	2.8434	-0.2238	311,725.7426
EDU7	1.6847	0.5278	0.5106	2.3783	15.0897	1,051.2263	1,648,518.3614	0.0394	0.0062	-0.0075	1.0672	0.2015	212.6221
EDU8	1.2970	0.5222	0.5145	1.8247	10.8177	773.6999	1,198,859.7155	0.0071	0.0102	-0.0237	0.5698	-67.0336	30,066.2742
EDU9	0.9535	0.5179	0.5037	0.1560	1.7190	135.0731	89,802.4481	0.0032	0.0068	-0.0527	0.5292	-555.8806	552,289.6777

Notes: Panel A depicts EDU data sample size for both time and sale data and order book data. The roll-over dates of the 10 Eurodollar quarterly trade futures and the average number of observations plus the average volume of bids, asks and trades. The time and sale data are from the Thomson Reuters Tick History database for January 1, 1996 to January 1, 2014, labelled by the Reuters Instrument Code (RIC; EDU0, EDU1, ..., EDU9, the exchange ticker is GE, which is the RIC for the globex only trades and quotes). Note, that the minimum tick size on the exchange is 1/4 of a basis point for the nearest expiring contract and 1/2 otherwise. The order book data is from July 1, 2008 to January 1, 201, labelled by the RIC as GEU0, GEU1, ..., GEU9. Panel B illustrates 10 EDU contracts descriptive statistics between 1996 and 2013 for 10 Eurodollar Futures with maturity in September. The mean, median and mode of the bid-ask spread are presented in basis points and mean returns reported in one millionths in contrast to the yearly deliveries I now cut one quarterly delivery date (U for September) by year of delivery.

Table A.4: EDZ sample characteristics and descriptive statistics

Panel A: Size data sample for both time and sale data and order book data

Time and Sale Data								Order Book Data					
		Trades		Asks		Bids				Asks		Bids	
RIC	Duration	Volume ($ trillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)	RIC	Maturity	Volume ($ quadrillion)	no. of obs. (million)	Volume ($ quadrillion)	no. of obs. (million)
EDZ0	2000-2010	23.39	1.57	64.32	23.12	60.40	22.93	GEZ0	2010	102.74	25.48	101.78	25.48
EDZ1	2001-2011	14.14	1.51	60.22	23.54	62.00	23.68	GEZ1	2011	148.04	39.42	146.22	39.42
EDZ2	2002-2012	12.38	1.41	99.20	24.36	96.31	24.46	GEZ2	2012	186.69	42.47	183.22	42.47
EDZ3	2003-2013	15.15	1.54	211.96	24.01	220.47	24.14	GEZ3	2013	462.54	41.88	448.57	41.88
EDZ4	2004-2014	30.98	1.79	136.59	25.12	130.98	25.30	GEZ4	2014	645.05	54.09	634.74	54.09
EDZ5	1995-2005	45.87	2.02	64.84	25.94	64.58	26.13	GEZ5	2015	312.45	62.27	314.66	62.27
EDZ6	1996-2006	46.23	1.53	64.81	24.21	65.16	24.24	GEZ6	2016	99.01	40.66	99.43	40.66
EDZ7	1997-2007	80.80	1.41	55.66	21.10	56.11	21.21	GEZ7	2017	16.90	17.72	16.77	17.72
EDZ8	1998-2008	67.97	1.86	25.65	22.45	26.29	22.53	GEZ8	2008	3.17	9.34	3.23	9.34
EDZ9	1999-2009	39.02	1.78	25.07	23.66	24.68	23.53	GEZ9	2009	12.17	14.05	12.09	14.05

Panel B: EDZ? contracts statistic description

RIC	Mean spread (bps)	Median spread (bps)	Mode spread (bps)	Max spread	St.dev spread (bps)	Skewness spread	Kurtosis spread	Mean returns (one millionth)	Max returns	Min returns	St.dev returns (bps)	Skewness returns	Kurtosis returns
Period A: Januray 1996 - July 2007													
EDZ0	2.0388	1.5881	0.0000	0.0624	3.3768	31.3369	2,287.9448	0.1214	0.0108	-0.0108	1.9391	-0.2661	1,368.2512
EDZ1	2.4486	1.5321	0.0000	0.0546	6.6869	21.5323	668.3288	0.0949	0.0106	-0.0593	2.4838	-149.4292	35,570.2495
EDZ2	1.7767	0.5201	0.0000	0.0362	7.6852	18.6459	425.2557	0.0586	0.0107	-0.0539	1.8669	-163.7106	47,836.5298
EDZ3	2.1969	0.5270	0.5060	0.0642	7.3244	13.9187	418.2639	0.0661	0.0079	-0.0582	1.9050	-213.0195	65,294.9954
EDZ4	0.9434	0.5119	0.5113	0.0744	2.5988	53.3494	8,458.1325	0.0197	0.0355	-0.0373	1.1919	-77.2616	63,378.6158
EDZ5	0.6272	0.5204	0.5202	0.0534	1.4058	78.4597	10,575.2911	0.0123	0.0377	-0.0383	0.7817	-12.0081	138,977.6603
EDZ6	0.6678	0.5258	0.5284	0.0620	3.5789	78.7591	7,154.1198	-0.0159	0.0107	-0.0236	0.6180	-73.6023	29,202.3844
EDZ7	0.6610	0.5268	0.5282	0.1621	1.1524	385.6783	433,278.8014	0.0055	0.0057	-0.0089	0.5509	-6.4337	2,095.1091
EDZ8	0.8025	0.5271	0.5244	0.0321	1.8691	42.2502	2,435.4688	0.0301	0.0108	-0.0143	0.9297	-10.4233	4,835.9188
EDZ9	1.3525	1.0521	1.0508	0.0589	3.5467	30.2283	1,618.9051	0.0907	0.0107	-0.0206	1.7848	-15.7761	2,878.3892
Period B: August 2007 - December 2013													
EDZ0	1.2888	0.5111	0.5041	0.1843	4.2869	74.9826	19,687.7822	0.0039	0.0080	-0.0546	0.5676	-594.0930	571,524.0662
EDZ1	1.5115	0.5131	0.5027	0.1816	6.5194	32.3675	3,583.4704	0.0051	0.0053	-0.0323	0.4366	-286.3513	211,739.4040
EDZ2	1.5461	0.5111	0.5026	0.0683	3.3506	20.6261	1,920.5610	0.0051	0.0031	-0.0351	0.4610	-347.9521	264,279.8635
EDZ3	1.2885	0.5098	0.5019	0.0515	5.9260	27.3142	887.0014	0.0046	0.0037	-0.0517	1.0420	-86.7684	43,135.7451
EDZ4	1.4980	0.5074	0.5029	0.1851	9.3621	24.1519	1,568.9299	0.0429	0.0055	-0.0052	0.6875	-0.1262	249.3548
EDZ5	1.2322	0.5089	0.5046	0.0567	8.1837	21.3631	492.6975	0.0436	0.1705	-0.1705	2.3074	0.0029	493,604.6359
EDZ6	1.7866	0.5133	0.5079	0.1325	12.1228	15.6003	275.3439	0.0566	0.0080	-0.0052	0.9406	1.2077	276.1488
EDZ7	2.8758	0.5265	1.0215	2.3797	147.1065	160.8729	26,011.4413	0.0265	0.5272	-0.5271	9.2956	0.0819	318,145.5857
EDZ8	1.3225	0.5207	0.5154	1.8251	12.4897	473.2826	613,670.0439	0.0046	0.0052	-0.0137	0.4041	-25.2299	10,243.2468
EDZ9	0.9420	0.5179	0.5018	0.1561	2.0809	195.9541	80,831.4506	0.0032	0.0080	-0.0578	0.5686	-624.4141	635,856.1408

Notes: Panel A depicts EDZ data sample size for both time and sale data and order book data. The roll-over dates of the 10 Eurodollar quarterly trade futures and the average number of observations plus the average volume of bids, asks and trades. The time and sale data are from the Thomson Reuters Tick History database for January 1, 1996 to January 1, 2014, labelled by the Reuters Instrument Code (RIC; EDZ0, EDZ1, . . . , EDZ9, the exchange ticker is GE, which is the RIC for the globex only trades and quotes). Note, that the minimum tick size on the exchange is 1/4 of a basis point for the nearest expiring contract and 1/2 otherwise. The order book data is from July 1, 2008 to January 1, 201, labelled by the RIC as GEZ0, GEZ1, . . . , GEZ9. Panel B illustrates 10 EDZ contracts descriptive statistics between 1996 and 2013 for 10 Eurodollar Futures with maturity in December. The mean, median and mode of the bid-ask spread are presented in basis points and mean returns reported in one millionths in contrast to the yearly deliveries I now cut one quarterly delivery date (Z for December) by year of delivery.

Appendix A.2. Median Wavelet Results at All Timescales

Table A.5: EDH futures contracts median results for ask variance

Ask Variance		EDH0 Median					EDH1 Median					EDH2 Median					EDH3 Median					EDH4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	10.1sec	1.6694	1.8457	1.9866	3.4744	11.6sec	1.5038	1.5685	1.8898	3.7076	14.3sec	1.4905	1.5776	1.7771	2.4838	12.4sec	1.5558	1.6205	1.7144	2.5168	9.5sec	1.5020	1.7082	1.9633	2.5236
	Level 2	20.2sec	1.5321	1.6175	1.7215	3.413	23.3sec	1.2684	1.3697	1.5950	4.3745	28.5sec	1.2697	1.3262	1.5200	2.1130	24.7sec	1.3106	1.4680	1.6743	3.6270	19sec	1.2558	1.5094	1.8165	2.3599
	Level 3	40.4sec	1.3069	1.4262	1.5526	2.6911	46.6sec	1.1545	1.2506	1.3917	3.0875	57.1sec	1.1590	1.1862	1.3487	1.8319	49.4sec	1.1767	1.3877	1.4869	5.1436	38.1sec	1.1292	1.3711	1.5725	1.6971
30	**Level 4**	1.3min	1.2114	1.2793	1.3878	2.3244	1.6min	1.1060	1.1881	1.2810	2.5835	1.9min	1.0960	1.1231	1.2273	1.5210	1.6min	1.1281	1.2064	1.3142	4.4474	1.3min	1.0670	1.2911	1.3604	1.6946
days	**Level 5**	2.7min	1.1466	1.2046	1.2959	2.1577	3.1min	1.0625	1.1592	1.2042	1.9385	3.8min	1.0560	1.0841	1.1459	1.3840	3.3min	1.0857	1.1211	1.1971	3.2735	2.5min	1.0379	1.1866	1.2508	1.4738
before	**Level 6**	5.4min	1.1142	1.1631	1.2174	1.7882	6.2min	1.0471	1.1241	1.1493	1.7743	7.6min	1.0425	1.0606	1.0980	1.2559	6.6min	1.0573	1.0945	1.1126	2.5818	5.1min	1.0260	1.1030	1.1400	1.2910
	Level 7	10.8min	1.0898	1.1196	1.1641	1.5088	12.4min	1.0340	1.0969	1.1220	1.5558	15.2min	1.0320	1.0452	1.0737	1.1689	13.2min	1.0305	1.0557	1.0756	2.0378	10.1min	1.0155	1.0549	1.0766	1.2010
	Level 8	21.5min	1.0643	1.0813	1.1324	1.343	24.8min	1.0282	1.0714	1.1097	1.5032	30.4min	1.0214	1.0340	1.0545	1.1308	26.4min	1.0209	1.0323	1.0479	1.7252	20.3min	1.0095	1.0299	1.0468	1.1395
	Level 9	43.1min	1.0465	1.0632	1.126	1.2728	49.7min	1.0191	1.0619	1.1034	1.5263	60.9min	1.0162	1.0275	1.0433	1.1007	52.7min	1.0186	1.0210	1.0387	1.8433	40.6min	1.0067	1.0196	1.0367	1.1074
	Level 1	4.5sec	1.4912	1.7346	1.8943	2.3066	5.4sec	1.5091	1.6252	1.7638	3.3471	6.5sec	1.5041	1.5694	1.6560	1.9626	6.3sec	1.5418	1.6373	1.7977	2.4636	7.3sec	1.5085	1.6915	1.8353	2.7287
	Level 2	9sec	1.3114	1.5433	1.6674	2.1885	10.8sec	1.2730	1.4244	1.5361	3.9629	13sec	1.2838	1.3529	1.4547	1.7647	12.6sec	1.3170	1.4543	1.6612	2.6846	14.7sec	1.3571	1.4654	1.5992	2.8512
	Level 3	18sec	1.2467	1.3912	1.4898	1.8783	21.6sec	1.1786	1.2655	1.3943	3.0627	26sec	1.1682	1.2152	1.3198	1.5994	25.1sec	1.1801	1.3330	1.4670	2.2186	29.3sec	1.2119	1.3120	1.5128	2.0744
60	**Level 4**	36.1sec	1.1545	1.2779	1.3748	1.6438	43.3sec	1.1117	1.1885	1.2838	2.7080	52sec	1.1047	1.1455	1.2002	1.4288	50.3sec	1.1261	1.1899	1.3238	1.8280	58.7sec	1.1125	1.2039	1.3487	1.7636
days	**Level 5**	1.2min	1.1011	1.1947	1.2822	1.4809	1.4min	1.0735	1.1368	1.2042	2.2361	1.7min	1.0643	1.0952	1.1328	1.2820	1.7min	1.0732	1.1178	1.2112	1.5828	2min	1.0565	1.1237	1.2037	1.5688
before	**Level 6**	2.4min	1.079	1.1293	1.2063	1.3888	2.9min	1.0469	1.0979	1.1463	2.1348	3.5min	1.0425	1.0652	1.0871	1.1860	3.4min	1.0420	1.0718	1.1235	1.3795	3.9min	1.0278	1.0878	1.1207	1.3565
	Level 7	4.8min	1.0544	1.0925	1.1437	1.3112	5.8min	1.0324	1.0705	1.1107	1.7563	6.9min	1.0320	1.0433	1.0612	1.1235	6.7min	1.0227	1.0428	1.0756	1.2632	7.8min	1.0155	1.0449	1.0712	1.2364
	Level 8	9.6min	1.0344	1.0668	1.107	1.2536	11.5min	1.0210	1.0526	1.0779	1.5383	13.9min	1.0212	1.0294	1.0430	1.0881	13.4min	1.0132	1.0257	1.0479	1.1656	15.6min	1.0095	1.0294	1.0450	1.1683
	Level 9	19.2min	1.0268	1.0515	1.0872	1.2193	23.1min	1.0163	1.0443	1.0702	1.4767	27.7min	1.0159	1.0225	1.0331	1.0624	26.8min	1.0100	1.0202	1.0343	1.1178	31.3min	1.0067	1.0192	1.0344	1.1447
	Level 1	2.6sec	1.5	1.7044	1.8367	2.0378	3.2sec	1.5145	1.6141	1.7294	2.0818	4.2sec	1.5086	1.6010	1.7053	1.9296	4.5sec	1.5000	1.6001	1.7106	1.9928	4.8sec	1.5170	1.6688	1.8075	2.5236
	Level 2	5.3sec	1.3322	1.4755	1.6319	1.7978	6.4sec	1.2926	1.3949	1.4703	1.9347	8.4sec	1.2808	1.3611	1.4557	1.6973	8.9sec	1.2698	1.4229	1.5435	2.0281	9.7sec	1.3055	1.4274	1.5977	2.3599
	Level 3	10.5sec	1.2399	1.3396	1.458	1.6449	12.9sec	1.1829	1.2586	1.3573	1.7366	16.8sec	1.1701	1.2232	1.3120	1.5871	17.9sec	1.1664	1.2639	1.3877	1.8199	19.4sec	1.1969	1.2758	1.3886	1.6971
3	**Level 4**	21.1sec	1.1638	1.2362	1.3218	1.5128	25.8sec	1.1220	1.1692	1.2440	1.6465	33.6sec	1.1090	1.1498	1.2211	1.3569	35.8sec	1.0905	1.1601	1.2266	1.6037	38.8sec	1.1114	1.1847	1.2818	1.6946
months	**Level 5**	42.2sec	1.1002	1.1669	1.2219	1.4294	51.6sec	1.0845	1.1270	1.1687	1.5636	1.1min	1.0682	1.1007	1.1390	1.2725	1.2min	1.0550	1.0952	1.1428	1.3595	1.3min	1.0565	1.1227	1.1987	1.4738
before	**Level 6**	1.4min	1.0761	1.1092	1.1677	1.3292	1.7min	1.0543	1.0870	1.1239	1.4363	2.2min	1.0466	1.0652	1.0892	1.1860	2.4min	1.0297	1.0558	1.0945	1.1989	2.6min	1.0293	1.0878	1.1185	1.2910
	Level 7	2.8min	1.0489	1.068	1.1201	1.2233	3.4min	1.0340	1.0545	1.0826	1.2791	4.5min	1.0320	1.0426	1.0612	1.1235	4.8min	1.0199	1.0345	1.0557	1.1202	5.2min	1.0181	1.0518	1.0681	1.2010
	Level 8	5.6min	1.0327	1.0453	1.0808	1.1662	6.9min	1.0209	1.0368	1.0601	1.1714	9min	1.0204	1.0284	1.0425	1.0773	9.5min	1.0126	1.0208	1.0334	1.0894	10.3min	1.0107	1.0307	1.0422	1.1395
	Level 9	11.2min	1.026	1.0396	1.0656	1.1406	13.8min	1.0159	1.0315	1.0509	1.1700	17.9min	1.0151	1.0214	1.0302	1.0624	19.1min	1.0094	1.0187	1.0238	1.0996	20.7min	1.0091	1.0229	1.0319	1.1074
	Level 1	1.4sec	1.4888	1.5421	1.6133	1.7864	1.9sec	1.5003	1.5673	1.6369	1.7418	2.9sec	1.4926	1.5581	1.6302	1.7581	3sec	1.5113	1.5886	1.6777	1.8368	3sec	1.5262	1.6207	1.7335	1.9458
	Level 2	2.7sec	1.258	1.3062	1.3889	1.564	3.8sec	1.2770	1.3416	1.4131	1.5250	5.7sec	1.2697	1.3329	1.3983	1.5207	6sec	1.2802	1.3805	1.4733	1.6919	6.1sec	1.3073	1.4145	1.5268	1.7375
	Level 3	5.4sec	1.1436	1.1918	1.251	1.4259	7.6sec	1.1647	1.2188	1.2698	1.3793	11.4sec	1.1598	1.2124	1.2624	1.3674	12sec	1.1777	1.2513	1.3284	1.4708	12.1sec	1.1983	1.2711	1.3572	1.5526
1	**Level 4**	10.9sec	1.09	1.1277	1.1809	1.2939	15.3sec	1.1016	1.1453	1.1866	1.2649	22.8sec	1.1012	1.1384	1.1778	1.2572	23.9sec	1.1100	1.1643	1.2154	1.3276	24.2sec	1.1188	1.1777	1.2343	1.3846
Year	**Level 5**	21.8sec	1.0595	1.0896	1.1296	1.2173	30.5sec	1.0663	1.0970	1.1307	1.1888	45.7sec	1.0623	1.0933	1.1199	1.1775	47.9sec	1.0675	1.1024	1.1394	1.2208	48.4sec	1.0736	1.1109	1.1495	1.2552
before	**Level 6**	43.5sec	1.0397	1.0602	1.09	1.1575	1min	1.0449	1.0652	1.0901	1.1289	1.5min	1.0409	1.0613	1.0781	1.1212	1.6min	1.0408	1.0653	1.0886	1.1442	1.6min	1.0433	1.0663	1.0929	1.1511
	Level 7	1.5min	1.0273	1.0412	1.0617	1.11	2min	1.0297	1.0430	1.0588	1.0921	3min	1.0257	1.0391	1.0510	1.0821	3.2min	1.0248	1.0407	1.0561	1.0954	3.2min	1.0255	1.0395	1.0555	1.0891
	Level 8	2.9min	1.0195	1.0294	1.0426	1.0802	4.1min	1.0201	1.0293	1.0397	1.0642	6.1min	1.0164	1.0257	1.0338	1.0546	6.4min	1.0162	1.0271	1.0370	1.0690	6.5min	1.0160	1.0253	1.0344	1.0557
	Level 9	5.8min	1.0166	1.0249	1.0368	1.0656	8.1min	1.0152	1.0231	1.0326	1.0551	12.2min	1.0121	1.0194	1.0260	1.0415	12.8min	1.0127	1.0207	1.0289	1.0570	12.9min	1.0118	1.0191	1.0263	1.0431

Notes: This table reports EDH future contracts median results for ask variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDH contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.5: EDH futures contracts median results for ask variance – Continued

Ask Variance		EDH5 Median					EDH6 Median					EDH7 Median					EDH8 Median					EDH9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.1sec	1.5473	1.6625	1.9013	2.2329	21.2sec	1.5561	1.7089	1.8133	2.1622	17.9sec	1.5142	1.5829	1.6369	2.0021	9.1sec	1.5121	1.6082	1.6944	1.8763	3.5sec	1.4750	1.5727	1.6456	1.7183
	Level 2	32.2sec	1.3470	1.4852	1.6901	2.0581	42.4sec	1.3346	1.5305	1.5734	1.9333	35.7sec	1.2718	1.3964	1.4642	2.0130	18.1sec	1.2537	1.3484	1.4310	1.6190	7.1sec	1.2539	1.3346	1.3669	1.4242
	Level 3	1.1min	1.2335	1.3629	1.4645	1.9655	1.4min	1.2194	1.3545	1.4393	1.7811	1.2min	1.1392	1.2719	1.3334	1.8608	36.2sec	1.1459	1.1889	1.2530	1.3217	14.1sec	1.1384	1.1865	1.2230	1.2506
30	**Level 4**	2.1min	1.1623	1.2550	1.3506	1.7987	2.8min	1.1391	1.2584	1.3064	1.5997	2.4min	1.0825	1.1763	1.2377	1.6331	1.2min	1.0795	1.1077	1.1503	1.2017	28.2sec	1.0819	1.1043	1.1342	1.1921
days	**Level 5**	4.3min	1.1069	1.1926	1.2600	1.5584	5.7min	1.0829	1.1680	1.2257	1.4494	4.8min	1.0407	1.1083	1.1604	1.5903	2.4min	1.0452	1.0635	1.0813	1.1157	56.5sec	1.0491	1.0643	1.0834	1.1178
before	**Level 6**	8.6min	1.0804	1.1389	1.2019	1.4154	11.3min	1.0690	1.1252	1.1783	1.3112	9.5min	1.0347	1.0775	1.1265	1.6921	4.8min	1.0265	1.0388	1.0491	1.0753	1.9min	1.0294	1.0420	1.0513	1.0748
	Level 7	17.2min	1.0498	1.0967	1.1417	1.2972	22.6min	1.0524	1.1013	1.1335	1.2447	19.1min	1.0220	1.0533	1.0993	1.7242	9.7min	1.0197	1.0258	1.0341	1.0595	3.8min	1.0190	1.0288	1.0357	1.0484
	Level 8	34.4min	1.0364	1.0712	1.1050	1.1967	45.3min	1.0457	1.0919	1.1023	1.2098	38.1min	1.0118	1.0428	1.0873	1.7001	19.3min	1.0174	1.0230	1.0288	1.0530	7.5min	1.0141	1.0205	1.0277	1.0370
	Level 9	68.7min	1.0348	1.0672	1.0945	1.1708	90.5min	1.0426	1.0837	1.0996	1.2575	76.2min	1.0169	1.0388	1.1008	1.8697	38.6min	1.0188	1.0264	1.0350	1.0591	15.1min	1.0135	1.0189	1.0255	1.0354
	Level 1	9.9sec	1.5446	1.6490	1.7809	2.2088	9.4sec	1.5035	1.6774	1.7650	1.9414	8sec	1.5035	1.5823	1.6369	1.9941	4.3sec	1.4847	1.5424	1.5873	1.7369	1.9sec	1.4736	1.5523	1.6059	1.6637
	Level 2	19.7sec	1.3483	1.4166	1.6106	1.9112	18.7sec	1.3207	1.5078	1.5534	1.7437	16sec	1.2718	1.3756	1.4793	2.1759	8.6sec	1.2340	1.2713	1.3375	1.4938	3.8sec	1.2380	1.3174	1.3594	1.3988
	Level 3	39.5sec	1.2191	1.3243	1.3945	1.7743	37.4sec	1.2159	1.3442	1.3876	1.5646	32sec	1.1467	1.2549	1.3385	1.7351	17.2sec	1.1177	1.1427	1.1760	1.2831	7.6sec	1.1299	1.1795	1.2100	1.2431
60	**Level 4**	1.3min	1.1581	1.2262	1.2910	1.5707	1.2min	1.1366	1.2219	1.2769	1.4422	1.1min	1.1140	1.1877	1.2658	1.4968	34.5sec	1.0623	1.0795	1.1075	1.1549	15.1sec	1.0728	1.1021	1.1211	1.1608
days	**Level 5**	2.6min	1.1090	1.1521	1.2160	1.4014	2.5min	1.0844	1.1536	1.2154	1.3089	2.1min	1.0715	1.1161	1.1777	1.4473	1.1min	1.0338	1.0474	1.0635	1.0888	30.3sec	1.0413	1.0621	1.0785	1.1038
before	**Level 6**	5.3min	1.0812	1.1071	1.1579	1.2576	5min	1.0661	1.1118	1.1523	1.2344	4.3min	1.0382	1.0783	1.1272	1.2549	2.3min	1.0222	1.0316	1.0401	1.0608	1min	1.0261	1.0381	1.0497	1.0696
	Level 7	10.5min	1.0526	1.0741	1.1100	1.1844	10min	1.0480	1.0827	1.1122	1.1759	8.5min	1.0241	1.0539	1.0993	1.1772	4.6min	1.0137	1.0216	1.0298	1.0441	2min	1.0177	1.0254	1.0327	1.0467
	Level 8	21.1min	1.0373	1.0579	1.0734	1.1394	20min	1.0351	1.0623	1.0927	1.1397	17.1min	1.0132	1.0407	1.0840	1.1786	9.2min	1.0101	1.0174	1.0254	1.0403	4min	1.0131	1.0189	1.0241	1.0329
	Level 9	42.1min	1.0339	1.0494	1.0655	1.1254	39.9min	1.0300	1.0566	1.0868	1.1255	34.2min	1.0169	1.0345	1.0910	1.3141	18.4min	1.0101	1.0183	1.0266	1.0480	8.1min	1.0114	1.0172	1.0226	1.0283
	Level 1	5.9sec	1.5110	1.5977	1.7151	2.1164	5.7sec	1.5077	1.6147	1.7242	1.8877	5.4sec	1.5060	1.6094	1.6826	1.9869	3.1sec	1.4561	1.5136	1.5960	1.7347	1.4sec	1.4736	1.5518	1.6064	1.6725
	Level 2	11.8sec	1.2787	1.4065	1.4885	1.8117	11.4sec	1.3191	1.3997	1.5123	1.5953	10.8sec	1.2786	1.3905	1.4925	1.8500	6.2sec	1.2270	1.2712	1.3300	1.4680	2.8sec	1.2380	1.3003	1.3594	1.4225
	Level 3	23.6sec	1.1834	1.2698	1.3649	1.5494	22.8sec	1.2073	1.2520	1.3534	1.4679	21.5sec	1.1547	1.2549	1.3516	1.6306	12.4sec	1.1134	1.1427	1.1842	1.2659	5.5sec	1.1278	1.1678	1.2058	1.2506
3	**Level 4**	47.3sec	1.1253	1.1917	1.2674	1.4282	45.7sec	1.1340	1.1791	1.2600	1.3554	43sec	1.1065	1.1983	1.2440	1.4968	24.8sec	1.0593	1.0806	1.1163	1.1544	11sec	1.0704	1.0992	1.1211	1.1727
months	**Level 5**	1.6min	1.0842	1.1424	1.1957	1.3251	1.5min	1.0829	1.1259	1.1783	1.2583	1.4min	1.0738	1.1327	1.1928	1.4473	49.6sec	1.0326	1.0489	1.0728	1.0904	22.1sec	1.0392	1.0606	1.0775	1.1106
before	**Level 6**	3.2min	1.0581	1.0937	1.1388	1.2201	3min	1.0632	1.0850	1.1252	1.1972	2.9min	1.0427	1.0943	1.1349	1.2549	1.7min	1.0202	1.0321	1.0440	1.0608	44.1sec	1.0251	1.0390	1.0496	1.0702
	Level 7	6.3min	1.0426	1.0657	1.0978	1.1530	6.1min	1.0425	1.0577	1.0892	1.1465	5.7min	1.0251	1.0621	1.0963	1.2114	3.3min	1.0131	1.0221	1.0312	1.0441	1.5min	1.0168	1.0257	1.0327	1.0470
	Level 8	12.6min	1.0307	1.0491	1.0707	1.1059	12.2min	1.0306	1.0440	1.0688	1.1059	11.5min	1.0182	1.0457	1.0824	1.1786	6.6min	1.0100	1.0174	1.0265	1.0392	2.9min	1.0128	1.0188	1.0241	1.0338
	Level 9	25.2min	1.0252	1.0427	1.0618	1.0960	24.4min	1.0252	1.0403	1.0594	1.1089	22.9min	1.0173	1.0457	1.0865	1.1952	13.2min	1.0098	1.0183	1.0264	1.0452	5.9min	1.0111	1.0172	1.0226	1.0314
	Level 1	5.7sec	1.4671	1.5283	1.6058	1.7707	3sec	1.4707	1.5250	1.5843	1.7362	2.7sec	1.4865	1.5382	1.5911	1.7165	1.7sec	1.4815	1.5229	1.5679	1.6506	1sec	1.4734	1.5198	1.5710	1.6393
	Level 2	11.4sec	1.2281	1.3002	1.3671	1.5191	5.9sec	1.2512	1.3012	1.3540	1.5078	5.3sec	1.2475	1.3071	1.3587	1.4998	3.3sec	1.2362	1.2737	1.3237	1.4048	2.1sec	1.2290	1.2721	1.3067	1.3776
	Level 3	22.8sec	1.1203	1.1758	1.2362	1.3563	11.8sec	1.1425	1.1893	1.2255	1.3428	10.7sec	1.1378	1.1869	1.2437	1.3629	6.6sec	1.1225	1.1485	1.1832	1.2465	4.1sec	1.1158	1.1446	1.1670	1.2176
1	**Level 4**	45.6sec	1.0702	1.1087	1.1615	1.2598	23.7sec	1.0913	1.1278	1.1572	1.2437	21.4sec	1.0848	1.1274	1.1722	1.2588	13.2sec	1.0665	1.0845	1.1150	1.1594	8.3sec	1.0580	1.0794	1.0963	1.1309
Year	**Level 5**	1.5min	1.0428	1.0743	1.1109	1.1916	47.4sec	1.0598	1.0902	1.1135	1.1722	42.7sec	1.0583	1.0874	1.1232	1.1876	26.4sec	1.0377	1.0560	1.0771	1.1148	16.5sec	1.0310	1.0471	1.0596	1.0863
before	**Level 6**	3min	1.0297	1.0518	1.0810	1.1357	1.6min	1.0399	1.0629	1.0784	1.1231	1.4min	1.0399	1.0605	1.0873	1.1324	52.9sec	1.0239	1.0381	1.0534	1.0780	33sec	1.0187	1.0299	1.0400	1.0575
	Level 7	6.1min	1.0204	1.0366	1.0563	1.0967	3.2min	1.0266	1.0424	1.0540	1.0856	2.8min	1.0261	1.0424	1.0609	1.0933	1.8min	1.0169	1.0269	1.0373	1.0556	1.1min	1.0127	1.0206	1.0275	1.0390
	Level 8	12.2min	1.0149	1.0270	1.0420	1.0701	6.3min	1.0191	1.0302	1.0391	1.0653	5.7min	1.0176	1.0304	1.0446	1.0739	3.5min	1.0129	1.0200	1.0276	1.0411	2.2min	1.0094	1.0152	1.0200	1.0284
	Level 9	24.3min	1.0130	1.0246	1.0371	1.0630	12.6min	1.0163	1.0258	1.0334	1.0593	11.4min	1.0153	1.0265	1.0379	1.0692	7.1min	1.0114	1.0184	1.0253	1.0374	4.4min	1.0084	1.0134	1.0173	1.0249

Notes: This table reports EDH future contracts median results for ask variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDH contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.6: EDH futures contracts median results for bid variance

Bid Variance		EDH0 Median					EDH1 Median					EDH2 Median					EDH3 Median					EDH4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	8.9sec	1.6563	1.8008	1.9535	3.3829	12.6sec	1.5043	1.5625	1.8451	3.7897	13.1sec	1.5028	1.5770	1.8403	2.5987	11.6sec	1.5305	1.6255	1.7164	2.2232	11.8sec	1.5022	1.6978	1.9589	2.5266
	Level 2	17.9sec	1.4598	1.5811	1.8113	2.5831	25.2sec	1.2678	1.3699	1.5101	4.6803	26.2sec	1.2781	1.3206	1.6464	2.1071	23.2sec	1.2770	1.4846	1.6061	3.1826	23.6sec	1.2575	1.4868	1.8159	2.3703
	Level 3	35.8sec	1.2796	1.3828	1.4776	1.9968	50.3sec	1.1578	1.2523	1.3479	3.2938	52.4sec	1.1605	1.2025	1.3899	1.9186	46.4sec	1.1603	1.4018	1.4642	6.2592	47.1sec	1.1312	1.3592	1.5523	1.7033
	Level 4	1.2min	1.1745	1.2771	1.3409	1.8443	1.7min	1.1073	1.1699	1.2354	2.5940	1.7min	1.0942	1.1395	1.2588	1.6340	1.5min	1.0922	1.2400	1.3277	10.1134	1.6min	1.0701	1.2837	1.3497	1.3844
	Level 5	2.4min	1.123	1.1875	1.2642	1.771	3.4min	1.0630	1.1116	1.1935	1.9647	3.5min	1.0553	1.0948	1.1633	1.4322	3.1min	1.0617	1.1443	1.2121	14.1720	3.1min	1.0431	1.1720	1.2393	1.2606
	Level 6	4.8min	1.0783	1.132	1.2092	1.5895	6.7min	1.0473	1.0841	1.1504	1.6961	7min	1.0407	1.0668	1.1201	1.2680	6.2min	1.0432	1.0833	1.1291	13.9649	6.3min	1.0285	1.0989	1.1265	1.2032
	Level 7	9.5min	1.0684	1.1082	1.1748	1.4766	13.4min	1.0364	1.0788	1.1388	1.5917	14min	1.0306	1.0500	1.0968	1.1782	12.4min	1.0284	1.0496	1.0769	9.9863	12.6min	1.0150	1.0543	1.0849	1.1422
	Level 8	19.1min	1.0469	1.0847	1.1663	1.3792	26.8min	1.0312	1.0747	1.1238	1.4881	28min	1.0221	1.0425	1.0765	1.1533	24.7min	1.0199	1.0333	1.0551	7.6268	25.1min	1.0117	1.0318	1.0516	1.1027
	Level 9	38.2min	1.0532	1.0771	1.1681	1.3946	53.7min	1.0310	1.0830	1.1335	1.4762	55.9min	1.0216	1.0435	1.0679	1.1471	49.5min	1.0183	1.0263	1.0643	8.2292	50.3min	1.0088	1.0221	1.0369	1.0906
60 days before	Level 1	4.3sec	1.4953	1.718	1.8336	2.32	5.4sec	1.5115	1.6263	1.7533	3.3539	6sec	1.5093	1.5751	1.6655	2.0013	6.4sec	1.5079	1.6342	1.7594	2.1235	7.4sec	1.5093	1.6927	1.8320	2.6237
	Level 2	8.7sec	1.2747	1.4827	1.6574	2.2108	10.7sec	1.2722	1.4105	1.5042	4.0972	12.1sec	1.2936	1.3537	1.4465	1.8961	12.8sec	1.2948	1.4648	1.6408	2.6785	14.9sec	1.2806	1.4639	1.6655	2.5182
	Level 3	17.3sec	1.2116	1.3465	1.4544	1.9764	21.5sec	1.1612	1.2659	1.3557	3.2266	24.2sec	1.1617	1.2181	1.3273	1.6396	25.5sec	1.1747	1.3214	1.4561	2.2599	29.8sec	1.1821	1.3309	1.4168	2.0118
	Level 4	34.7sec	1.1331	1.2427	1.3132	1.6689	43sec	1.1138	1.1729	1.2690	3.0430	48.3sec	1.1003	1.1520	1.2143	1.4060	51sec	1.1010	1.1914	1.3055	1.8695	59.6sec	1.0965	1.1963	1.3242	1.8574
	Level 5	1.2min	1.0947	1.1609	1.2404	1.4918	1.4min	1.0711	1.1213	1.1935	2.6637	1.6min	1.0626	1.0978	1.1409	1.2537	1.7min	1.0677	1.1146	1.2092	1.5563	2min	1.0563	1.1150	1.1781	1.5855
	Level 6	2.3min	1.0692	1.119	1.1714	1.4261	2.9min	1.0457	1.0848	1.1486	2.2084	3.2min	1.0407	1.0662	1.0924	1.1809	3.4min	1.0353	1.0602	1.1203	1.3294	4min	1.0309	1.0671	1.1228	1.4002
	Level 7	4.6min	1.0469	1.0867	1.1422	1.3251	5.7min	1.0320	1.0663	1.1083	1.8807	6.4min	1.0306	1.0479	1.0656	1.1293	6.8min	1.0218	1.0380	1.0706	1.2488	7.9min	1.0158	1.0453	1.0729	1.2734
	Level 8	9.2min	1.0355	1.0683	1.118	1.2813	11.5min	1.0260	1.0599	1.0906	1.6707	12.9min	1.0221	1.0327	1.0481	1.1075	13.6min	1.0138	1.0268	1.0551	1.1737	15.9min	1.0117	1.0247	1.0444	1.2020
	Level 9	18.5min	1.0321	1.0593	1.1252	1.3213	22.9min	1.0235	1.0593	1.0849	1.6234	25.8min	1.0195	1.0274	1.0422	1.0985	27.2min	1.0106	1.0222	1.0438	1.1542	31.8min	1.0088	1.0187	1.0369	1.1421
3 months before	Level 1	2.5sec	1.5	1.7032	1.7942	2.03	3.2sec	1.5137	1.6223	1.7403	2.0210	3.9sec	1.5093	1.5832	1.6898	1.9425	4.4sec	1.5002	1.5934	1.7089	2.0027	5.1sec	1.5093	1.6899	1.8142	2.5266
	Level 2	5.1sec	1.3165	1.4598	1.6096	1.8769	6.3sec	1.2835	1.3906	1.4676	1.8027	7.9sec	1.2897	1.3590	1.4391	1.6967	8.7sec	1.2533	1.4106	1.5732	1.9563	10.2sec	1.2806	1.4112	1.6066	2.3703
	Level 3	10.2sec	1.2148	1.31	1.4515	1.6474	12.6sec	1.1701	1.2439	1.3098	1.6921	15.7sec	1.1674	1.2263	1.3092	1.5600	17.4sec	1.1341	1.2455	1.3790	1.8511	20.4sec	1.1686	1.2940	1.3781	1.7033
	Level 4	20.4sec	1.1558	1.2072	1.2968	1.4901	25.2sec	1.1187	1.1653	1.2223	1.5229	31.5sec	1.1053	1.1524	1.2090	1.3770	34.9sec	1.0768	1.1541	1.2390	1.5606	40.7sec	1.0990	1.1900	1.2513	1.4611
	Level 5	40.8sec	1.1001	1.1394	1.2135	1.3984	50.4sec	1.0820	1.1079	1.1564	1.3634	1min	1.0639	1.0977	1.1380	1.2537	1.2min	1.0462	1.0884	1.1439	1.3408	1.4min	1.0563	1.1106	1.1781	1.2960
	Level 6	1.4min	1.0665	1.1068	1.151	1.3071	1.7min	1.0534	1.0779	1.1061	1.3513	2.1min	1.0430	1.0657	1.0883	1.1809	2.3min	1.0286	1.0551	1.0833	1.2031	2.7min	1.0323	1.0679	1.1134	1.2032
	Level 7	2.7min	1.0467	1.0695	1.1095	1.2412	3.4min	1.0364	1.0565	1.0860	1.3013	4.2min	1.0305	1.0446	1.0625	1.1293	4.6min	1.0187	1.0323	1.0496	1.1362	5.4min	1.0173	1.0453	1.0729	1.1422
	Level 8	5.4min	1.0333	1.0473	1.0853	1.2167	6.7min	1.0261	1.0425	1.0673	1.2734	8.4min	1.0218	1.0319	1.0443	1.0945	9.3min	1.0139	1.0216	1.0372	1.1103	10.9min	1.0121	1.0294	1.0444	1.1027
	Level 9	10.9min	1.0272	1.0427	1.0812	1.2367	13.4min	1.0222	1.0341	1.0662	1.2859	16.8min	1.0193	1.0272	1.0376	1.0922	18.6min	1.0117	1.0191	1.0393	1.1235	21.7min	1.0090	1.0260	1.0408	1.0906
1 Year before	Level 1	1.3sec	1.4901	1.5431	1.6183	1.7574	1.9sec	1.4972	1.5636	1.6388	1.7527	2.7sec	1.4913	1.5624	1.6260	1.7515	2.9sec	1.5014	1.5768	1.6665	1.8500	3.2sec	1.5239	1.6114	1.7132	1.9420
	Level 2	2.7sec	1.2563	1.3064	1.3823	1.5566	3.8sec	1.2750	1.3376	1.4078	1.5107	5.5sec	1.2683	1.3295	1.3940	1.5112	5.9sec	1.2753	1.3617	1.4605	1.6627	6.4sec	1.3014	1.3932	1.5142	1.7038
	Level 3	5.3sec	1.1422	1.1927	1.2505	1.4145	7.7sec	1.1612	1.2103	1.2679	1.3538	10.9sec	1.1552	1.2071	1.2565	1.3539	11.7sec	1.1646	1.2242	1.3122	1.4577	12.9sec	1.1871	1.2473	1.3358	1.4971
	Level 4	10.6sec	1.0903	1.1264	1.1818	1.285	15.3sec	1.0993	1.1365	1.1753	1.2509	21.8sec	1.0943	1.1355	1.1683	1.2429	23.5sec	1.0978	1.1497	1.1946	1.3033	25.7sec	1.1150	1.1601	1.2183	1.3401
	Level 5	21.3sec	1.0596	1.089	1.1285	1.2068	30.6sec	1.0634	1.0900	1.1204	1.1623	43.7sec	1.0589	1.0896	1.1112	1.1666	46.9sec	1.0628	1.0918	1.1235	1.1979	51.4sec	1.0677	1.0992	1.1357	1.2293
	Level 6	42.6sec	1.0401	1.0605	1.0885	1.1486	1min	1.0428	1.0607	1.0830	1.1153	1.5min	1.0380	1.0604	1.0739	1.1140	1.6min	1.0397	1.0585	1.0826	1.1280	1.7min	1.0409	1.0616	1.0853	1.1418
	Level 7	1.4min	1.0279	1.0418	1.0602	1.1049	2min	1.0286	1.0417	1.0568	1.0880	2.9min	1.0254	1.0402	1.0505	1.0782	3.1min	1.0256	1.0385	1.0555	1.0919	3.4min	1.0249	1.0394	1.0533	1.0870
	Level 8	2.8min	1.0196	1.03	1.044	1.0796	4.1min	1.0210	1.0308	1.0419	1.0688	5.8min	1.0173	1.0277	1.0364	1.0570	6.3min	1.0180	1.0281	1.0404	1.0698	6.9min	1.0168	1.0266	1.0375	1.0641
	Level 9	5.7min	1.0163	1.0255	1.0376	1.0691	8.2min	1.0182	1.0282	1.0376	1.0659	11.6min	1.0145	1.0231	1.0315	1.0503	12.5min	1.0152	1.0257	1.0364	1.0744	13.7min	1.0140	1.0222	1.0325	1.0562

Notes: This table reports EDH future contracts median results for bid variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDH contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.6: EDH futures contracts median results for bid variance – Continued

Bid Variance		EDH5 Median					EDH6 Median					EDH7 Median					EDH8 Median					EDH9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.1sec	1.5506	1.6546	1.8682	2.2685	21.2sec	1.5544	1.7063	1.8253	2.1986	17.9sec	1.5103	1.5826	1.6267	2.0235	9.1sec	1.5041	1.6078	1.6972	1.8736	3.5sec	1.4782	1.5763	1.6461	1.7168
	Level 2	32.2sec	1.3329	1.5359	1.6606	1.9511	42.4sec	1.3249	1.5354	1.5677	1.9756	35.7sec	1.2647	1.3829	1.4534	2.0380	18.1sec	1.2497	1.3524	1.4424	1.5839	7.1sec	1.2608	1.3331	1.3687	1.4260
	Level 3	1.1min	1.2200	1.3781	1.4790	1.9207	1.4min	1.2172	1.3565	1.4127	1.7742	1.2min	1.1366	1.2304	1.3229	1.8224	36.2sec	1.1380	1.1894	1.2533	1.3159	14.1sec	1.1394	1.1905	1.2157	1.2592
30	Level 4	2.1min	1.1554	1.2780	1.3469	1.7795	2.8min	1.1437	1.2611	1.3221	1.5963	2.4min	1.0819	1.1478	1.2294	1.5705	1.2min	1.0747	1.1053	1.1489	1.1916	28.2sec	1.0829	1.1052	1.1298	1.2001
days	Level 5	4.3min	1.1163	1.1951	1.2641	1.5504	5.7min	1.0912	1.1784	1.2266	1.5185	4.8min	1.0389	1.1020	1.1432	1.3905	2.4min	1.0425	1.0614	1.0796	1.1065	56.5sec	1.0542	1.0633	1.0867	1.1203
before	Level 6	8.6min	1.0737	1.1355	1.1977	1.3628	11.3min	1.0784	1.1235	1.1672	1.3651	9.5min	1.0338	1.0657	1.1132	1.2474	4.8min	1.0276	1.0388	1.0472	1.0792	1.9min	1.0328	1.0432	1.0540	1.0783
	Level 7	17.2min	1.0477	1.0965	1.1464	1.2468	22.6min	1.0588	1.1012	1.1286	1.3040	19.1min	1.0257	1.0478	1.1027	1.1728	9.7min	1.0192	1.0256	1.0332	1.0620	3.8min	1.0208	1.0298	1.0389	1.0548
	Level 8	34.4min	1.0329	1.0733	1.1047	1.1737	45.2min	1.0438	1.0928	1.1018	1.2651	38.1min	1.0162	1.0411	1.0918	1.1412	19.3min	1.0163	1.0226	1.0266	1.0519	7.5min	1.0150	1.0220	1.0284	1.0386
	Level 9	68.7min	1.0312	1.0715	1.0880	1.1539	90.5min	1.0500	1.0787	1.1011	1.3131	76.2min	1.0237	1.0403	1.0974	1.1353	38.6min	1.0187	1.0258	1.0329	1.0592	15.1min	1.0138	1.0207	1.0254	1.0357
	Level 1	9.9sec	1.5509	1.6411	1.7321	2.1735	9.4sec	1.5063	1.6675	1.7701	1.9565	8sec	1.5103	1.5748	1.6462	2.0181	4.3sec	1.4873	1.5425	1.5828	1.7315	1.9sec	1.4776	1.5538	1.6026	1.6721
	Level 2	19.7sec	1.3369	1.4195	1.5784	1.8963	18.7sec	1.3144	1.4750	1.5493	1.7813	16sec	1.2674	1.3759	1.4534	2.1690	8.6sec	1.2343	1.2695	1.3333	1.4857	3.8sec	1.2358	1.3177	1.3567	1.3898
	Level 3	39.5sec	1.2167	1.3140	1.4009	1.7289	37.4sec	1.2102	1.3296	1.3919	1.5225	32sec	1.1719	1.2369	1.3349	1.7112	17.2sec	1.1174	1.1397	1.1807	1.2759	7.6sec	1.1315	1.1801	1.2014	1.2455
60	Level 4	1.3min	1.1512	1.2286	1.3005	1.5041	1.2min	1.1354	1.2283	1.2855	1.3732	1.1min	1.1134	1.1623	1.2507	1.4980	34.4sec	1.0614	1.0774	1.1053	1.1551	15.1sec	1.0741	1.1028	1.1225	1.1569
days	Level 5	2.6min	1.1115	1.1636	1.2236	1.3550	2.5min	1.0873	1.1528	1.2103	1.2714	2.1min	1.0696	1.1058	1.1639	1.3407	1.1min	1.0336	1.0455	1.0614	1.0884	30.3sec	1.0438	1.0615	1.0766	1.0975
before	Level 6	5.3min	1.0763	1.1091	1.1494	1.2670	5min	1.0657	1.1037	1.1450	1.2107	4.3min	1.0350	1.0779	1.1209	1.2337	2.3min	1.0215	1.0294	1.0396	1.0613	1min	1.0279	1.0431	1.0505	1.0663
	Level 7	10.5min	1.0509	1.0806	1.1078	1.1816	10min	1.0478	1.0718	1.1012	1.1569	8.5min	1.0257	1.0481	1.0928	1.1576	4.6min	1.0146	1.0210	1.0280	1.0460	2min	1.0188	1.0298	1.0343	1.0458
	Level 8	21.1min	1.0362	1.0579	1.0846	1.1230	20min	1.0334	1.0594	1.0928	1.1189	17.1min	1.0184	1.0387	1.0733	1.1372	9.2min	1.0111	1.0163	1.0237	1.0372	4min	1.0139	1.0220	1.0257	1.0357
	Level 9	42.1min	1.0335	1.0518	1.0770	1.1159	39.9min	1.0300	1.0521	1.0787	1.1185	34.2min	1.0177	1.0346	1.0650	1.1333	18.4min	1.0101	1.0178	1.0258	1.0441	8.1min	1.0125	1.0182	1.0229	1.0333
	Level 1	5.9sec	1.5115	1.6028	1.6958	2.1037	5.7sec	1.5020	1.6165	1.7220	1.8998	5.4sec	1.5080	1.6054	1.6780	2.0071	3.1sec	1.4541	1.5160	1.5953	1.7315	1.4sec	1.4749	1.5537	1.6055	1.6755
	Level 2	11.8sec	1.2814	1.4034	1.5157	1.7425	11.4sec	1.3134	1.3971	1.4943	1.6311	10.8sec	1.2780	1.3912	1.4913	1.8637	6.2sec	1.2269	1.2672	1.3269	1.4579	2.8sec	1.2375	1.3042	1.3567	1.4166
	Level 3	23.6sec	1.1791	1.2749	1.3781	1.5282	22.8sec	1.2006	1.2595	1.3525	1.4413	21.5sec	1.1676	1.2509	1.3466	1.6111	12.4sec	1.1100	1.1404	1.1874	1.2631	5.5sec	1.1274	1.1745	1.2014	1.2500
3	Level 4	47.3sec	1.1209	1.1956	1.2715	1.3640	45.7sec	1.1272	1.1813	1.2464	1.3269	43sec	1.1047	1.1787	1.2453	1.4980	24.8sec	1.0574	1.0795	1.1144	1.1540	11sec	1.0699	1.1015	1.1219	1.1706
months	Level 5	1.6min	1.0835	1.1411	1.2004	1.2973	1.5min	1.0835	1.1280	1.1800	1.2492	1.4min	1.0699	1.1268	1.1867	1.3696	49.6sec	1.0331	1.0479	1.0675	1.0900	22.1sec	1.0412	1.0619	1.0731	1.1004
before	Level 6	3.2min	1.0573	1.0975	1.1377	1.2217	3min	1.0556	1.0851	1.1282	1.1780	2.9min	1.0384	1.0846	1.1316	1.2947	1.7min	1.0219	1.0311	1.0420	1.0613	44.1sec	1.0267	1.0408	1.0505	1.0666
	Level 7	6.3min	1.0408	1.0694	1.0976	1.1552	6.1min	1.0428	1.0599	1.0900	1.1300	5.7min	1.0286	1.0632	1.0928	1.1881	3.3min	1.0149	1.0220	1.0302	1.0455	1.5min	1.0179	1.0279	1.0337	1.0474
	Level 8	12.6min	1.0283	1.0524	1.0705	1.1085	12.2min	1.0289	1.0447	1.0640	1.1065	11.5min	1.0202	1.0491	1.0732	1.1452	6.6min	1.0117	1.0175	1.0248	1.0372	2.9min	1.0129	1.0202	1.0253	1.0371
	Level 9	25.2min	1.0246	1.0449	1.0647	1.0895	24.4min	1.0258	1.0421	1.0603	1.1132	22.9min	1.0207	1.0395	1.0655	1.1373	13.2min	1.0108	1.0184	1.0259	1.0441	5.9min	1.0111	1.0179	1.0227	1.0337
	Level 1	5.7sec	1.4664	1.5285	1.6086	1.7746	3sec	1.4690	1.5237	1.5840	1.7338	2.7sec	1.4861	1.5379	1.5905	1.7125	1.7sec	1.4811	1.5227	1.5698	1.6513	1sec	1.4714	1.5201	1.5686	1.6406
	Level 2	11.4sec	1.2266	1.2977	1.3725	1.5263	5.9sec	1.2507	1.2994	1.3485	1.4934	5.3sec	1.2470	1.3060	1.3570	1.5028	3.3sec	1.2358	1.2736	1.3237	1.4045	2.1sec	1.2327	1.2720	1.3064	1.3735
	Level 3	22.8sec	1.1192	1.1765	1.2368	1.3706	11.8sec	1.1419	1.1888	1.2252	1.3409	10.7sec	1.1360	1.1854	1.2404	1.3541	6.6sec	1.1227	1.1471	1.1844	1.2468	4.1sec	1.1155	1.1447	1.1686	1.2157
1	Level 4	45.6sec	1.0692	1.1085	1.1577	1.2675	23.7sec	1.0919	1.1280	1.1579	1.2403	21.4sec	1.0835	1.1255	1.1700	1.2535	13.2sec	1.0661	1.0855	1.1143	1.1616	8.3sec	1.0593	1.0803	1.0977	1.1297
Year	Level 5	1.5min	1.0420	1.0735	1.1123	1.1960	47.4sec	1.0602	1.0895	1.1118	1.1702	42.7sec	1.0587	1.0864	1.1225	1.1829	26.4sec	1.0381	1.0568	1.0788	1.1161	16.5sec	1.0320	1.0477	1.0599	1.0854
before	Level 6	3min	1.0294	1.0509	1.0797	1.1370	1.6min	1.0405	1.0629	1.0799	1.1227	1.4min	1.0377	1.0607	1.0861	1.1308	52.9sec	1.0242	1.0388	1.0549	1.0809	33sec	1.0191	1.0304	1.0400	1.0566
	Level 7	6.1min	1.0203	1.0368	1.0567	1.0990	3.2min	1.0257	1.0430	1.0551	1.0858	2.8min	1.0265	1.0424	1.0606	1.0928	1.8min	1.0169	1.0266	1.0378	1.0588	1.1min	1.0128	1.0208	1.0275	1.0388
	Level 8	12.2min	1.0147	1.0279	1.0433	1.0718	6.3min	1.0185	1.0307	1.0400	1.0616	5.7min	1.0184	1.0306	1.0439	1.0679	3.5min	1.0126	1.0196	1.0280	1.0446	2.2min	1.0091	1.0152	1.0200	1.0281
	Level 9	24.3min	1.0132	1.0255	1.0375	1.0657	12.6min	1.0168	1.0256	1.0337	1.0604	11.4min	1.0150	1.0265	1.0372	1.0613	7.1min	1.0115	1.0182	1.0253	1.0402	4.4min	1.0083	1.0135	1.0175	1.0251

Notes: This table reports EDH future contracts median results for bid variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDH contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.7: EDH futures contracts median results for bid–ask covariance

Bid–Ask Covariance		EDH0 Median					EDH1 Median					EDH2 Median					EDH3 Median					EDH4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	9.5sec	1.6557	1.7982	1.9179	3.4333	12.1sec	1.5039	1.5656	1.8861	3.7477	13.7sec	1.4978	1.5771	1.7729	2.2186	12sec	1.5358	1.6208	1.6914	2.2095	10.6sec	1.5020	1.6831	1.9595	2.5251
	Level 2	19sec	1.439	1.5581	1.6713	2.9157	24.2sec	1.2687	1.3555	1.5407	4.5208	27.4sec	1.2579	1.3132	1.5691	2.0336	24sec	1.2815	1.4706	1.6413	3.0807	21.3sec	1.2563	1.4819	1.8123	2.3650
	Level 3	38.1sec	1.2781	1.3773	1.4367	2.1689	48.4sec	1.1565	1.2411	1.3631	3.1820	54.8sec	1.1532	1.1714	1.3672	1.8681	47.9sec	1.1585	1.3807	1.4749	4.9991	42.6sec	1.1294	1.3593	1.5470	1.7001
	Level 4	1.3min	1.1645	1.231	1.2741	1.7281	1.6min	1.0917	1.1429	1.2204	2.4122	1.8min	1.0809	1.1130	1.2326	1.5094	1.6min	1.0916	1.2020	1.3112	4.9450	1.4min	1.0671	1.2738	1.3531	1.3840
	Level 5	2.5min	1.111	1.1602	1.1965	1.477	3.2min	1.0604	1.1033	1.1499	1.9084	3.7min	1.0345	1.0636	1.1128	1.2933	3.2min	1.0524	1.1144	1.1839	4.0202	2.8min	1.0378	1.1704	1.2313	1.2715
	Level 6	5.1min	1.0768	1.1072	1.1415	1.3158	6.5min	1.0460	1.0682	1.0995	1.6335	7.3min	1.0215	1.0406	1.0699	1.1793	6.4min	1.0311	1.0654	1.0994	3.2758	5.7min	1.0256	1.0936	1.1204	1.1635
	Level 7	10.2min	1.0533	1.0687	1.0956	1.2043	12.9min	1.0250	1.0435	1.0737	1.3663	14.6min	1.0136	1.0276	1.0436	1.1099	12.8min	1.0169	1.0339	1.0555	2.2983	11.4min	1.0149	1.0472	1.0643	1.1014
	Level 8	20.3min	1.0326	1.0438	1.0624	1.1242	25.8min	1.0163	1.0339	1.0571	1.2412	29.2min	1.0086	1.0170	1.0275	1.0646	25.5min	1.0079	1.0122	1.0261	1.1537	22.7min	1.0083	1.0219	1.0346	1.0552
	Level 9	40.6min	1.0221	1.0324	1.0459	1.1029	51.7min	1.0118	1.0268	1.0430	1.2883	58.4min	1.0055	1.0112	1.0213	1.0461	51.1min	1.0041	1.0087	1.0150	1.0860	45.4min	1.0031	1.0099	1.0198	1.0268
60 days before	Level 1	4.4sec	1.4913	1.6977	1.8428	2.3054	5.4sec	1.5053	1.6217	1.7579	3.3491	6.3sec	1.5001	1.5736	1.6461	1.9482	6.3sec	1.5171	1.6220	1.7648	2.1183	7.4sec	1.5089	1.6913	1.8303	2.6687
	Level 2	8.8sec	1.2791	1.4526	1.6055	2.0778	10.8sec	1.2742	1.4123	1.5018	4.0218	12.5sec	1.2869	1.3468	1.4465	1.9214	12.7sec	1.2983	1.4524	1.6588	2.5476	14.8sec	1.3168	1.4645	1.6258	2.6436
	Level 3	17.7sec	1.21	1.3057	1.3865	1.7121	21.6sec	1.1650	1.2521	1.3510	3.1291	25.1sec	1.1567	1.2024	1.3140	1.5614	25.3sec	1.1779	1.3334	1.4100	2.2005	29.6sec	1.1819	1.3074	1.3842	1.9588
	Level 4	35.4sec	1.1258	1.1992	1.2683	1.4912	43.1sec	1.0975	1.1606	1.2384	2.3029	50.2sec	1.0906	1.1267	1.1991	1.4255	50.7sec	1.0944	1.1724	1.2817	1.8418	59.1sec	1.0964	1.1886	1.3195	1.7009
	Level 5	1.2min	1.0836	1.1232	1.1886	1.4019	1.4min	1.0598	1.1037	1.1442	1.8758	1.7min	1.0516	1.0774	1.1143	1.2204	1.7min	1.0575	1.0940	1.1727	1.5325	2min	1.0378	1.0967	1.1706	1.2715
	Level 6	2.4min	1.0504	1.0808	1.1229	1.2886	2.9min	1.0388	1.0658	1.0960	1.5893	3.3min	1.0317	1.0485	1.0695	1.1282	3.4min	1.0280	1.0538	1.0994	1.2965	3.9min	1.0241	1.0515	1.0951	1.1635
	Level 7	4.7min	1.0295	1.0558	1.0874	1.1752	5.7min	1.0192	1.0407	1.0605	1.2559	6.7min	1.0193	1.0301	1.0418	1.0790	6.8min	1.0137	1.0275	1.0555	1.2062	7.9min	1.0121	1.0258	1.0490	1.1014
	Level 8	9.4min	1.018	1.0359	1.0558	1.1099	11.5min	1.0110	1.0262	1.0354	1.1542	13.4min	1.0129	1.0186	1.0251	1.0541	13.5min	1.0060	1.0122	1.0261	1.0725	15.8min	1.0061	1.0149	1.0234	1.0552
	Level 9	18.9min	1.0096	1.0208	1.0367	1.0807	23min	1.0063	1.0161	1.0273	1.1262	26.7min	1.0073	1.0105	1.0155	1.0365	27min	1.0015	1.0087	1.0150	1.0433	31.5min	1.0029	1.0089	1.0148	1.0268
3 months before	Level 1	2.6sec	1.5	1.6865	1.7999	1.9665	3.2sec	1.5063	1.6208	1.7109	2.0115	4.1sec	1.5024	1.5811	1.6852	1.9279	4.4sec	1.5006	1.5925	1.7097	1.9960	5sec	1.5089	1.6704	1.8086	2.0707
	Level 2	5.2sec	1.292	1.4226	1.585	1.7712	6.4sec	1.2859	1.3701	1.4737	1.8088	8.1sec	1.2819	1.3534	1.4421	1.7001	8.8sec	1.2540	1.4103	1.5509	1.9558	9.9sec	1.2904	1.4056	1.5902	2.0351
	Level 3	10.4sec	1.2039	1.2848	1.3774	1.5499	12.8sec	1.1734	1.2392	1.3115	1.6902	16.3sec	1.1590	1.2083	1.2962	1.5524	17.7sec	1.1338	1.2496	1.3757	1.7405	19.9sec	1.1730	1.2863	1.3673	1.6313
	Level 4	20.7sec	1.1316	1.1844	1.2517	1.4017	25.5sec	1.1064	1.1474	1.1985	1.3165	32.5sec	1.1003	1.1318	1.2019	1.3696	35.3sec	1.0753	1.1529	1.2128	1.4558	39.8sec	1.0963	1.1673	1.2287	1.4381
	Level 5	41.5sec	1.0872	1.1194	1.1688	1.2701	51sec	1.0707	1.0989	1.1280	1.2964	1.1min	1.0567	1.0796	1.1187	1.2204	1.2min	1.0415	1.0850	1.1176	1.2823	1.3min	1.0482	1.0955	1.1650	1.2636
	Level 6	1.4min	1.0527	1.0768	1.107	1.1832	1.7min	1.0408	1.0625	1.0835	1.2043	2.2min	1.0342	1.0523	1.0704	1.1282	2.4min	1.0211	1.0427	1.0706	1.1615	2.7min	1.0268	1.0518	1.0879	1.1453
	Level 7	2.8min	1.0315	1.0482	1.0685	1.1115	3.4min	1.0208	1.0355	1.0529	1.1015	4.3min	1.0212	1.0301	1.0418	1.0790	4.7min	1.0111	1.0238	1.0377	1.0904	5.3min	1.0149	1.0283	1.0455	1.0770
	Level 8	5.5min	1.0182	1.026	1.0422	1.0743	6.8min	1.0119	1.0219	1.0333	1.0597	8.7min	1.0129	1.0185	1.0251	1.0484	9.4min	1.0057	1.0122	1.0196	1.0566	10.6min	1.0083	1.0154	1.0251	1.0405
	Level 9	11.1min	1.0109	1.0193	1.0282	1.0492	13.6min	1.0064	1.0124	1.0230	1.0448	17.4min	1.0076	1.0103	1.0146	1.0339	18.8min	1.0023	1.0075	1.0112	1.0339	21.2min	1.0031	1.0101	1.0142	1.0265
1 Year before	Level 1	1.3sec	1.4875	1.5387	1.6087	1.7495	1.9sec	1.4957	1.5620	1.6310	1.7361	2.8sec	1.4873	1.5549	1.6248	1.7481	3sec	1.4992	1.5751	1.6573	1.8520	3.1sec	1.5169	1.6063	1.7134	1.9382
	Level 2	2.7sec	1.2535	1.2978	1.3714	1.5277	3.8sec	1.2705	1.3270	1.3980	1.5033	5.6sec	1.2577	1.3216	1.3821	1.5000	5.9sec	1.2729	1.3470	1.4496	1.6892	6.2sec	1.2959	1.3835	1.4935	1.6917
	Level 3	5.4sec	1.1382	1.1806	1.2377	1.3608	7.6sec	1.1549	1.2028	1.2505	1.3510	11.2sec	1.1505	1.1996	1.2470	1.3370	11.9sec	1.1566	1.2144	1.2881	1.4256	12.5sec	1.1781	1.2404	1.3275	1.4881
	Level 4	10.8sec	1.0818	1.1129	1.163	1.2466	15.3sec	1.0913	1.1237	1.1597	1.2248	22.3sec	1.0900	1.1222	1.1575	1.2283	23.7sec	1.0901	1.1377	1.1769	1.2741	25sec	1.1021	1.1491	1.1995	1.3233
	Level 5	21.5sec	1.0503	1.0734	1.1073	1.171	30.6sec	1.0580	1.0786	1.1026	1.1408	44.7sec	1.0524	1.0775	1.0995	1.1491	47.4sec	1.0546	1.0822	1.1115	1.1765	49.9sec	1.0572	1.0863	1.1185	1.1997
	Level 6	43.1sec	1.0312	1.0468	1.0697	1.1075	1min	1.0354	1.0484	1.0644	1.0885	1.5min	1.0323	1.0480	1.0624	1.0951	1.6min	1.0303	1.0472	1.0673	1.1029	1.7min	1.0318	1.0491	1.0676	1.1172
	Level 7	1.4min	1.0194	1.0286	1.0424	1.0685	2min	1.0206	1.0290	1.0384	1.0546	3min	1.0197	1.0293	1.0386	1.0590	3.2min	1.0176	1.0267	1.0376	1.0606	3.3min	1.0174	1.0266	1.0369	1.0617
	Level 8	2.9min	1.0123	1.0181	1.026	1.0438	4.1min	1.0119	1.0168	1.0229	1.0339	6min	1.0111	1.0171	1.0228	1.0344	6.3min	1.0099	1.0153	1.0215	1.0337	6.7min	1.0093	1.0144	1.0192	1.0313
	Level 9	5.7min	1.0086	1.013	1.0183	1.0311	8.2min	1.0072	1.0106	1.0140	1.0222	11.9min	1.0067	1.0105	1.0141	1.0219	12.6min	1.0058	1.0099	1.0135	1.0218	13.3min	1.0046	1.0078	1.0116	1.0177

Notes: This table reports EDH future contracts median results for bid–ask covariance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDH contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.7: EDH futures contracts median results for bid–ask covariance – Continued

Bid–Ask Covariance		EDH5 Median					EDH6 Median					EDH7 Median					EDH8 Median					EDH9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.1sec	1.5488	1.6538	1.8818	2.2453	21.2sec	1.5542	1.7064	1.8186	2.1705	17.9sec	1.5118	1.5871	1.6317	2.0111	9.1sec	1.5075	1.6057	1.6863	1.8746	3.5sec	1.4759	1.5737	1.6453	1.7163
	Level 2	32.2sec	1.3350	1.4968	1.6714	1.9449	42.4sec	1.3253	1.5207	1.5619	1.8968	35.7sec	1.2668	1.3862	1.4512	2.0218	18.1sec	1.2496	1.3479	1.4327	1.6014	7.1sec	1.2536	1.3349	1.3620	1.4224
	Level 3	1.1min	1.2286	1.3578	1.4816	1.8806	1.4min	1.2073	1.3422	1.4118	1.7019	1.2min	1.1365	1.2309	1.3010	1.8295	36.2sec	1.1390	1.1825	1.2356	1.3144	14.1sec	1.1352	1.1851	1.2139	1.2440
30	**Level 4**	2.1min	1.1463	1.2362	1.3363	1.7335	2.8min	1.1356	1.2529	1.3009	1.5235	2.4min	1.0784	1.1400	1.2163	1.5649	1.2min	1.0737	1.1032	1.1417	1.1769	28.2sec	1.0775	1.0971	1.1212	1.1854
days	**Level 5**	4.3min	1.1057	1.1843	1.2300	1.4782	5.7min	1.0790	1.1449	1.1989	1.4257	4.8min	1.0359	1.0948	1.1419	1.3571	2.4min	1.0387	1.0567	1.0748	1.1006	56.5sec	1.0442	1.0553	1.0726	1.1028
before	**Level 6**	8.6min	1.0645	1.1137	1.1472	1.3038	11.3min	1.0620	1.1024	1.1396	1.2517	9.5min	1.0338	1.0578	1.0883	1.2168	4.8min	1.0220	1.0311	1.0392	1.0537	1.9min	1.0245	1.0326	1.0412	1.0604
	Level 7	17.2min	1.0424	1.0799	1.1009	1.1980	22.6min	1.0423	1.0729	1.1007	1.1740	19.1min	1.0224	1.0420	1.0733	1.1392	9.7min	1.0128	1.0186	1.0225	1.0371	3.8min	1.0140	1.0183	1.0243	1.0347
	Level 8	34.4min	1.0275	1.0547	1.0683	1.1239	45.2min	1.0287	1.0586	1.0690	1.1258	38.1min	1.0118	1.0262	1.0631	1.0996	19.3min	1.0093	1.0135	1.0160	1.0294	7.5min	1.0087	1.0110	1.0158	1.0225
	Level 9	68.7min	1.0196	1.0437	1.0560	1.0905	90.5min	1.0251	1.0514	1.0546	1.1399	76.2min	1.0149	1.0253	1.0589	1.1047	38.6min	1.0092	1.0131	1.0167	1.0283	15.1min	1.0065	1.0087	1.0127	1.0178
	Level 1	9.9sec	1.5474	1.6404	1.7480	2.1733	9.4sec	1.5015	1.6628	1.7598	1.9404	8sec	1.5037	1.5852	1.6364	2.0051	4.3sec	1.4860	1.5429	1.5837	1.7271	1.9sec	1.4751	1.5521	1.6026	1.6656
	Level 2	19.7sec	1.3378	1.4152	1.5847	1.8617	18.7sec	1.3151	1.4779	1.5512	1.7577	16sec	1.2668	1.3807	1.4541	2.1884	8.6sec	1.2334	1.2685	1.3318	1.4814	3.8sec	1.2349	1.3161	1.3550	1.3912
	Level 3	39.5sec	1.2102	1.3140	1.3937	1.6965	37.4sec	1.2048	1.3296	1.3734	1.4948	32sec	1.1379	1.2409	1.3242	1.7170	17.2sec	1.1156	1.1390	1.1725	1.2766	7.6sec	1.1284	1.1759	1.2007	1.2337
60	**Level 4**	1.3min	1.1418	1.2197	1.2794	1.4700	1.2min	1.1301	1.2152	1.2621	1.3686	1.1min	1.1126	1.1596	1.2204	1.4166	34.5sec	1.0601	1.0754	1.1005	1.1514	15.1sec	1.0701	1.0964	1.1144	1.1439
days	**Level 5**	2.6min	1.0987	1.1394	1.2053	1.3296	2.5min	1.0794	1.1411	1.1899	1.2590	2.1min	1.0697	1.1034	1.1423	1.2790	1.1min	1.0302	1.0429	1.0567	1.0789	30.3sec	1.0386	1.0551	1.0680	1.0853
before	**Level 6**	5.3min	1.0651	1.0885	1.1264	1.2160	5min	1.0591	1.0911	1.1342	1.1854	4.3min	1.0352	1.0639	1.0974	1.1886	2.3min	1.0185	1.0252	1.0347	1.0514	1min	1.0226	1.0318	1.0415	1.0524
	Level 7	10.5min	1.0416	1.0567	1.0861	1.1390	10min	1.0405	1.0603	1.0863	1.1252	8.5min	1.0224	1.0429	1.0733	1.1376	4.6min	1.0112	1.0159	1.0203	1.0290	2min	1.0137	1.0186	1.0253	1.0321
	Level 8	21.1min	1.0269	1.0382	1.0568	1.0884	20min	1.0250	1.0440	1.0586	1.0872	17.1min	1.0118	1.0268	1.0538	1.0900	9.2min	1.0072	1.0109	1.0150	1.0215	4min	1.0087	1.0124	1.0164	1.0218
	Level 9	42.1min	1.0208	1.0312	1.0439	1.0671	39.9min	1.0205	1.0359	1.0514	1.0726	34.2min	1.0149	1.0214	1.0311	1.0957	18.4min	1.0052	1.0093	1.0135	1.0227	8.1min	1.0065	1.0093	1.0124	1.0174
	Level 1	5.9sec	1.5121	1.6035	1.7048	2.1105	5.7sec	1.5034	1.6157	1.7167	1.8906	5.4sec	1.5050	1.5913	1.6764	2.0009	3.1sec	1.4548	1.5144	1.5931	1.7271	1.4sec	1.4743	1.5501	1.6060	1.6706
	Level 2	11.8sec	1.2794	1.3982	1.4968	1.8014	11.4sec	1.3126	1.3914	1.5037	1.5969	10.8sec	1.2773	1.3844	1.4766	1.8551	6.2sec	1.2266	1.2674	1.3270	1.4611	2.8sec	1.2349	1.3006	1.3550	1.4155
	Level 3	23.6sec	1.1801	1.2660	1.3578	1.5163	22.8sec	1.2003	1.2511	1.3435	1.4406	21.5sec	1.1533	1.2409	1.3324	1.6039	12.4sec	1.1103	1.1390	1.1796	1.2614	5.5sec	1.1243	1.1633	1.1996	1.2422
3	**Level 4**	47.3sec	1.1207	1.1850	1.2542	1.3512	45.7sec	1.1244	1.1713	1.2355	1.3038	43sec	1.1036	1.1779	1.2279	1.4166	24.8sec	1.0569	1.0757	1.1082	1.1455	11sec	1.0687	1.0949	1.1144	1.1559
months	**Level 5**	1.6min	1.0797	1.1286	1.1825	1.2386	1.5min	1.0790	1.1156	1.1650	1.2273	1.4min	1.0702	1.1151	1.1640	1.3067	49.6sec	1.0296	1.0435	1.0618	1.0811	22.1sec	1.0361	1.0552	1.0675	1.0907
before	**Level 6**	3.2min	1.0494	1.0815	1.1141	1.1845	3min	1.0535	1.0755	1.1095	1.1622	2.9min	1.0379	1.0797	1.1102	1.2450	1.7min	1.0175	1.0266	1.0355	1.0514	44.1sec	1.0216	1.0328	1.0404	1.0551
	Level 7	6.3min	1.0313	1.0514	1.0728	1.1089	6.1min	1.0332	1.0481	1.0688	1.1094	5.7min	1.0228	1.0484	1.0763	1.1408	3.3min	1.0108	1.0175	1.0224	1.0330	1.5min	1.0135	1.0197	1.0248	1.0342
	Level 8	12.6min	1.0211	1.0341	1.0502	1.0786	12.2min	1.0199	1.0307	1.0473	1.0748	11.5min	1.0150	1.0338	1.0534	1.1092	6.6min	1.0073	1.0112	1.0152	1.0230	2.9min	1.0086	1.0130	1.0160	1.0224
	Level 9	25.2min	1.0163	1.0266	1.0395	1.0593	24.4min	1.0163	1.0251	1.0371	1.0622	22.9min	1.0150	1.0260	1.0431	1.1019	13.2min	1.0057	1.0093	1.0135	1.0212	5.9min	1.0065	1.0096	1.0119	1.0175
	Level 1	5.7sec	1.4667	1.5276	1.6046	1.7685	3sec	1.4696	1.5249	1.5815	1.7293	2.7sec	1.4856	1.5366	1.5908	1.7080	1.7sec	1.4790	1.5212	1.5689	1.6493	1sec	1.4723	1.5206	1.5693	1.6381
	Level 2	11.4sec	1.2247	1.2934	1.3653	1.5008	5.9sec	1.2497	1.2937	1.3481	1.4979	5.3sec	1.2461	1.3024	1.3537	1.4930	3.3sec	1.2342	1.2717	1.3201	1.3997	2.1sec	1.2303	1.2698	1.3042	1.3734
	Level 3	22.8sec	1.1178	1.1731	1.2285	1.3519	11.8sec	1.1412	1.1864	1.2209	1.3354	10.7sec	1.1361	1.1828	1.2361	1.3476	6.6sec	1.1197	1.1436	1.1797	1.2379	4.1sec	1.1137	1.1422	1.1644	1.2117
1	**Level 4**	45.6sec	1.0650	1.1007	1.1501	1.2442	23.7sec	1.0879	1.1245	1.1502	1.2227	21.4sec	1.0823	1.1219	1.1608	1.2389	13.2sec	1.0627	1.0807	1.1086	1.1523	8.3sec	1.0556	1.0754	1.0908	1.1196
Year	**Level 5**	1.5min	1.0360	1.0646	1.0988	1.1718	47.4sec	1.0573	1.0842	1.1032	1.1542	42.7sec	1.0543	1.0812	1.1114	1.1651	26.4sec	1.0346	1.0515	1.0695	1.1039	16.5sec	1.0283	1.0412	1.0523	1.0751
before	**Level 6**	3min	1.0209	1.0409	1.0642	1.1103	1.6min	1.0365	1.0553	1.0689	1.1060	1.4min	1.0353	1.0533	1.0760	1.1120	52.9sec	1.0203	1.0327	1.0441	1.0695	33sec	1.0155	1.0240	1.0318	1.0458
	Level 7	6.1min	1.0132	1.0266	1.0412	1.0694	3.2min	1.0228	1.0352	1.0454	1.0678	2.8min	1.0224	1.0351	1.0490	1.0758	1.8min	1.0128	1.0208	1.0288	1.0453	1.1min	1.0092	1.0147	1.0194	1.0279
	Level 8	12.2min	1.0090	1.0174	1.0275	1.0470	6.3min	1.0150	1.0234	1.0308	1.0467	5.7min	1.0140	1.0236	1.0319	1.0497	3.5min	1.0086	1.0135	1.0188	1.0294	2.2min	1.0058	1.0093	1.0122	1.0176
	Level 9	24.3min	1.0073	1.0137	1.0212	1.0368	12.6min	1.0117	1.0176	1.0234	1.0370	11.4min	1.0107	1.0176	1.0243	1.0371	7.1min	1.0064	1.0099	1.0143	1.0227	4.4min	1.0041	1.0068	1.0089	1.0132

Notes: This table reports EDH future contracts median results for bid–ask covariance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDH contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.8: EDH futures contracts median results for wavelet correlations

Wavelet Correlation		EDH0 Median					EDH1 Median					EDH2 Median					EDH3 Median					EDH4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	9.5sec	0.2956	0.5119	0.5553	0.6038	12.1sec	0.2639	0.5519	0.6409	0.6648	13.7sec	0.3848	0.5509	0.6349	0.6654	12sec	0.4720	0.5922	0.6246	0.6645	10.6sec	0.3958	0.5307	0.5912	0.6657
	Level 2	19sec	0.3871	0.5521	0.6325	0.6850	24.2sec	0.2137	0.6814	0.7389	0.7888	27.4sec	0.4746	0.6360	0.7636	0.7824	24sec	0.4144	0.6294	0.6806	0.7952	21.3sec	0.4219	0.5673	0.7086	0.7952
	Level 3	38.1sec	0.5008	0.6768	0.7231	0.7815	48.4sec	0.3036	0.7428	0.8020	0.8637	54.8sec	0.5212	0.7292	0.8326	0.8617	47.9sec	0.3633	0.6858	0.7351	0.8775	42.6sec	0.5871	0.6580	0.7514	0.8840
	Level 4	1.3min	0.5422	0.7457	0.7830	0.8514	1.6min	0.3855	0.8379	0.8595	0.9031	1.8min	0.6120	0.8109	0.8790	0.9139	1.6min	0.3058	0.7673	0.8154	0.9169	1.4min	0.7224	0.7435	0.8044	0.9345
	Level 5	2.5min	0.5646	0.7910	0.8421	0.8905	3.2min	0.5090	0.8561	0.9032	0.9407	3.7min	0.6982	0.8674	0.9138	0.9476	3.2min	0.3252	0.8310	0.8815	0.9565	2.8min	0.7933	0.8176	0.8562	0.9587
	Level 6	5.1min	0.6291	0.8270	0.8834	0.9274	6.5min	0.5896	0.8765	0.9250	0.9549	7.3min	0.7887	0.9016	0.9388	0.9609	6.4min	0.3830	0.8938	0.9280	0.9722	5.7min	0.8311	0.8886	0.9186	0.9723
	Level 7	10.2min	0.6772	0.8512	0.9024	0.9360	12.9min	0.6283	0.8816	0.9329	0.9649	14.6min	0.8487	0.9176	0.9525	0.9703	12.8min	0.4222	0.9391	0.9561	0.9764	11.4min	0.8755	0.9269	0.9566	0.9852
	Level 8	20.3min	0.7251	0.8574	0.9219	0.9552	25.8min	0.6720	0.9040	0.9317	0.9697	29.2min	0.8671	0.9340	0.9634	0.9784	25.5min	0.4705	0.9494	0.9704	0.9827	22.7min	0.9068	0.9556	0.9759	0.9884
	Level 9	40.6min	0.7171	0.8561	0.9285	0.9495	51.7min	0.6774	0.9077	0.9241	0.9699	58.4min	0.8718	0.9396	0.9626	0.9789	51.1min	0.4897	0.9600	0.9749	0.9833	45.4min	0.9169	0.9656	0.9827	0.9913
60 days before	Level 1	4.4sec	0.4313	0.5483	0.5834	0.6688	5.4sec	0.3033	0.5703	0.6149	0.6616	6.3sec	0.4997	0.6032	0.6362	0.6626	6.3sec	0.4720	0.5700	0.6136	0.6632	7.4sec	0.3811	0.5458	0.5908	0.6625
	Level 2	8.8sec	0.4527	0.6057	0.6758	0.7845	10.8sec	0.2491	0.6648	0.7090	0.7861	12.5sec	0.5274	0.6935	0.7390	0.7731	12.7sec	0.3870	0.6160	0.6850	0.7723	14.8sec	0.3971	0.6004	0.6831	0.7809
	Level 3	17.7sec	0.5060	0.6876	0.7429	0.8253	21.6sec	0.3101	0.7376	0.7900	0.8612	25.1sec	0.6099	0.7561	0.8226	0.8608	25.3sec	0.4516	0.6877	0.7591	0.8513	29.6sec	0.4971	0.7058	0.7514	0.8459
	Level 4	35.4sec	0.5996	0.7617	0.8163	0.8825	43.1sec	0.3359	0.7880	0.8526	0.8979	50.2sec	0.7112	0.8273	0.8695	0.9089	50.7sec	0.5359	0.7673	0.8461	0.9083	59.1sec	0.5384	0.7552	0.8359	0.9120
	Level 5	1.2min	0.6708	0.8074	0.8663	0.9135	1.4min	0.4032	0.8382	0.8918	0.9337	1.7min	0.7977	0.8777	0.9110	0.9411	1.7min	0.6501	0.8310	0.9019	0.9366	2min	0.6307	0.8488	0.8969	0.9467
	Level 6	2.4min	0.7012	0.8540	0.8964	0.9353	2.9min	0.4786	0.8707	0.9218	0.9563	3.3min	0.8468	0.9188	0.9383	0.9609	3.4min	0.7575	0.8938	0.9435	0.9660	3.9min	0.7142	0.8907	0.9371	0.9700
	Level 7	4.7min	0.7547	0.8821	0.9212	0.9552	5.7min	0.5446	0.9023	0.9378	0.9690	6.7min	0.8855	0.9385	0.9546	0.9703	6.8min	0.8055	0.9391	0.9641	0.9787	7.9min	0.7853	0.9320	0.9566	0.9844
	Level 8	9.4min	0.7805	0.8993	0.9417	0.9657	11.5min	0.6058	0.9169	0.9435	0.9747	13.4min	0.9029	0.9552	0.9686	0.9784	13.5min	0.8543	0.9494	0.9746	0.9864	15.8min	0.8319	0.9575	0.9759	0.9884
	Level 9	18.9min	0.7579	0.8929	0.9468	0.9689	23min	0.6211	0.9217	0.9440	0.9771	26.7min	0.9103	0.9606	0.9734	0.9809	27min	0.8665	0.9600	0.9786	0.9896	31.5min	0.8756	0.9644	0.9817	0.9913
3 months before	Level 1	2.6sec	0.4926	0.5594	0.5882	0.6667	3.2sec	0.4948	0.5746	0.6164	0.6606	4.1sec	0.5160	0.5931	0.6325	0.6626	4.4sec	0.5047	0.5881	0.6317	0.6666	5sec	0.3958	0.5512	0.5918	0.6625
	Level 2	5.2sec	0.5328	0.6237	0.6864	0.7596	6.4sec	0.5547	0.6814	0.7191	0.7791	8.1sec	0.5901	0.6954	0.7367	0.7777	8.8sec	0.5146	0.6387	0.7124	0.7985	9.9sec	0.4219	0.6224	0.7086	0.7809
	Level 3	10.4sec	0.6070	0.6893	0.7658	0.8232	12.8sec	0.5910	0.7635	0.8039	0.8546	16.3sec	0.6430	0.7661	0.8182	0.8581	17.7sec	0.5669	0.7260	0.8031	0.8826	19.9sec	0.5871	0.7257	0.7728	0.8557
	Level 4	20.7sec	0.6711	0.7779	0.8306	0.8652	25.5sec	0.6566	0.8181	0.8581	0.8939	32.5sec	0.7323	0.8273	0.8679	0.9050	35.3sec	0.6629	0.8107	0.8669	0.9291	39.8sec	0.6844	0.7992	0.8404	0.9099
	Level 5	41.5sec	0.7151	0.8303	0.8797	0.9090	51sec	0.7335	0.8647	0.9026	0.9242	1.1min	0.8073	0.8797	0.9114	0.9406	1.2min	0.7731	0.8776	0.9200	0.9562	1.3min	0.7716	0.8488	0.9004	0.9467
	Level 6	1.4min	0.7651	0.8716	0.9077	0.9377	1.7min	0.7400	0.9040	0.9278	0.9493	2.2min	0.8614	0.9189	0.9386	0.9589	2.4min	0.8421	0.9254	0.9502	0.9723	2.7min	0.8311	0.8981	0.9364	0.9687
	Level 7	2.8min	0.8057	0.9024	0.9351	0.9554	3.4min	0.7685	0.9208	0.9465	0.9649	4.3min	0.8860	0.9431	0.9574	0.9705	4.7min	0.8940	0.9555	0.9689	0.9824	5.3min	0.8755	0.9320	0.9566	0.9830
	Level 8	5.5min	0.8219	0.9219	0.9550	0.9677	6.8min	0.7853	0.9370	0.9592	0.9746	8.7min	0.9156	0.9577	0.9692	0.9790	9.4min	0.9027	0.9649	0.9789	0.9871	10.6min	0.9068	0.9575	0.9715	0.9881
	Level 9	11.1min	0.8086	0.9285	0.9591	0.9735	13.6min	0.7776	0.9379	0.9670	0.9783	17.4min	0.9178	0.9650	0.9737	0.9812	18.8min	0.8926	0.9625	0.9815	0.9899	21.2min	0.9169	0.9608	0.9747	0.9911
1 Year before	Level 1	1.3sec	0.5690	0.6185	0.6481	0.6711	1.9sec	0.5705	0.6105	0.6396	0.6679	2.8sec	0.5724	0.6150	0.6402	0.6710	3sec	0.5405	0.6006	0.6342	0.6660	3.1sec	0.5149	0.5837	0.6206	0.6562
	Level 2	2.7sec	0.6424	0.7235	0.7657	0.7960	3.8sec	0.6620	0.7104	0.7477	0.7843	5.6sec	0.6621	0.7177	0.7525	0.7886	5.9sec	0.6014	0.6848	0.7347	0.7841	6.2sec	0.5869	0.6604	0.7178	0.7684
	Level 3	5.4sec	0.7070	0.7999	0.8386	0.8755	7.6sec	0.7387	0.7894	0.8263	0.8612	11.2sec	0.7389	0.7961	0.8284	0.8657	11.9sec	0.6860	0.7632	0.8173	0.8586	12.5sec	0.6679	0.7486	0.8018	0.8424
	Level 4	10.8sec	0.7782	0.8465	0.8878	0.9172	15.3sec	0.7995	0.8512	0.8800	0.9097	22.3sec	0.8049	0.8566	0.8810	0.9139	23.7sec	0.7673	0.8373	0.8699	0.9109	25sec	0.7462	0.8208	0.8620	0.8969
	Level 5	21.5sec	0.8286	0.8862	0.9183	0.9437	30.6sec	0.8604	0.8925	0.9175	0.9404	44.7sec	0.8593	0.9002	0.9179	0.9450	47.4sec	0.8348	0.8901	0.9161	0.9409	49.9sec	0.8135	0.8805	0.9097	0.9366
	Level 6	43.1sec	0.8707	0.9187	0.9430	0.9614	1min	0.8966	0.9236	0.9429	0.9589	1.5min	0.8979	0.9312	0.9432	0.9634	1.6min	0.8865	0.9238	0.9448	0.9618	1.7min	0.8758	0.9214	0.9420	0.9607
	Level 7	1.4min	0.9051	0.9432	0.9600	0.9728	2min	0.9191	0.9465	0.9602	0.9722	3min	0.9282	0.9521	0.9613	0.9752	3.2min	0.9158	0.9477	0.9631	0.9750	3.3min	0.9200	0.9494	0.9621	0.9757
	Level 8	2.9min	0.9263	0.9579	0.9709	0.9808	4.1min	0.9357	0.9599	0.9702	0.9794	6min	0.9462	0.9649	0.9731	0.9831	6.3min	0.9347	0.9612	0.9727	0.9823	6.7min	0.9397	0.9639	0.9741	0.9834
	Level 9	5.7min	0.9354	0.9639	0.9753	0.9840	8.2min	0.9381	0.9639	0.9726	0.9822	11.9min	0.9524	0.9695	0.9774	0.9857	12.6min	0.9307	0.9649	0.9750	0.9850	13.3min	0.9468	0.9685	0.9783	0.9862

Notes: This table reports EDH future contracts median results for wavelet correlations with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDH contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.8: EDH futures contracts median results for wavelet correlations – Continued

Wavelet Correlation		EDH5 Median					EDH6 Median					EDH7 Median					EDH8 Median					EDH9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	16.1sec	0.4408	0.5353	0.6044	0.6449	21.2sec	0.4548	0.5479	0.5860	0.6433	17.9sec	0.4955	0.6158	0.6350	0.6652	9.1sec	0.5337	0.5921	0.6236	0.6649	3.5sec	0.5878	0.6136	0.6362	0.6768
	Level 2	32.2sec	0.5125	0.6022	0.6511	0.7503	42.4sec	0.5062	0.6379	0.6513	0.7548	35.7sec	0.5366	0.6946	0.7268	0.7982	18.1sec	0.6314	0.6975	0.7426	0.8002	7.1sec	0.7036	0.7323	0.7545	0.8024
	Level 3	1.1min	0.5206	0.6761	0.7256	0.8197	1.4min	0.5636	0.7079	0.7372	0.8215	1.2min	0.6224	0.7567	0.8170	0.8800	36.2sec	0.7599	0.8047	0.8464	0.8787	14.1sec	0.7971	0.8257	0.8402	0.8814
	Level 4	2.1min	0.5619	0.7424	0.7825	0.8655	2.8min	0.6264	0.7564	0.7930	0.8744	2.4min	0.7234	0.8180	0.8731	0.9314	1.2min	0.8392	0.8714	0.9090	0.9305	28.2sec	0.8438	0.8901	0.9056	0.9239
	Level 5	4.3min	0.6450	0.7911	0.8367	0.8958	5.7min	0.6585	0.8153	0.8486	0.9164	4.8min	0.7881	0.8801	0.9090	0.9656	2.4min	0.9038	0.9264	0.9432	0.9593	56.5sec	0.9007	0.9256	0.9412	0.9488
	Level 6	8.6min	0.7338	0.8350	0.8807	0.9313	11.3min	0.7325	0.8568	0.8900	0.9273	9.5min	0.8333	0.9114	0.9393	0.9735	4.8min	0.9266	0.9554	0.9627	0.9731	1.9min	0.9325	0.9491	0.9587	0.9693
	Level 7	17.2min	0.8021	0.8723	0.9120	0.9545	22.6min	0.7669	0.8861	0.9081	0.9445	19.1min	0.8639	0.9181	0.9546	0.9807	9.7min	0.9416	0.9691	0.9759	0.9812	3.8min	0.9482	0.9645	0.9715	0.9800
	Level 8	34.4min	0.8520	0.9052	0.9317	0.9682	45.2min	0.7904	0.9076	0.9151	0.9580	38.1min	0.8794	0.9238	0.9631	0.9845	19.3min	0.9507	0.9741	0.9781	0.9840	7.5min	0.9635	0.9726	0.9792	0.9853
	Level 9	68.7min	0.8666	0.9191	0.9332	0.9698	90.5min	0.7615	0.9082	0.9270	0.9524	76.2min	0.8824	0.9173	0.9625	0.9812	38.6min	0.9441	0.9690	0.9750	0.9816	15.1min	0.9665	0.9754	0.9811	0.9864
60 days before	Level 1	9.9sec	0.4601	0.5775	0.6093	0.6448	9.4sec	0.5111	0.5674	0.6009	0.6639	8sec	0.4955	0.6075	0.6350	0.6621	4.3sec	0.5775	0.6334	0.6495	0.6724	1.9sec	0.5980	0.6240	0.6436	0.6768
	Level 2	19.7sec	0.5276	0.6336	0.7045	0.7480	18.7sec	0.5619	0.6468	0.6860	0.7608	16sec	0.4610	0.6880	0.7268	0.7890	8.6sec	0.6731	0.7523	0.7884	0.8102	3.8sec	0.7195	0.7371	0.7589	0.8092
	Level 3	39.5sec	0.5834	0.7139	0.7610	0.8219	37.4sec	0.6577	0.7218	0.7551	0.8263	32sec	0.5844	0.7491	0.8085	0.8533	17.2sec	0.7838	0.8475	0.8781	0.8949	7.6sec	0.8029	0.8323	0.8474	0.8838
	Level 4	1.3min	0.6661	0.7689	0.8139	0.8687	1.2min	0.7283	0.7819	0.8173	0.8808	1.1min	0.6675	0.7995	0.8604	0.8981	34.5sec	0.8657	0.9090	0.9284	0.9422	15.1sec	0.8644	0.8909	0.9067	0.9310
	Level 5	2.6min	0.7381	0.8173	0.8594	0.8997	2.5min	0.7866	0.8298	0.8716	0.9197	2.1min	0.7459	0.8592	0.9043	0.9349	1.1min	0.9188	0.9432	0.9569	0.9675	30.3sec	0.9112	0.9288	0.9420	0.9580
	Level 6	5.3min	0.7894	0.8700	0.9017	0.9291	5min	0.8260	0.8748	0.9087	0.9384	4.3min	0.8106	0.8922	0.9277	0.9662	2.3min	0.9422	0.9621	0.9717	0.9789	1min	0.9379	0.9519	0.9587	0.9728
	Level 7	10.5min	0.8464	0.9027	0.9254	0.9515	10min	0.8644	0.9082	0.9334	0.9543	8.5min	0.8639	0.9151	0.9541	0.9749	4.6min	0.9561	0.9728	0.9795	0.9856	2min	0.9562	0.9669	0.9711	0.9815
	Level 8	21.1min	0.8905	0.9220	0.9452	0.9651	20min	0.8938	0.9174	0.9452	0.9676	17.1min	0.8794	0.9317	0.9627	0.9819	9.2min	0.9641	0.9777	0.9840	0.9890	4min	0.9655	0.9749	0.9784	0.9862
	Level 9	42.1min	0.8961	0.9285	0.9507	0.9675	39.9min	0.8940	0.9279	0.9509	0.9709	34.2min	0.8824	0.9390	0.9665	0.9826	18.4min	0.9577	0.9750	0.9829	0.9900	8.1min	0.9678	0.9776	0.9821	0.9877
3 months before	Level 1	5.9sec	0.4753	0.5897	0.6239	0.6616	5.7sec	0.5264	0.5833	0.6206	0.6658	5.4sec	0.5024	0.5960	0.6258	0.6642	3.1sec	0.5781	0.6269	0.6607	0.6896	1.4sec	0.5968	0.6234	0.6437	0.6780
	Level 2	11.8sec	0.5739	0.6598	0.7125	0.7804	11.4sec	0.6131	0.6696	0.7193	0.7614	10.8sec	0.5656	0.6753	0.7191	0.7858	6.2sec	0.6862	0.7549	0.7895	0.8192	2.8sec	0.7059	0.7372	0.7710	0.8081
	Level 3	23.6sec	0.6544	0.7256	0.7844	0.8481	22.8sec	0.6938	0.7410	0.7958	0.8329	21.5sec	0.6215	0.7439	0.8022	0.8596	12.4sec	0.7948	0.8433	0.8771	0.9053	5.5sec	0.8000	0.8325	0.8526	0.8870
	Level 4	47.3sec	0.7331	0.7865	0.8364	0.8921	45.7sec	0.7536	0.8047	0.8499	0.8872	43sec	0.6858	0.8066	0.8527	0.9125	24.8sec	0.8685	0.8978	0.9272	0.9476	11sec	0.8542	0.8932	0.9087	0.9347
	Level 5	1.6min	0.7709	0.8330	0.8763	0.9230	1.5min	0.8005	0.8486	0.8874	0.9230	1.4min	0.7380	0.8468	0.8882	0.9349	49.6sec	0.9181	0.9373	0.9554	0.9684	22.1sec	0.9088	0.9320	0.9420	0.9604
	Level 6	3.2min	0.8185	0.8790	0.9111	0.9458	3min	0.8489	0.8891	0.9218	0.9473	2.9min	0.7915	0.8861	0.9233	0.9662	1.7min	0.9430	0.9597	0.9702	0.9789	44.1sec	0.9375	0.9521	0.9620	0.9740
	Level 7	6.3min	0.8657	0.9111	0.9351	0.9608	6.1min	0.8850	0.9175	0.9438	0.9590	5.7min	0.8528	0.9151	0.9415	0.9749	3.3min	0.9581	0.9710	0.9784	0.9856	1.5min	0.9548	0.9674	0.9732	0.9824
	Level 8	12.6min	0.9021	0.9341	0.9502	0.9725	12.2min	0.9038	0.9404	0.9576	0.9719	11.5min	0.8763	0.9319	0.9555	0.9819	6.6min	0.9646	0.9759	0.9830	0.9890	2.9min	0.9642	0.9756	0.9804	0.9873
	Level 9	25.2min	0.9178	0.9392	0.9570	0.9760	24.4min	0.8983	0.9434	0.9613	0.9748	22.9min	0.8809	0.9390	0.9622	0.9826	13.2min	0.9622	0.9748	0.9822	0.9900	5.9min	0.9674	0.9779	0.9825	0.9890
1 Year before	Level 1	5.7sec	0.5635	0.6216	0.6542	0.6820	3sec	0.5768	0.6317	0.6565	0.6807	2.7sec	0.5839	0.6291	0.6506	0.6729	1.7sec	0.6058	0.6372	0.6569	0.6754	1sec	0.6097	0.6376	0.6579	0.6796
	Level 2	11.4sec	0.6552	0.7286	0.7706	0.8152	5.9sec	0.6696	0.7427	0.7699	0.7995	5.3sec	0.6654	0.7374	0.7657	0.8019	3.3sec	0.7131	0.7557	0.7852	0.8097	2.1sec	0.7289	0.7657	0.7862	0.8115
	Level 3	22.8sec	0.7296	0.8085	0.8500	0.8935	11.8sec	0.7458	0.8164	0.8412	0.8757	10.7sec	0.7385	0.8062	0.8438	0.8803	6.6sec	0.8026	0.8443	0.8719	0.8912	4.1sec	0.8244	0.8558	0.8737	0.8965
	Level 4	45.6sec	0.7890	0.8638	0.9021	0.9353	23.7sec	0.8063	0.8637	0.8867	0.9158	21.4sec	0.7978	0.8551	0.8889	0.9229	13.2sec	0.8616	0.8975	0.9217	0.9381	8.3sec	0.8864	0.9111	0.9258	0.9441
	Level 5	1.5min	0.8361	0.8990	0.9316	0.9597	47.4sec	0.8546	0.8997	0.9180	0.9433	42.7sec	0.8454	0.8911	0.9207	0.9446	26.4sec	0.8970	0.9272	0.9463	0.9634	16.5sec	0.9218	0.9435	0.9546	0.9690
	Level 6	3min	0.8795	0.9262	0.9516	0.9714	1.6min	0.8907	0.9262	0.9411	0.9610	1.4min	0.8844	0.9208	0.9429	0.9637	52.9sec	0.9253	0.9480	0.9627	0.9766	33sec	0.9467	0.9616	0.9708	0.9814
	Level 7	6.1min	0.9099	0.9464	0.9645	0.9801	3.2min	0.9210	0.9478	0.9589	0.9749	2.8min	0.9151	0.9430	0.9596	0.9742	1.8min	0.9448	0.9636	0.9741	0.9835	1.1min	0.9626	0.9733	0.9797	0.9874
	Level 8	12.2min	0.9330	0.9585	0.9729	0.9855	6.3min	0.9420	0.9616	0.9703	0.9818	5.7min	0.9364	0.9580	0.9703	0.9819	3.5min	0.9573	0.9728	0.9809	0.9875	2.2min	0.9727	0.9804	0.9850	0.9910
	Level 9	24.3min	0.9383	0.9639	0.9752	0.9869	12.6min	0.9430	0.9674	0.9750	0.9835	11.4min	0.9423	0.9642	0.9742	0.9852	7.1min	0.9614	0.9755	0.9821	0.9887	4.4min	0.9756	0.9828	0.9867	0.9919

Notes: This table reports EDH future contracts median results for wavelet correlations with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDH contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.9: EDM futures contracts median results for ask variance

Ask Variance		EDM0 Median					EDM1 Median					EDM2 Median					EDM3 Median					EDM4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.2sec	1.5460	1.5890	1.6994	1.9396	15.8sec	1.5104	1.8324	2.6019	3.8734	20.1sec	1.5907	1.6995	1.9638	4.0161	22.4sec	1.6119	1.7355	1.9737	2.5223	7.6sec	1.5211	1.6977	1.8497	2.4346
	Level 2	26.3sec	1.2892	1.3467	1.4349	1.7290	31.6sec	1.2511	1.5941	2.3476	4.5590	40.1sec	1.3052	1.4627	1.8823	3.4306	44.8sec	1.4599	1.9174	2.0231	2.2384	15.2sec	1.3030	1.4803	1.6504	2.5625
	Level 3	52.6sec	1.1540	1.1901	1.2923	1.7155	1.1min	1.1453	1.4382	1.7741	2.9570	1.3min	1.2517	1.3068	1.7455	2.5577	1.5min	1.3552	1.5121	1.7737	1.9582	30.3sec	1.2015	1.3324	1.4931	2.2334
30	**Level 4**	1.8min	1.0753	1.1007	1.1585	1.4292	2.1min	1.1083	1.3401	1.5909	2.5871	2.7min	1.1842	1.2137	1.6208	2.1071	3min	1.1809	1.3045	1.5326	1.6346	1min	1.1008	1.2207	1.3161	1.7371
days	**Level 5**	3.5min	1.0379	1.0573	1.1079	1.3031	4.2min	1.0844	1.2504	1.4070	2.1482	5.3min	1.1232	1.1488	1.4736	1.8066	6min	1.0953	1.1889	1.3487	1.4359	2min	1.0506	1.1319	1.2045	1.4718
before	**Level 6**	7min	1.0203	1.0328	1.0698	1.2132	8.4min	1.0677	1.1976	1.2765	2.0397	10.7min	1.0778	1.1052	1.3262	1.6000	12min	1.0561	1.1156	1.2272	1.2617	4min	1.0300	1.0775	1.1326	1.3306
	Level 7	14min	1.0123	1.0216	1.0427	1.1549	16.8min	1.0503	1.1137	1.2213	1.8071	21.4min	1.0468	1.0910	1.2163	1.4381	23.9min	1.0353	1.0806	1.1473	1.1887	8.1min	1.0166	1.0451	1.0760	1.2331
	Level 8	28.1min	1.0082	1.0157	1.0273	1.1129	33.7min	1.0362	1.0696	1.1732	1.6419	42.8min	1.0312	1.0723	1.1590	1.3264	47.8min	1.0204	1.0587	1.1001	1.1452	16.2min	1.0110	1.0246	1.0479	1.1532
	Level 9	56.1min	1.0067	1.0135	1.0215	1.1029	67.3min	1.0288	1.0579	1.1496	1.4976	85.5min	1.0249	1.0520	1.1419	1.2757	95.7min	1.0140	1.0441	1.0754	1.1047	32.4min	1.0099	1.0177	1.0402	1.1164
	Level 1	5.3sec	1.4703	1.5792	1.6841	1.9422	6.7sec	1.5275	1.7356	1.9155	3.5384	8.7sec	1.5442	1.6657	1.8042	2.1985	10.7sec	1.5000	1.7030	2.0272	2.9272	4.6sec	1.5107	1.6420	1.7739	2.3534
	Level 2	10.7sec	1.2698	1.3370	1.4290	1.7290	13.5sec	1.2853	1.5346	1.6452	2.6220	17.3sec	1.3010	1.4387	1.6316	2.2554	21.4sec	1.2501	1.5494	2.0306	4.5631	9.2sec	1.3030	1.4302	1.6504	2.3544
	Level 3	21.4sec	1.1400	1.1968	1.2937	1.5533	27sec	1.1610	1.3478	1.5749	2.0985	34.7sec	1.2432	1.2785	1.4213	1.9281	42.8sec	1.1251	1.4399	1.7766	6.9611	18.3sec	1.1603	1.3045	1.4931	1.8870
60	**Level 4**	42.8sec	1.0737	1.1164	1.1961	1.3710	54sec	1.1060	1.2563	1.4271	1.8600	1.2min	1.1528	1.2058	1.3085	1.7640	1.4min	1.0627	1.2203	1.5376	8.2780	36.7sec	1.0802	1.1935	1.3161	1.6224
days	**Level 5**	1.4min	1.0392	1.0676	1.1248	1.2655	1.8min	1.0730	1.1770	1.2881	1.7061	2.3min	1.1044	1.1283	1.2143	1.6157	2.9min	1.0317	1.1589	1.3551	5.3759	1.2min	1.0440	1.1190	1.2036	1.3972
before	**Level 6**	2.9min	1.0244	1.0445	1.0830	1.1898	3.6min	1.0558	1.1228	1.2324	1.5377	4.6min	1.0614	1.0849	1.1403	1.4437	5.7min	1.0171	1.0796	1.2283	3.2008	2.4min	1.0258	1.0729	1.1103	1.2847
	Level 7	5.7min	1.0160	1.0280	1.0517	1.1228	7.2min	1.0368	1.0756	1.1529	1.4259	9.2min	1.0404	1.0578	1.0958	1.3013	11.4min	1.0127	1.0401	1.1569	2.1260	4.9min	1.0145	1.0390	1.0566	1.2242
	Level 8	11.4min	1.0111	1.0189	1.0340	1.0763	14.4min	1.0261	1.0529	1.1079	1.3275	18.5min	1.0264	1.0394	1.0850	1.2234	22.8min	1.0073	1.0241	1.1046	1.6142	9.8min	1.0098	1.0225	1.0340	1.1219
	Level 9	22.8min	1.0102	1.0157	1.0266	1.0630	28.8min	1.0193	1.0484	1.0824	1.2686	37min	1.0232	1.0335	1.0671	1.1784	45.7min	1.0082	1.0166	1.0735	1.4094	19.6min	1.0073	1.0169	1.0300	1.0939
	Level 1	3.2sec	1.4839	1.5861	1.7048	1.9409	3.9sec	1.5457	1.7004	1.8218	2.7980	4.8sec	1.5165	1.6417	1.7224	1.9949	6.4sec	1.5000	1.6023	1.7858	2.5405	3.2sec	1.5211	1.6530	1.7923	2.3534
	Level 2	6.4sec	1.2708	1.3542	1.4445	1.7470	7.8sec	1.3101	1.4488	1.6212	2.4224	9.7sec	1.2999	1.4240	1.5101	1.9301	12.8sec	1.2514	1.3785	1.7263	3.0900	6.5sec	1.3205	1.4328	1.6452	2.3312
	Level 3	12.7sec	1.1566	1.2022	1.3007	1.5234	15.6sec	1.1971	1.3007	1.5068	1.9304	19.3sec	1.2071	1.2750	1.3873	1.7709	25.5sec	1.1333	1.2386	1.5085	2.5339	12.9sec	1.1923	1.3057	1.4633	1.8870
3	**Level 4**	25.5sec	1.0762	1.1400	1.2038	1.3768	31.1sec	1.1177	1.2025	1.3684	1.6215	38.7sec	1.1363	1.1887	1.2762	1.6232	51.1sec	1.0802	1.1616	1.3634	1.8528	25.8sec	1.1077	1.1980	1.3037	1.6224
months	**Level 5**	50.9sec	1.0458	1.0841	1.1351	1.3003	1min	1.0816	1.1413	1.2397	1.5187	1.3min	1.0830	1.1234	1.1943	1.4019	1.7min	1.0560	1.1031	1.2084	1.5510	51.6sec	1.0645	1.1265	1.1995	1.4119
before	**Level 6**	1.7min	1.0274	1.0554	1.0872	1.2013	2.1min	1.0510	1.0997	1.1633	1.4098	2.6min	1.0483	1.0764	1.1226	1.2581	3.4min	1.0290	1.0625	1.1374	1.3366	1.7min	1.0371	1.0745	1.1229	1.2847
	Level 7	3.4min	1.0181	1.0349	1.0544	1.1231	4.2min	1.0318	1.0687	1.1073	1.3630	5.2min	1.0306	1.0494	1.0851	1.1711	6.8min	1.0146	1.0386	1.0804	1.1993	3.4min	1.0208	1.0435	1.0755	1.1660
	Level 8	6.8min	1.0130	1.0237	1.0364	1.0796	8.3min	1.0229	1.0441	1.0707	1.2805	10.3min	1.0209	1.0349	1.0538	1.1330	13.6min	1.0099	1.0238	1.0541	1.1451	6.9min	1.0140	1.0250	1.0447	1.1005
	Level 9	13.6min	1.0107	1.0193	1.0304	1.0655	16.6min	1.0175	1.0334	1.0567	1.2425	20.6min	1.0150	1.0274	1.0520	1.1245	27.2min	1.0080	1.0167	1.0435	1.1126	13.8min	1.0107	1.0186	1.0349	1.0757
	Level 1	1.6sec	1.4836	1.5481	1.6044	1.7400	2.2sec	1.5120	1.5876	1.6718	1.8307	3.1sec	1.4937	1.5667	1.6492	1.7928	4.2sec	1.5029	1.6141	1.7154	1.9522	2.3sec	1.5248	1.6117	1.7108	1.8497
	Level 2	3.2sec	1.2596	1.3115	1.3772	1.4957	4.4sec	1.2906	1.3706	1.4412	1.6317	6.2sec	1.2692	1.3455	1.4257	1.6089	8.3sec	1.2837	1.3933	1.5141	1.9184	4.6sec	1.3121	1.4040	1.4957	1.6894
	Level 3	6.4sec	1.1463	1.1936	1.2383	1.3576	8.9sec	1.1825	1.2390	1.3015	1.5040	12.4sec	1.1637	1.2237	1.2802	1.4237	16.7sec	1.1620	1.2435	1.3621	1.6347	9.2sec	1.1919	1.2693	1.3411	1.5014
1	**Level 4**	12.8sec	1.0868	1.1274	1.1612	1.2609	17.7sec	1.1163	1.1638	1.2167	1.3582	24.9sec	1.0991	1.1450	1.1937	1.3087	33.4sec	1.0960	1.1630	1.2381	1.4209	18.4sec	1.1153	1.1750	1.2364	1.3601
Year	**Level 5**	25.6sec	1.0547	1.0869	1.1140	1.1845	35.4sec	1.0770	1.1123	1.1477	1.2367	49.8sec	1.0630	1.0957	1.1274	1.2098	1.1min	1.0557	1.0993	1.1447	1.2851	36.8sec	1.0681	1.1128	1.1592	1.2437
before	**Level 6**	51.2sec	1.0354	1.0582	1.0789	1.1292	1.2min	1.0493	1.0753	1.1021	1.1633	1.7min	1.0410	1.0615	1.0830	1.1393	2.2min	1.0312	1.0583	1.0876	1.1897	1.2min	1.0415	1.0693	1.0944	1.1506
	Level 7	1.7min	1.0229	1.0377	1.0525	1.0858	2.4min	1.0306	1.0495	1.0671	1.1120	3.3min	1.0251	1.0394	1.0540	1.0922	4.5min	1.0188	1.0363	1.0545	1.1231	2.5min	1.0245	1.0417	1.0573	1.0904
	Level 8	3.4min	1.0159	1.0259	1.0367	1.0611	4.7min	1.0203	1.0332	1.0452	1.0763	6.6min	1.0160	1.0251	1.0357	1.0602	8.9min	1.0121	1.0235	1.0363	1.0875	4.9min	1.0144	1.0256	1.0349	1.0598
	Level 9	6.8min	1.0136	1.0217	1.0308	1.0512	9.4min	1.0167	1.0258	1.0374	1.0609	13.3min	1.0123	1.0190	1.0274	1.0475	17.8min	1.0092	1.0180	1.0292	1.0774	9.8min	1.0112	1.0198	1.0263	1.0457

Notes: This table reports EDM future contracts median results for ask variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDM contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.9: EDM futures contracts median results for ask variance – Continued

Ask Variance		EDM5 Median					EDM6 Median					EDM7 Median					EDM8 Median					EDM9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.4sec	1.4338	1.6062	1.6487	2.0263	13.9sec	1.4185	1.5931	1.6586	1.7620	27.3sec	1.6189	1.7709	1.9421	4.4646	4.9sec	1.5177	1.5839	1.6330	1.8256	3sec	1.4535	1.5343	1.6032	1.7485
	Level 2	28.8sec	1.2074	1.4098	1.5689	1.6058	27.8sec	1.2083	1.2939	1.3863	1.4507	54.6sec	1.4746	1.6067	1.9986	4.3841	9.9sec	1.2889	1.3344	1.4104	1.5190	6sec	1.2411	1.3031	1.3921	1.4301
	Level 3	57.5sec	1.1337	1.3202	1.3824	1.5606	55.5sec	1.1009	1.1477	1.2043	1.2962	1.8min	1.3534	1.4425	1.8045	2.9462	19.7sec	1.1381	1.1894	1.2522	1.3102	12sec	1.0988	1.1778	1.2244	1.2877
30	Level 4	1.9min	1.0950	1.2201	1.2862	1.5157	1.9min	1.0499	1.0806	1.1185	1.2339	3.6min	1.2945	1.3902	1.5921	2.4635	39.4sec	1.0775	1.1110	1.1393	1.1829	24.1sec	1.0466	1.1065	1.1385	1.1996
days	Level 5	3.8min	1.0631	1.1376	1.2306	1.3922	3.7min	1.0272	1.0501	1.0855	1.2012	7.3min	1.2022	1.3109	1.4447	1.9811	1.3min	1.0429	1.0666	1.0861	1.1081	48.2sec	1.0278	1.0656	1.0930	1.1251
before	Level 6	7.7min	1.0422	1.0917	1.1592	1.2653	7.4min	1.0182	1.0322	1.0577	1.1543	14.6min	1.1382	1.2128	1.4268	1.8897	2.6min	1.0281	1.0452	1.0535	1.0655	1.6min	1.0180	1.0424	1.0626	1.0892
	Level 7	15.3min	1.0294	1.0651	1.1012	1.1772	14.8min	1.0130	1.0232	1.0467	1.1199	29.1min	1.1049	1.1624	1.3536	1.8308	5.3min	1.0196	1.0316	1.0372	1.0497	3.2min	1.0127	1.0297	1.0435	1.0612
	Level 8	30.7min	1.0214	1.0528	1.0651	1.1283	29.6min	1.0105	1.0198	1.0397	1.1000	58.3min	1.1018	1.1439	1.3222	1.7638	10.5min	1.0171	1.0263	1.0290	1.0454	6.4min	1.0096	1.0236	1.0349	1.0479
	Level 9	61.4min	1.0192	1.0485	1.0573	1.1085	59.2min	1.0111	1.0199	1.0418	1.0998	116.6min	1.1054	1.1448	1.3568	1.8400	21min	1.0186	1.0265	1.0351	1.0513	12.9min	1.0091	1.0225	1.0316	1.0459
	Level 1	8.5sec	1.4733	1.5740	1.7291	1.8550	6.1sec	1.4724	1.5866	1.6294	1.7372	11sec	1.5796	1.6730	1.8165	2.2995	2.2sec	1.4754	1.5349	1.5910	1.7351	1.6sec	1.5005	1.5811	1.6192	1.7485
	Level 2	17sec	1.2400	1.3845	1.4997	1.6394	12.3sec	1.2506	1.3093	1.3904	1.4499	22sec	1.3760	1.5243	1.6579	2.1792	4.3sec	1.2411	1.2996	1.3452	1.4599	3.1sec	1.2681	1.3352	1.4035	1.4653
	Level 3	33.9sec	1.1517	1.2573	1.3488	1.5113	24.6sec	1.1166	1.1733	1.2309	1.3111	43.9sec	1.2386	1.3654	1.4615	2.3795	8.6sec	1.1185	1.1677	1.2106	1.2762	6.3sec	1.1383	1.2063	1.2589	1.3126
60	Level 4	1.1min	1.0973	1.1742	1.2405	1.3464	49.1sec	1.0608	1.1035	1.1495	1.2246	1.5min	1.1434	1.2372	1.3723	1.9922	17.2sec	1.0655	1.0965	1.1340	1.1797	12.6sec	1.0794	1.1361	1.1679	1.2159
days	Level 5	2.3min	1.0671	1.1198	1.1620	1.2665	1.6min	1.0333	1.0698	1.1041	1.1544	2.9min	1.0981	1.1651	1.2710	1.7270	34.4sec	1.0409	1.0627	1.0853	1.1081	25.2sec	1.0449	1.0915	1.1123	1.1395
before	Level 6	4.5min	1.0446	1.0778	1.1125	1.1898	3.3min	1.0196	1.0450	1.0629	1.1058	5.9min	1.0654	1.1127	1.1984	1.5500	1.1min	1.0257	1.0449	1.0546	1.0705	50.4sec	1.0272	1.0591	1.0744	1.0943
	Level 7	9min	1.0302	1.0509	1.0797	1.1253	6.5min	1.0132	1.0298	1.0477	1.0816	11.7min	1.0431	1.0746	1.1405	1.4622	2.3min	1.0192	1.0313	1.0376	1.0541	1.7min	1.0175	1.0395	1.0510	1.0701
	Level 8	18.1min	1.0219	1.0380	1.0591	1.0940	13.1min	1.0107	1.0218	1.0390	1.0713	23.4min	1.0326	1.0535	1.1068	1.4952	4.6min	1.0159	1.0243	1.0288	1.0454	3.4min	1.0120	1.0312	1.0381	1.0589
	Level 9	36.2min	1.0194	1.0424	1.0539	1.0866	26.2min	1.0116	1.0210	1.0349	1.0645	46.9min	1.0300	1.0483	1.1076	1.6757	9.2min	1.0152	1.0238	1.0322	1.0489	6.7min	1.0105	1.0293	1.0379	1.0551
	Level 1	5.8sec	1.4856	1.5607	1.7009	1.8215	3.7sec	1.4947	1.5827	1.6229	1.7559	6.4sec	1.5678	1.6535	1.7881	2.1146	1.4sec	1.4854	1.5360	1.5839	1.7336	1sec	1.5013	1.5505	1.6027	1.6957
	Level 2	11.5sec	1.2622	1.3610	1.4704	1.6159	7.3sec	1.2642	1.3268	1.3826	1.4651	12.9sec	1.3445	1.4709	1.5778	2.0262	2.8sec	1.2420	1.2884	1.3393	1.4683	2sec	1.2787	1.3270	1.3799	1.4415
	Level 3	23.1sec	1.1582	1.2499	1.3207	1.4620	14.6sec	1.1318	1.1918	1.2362	1.3253	25.7sec	1.2089	1.3264	1.4299	1.7842	5.6sec	1.1198	1.1576	1.2014	1.2821	4sec	1.1553	1.2021	1.2380	1.3028
3	Level 4	46.1sec	1.0977	1.1662	1.2321	1.3237	29.2sec	1.0713	1.1216	1.1695	1.2339	51.4sec	1.1288	1.2057	1.3122	1.5337	11.1sec	1.0642	1.0922	1.1283	1.1743	8sec	1.0897	1.1289	1.1589	1.2125
months	Level 5	1.5min	1.0707	1.1085	1.1598	1.2532	58.5sec	1.0455	1.0854	1.1184	1.1600	1.7min	1.0923	1.1395	1.2241	1.4187	22.2sec	1.0385	1.0599	1.0749	1.1096	16sec	1.0562	1.0827	1.1076	1.1385
before	Level 6	3.1min	1.0442	1.0772	1.1101	1.1785	1.9min	1.0306	1.0559	1.0819	1.1061	3.4min	1.0604	1.0994	1.1527	1.3540	44.4sec	1.0243	1.0400	1.0534	1.0756	32sec	1.0326	1.0556	1.0711	1.0935
	Level 7	6.1min	1.0282	1.0496	1.0763	1.1254	3.9min	1.0218	1.0382	1.0594	1.0816	6.9min	1.0410	1.0669	1.1115	1.2828	1.5min	1.0165	1.0279	1.0369	1.0537	1.1min	1.0210	1.0389	1.0481	1.0663
	Level 8	12.3min	1.0201	1.0366	1.0575	1.0914	7.8min	1.0174	1.0296	1.0418	1.0713	13.7min	1.0307	1.0470	1.0822	1.2483	3min	1.0136	1.0217	1.0281	1.0422	2.1min	1.0144	1.0297	1.0365	1.0502
	Level 9	24.6min	1.0190	1.0336	1.0494	1.0759	15.6min	1.0150	1.0259	1.0370	1.0645	27.4min	1.0277	1.0398	1.0706	1.2597	5.9min	1.0133	1.0201	1.0304	1.0437	4.3min	1.0121	1.0254	1.0325	1.0486
	Level 1	3.9sec	1.4607	1.5233	1.5893	1.7296	2.3sec	1.4749	1.5382	1.5951	1.6815	3.1sec	1.4787	1.5418	1.6268	1.8114	1.1sec	1.4739	1.5186	1.5537	1.6205	1sec	1.4706	1.5312	1.5706	1.6329
	Level 2	7.8sec	1.2290	1.3005	1.3663	1.4803	4.6sec	1.2519	1.3033	1.3572	1.4410	6.3sec	1.2389	1.3078	1.3950	1.5799	2.2sec	1.2305	1.2701	1.2996	1.3611	2sec	1.2331	1.2816	1.3185	1.3921
	Level 3	15.6sec	1.1286	1.1859	1.2348	1.3305	9.2sec	1.1439	1.1838	1.2314	1.2964	12.6sec	1.1385	1.1919	1.2561	1.4257	4.4sec	1.1156	1.1419	1.1651	1.2102	4sec	1.1196	1.1491	1.1816	1.2405
1	Level 4	31.3sec	1.0801	1.1255	1.1637	1.2450	18.5sec	1.0911	1.1267	1.1635	1.2059	25.2sec	1.0843	1.1273	1.1810	1.3118	8.7sec	1.0627	1.0807	1.0956	1.1353	7.9sec	1.0636	1.0835	1.1109	1.1583
Year	Level 5	1min	1.0522	1.0848	1.1187	1.1719	37sec	1.0575	1.0885	1.1168	1.1535	50.4sec	1.0586	1.0890	1.1270	1.2243	17.5sec	1.0367	1.0508	1.0620	1.0910	15.8sec	1.0360	1.0514	1.0716	1.1084
before	Level 6	2.1min	1.0353	1.0570	1.0850	1.1225	1.2min	1.0388	1.0617	1.0810	1.1061	1.7min	1.0376	1.0636	1.0896	1.1606	35sec	1.0229	1.0345	1.0438	1.0630	31.6sec	1.0209	1.0340	1.0476	1.0705
	Level 7	4.2min	1.0240	1.0404	1.0581	1.0871	2.5min	1.0258	1.0425	1.0559	1.0773	3.4min	1.0256	1.0440	1.0647	1.1135	1.2min	1.0162	1.0240	1.0310	1.0467	1.1min	1.0139	1.0230	1.0329	1.0476
	Level 8	8.3min	1.0167	1.0291	1.0419	1.0622	4.9min	1.0198	1.0313	1.0401	1.0567	6.7min	1.0181	1.0322	1.0473	1.0830	2.3min	1.0121	1.0175	1.0227	1.0342	2.1min	1.0103	1.0167	1.0241	1.0357
	Level 9	16.7min	1.0145	1.0246	1.0353	1.0539	9.9min	1.0172	1.0263	1.0339	1.0506	13.4min	1.0155	1.0275	1.0418	1.0752	4.7min	1.0107	1.0156	1.0201	1.0321	4.2min	1.0091	1.0147	1.0211	1.0324

Notes: This table reports EDM future contracts median results for ask variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDM contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.10: EDM futures contracts median results for bid variance

Bid Variance		EDM0 Median					EDM1 Median					EDM2 Median					EDM3 Median					EDM4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	13.4sec	1.5405	1.5939	1.6863	1.9537	16.2sec	1.4801	1.8211	2.6945	4.1841	19.6sec	1.5717	1.6747	1.9455	3.6856	21.2sec	1.5855	1.7499	1.9397	2.4103	6.8sec	1.5155	1.6881	1.8385	2.4401
	Level 2	26.8sec	1.2804	1.3478	1.4169	1.7535	32.5sec	1.2559	1.5564	2.4498	4.0793	39.3sec	1.3244	1.4381	1.8168	2.9024	42.3sec	1.4492	1.7624	2.0201	2.2940	13.6sec	1.2913	1.4366	1.6470	2.2868
	Level 3	53.6sec	1.1559	1.1837	1.2404	1.7580	1.1min	1.1490	1.4078	1.7157	2.6529	1.3min	1.2617	1.2926	1.5185	2.2178	1.4min	1.3541	1.4859	1.7372	1.9689	27.3sec	1.2016	1.2936	1.4948	1.9301
	Level 4	1.8min	1.0733	1.0977	1.1477	1.4328	2.2min	1.1131	1.2841	1.5340	2.3421	2.6min	1.1896	1.2115	1.4021	1.9731	2.8min	1.1832	1.2827	1.5358	1.5966	54.5sec	1.1008	1.2006	1.3212	1.6430
	Level 5	3.6min	1.0379	1.0558	1.0966	1.3061	4.3min	1.0751	1.2083	1.3326	1.6923	5.2min	1.1194	1.1404	1.2627	1.7907	5.6min	1.0967	1.1990	1.3393	1.3849	1.8min	1.0505	1.1326	1.1894	1.4395
	Level 6	7.1min	1.0200	1.0320	1.0670	1.2163	8.7min	1.0585	1.1647	1.2938	1.5028	10.5min	1.0775	1.0927	1.1927	1.6731	11.3min	1.0563	1.1001	1.2174	1.2655	3.6min	1.0354	1.0745	1.1201	1.3073
	Level 7	14.3min	1.0124	1.0217	1.0449	1.1531	17.3min	1.0484	1.1132	1.2866	1.5464	20.9min	1.0465	1.0717	1.1548	1.5145	22.6min	1.0325	1.0512	1.1443	1.2019	7.3min	1.0231	1.0449	1.0855	1.2249
	Level 8	28.6min	1.0089	1.0173	1.0315	1.1164	34.7min	1.0400	1.0755	1.2877	1.5678	41.9min	1.0334	1.0679	1.1462	1.4416	45.2min	1.0189	1.0359	1.1079	1.1347	14.5min	1.0146	1.0309	1.0623	1.1825
	Level 9	57.1min	1.0093	1.0184	1.0271	1.1115	69.3min	1.0395	1.0842	1.2619	1.5356	83.8min	1.0316	1.0886	1.1801	1.4280	90.3min	1.0133	1.0314	1.0925	1.1180	29.1min	1.0117	1.0265	1.0552	1.2479
60 days before	Level 1	5.4sec	1.4680	1.5714	1.6794	1.9480	7sec	1.4929	1.6460	1.8902	3.7342	8.6sec	1.5327	1.6611	1.7219	2.1671	10sec	1.5000	1.7096	2.0269	2.9272	4.7sec	1.5087	1.6428	1.7987	2.3511
	Level 2	10.9sec	1.2587	1.3336	1.4261	1.6672	13.9sec	1.2601	1.4823	1.6331	2.9313	17.2sec	1.3157	1.4309	1.4974	1.9303	20sec	1.2500	1.5509	2.0335	4.5631	9.4sec	1.2913	1.4161	1.6470	2.1840
	Level 3	21.7sec	1.1334	1.1944	1.2643	1.4857	27.9sec	1.1603	1.3531	1.4829	2.2258	34.4sec	1.2087	1.2801	1.3955	1.7868	40.1sec	1.1250	1.4095	1.7843	6.9611	18.7sec	1.1596	1.2830	1.4431	1.8646
	Level 4	43.5sec	1.0701	1.1170	1.1715	1.3004	55.7sec	1.1027	1.2337	1.3615	1.9125	1.1min	1.1318	1.1939	1.2583	1.5953	1.3min	1.0628	1.2168	1.5396	8.2780	37.4sec	1.0790	1.1802	1.2784	1.5600
	Level 5	1.4min	1.0385	1.0642	1.1116	1.1974	1.9min	1.0702	1.1483	1.2718	1.6233	2.3min	1.0896	1.1234	1.2004	1.4060	2.7min	1.0373	1.1256	1.3467	5.3759	1.2min	1.0487	1.0996	1.1835	1.3793
	Level 6	2.9min	1.0236	1.0416	1.0740	1.1603	3.7min	1.0460	1.1018	1.1919	1.4468	4.6min	1.0563	1.0808	1.1451	1.2954	5.3min	1.0226	1.0774	1.2145	3.2008	2.5min	1.0254	1.0597	1.1083	1.2859
	Level 7	5.8min	1.0143	1.0262	1.0505	1.1205	7.4min	1.0292	1.0759	1.1521	1.4603	9.2min	1.0356	1.0535	1.1031	1.2080	10.7min	1.0184	1.0410	1.1373	2.1260	5min	1.0130	1.0377	1.0609	1.2002
	Level 8	11.6min	1.0111	1.0180	1.0362	1.0844	14.9min	1.0235	1.0572	1.1177	1.4262	18.3min	1.0259	1.0404	1.0862	1.1826	21.4min	1.0100	1.0265	1.1080	1.6142	10min	1.0071	1.0259	1.0373	1.1551
	Level 9	23.2min	1.0114	1.0202	1.0346	1.0820	29.7min	1.0237	1.0549	1.1240	1.3960	36.6min	1.0247	1.0418	1.0859	1.2363	42.7min	1.0082	1.0199	1.0836	1.4094	20min	1.0075	1.0191	1.0342	1.2270
3 months before	Level 1	3.2sec	1.4775	1.5807	1.7267	1.8727	4.1sec	1.5085	1.6507	1.8124	2.7414	4.8sec	1.5011	1.6396	1.7187	2.0148	6.3sec	1.5000	1.6078	1.7722	2.6333	3.3sec	1.5155	1.6523	1.7987	2.3511
	Level 2	6.5sec	1.2625	1.3469	1.4505	1.6603	8.1sec	1.2930	1.4286	1.5618	2.4857	9.6sec	1.2867	1.3920	1.4929	1.8533	12.5sec	1.2500	1.3738	1.7089	3.1139	6.6sec	1.3152	1.4328	1.6402	2.1840
	Level 3	12.9sec	1.1551	1.2037	1.2787	1.4862	16.2sec	1.1946	1.3008	1.4330	2.0002	19.2sec	1.1851	1.2676	1.3585	1.5954	25.1sec	1.1250	1.2293	1.4695	2.4565	13.2sec	1.1912	1.2885	1.4431	1.8646
	Level 4	25.9sec	1.0752	1.1302	1.1850	1.3160	32.5sec	1.1189	1.1935	1.2881	1.5985	38.5sec	1.1258	1.1824	1.2373	1.5165	50.2sec	1.0702	1.1506	1.3016	1.7332	26.4sec	1.1041	1.1926	1.2816	1.6265
	Level 5	51.8sec	1.0412	1.0792	1.1223	1.2329	1.1min	1.0753	1.1221	1.2102	1.4803	1.3min	1.0778	1.1134	1.1589	1.3897	1.7min	1.0463	1.0978	1.2040	1.4533	52.8sec	1.0522	1.1194	1.1835	1.4134
	Level 6	1.7min	1.0248	1.0502	1.0821	1.1653	2.2min	1.0473	1.0916	1.1559	1.4250	2.6min	1.0468	1.0705	1.1091	1.2695	3.3min	1.0290	1.0619	1.1174	1.3130	1.8min	1.0354	1.0689	1.1177	1.2677
	Level 7	3.5min	1.0173	1.0330	1.0614	1.1235	4.3min	1.0292	1.0634	1.1069	1.3321	5.1min	1.0313	1.0443	1.0812	1.1929	6.7min	1.0180	1.0405	1.0693	1.1999	3.5min	1.0231	1.0422	1.0672	1.1692
	Level 8	6.9min	1.0141	1.0250	1.0480	1.0881	8.7min	1.0217	1.0444	1.0765	1.3004	10.3min	1.0213	1.0358	1.0649	1.1504	13.4min	1.0107	1.0264	1.0446	1.1301	7min	1.0146	1.0282	1.0502	1.1139
	Level 9	13.8min	1.0126	1.0246	1.0451	1.0838	17.3min	1.0198	1.0413	1.0694	1.3237	20.5min	1.0182	1.0304	1.0601	1.1723	26.7min	1.0085	1.0207	1.0379	1.1306	14.1min	1.0117	1.0235	1.0384	1.0863
1 Year before	Level 1	1.6sec	1.4811	1.5469	1.6009	1.7502	2.2sec	1.5083	1.5869	1.6646	1.8472	3.1sec	1.4933	1.5607	1.6483	1.7775	4.2sec	1.5023	1.5931	1.6961	1.9563	2.3sec	1.5210	1.6058	1.6962	1.8385
	Level 2	3.3sec	1.2587	1.3136	1.3679	1.4916	4.5sec	1.2849	1.3676	1.4376	1.6126	6.2sec	1.2702	1.3403	1.4186	1.5637	8.5sec	1.2692	1.3779	1.4989	1.8384	4.5sec	1.3065	1.3858	1.4767	1.6653
	Level 3	6.5sec	1.1456	1.1948	1.2377	1.3404	9sec	1.1747	1.2358	1.2968	1.4526	12.4sec	1.1661	1.2126	1.2749	1.4204	17sec	1.1503	1.2371	1.3268	1.5937	9.1sec	1.1831	1.2511	1.3226	1.4939
	Level 4	13.1sec	1.0856	1.1278	1.1613	1.2344	18sec	1.1110	1.1519	1.2043	1.3133	24.7sec	1.0954	1.1369	1.1847	1.2924	33.9sec	1.0878	1.1490	1.2213	1.3814	18.1sec	1.1087	1.1581	1.2197	1.3289
	Level 5	26.1sec	1.0561	1.0861	1.1128	1.1719	35.9sec	1.0735	1.1036	1.1333	1.2140	49.4sec	1.0608	1.0896	1.1216	1.1969	1.1min	1.0535	1.0945	1.1341	1.2426	36.2sec	1.0650	1.1000	1.1397	1.2165
	Level 6	52.3sec	1.0368	1.0566	1.0783	1.1194	1.2min	1.0460	1.0695	1.0929	1.1546	1.6min	1.0386	1.0574	1.0807	1.1292	2.3min	1.0310	1.0579	1.0833	1.1789	1.2min	1.0380	1.0642	1.0906	1.1430
	Level 7	1.7min	1.0234	1.0379	1.0543	1.0857	2.4min	1.0292	1.0476	1.0638	1.1071	3.3min	1.0250	1.0382	1.0528	1.0866	4.5min	1.0184	1.0350	1.0512	1.1195	2.4min	1.0234	1.0397	1.0553	1.0890
	Level 8	3.5min	1.0165	1.0263	1.0391	1.0681	4.8min	1.0214	1.0348	1.0468	1.0800	6.6min	1.0176	1.0267	1.0379	1.0624	9.1min	1.0123	1.0247	1.0366	1.0909	4.8min	1.0158	1.0265	1.0367	1.0601
	Level 9	7min	1.0149	1.0225	1.0338	1.0616	9.6min	1.0192	1.0311	1.0424	1.0748	13.2min	1.0143	1.0225	1.0325	1.0598	18.1min	1.0102	1.0215	1.0335	1.0860	9.7min	1.0130	1.0224	1.0309	1.0543

Notes: This table reports EDM future contracts median results for bid variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDM contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.10: EDM futures contracts median results for bid variance – Continued

Bid Variance		EDM5 Median					EDM6 Median					EDM7 Median					EDM8 Median					EDM9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.4sec	1.4342	1.6188	1.6453	2.0247	13.9sec	1.4215	1.6018	1.6667	1.8042	27.3sec	1.6309	1.7996	2.0454	4.3187	4.9sec	1.5177	1.5839	1.6330	1.8256	3sec	1.4521	1.5346	1.6024	1.7223
	Level 2	28.8sec	1.2099	1.4042	1.5537	1.5902	27.8sec	1.2065	1.2908	1.3813	1.5796	54.6sec	1.4426	1.6256	1.9345	4.5061	9.9sec	1.2889	1.3344	1.4104	1.5190	6sec	1.2400	1.3035	1.4026	1.4294
	Level 3	57.5sec	1.1298	1.2794	1.3686	1.5654	55.5sec	1.1021	1.1409	1.2107	1.3463	1.8min	1.3258	1.4238	1.8072	2.9455	19.7sec	1.1381	1.1894	1.2522	1.3102	12sec	1.0986	1.1863	1.2092	1.2902
30	**Level 4**	1.9min	1.0868	1.2259	1.2783	1.5376	1.9min	1.0503	1.0807	1.1314	1.2380	3.6min	1.2392	1.3996	1.5882	2.0614	39.4sec	1.0775	1.1110	1.1393	1.1829	24.1sec	1.0491	1.1090	1.1367	1.2098
days	**Level 5**	3.8min	1.0538	1.1410	1.2494	1.3862	3.7min	1.0279	1.0496	1.0927	1.2176	7.3min	1.1865	1.3151	1.4598	1.8490	1.3min	1.0429	1.0666	1.0861	1.1081	48.2sec	1.0296	1.0657	1.0946	1.1305
before	**Level 6**	7.7min	1.0326	1.0923	1.1645	1.2555	7.4min	1.0183	1.0328	1.0634	1.1528	14.6min	1.1298	1.2117	1.4253	1.7912	2.6min	1.0281	1.0452	1.0535	1.0655	1.6min	1.0186	1.0394	1.0657	1.0873
	Level 7	15.3min	1.0209	1.0652	1.1010	1.1640	14.8min	1.0130	1.0244	1.0486	1.1145	29.1min	1.0928	1.1699	1.3624	1.6992	5.3min	1.0196	1.0316	1.0372	1.0497	3.2min	1.0132	1.0260	1.0447	1.0612
	Level 8	30.7min	1.0141	1.0511	1.0675	1.1178	29.6min	1.0105	1.0193	1.0406	1.0980	58.3min	1.0779	1.1612	1.2892	1.6686	10.5min	1.0171	1.0263	1.0290	1.0454	6.4min	1.0100	1.0205	1.0347	1.0538
	Level 9	61.3min	1.0143	1.0441	1.0574	1.0981	59.2min	1.0105	1.0202	1.0412	1.1093	116.6min	1.0926	1.1842	1.3230	1.7132	21min	1.0186	1.0265	1.0351	1.0513	12.9min	1.0092	1.0206	1.0331	1.0477
	Level 1	8.5sec	1.4749	1.5736	1.7148	1.8510	6.1sec	1.4649	1.5793	1.6437	1.7777	11sec	1.5487	1.6873	1.8579	2.2526	2.2sec	1.4754	1.5349	1.5910	1.7351	1.6sec	1.5006	1.5808	1.6335	1.7223
	Level 2	17sec	1.2440	1.3789	1.4894	1.6435	12.3sec	1.2423	1.3131	1.3937	1.5091	22sec	1.3352	1.5192	1.6607	2.1729	4.3sec	1.2411	1.2996	1.3452	1.4599	3.1sec	1.2716	1.3501	1.4100	1.4591
	Level 3	33.9sec	1.1484	1.2512	1.3359	1.5101	24.6sec	1.1165	1.1756	1.2383	1.3424	43.9sec	1.2125	1.3578	1.5140	1.9429	8.6sec	1.1185	1.1677	1.2106	1.2762	6.3sec	1.1381	1.2052	1.2506	1.3080
60	**Level 4**	1.1min	1.0936	1.1692	1.2376	1.3726	49.1sec	1.0603	1.1069	1.1657	1.2354	1.5min	1.1316	1.2432	1.3959	1.7454	17.2sec	1.0655	1.0965	1.1340	1.1797	12.6sec	1.0773	1.1356	1.1694	1.2153
days	**Level 5**	2.3min	1.0642	1.1123	1.1649	1.2801	1.6min	1.0323	1.0698	1.1117	1.1837	2.9min	1.0940	1.1787	1.3089	1.5425	34.4sec	1.0409	1.0627	1.0853	1.1081	25.2sec	1.0441	1.0917	1.1105	1.1454
before	**Level 6**	4.5min	1.0422	1.0837	1.1187	1.2002	3.3min	1.0193	1.0475	1.0704	1.1341	5.9min	1.0698	1.1209	1.2132	1.4655	1.1min	1.0257	1.0449	1.0546	1.0705	50.4sec	1.0266	1.0654	1.0764	1.1018
	Level 7	9min	1.0280	1.0631	1.0839	1.1330	6.5min	1.0133	1.0317	1.0505	1.0990	11.7min	1.0485	1.0804	1.1544	1.3808	2.3min	1.0192	1.0313	1.0376	1.0541	1.7min	1.0173	1.0447	1.0545	1.0726
	Level 8	18.1min	1.0192	1.0480	1.0576	1.1032	13.1min	1.0106	1.0226	1.0396	1.0765	23.4min	1.0354	1.0588	1.1174	1.3656	4.6min	1.0159	1.0243	1.0288	1.0454	3.4min	1.0118	1.0317	1.0404	1.0581
	Level 9	36.2min	1.0163	1.0412	1.0535	1.0885	26.2min	1.0108	1.0214	1.0355	1.0679	46.9min	1.0300	1.0598	1.1118	1.4707	9.2min	1.0152	1.0238	1.0322	1.0489	6.7min	1.0105	1.0301	1.0387	1.0582
	Level 1	5.8sec	1.4868	1.5556	1.6889	1.8171	3.7sec	1.4821	1.5793	1.6435	1.7498	6.4sec	1.5494	1.6544	1.7956	2.1065	1.4sec	1.4854	1.5360	1.5839	1.7336	1sec	1.5009	1.5556	1.6057	1.6826
	Level 2	11.5sec	1.2648	1.3566	1.4580	1.6212	7.3sec	1.2598	1.3324	1.3845	1.5091	12.9sec	1.3332	1.4624	1.6037	1.9969	2.8sec	1.2420	1.2884	1.3393	1.4683	2sec	1.2741	1.3369	1.3812	1.4383
	Level 3	23sec	1.1602	1.2512	1.3064	1.4576	14.6sec	1.1314	1.2062	1.2456	1.3424	25.7sec	1.2009	1.3250	1.4169	1.8020	5.6sec	1.1198	1.1576	1.2014	1.2821	4sec	1.1527	1.2029	1.2375	1.3017
3	**Level 4**	46.1sec	1.0986	1.1692	1.2273	1.3598	29.2sec	1.0693	1.1316	1.1721	1.2389	51.4sec	1.1204	1.2183	1.3040	1.5795	11.1sec	1.0642	1.0922	1.1283	1.1743	8sec	1.0893	1.1275	1.1596	1.2114
months	**Level 5**	1.5min	1.0690	1.1123	1.1649	1.2704	58.5sec	1.0437	1.0913	1.1194	1.1857	1.7min	1.0908	1.1449	1.2202	1.4584	22.2sec	1.0385	1.0599	1.0749	1.1096	16sec	1.0556	1.0833	1.1078	1.1425
before	**Level 6**	3.1min	1.0438	1.0775	1.1125	1.1988	1.9min	1.0292	1.0599	1.0847	1.1341	3.4min	1.0628	1.0968	1.1572	1.3809	44.4sec	1.0243	1.0400	1.0534	1.0756	32sec	1.0325	1.0555	1.0738	1.0994
	Level 7	6.1min	1.0268	1.0588	1.0775	1.1258	3.9min	1.0213	1.0388	1.0587	1.0990	6.9min	1.0434	1.0643	1.1087	1.3041	1.5min	1.0165	1.0279	1.0369	1.0537	1.1min	1.0214	1.0390	1.0512	1.0718
	Level 8	12.3min	1.0195	1.0442	1.0554	1.0896	7.8min	1.0176	1.0302	1.0409	1.0765	13.7min	1.0328	1.0486	1.0806	1.2489	3min	1.0136	1.0217	1.0281	1.0422	2.1min	1.0155	1.0302	1.0384	1.0581
	Level 9	24.6min	1.0168	1.0350	1.0486	1.0753	15.6min	1.0156	1.0264	1.0370	1.0679	27.4min	1.0291	1.0395	1.0725	1.2457	5.9min	1.0133	1.0201	1.0304	1.0437	4.3min	1.0135	1.0252	1.0345	1.0569
	Level 1	3.9sec	1.4591	1.5298	1.5935	1.7348	2.3sec	1.4751	1.5419	1.5940	1.6785	3.1sec	1.4810	1.5415	1.6152	1.8324	1.1sec	1.4739	1.5186	1.5537	1.6205	1sec	1.4715	1.5305	1.5671	1.6356
	Level 2	7.8sec	1.2325	1.2981	1.3670	1.4722	4.6sec	1.2521	1.3041	1.3597	1.4424	6.3sec	1.2398	1.3086	1.3937	1.6024	2.2sec	1.2305	1.2701	1.2996	1.3611	2sec	1.2354	1.2792	1.3161	1.3934
	Level 3	15.6sec	1.1267	1.1880	1.2346	1.3262	9.2sec	1.1440	1.1859	1.2327	1.2978	12.6sec	1.1374	1.1915	1.2484	1.4238	4.4sec	1.1156	1.1419	1.1651	1.2102	4sec	1.1212	1.1501	1.1819	1.2409
1	**Level 4**	31.3sec	1.0802	1.1249	1.1613	1.2371	18.5sec	1.0916	1.1279	1.1649	1.2094	25.2sec	1.0853	1.1248	1.1779	1.3086	8.7sec	1.0627	1.0807	1.0956	1.1353	7.9sec	1.0633	1.0837	1.1107	1.1573
Year	**Level 5**	1min	1.0528	1.0852	1.1180	1.1711	37sec	1.0578	1.0909	1.1167	1.1564	50.4sec	1.0563	1.0900	1.1274	1.2278	17.5sec	1.0367	1.0508	1.0620	1.0910	15.8sec	1.0356	1.0514	1.0717	1.1078
before	**Level 6**	2.1min	1.0347	1.0578	1.0855	1.1258	1.2min	1.0389	1.0631	1.0800	1.1074	1.7min	1.0356	1.0629	1.0897	1.1621	35sec	1.0229	1.0345	1.0438	1.0630	31.6sec	1.0214	1.0331	1.0474	1.0726
	Level 7	4.2min	1.0236	1.0398	1.0588	1.0878	2.5min	1.0266	1.0435	1.0556	1.0767	3.4min	1.0242	1.0441	1.0617	1.1155	1.2min	1.0162	1.0240	1.0310	1.0467	1.1min	1.0143	1.0228	1.0329	1.0499
	Level 8	8.3min	1.0170	1.0288	1.0423	1.0614	4.9min	1.0191	1.0315	1.0402	1.0574	6.7min	1.0177	1.0323	1.0456	1.0827	2.3min	1.0121	1.0175	1.0227	1.0342	2.1min	1.0104	1.0167	1.0238	1.0372
	Level 9	16.7min	1.0145	1.0244	1.0350	1.0541	9.9min	1.0168	1.0269	1.0345	1.0492	13.4min	1.0154	1.0281	1.0398	1.0761	4.7min	1.0107	1.0156	1.0201	1.0321	4.2min	1.0093	1.0145	1.0209	1.0331

Notes: This table reports EDM future contracts median results for bid variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDM contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.11: EDM futures contracts median results for bid–ask covariance

Bid–Ask Covariance		EDM0 Median					EDM1 Median					EDM2 Median					EDM3 Median					EDM4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	16sec	1.5101	1.8184	2.6271	3.9798	16sec	1.5101	1.8184	2.6271	3.9798	19.8sec	1.5878	1.6546	1.9274	3.8502	21.8sec	1.5850	1.7442	1.9557	2.4612	7.2sec	1.5178	1.6919	1.8325	2.4394
	Level 2	32sec	1.2532	1.5823	2.3271	4.2739	32sec	1.2532	1.5823	2.3271	4.2739	39.7sec	1.3038	1.4532	1.8282	3.0976	43.6sec	1.4523	1.8059	2.0146	2.2647	14.4sec	1.2959	1.4406	1.6459	2.3492
	Level 3	1.1min	1.1465	1.3790	1.6818	2.7265	1.1min	1.1465	1.3790	1.6818	2.7265	1.3min	1.2329	1.2964	1.5418	2.2980	1.5min	1.3541	1.4905	1.7475	1.9477	28.8sec	1.2015	1.2994	1.4936	1.9669
	Level 4	2.1min	1.1089	1.2457	1.4729	2.3316	2.1min	1.1089	1.2457	1.4729	2.3316	2.6min	1.1708	1.1954	1.4081	1.9356	2.9min	1.1800	1.2814	1.5187	1.5727	57.6sec	1.1008	1.1967	1.3177	1.6393
	Level 5	4.3min	1.0681	1.1565	1.2727	1.6305	4.3min	1.0681	1.1565	1.2727	1.6305	5.3min	1.1063	1.1264	1.2615	1.6631	5.8min	1.0915	1.1928	1.2864	1.3588	1.9min	1.0504	1.1190	1.1842	1.3829
	Level 6	8.5min	1.0489	1.1263	1.2040	1.5554	8.5min	1.0489	1.1263	1.2040	1.5554	10.6min	1.0638	1.0818	1.1643	1.4704	11.6min	1.0520	1.0917	1.1952	1.2436	3.8min	1.0300	1.0612	1.0941	1.2350
	Level 7	17.1min	1.0328	1.0747	1.1465	1.4425	17.1min	1.0328	1.0747	1.1465	1.4425	21.2min	1.0356	1.0517	1.1110	1.3027	23.2min	1.0284	1.0410	1.1111	1.1577	7.7min	1.0157	1.0310	1.0448	1.1336
	Level 8	34.2min	1.0193	1.0409	1.0894	1.3552	34.2min	1.0193	1.0409	1.0894	1.3552	42.3min	1.0170	1.0330	1.0640	1.1452	46.5min	1.0159	1.0223	1.0649	1.0752	15.4min	1.0081	1.0153	1.0236	1.0732
	Level 9	68.3min	1.0115	1.0250	1.0823	1.2665	68.3min	1.0115	1.0250	1.0823	1.2665	84.7min	1.0111	1.0219	1.0428	1.0946	93min	1.0080	1.0149	1.0378	1.0604	30.7min	1.0043	1.0080	1.0127	1.0512
60 days before	Level 1	6.9sec	1.5050	1.6783	1.8895	3.7032	6.9sec	1.5050	1.6783	1.8895	3.7032	8.6sec	1.5183	1.6468	1.7336	2.1385	10.4sec	1.5000	1.7062	2.0221	2.5928	4.6sec	1.5097	1.6408	1.7662	2.1483
	Level 2	13.7sec	1.2631	1.4732	1.6164	2.8210	13.7sec	1.2631	1.4732	1.6164	2.8210	17.3sec	1.2866	1.4201	1.5073	1.9637	20.7sec	1.2500	1.5498	2.0146	3.2895	9.3sec	1.2959	1.4179	1.6162	2.0967
	Level 3	27.4sec	1.1585	1.3262	1.4908	2.1308	27.4sec	1.1585	1.3262	1.4908	2.1308	34.5sec	1.2055	1.2645	1.3481	1.8268	41.4sec	1.1250	1.4092	1.7475	3.2094	18.5sec	1.1599	1.2819	1.3943	1.8445
	Level 4	54.8sec	1.0981	1.2102	1.3165	1.7360	54.8sec	1.0981	1.2102	1.3165	1.7360	1.2min	1.1275	1.1785	1.2467	1.6092	1.4min	1.0626	1.2114	1.5187	2.4819	37.1sec	1.0795	1.1672	1.2396	1.5115
	Level 5	1.8min	1.0656	1.1273	1.1937	1.5187	1.8min	1.0656	1.1273	1.1937	1.5187	2.3min	1.0792	1.1119	1.1710	1.3797	2.8min	1.0327	1.1201	1.2864	1.7656	1.2min	1.0448	1.0975	1.1279	1.3309
	Level 6	3.7min	1.0394	1.0866	1.1430	1.3862	3.7min	1.0394	1.0866	1.1430	1.3862	4.6min	1.0501	1.0670	1.1080	1.2485	5.5min	1.0157	1.0551	1.1837	1.3351	2.5min	1.0196	1.0521	1.0730	1.1812
	Level 7	7.3min	1.0217	1.0480	1.0886	1.2785	7.3min	1.0217	1.0480	1.0886	1.2785	9.2min	1.0274	1.0378	1.0629	1.1486	11.1min	1.0081	1.0292	1.0999	1.1771	4.9min	1.0100	1.0257	1.0343	1.0993
	Level 8	14.6min	1.0133	1.0269	1.0497	1.1991	14.6min	1.0133	1.0269	1.0497	1.1991	18.4min	1.0142	1.0228	1.0359	1.0826	22.1min	1.0044	1.0177	1.0617	1.0898	9.9min	1.0050	1.0119	1.0193	1.0563
	Level 9	29.2min	1.0084	1.0173	1.0281	1.1249	29.2min	1.0084	1.0173	1.0281	1.1249	36.8min	1.0086	1.0163	1.0234	1.0584	44.2min	1.0021	1.0073	1.0180	1.0576	19.8min	1.0025	1.0060	1.0110	1.0340
3 months before	Level 1	4sec	1.5106	1.6649	1.8018	2.7134	4sec	1.5106	1.6649	1.8018	2.7134	4.8sec	1.5022	1.6332	1.7137	2.0037	6.3sec	1.5000	1.5915	1.7524	2.5114	3.3sec	1.5178	1.6440	1.7853	2.3034
	Level 2	8sec	1.2998	1.4202	1.5823	2.3950	8sec	1.2998	1.4202	1.5823	2.3950	9.6sec	1.2863	1.4008	1.4751	1.8227	12.7sec	1.2500	1.3726	1.6525	2.6981	6.5sec	1.3203	1.4182	1.5965	2.0967
	Level 3	15.9sec	1.1840	1.2815	1.4054	1.9285	15.9sec	1.1840	1.2815	1.4054	1.9285	19.3sec	1.1839	1.2522	1.3383	1.5478	25.3sec	1.1250	1.2252	1.4582	2.1781	13.1sec	1.1821	1.2824	1.4009	1.8445
	Level 4	31.8sec	1.1155	1.1804	1.2564	1.5202	31.8sec	1.1155	1.1804	1.2564	1.5202	38.6sec	1.1167	1.1699	1.2345	1.4126	50.6sec	1.0678	1.1482	1.2814	1.6064	26.1sec	1.1019	1.1742	1.2396	1.5495
	Level 5	1.1min	1.0733	1.1128	1.1728	1.4443	1.1min	1.0733	1.1128	1.1728	1.4443	1.3min	1.0715	1.1043	1.1443	1.3147	1.7min	1.0455	1.0949	1.1928	1.3834	52.2sec	1.0541	1.1018	1.1495	1.3324
	Level 6	2.1min	1.0433	1.0712	1.1178	1.2456	2.1min	1.0433	1.0712	1.1178	1.2456	2.6min	1.0372	1.0605	1.0824	1.1830	3.4min	1.0205	1.0478	1.0907	1.2047	1.7min	1.0300	1.0551	1.0758	1.1960
	Level 7	4.2min	1.0245	1.0425	1.0675	1.2301	4.2min	1.0245	1.0425	1.0675	1.2301	5.1min	1.0213	1.0360	1.0517	1.1147	6.7min	1.0098	1.0284	1.0502	1.1240	3.5min	1.0149	1.0304	1.0429	1.1046
	Level 8	8.5min	1.0127	1.0248	1.0401	1.1318	8.5min	1.0127	1.0248	1.0401	1.1318	10.3min	1.0124	1.0215	1.0330	1.0670	13.5min	1.0051	1.0146	1.0249	1.0730	7min	1.0069	1.0152	1.0206	1.0563
	Level 9	17min	1.0084	1.0147	1.0243	1.0848	17min	1.0084	1.0147	1.0243	1.0848	20.6min	1.0082	1.0133	1.0209	1.0474	27min	1.0025	1.0079	1.0131	1.0387	13.9min	1.0031	1.0080	1.0122	1.0299
1 Year before	Level 1	2.2sec	1.5074	1.5778	1.6561	1.8357	2.2sec	1.5074	1.5778	1.6561	1.8357	3.1sec	1.4934	1.5570	1.6403	1.7687	4.2sec	1.5000	1.5889	1.6950	1.9200	2.3sec	1.5178	1.6034	1.6905	1.8370
	Level 2	4.5sec	1.2814	1.3588	1.4202	1.6073	4.5sec	1.2814	1.3588	1.4202	1.6073	6.2sec	1.2647	1.3328	1.4164	1.5630	8.4sec	1.2604	1.3750	1.4763	1.8059	4.6sec	1.2968	1.3803	1.4728	1.6809
	Level 3	8.9sec	1.1683	1.2240	1.2792	1.4407	8.9sec	1.1683	1.2240	1.2792	1.4407	12.4sec	1.1573	1.2045	1.2647	1.3798	16.8sec	1.1491	1.2265	1.3171	1.5343	9.1sec	1.1771	1.2387	1.3113	1.4632
	Level 4	17.8sec	1.1024	1.1400	1.1817	1.2821	17.8sec	1.1024	1.1400	1.1817	1.2821	24.8sec	1.0891	1.1270	1.1723	1.2616	33.7sec	1.0791	1.1392	1.2098	1.3585	18.3sec	1.1039	1.1443	1.2029	1.3093
	Level 5	35.7sec	1.0633	1.0894	1.1165	1.1852	35.7sec	1.0633	1.0894	1.1165	1.1852	49.6sec	1.0541	1.0788	1.1085	1.1695	1.1min	1.0470	1.0819	1.1173	1.2108	36.5sec	1.0575	1.0905	1.1237	1.1909
	Level 6	1.2min	1.0379	1.0542	1.0715	1.1209	1.2min	1.0379	1.0542	1.0715	1.1209	1.7min	1.0320	1.0484	1.0672	1.1076	2.2min	1.0252	1.0472	1.0661	1.1298	1.2min	1.0317	1.0520	1.0716	1.1084
	Level 7	2.4min	1.0218	1.0325	1.0435	1.0744	2.4min	1.0218	1.0325	1.0435	1.0744	3.3min	1.0181	1.0292	1.0389	1.0627	4.5min	1.0133	1.0263	1.0366	1.0743	2.4min	1.0169	1.0275	1.0383	1.0612
	Level 8	4.8min	1.0122	1.0186	1.0257	1.0414	4.8min	1.0122	1.0186	1.0257	1.0414	6.6min	1.0101	1.0166	1.0228	1.0353	9min	1.0065	1.0144	1.0209	1.0430	4.9min	1.0091	1.0148	1.0201	1.0317
	Level 9	9.5min	1.0078	1.0117	1.0160	1.0263	9.5min	1.0078	1.0117	1.0160	1.0263	13.2min	1.0062	1.0101	1.0140	1.0221	18min	1.0032	1.0081	1.0125	1.0255	9.7min	1.0051	1.0082	1.0113	1.0187

Notes: This table reports EDM future contracts median results for bid–ask covariance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDM contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.11: EDM futures contracts median results for bid–ask covariance – Continued

Bid–Ask Covariance		EDM5 Median					EDM6 Median					EDM7 Median					EDM8 Median					EDM9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	14.4sec	1.4339	1.6130	1.6460	2.0218	13.9sec	1.4193	1.5986	1.6609	1.7629	27.3sec	1.6237	1.7833	2.0212	4.3864	4.9sec	1.5191	1.5721	1.6353	1.8292	3sec	1.4510	1.5341	1.6022	1.7327
	Level 2	28.8sec	1.2082	1.4051	1.5469	1.5873	27.8sec	1.2071	1.2918	1.3820	1.4888	54.6sec	1.4518	1.6159	1.9446	4.3819	9.9sec	1.2915	1.3219	1.4030	1.5106	6sec	1.2396	1.2999	1.3946	1.4241
	Level 3	57.5sec	1.1300	1.3018	1.3615	1.5307	55.5sec	1.1005	1.1420	1.2069	1.2982	1.8min	1.3484	1.4273	1.7907	2.8341	19.7sec	1.1337	1.1746	1.2412	1.2842	12sec	1.0974	1.1750	1.2047	1.2806
	Level 4	1.9min	1.0881	1.2169	1.2644	1.4956	1.9min	1.0494	1.0774	1.1198	1.2267	3.6min	1.2536	1.3684	1.5140	2.0420	39.4sec	1.0726	1.0926	1.1246	1.1706	24.1sec	1.0451	1.1019	1.1320	1.1925
	Level 5	3.8min	1.0550	1.1302	1.2240	1.3529	3.7min	1.0265	1.0449	1.0825	1.1797	7.3min	1.1791	1.2773	1.3799	1.6167	1.3min	1.0363	1.0559	1.0708	1.0889	48.2sec	1.0260	1.0593	1.0840	1.1137
	Level 6	7.7min	1.0331	1.0817	1.1441	1.2193	7.4min	1.0158	1.0274	1.0509	1.1276	14.6min	1.1185	1.1741	1.2712	1.5276	2.6min	1.0209	1.0334	1.0422	1.0472	1.6min	1.0158	1.0341	1.0534	1.0735
	Level 7	15.3min	1.0205	1.0505	1.0821	1.1277	14.8min	1.0104	1.0186	1.0367	1.0860	29.1min	1.0780	1.1175	1.1942	1.5150	5.3min	1.0129	1.0215	1.0238	1.0293	3.2min	1.0101	1.0207	1.0320	1.0454
	Level 8	30.7min	1.0128	1.0360	1.0483	1.0812	29.6min	1.0076	1.0131	1.0270	1.0634	58.3min	1.0546	1.1050	1.1571	1.4247	10.5min	1.0092	1.0145	1.0176	1.0226	6.4min	1.0068	1.0138	1.0215	1.0304
	Level 9	61.3min	1.0092	1.0296	1.0367	1.0599	59.2min	1.0067	1.0121	1.0264	1.0568	116.6min	1.0589	1.1094	1.2049	1.4035	21min	1.0091	1.0127	1.0183	1.0232	12.9min	1.0053	1.0112	1.0172	1.0260
60 days before	Level 1	8.5sec	1.4710	1.5711	1.7196	1.8513	6.1sec	1.4698	1.5710	1.6342	1.7359	11sec	1.5603	1.6853	1.8319	2.2218	2.2sec	1.4775	1.5356	1.5938	1.7290	1.6sec	1.4929	1.5710	1.6234	1.7327
	Level 2	17sec	1.2402	1.3793	1.4875	1.6387	12.3sec	1.2435	1.3099	1.3915	1.4612	22sec	1.3407	1.5264	1.6501	2.0826	4.3sec	1.2388	1.2925	1.3395	1.4488	3.1sec	1.2689	1.3432	1.3975	1.4573
	Level 3	33.9sec	1.1466	1.2551	1.3335	1.4908	24.6sec	1.1155	1.1724	1.2357	1.3310	43.9sec	1.2190	1.3501	1.4641	1.9871	8.6sec	1.1134	1.1600	1.1949	1.2591	6.3sec	1.1361	1.1996	1.2423	1.2936
	Level 4	1.1min	1.0915	1.1700	1.2296	1.3335	49.1sec	1.0591	1.1002	1.1544	1.2185	1.5min	1.1259	1.2364	1.3683	1.7544	17.2sec	1.0610	1.0869	1.1193	1.1557	12.6sec	1.0760	1.1281	1.1548	1.1965
	Level 5	2.3min	1.0611	1.1092	1.1523	1.2393	1.6min	1.0308	1.0623	1.1001	1.1634	2.9min	1.0948	1.1617	1.2588	1.4716	34.4sec	1.0332	1.0528	1.0685	1.0882	25.2sec	1.0421	1.0796	1.0987	1.1268
	Level 6	4.5min	1.0376	1.0667	1.1024	1.1613	3.3min	1.0176	1.0387	1.0573	1.0937	5.9min	1.0595	1.1013	1.1686	1.3605	1.1min	1.0190	1.0328	1.0423	1.0520	50.4sec	1.0243	1.0496	1.0621	1.0808
	Level 7	9min	1.0228	1.0431	1.0693	1.0941	6.5min	1.0106	1.0238	1.0384	1.0669	11.7min	1.0377	1.0593	1.1098	1.2717	2.3min	1.0119	1.0192	1.0244	1.0337	1.7min	1.0142	1.0313	1.0396	1.0521
	Level 8	18.1min	1.0142	1.0317	1.0456	1.0620	13.1min	1.0076	1.0173	1.0283	1.0557	23.4min	1.0271	1.0363	1.0750	1.2135	4.6min	1.0084	1.0128	1.0171	1.0229	3.4min	1.0089	1.0203	1.0262	1.0372
	Level 9	36.2min	1.0105	1.0247	1.0355	1.0491	26.2min	1.0072	1.0141	1.0224	1.0438	46.9min	1.0208	1.0295	1.0633	1.2495	9.2min	1.0074	1.0108	1.0146	1.0216	6.7min	1.0068	1.0171	1.0222	1.0310
3 months before	Level 1	5.8sec	1.4849	1.5582	1.6928	1.8186	3.7sec	1.4858	1.5710	1.6273	1.7402	6.4sec	1.5582	1.6529	1.7886	2.0677	1.4sec	1.4819	1.5340	1.5787	1.7283	1sec	1.4954	1.5492	1.6023	1.6874
	Level 2	11.5sec	1.2601	1.3580	1.4585	1.6121	7.3sec	1.2612	1.3281	1.3820	1.4794	12.9sec	1.3385	1.4626	1.5930	2.0046	2.8sec	1.2385	1.2856	1.3279	1.4530	2sec	1.2732	1.3237	1.3707	1.4339
	Level 3	23.1sec	1.1520	1.2458	1.3022	1.4510	14.6sec	1.1301	1.2026	1.2388	1.3310	25.7sec	1.2070	1.3198	1.4187	1.7396	5.6sec	1.1180	1.1522	1.1862	1.2609	4sec	1.1480	1.1941	1.2273	1.2865
	Level 4	46.1sec	1.0953	1.1613	1.2264	1.3285	29.2sec	1.0686	1.1218	1.1613	1.2246	51.4sec	1.1216	1.1958	1.2969	1.4977	11.1sec	1.0599	1.0831	1.1166	1.1533	8sec	1.0823	1.1170	1.1420	1.1929
	Level 5	1.5min	1.0661	1.1033	1.1495	1.2353	58.5sec	1.0420	1.0820	1.1119	1.1712	1.7min	1.0858	1.1285	1.2064	1.3656	22.2sec	1.0336	1.0497	1.0637	1.0886	16sec	1.0482	1.0721	1.0926	1.1249
	Level 6	3.1min	1.0400	1.0637	1.1004	1.1561	1.9min	1.0254	1.0510	1.0696	1.0975	3.4min	1.0560	1.0846	1.1416	1.2645	44.4sec	1.0184	1.0300	1.0390	1.0535	32sec	1.0278	1.0441	1.0576	1.0790
	Level 7	6.1min	1.0225	1.0405	1.0663	1.1000	3.9min	1.0162	1.0306	1.0475	1.0669	6.9min	1.0358	1.0522	1.0902	1.1917	1.5min	1.0113	1.0181	1.0236	1.0338	1.1min	1.0172	1.0287	1.0364	1.0514
	Level 8	12.3min	1.0149	1.0272	1.0433	1.0605	7.8min	1.0126	1.0205	1.0327	1.0557	13.7min	1.0246	1.0345	1.0604	1.1515	3min	1.0081	1.0125	1.0164	1.0228	2.1min	1.0107	1.0192	1.0256	1.0352
	Level 9	24.6min	1.0112	1.0221	1.0332	1.0488	15.6min	1.0104	1.0164	1.0256	1.0438	27.4min	1.0188	1.0268	1.0477	1.1706	5.9min	1.0067	1.0098	1.0138	1.0203	4.3min	1.0078	1.0143	1.0190	1.0279
1 Year before	Level 1	3.9sec	1.4581	1.5248	1.5901	1.7279	2.3sec	1.4742	1.5399	1.5930	1.6770	3.1sec	1.4814	1.5401	1.6201	1.8103	1.1sec	1.4725	1.5171	1.5538	1.6184	1sec	1.4705	1.5292	1.5672	1.6314
	Level 2	7.8sec	1.2284	1.2957	1.3630	1.4687	4.6sec	1.2501	1.3022	1.3561	1.4377	6.3sec	1.2385	1.3035	1.3918	1.5836	2.2sec	1.2281	1.2686	1.2980	1.3580	2sec	1.2331	1.2776	1.3131	1.3828
	Level 3	15.6sec	1.1248	1.1818	1.2284	1.3167	9.2sec	1.1420	1.1805	1.2289	1.2937	12.6sec	1.1322	1.1864	1.2436	1.4066	4.4sec	1.1132	1.1390	1.1614	1.2053	4sec	1.1173	1.1448	1.1750	1.2304
	Level 4	31.3sec	1.0778	1.1194	1.1529	1.2296	18.5sec	1.0892	1.1226	1.1569	1.2023	25.2sec	1.0794	1.1214	1.1718	1.2938	8.7sec	1.0593	1.0754	1.0887	1.1244	7.9sec	1.0614	1.0780	1.1020	1.1418
	Level 5	1min	1.0484	1.0769	1.1085	1.1569	37sec	1.0549	1.0830	1.1071	1.1436	50.4sec	1.0543	1.0819	1.1171	1.1999	17.5sec	1.0331	1.0447	1.0548	1.0800	15.8sec	1.0318	1.0444	1.0619	1.0896
	Level 6	2.1min	1.0311	1.0504	1.0723	1.1072	1.2min	1.0345	1.0551	1.0705	1.0964	1.7min	1.0339	1.0550	1.0771	1.1344	35sec	1.0186	1.0287	1.0349	1.0506	31.6sec	1.0172	1.0266	1.0372	1.0563
	Level 7	4.2min	1.0191	1.0332	1.0470	1.0702	2.5min	1.0213	1.0360	1.0468	1.0644	3.4min	1.0207	1.0361	1.0500	1.0881	1.2min	1.0117	1.0182	1.0227	1.0317	1.1min	1.0101	1.0163	1.0234	1.0352
	Level 8	8.3min	1.0127	1.0214	1.0313	1.0456	4.9min	1.0145	1.0237	1.0312	1.0440	6.7min	1.0136	1.0237	1.0325	1.0580	2.3min	1.0075	1.0116	1.0149	1.0214	2.1min	1.0059	1.0102	1.0148	1.0225
	Level 9	16.7min	1.0091	1.0158	1.0236	1.0355	9.9min	1.0120	1.0182	1.0241	1.0340	13.4min	1.0099	1.0180	1.0248	1.0447	4.7min	1.0052	1.0085	1.0110	1.0167	4.2min	1.0043	1.0072	1.0106	1.0177

Notes: This table reports EDM future contracts median results for bid–ask covariance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDM contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.12: EDM futures contracts median results for wavelet correlations

Wavelet Correlation		EDM0 Median					EDM1 Median					EDM2 Median					EDM3 Median					EDM4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	**Level 1**	13.3sec	0.5118	0.5954	0.6286	0.6492	16sec	0.2390	0.3897	0.5495	0.6756	19.8sec	0.2772	0.5330	0.5990	0.6365	21.8sec	0.4153	0.5372	0.5782	0.6460	7.2sec	0.4253	0.5487	0.5980	0.6630
	Level 2	26.5sec	0.5703	0.7089	0.7475	0.7810	32sec	0.2451	0.4462	0.6459	0.7962	39.7sec	0.3601	0.5617	0.7073	0.7557	43.6sec	0.4466	0.4983	0.5735	0.7265	14.4sec	0.4579	0.6118	0.6962	0.7863
	Level 3	53.1sec	0.5688	0.8063	0.8526	0.8651	1.1min	0.3769	0.5856	0.7191	0.8704	1.3min	0.4509	0.6612	0.7755	0.7926	1.5min	0.5301	0.5917	0.6806	0.7700	28.8sec	0.5363	0.6810	0.7741	0.8583
	Level 4	1.8min	0.6979	0.8739	0.9119	0.9317	2.1min	0.4270	0.6633	0.7806	0.8984	2.6min	0.5128	0.7305	0.8257	0.8406	2.9min	0.6332	0.6528	0.7798	0.8699	57.6sec	0.6410	0.7792	0.8339	0.9201
	Level 5	3.5min	0.7657	0.9144	0.9499	0.9635	4.3min	0.5909	0.7528	0.8376	0.9302	5.3min	0.5588	0.8024	0.8793	0.8933	5.8min	0.7270	0.7509	0.8483	0.9231	1.9min	0.7250	0.8429	0.8850	0.9528
	Level 6	7.1min	0.8222	0.9398	0.9702	0.9804	8.5min	0.6654	0.7960	0.8650	0.9447	10.6min	0.6028	0.8431	0.9156	0.9281	11.6min	0.7951	0.8234	0.9174	0.9475	3.8min	0.7776	0.8975	0.9312	0.9705
	Level 7	14.2min	0.8672	0.9587	0.9789	0.9878	17.1min	0.6467	0.8159	0.9041	0.9539	21.2min	0.6661	0.8719	0.9347	0.9556	23.2min	0.8373	0.8793	0.9534	0.9724	7.7min	0.8332	0.9319	0.9578	0.9823
	Level 8	28.3min	0.8958	0.9702	0.9830	0.9912	34.2min	0.6378	0.8124	0.9340	0.9615	42.3min	0.6967	0.8757	0.9422	0.9677	46.5min	0.8849	0.9092	0.9691	0.9848	15.4min	0.8657	0.9527	0.9729	0.9893
	Level 9	56.6min	0.8997	0.9737	0.9826	0.9908	68.3min	0.6512	0.8090	0.9352	0.9620	84.7min	0.7011	0.8509	0.9309	0.9694	93min	0.8966	0.9229	0.9750	0.9885	30.7min	0.8150	0.9573	0.9767	0.9919
60 days before	**Level 1**	5.4sec	0.5133	0.5979	0.6395	0.6812	6.9sec	0.2678	0.5291	0.6075	0.6698	8.6sec	0.4623	0.5813	0.6030	0.6525	10.4sec	0.3416	0.4934	0.5849	0.6667	4.6sec	0.4253	0.5599	0.6095	0.6628
	Level 2	10.8sec	0.5998	0.7058	0.7508	0.7945	13.7sec	0.3444	0.6124	0.6746	0.7936	17.3sec	0.5186	0.6679	0.7006	0.7604	20.7sec	0.2191	0.4918	0.6448	0.8000	9.3sec	0.4579	0.6118	0.7081	0.7744
	Level 3	21.6sec	0.6731	0.7912	0.8389	0.8823	27.4sec	0.4498	0.6745	0.7390	0.8619	34.5sec	0.5603	0.7203	0.7836	0.8274	41.4sec	0.1437	0.5605	0.7095	0.8889	18.5sec	0.5363	0.7050	0.7809	0.8624
	Level 4	43.1sec	0.7690	0.8555	0.9027	0.9345	54.8sec	0.5229	0.7352	0.8106	0.9069	1.2min	0.6268	0.7956	0.8381	0.8836	1.4min	0.1208	0.6495	0.8218	0.9409	37.1sec	0.6410	0.7919	0.8477	0.9268
	Level 5	1.4min	0.8351	0.9004	0.9400	0.9630	1.8min	0.6161	0.7867	0.8709	0.9344	2.3min	0.7113	0.8398	0.8912	0.9178	2.8min	0.1860	0.7425	0.8884	0.9640	1.2min	0.7250	0.8508	0.9108	0.9536
	Level 6	2.9min	0.8619	0.9342	0.9604	0.9769	3.7min	0.6912	0.8390	0.9076	0.9560	4.6min	0.7719	0.8828	0.9253	0.9467	5.5min	0.3124	0.8234	0.9281	0.9779	2.5min	0.7776	0.9067	0.9441	0.9752
	Level 7	5.7min	0.8925	0.9520	0.9763	0.9859	7.3min	0.6857	0.8680	0.9295	0.9716	9.2min	0.8278	0.9066	0.9508	0.9656	11.1min	0.4704	0.8793	0.9606	0.9820	4.9min	0.8332	0.9469	0.9644	0.9872
	Level 8	11.5min	0.9222	0.9658	0.9826	0.9891	14.6min	0.7037	0.8947	0.9459	0.9771	18.4min	0.8461	0.9256	0.9617	0.9748	22.1min	0.6195	0.9026	0.9742	0.9901	9.9min	0.8657	0.9653	0.9749	0.9930
	Level 9	23min	0.9242	0.9674	0.9807	0.9887	29.2min	0.7169	0.8897	0.9479	0.9769	36.8min	0.8103	0.9213	0.9616	0.9759	44.2min	0.7095	0.9229	0.9804	0.9918	19.8min	0.8150	0.9679	0.9817	0.9926
3 months before	**Level 1**	3.2sec	0.5340	0.5808	0.6344	0.6768	4sec	0.3680	0.5540	0.6060	0.6645	4.8sec	0.4963	0.5833	0.6116	0.6662	6.3sec	0.3800	0.5643	0.6220	0.6667	3.3sec	0.4253	0.5565	0.6080	0.6599
	Level 2	6.4sec	0.6023	0.6894	0.7438	0.7921	8sec	0.4052	0.6414	0.7002	0.7738	9.6sec	0.5396	0.6731	0.7191	0.7772	12.7sec	0.3228	0.5852	0.7279	0.8000	6.5sec	0.4579	0.6118	0.6997	0.7603
	Level 3	12.8sec	0.6728	0.7828	0.8324	0.8657	15.9sec	0.5414	0.7017	0.7758	0.8423	19.3sec	0.6268	0.7389	0.7889	0.8438	25.3sec	0.4092	0.6806	0.8135	0.8889	13.1sec	0.5363	0.7031	0.7762	0.8395
	Level 4	25.7sec	0.7599	0.8481	0.8859	0.9301	31.8sec	0.6366	0.7770	0.8389	0.8984	38.6sec	0.6594	0.8130	0.8461	0.8883	50.6sec	0.5785	0.7685	0.8691	0.9345	26.1sec	0.6148	0.7812	0.8400	0.9057
	Level 5	51.4sec	0.8111	0.8920	0.9267	0.9604	1.1min	0.6783	0.8272	0.8919	0.9302	1.3min	0.7196	0.8665	0.8997	0.9278	1.7min	0.6886	0.8306	0.9109	0.9558	52.2sec	0.7075	0.8476	0.8967	0.9504
	Level 6	1.7min	0.8581	0.9252	0.9530	0.9758	2.1min	0.7235	0.8652	0.9193	0.9551	2.6min	0.7877	0.9025	0.9344	0.9553	3.4min	0.7626	0.8952	0.9417	0.9718	1.7min	0.7888	0.8985	0.9356	0.9658
	Level 7	3.4min	0.8901	0.9469	0.9682	0.9830	4.2min	0.7540	0.9041	0.9405	0.9720	5.1min	0.8383	0.9267	0.9580	0.9696	6.7min	0.8334	0.9352	0.9611	0.9824	3.5min	0.8553	0.9388	0.9601	0.9775
	Level 8	6.8min	0.9190	0.9548	0.9757	0.9861	8.5min	0.7728	0.9308	0.9581	0.9793	10.3min	0.8693	0.9414	0.9656	0.9791	13.5min	0.8849	0.9573	0.9743	0.9895	7min	0.8977	0.9557	0.9726	0.9856
	Level 9	13.7min	0.9227	0.9575	0.9761	0.9876	17min	0.7740	0.9352	0.9604	0.9807	20.6min	0.8530	0.9437	0.9715	0.9821	27min	0.8846	0.9635	0.9797	0.9916	13.9min	0.9206	0.9634	0.9774	0.9884
1 Year before	**Level 1**	1.6sec	0.5717	0.6248	0.6465	0.6752	2.2sec	0.5414	0.6008	0.6302	0.6630	3.1sec	0.5626	0.6070	0.6410	0.6697	4.2sec	0.5112	0.5896	0.6277	0.6656	2.3sec	0.5440	0.5909	0.6228	0.6575
	Level 2	3.2sec	0.6710	0.7314	0.7622	0.7952	4.5sec	0.6201	0.6956	0.7312	0.7783	6.2sec	0.6395	0.7055	0.7463	0.7873	8.4sec	0.5440	0.6672	0.7258	0.7879	4.6sec	0.6005	0.6772	0.7218	0.7655
	Level 3	6.5sec	0.7496	0.8083	0.8372	0.8731	8.9sec	0.6884	0.7711	0.8092	0.8513	12.4sec	0.7041	0.7849	0.8249	0.8576	16.8sec	0.6275	0.7537	0.8084	0.8693	9.1sec	0.6707	0.7564	0.7995	0.8462
	Level 4	12.9sec	0.8137	0.8611	0.8867	0.9212	17.8sec	0.7614	0.8304	0.8681	0.9001	24.8sec	0.7738	0.8441	0.8797	0.9129	33.7sec	0.7239	0.8188	0.8703	0.9193	18.3sec	0.7537	0.8202	0.8638	0.9021
	Level 5	25.9sec	0.8556	0.8987	0.9211	0.9469	35.7sec	0.8237	0.8824	0.9061	0.9315	49.6sec	0.8355	0.8917	0.9178	0.9427	1.1min	0.8048	0.8818	0.9137	0.9492	36.5sec	0.8236	0.8778	0.9091	0.9390
	Level 6	51.7sec	0.8936	0.9274	0.9468	0.9650	1.2min	0.8661	0.9150	0.9350	0.9560	1.7min	0.8856	0.9255	0.9458	0.9628	2.2min	0.8483	0.9231	0.9453	0.9699	1.2min	0.8757	0.9170	0.9399	0.9636
	Level 7	1.7min	0.9219	0.9486	0.9636	0.9771	2.4min	0.9033	0.9401	0.9545	0.9716	3.3min	0.9203	0.9499	0.9632	0.9756	4.5min	0.8933	0.9513	0.9662	0.9820	2.4min	0.9183	0.9476	0.9620	0.9772
	Level 8	3.4min	0.9369	0.9624	0.9745	0.9838	4.8min	0.9259	0.9553	0.9664	0.9790	6.6min	0.9412	0.9635	0.9740	0.9827	9min	0.9166	0.9647	0.9759	0.9878	4.9min	0.9435	0.9646	0.9743	0.9845
	Level 9	6.9min	0.9422	0.9673	0.9780	0.9854	9.5min	0.9304	0.9593	0.9698	0.9811	13.2min	0.9436	0.9686	0.9780	0.9859	18min	0.9208	0.9676	0.9789	0.9899	9.7min	0.9486	0.9701	0.9782	0.9872

Notes: This table reports EDM future contracts median results for wavelet correlations with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDM contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.12: EDM futures contracts median results for wavelet correlations – Continued

Wavelet Correlation		EDM5 Median					EDM6 Median					EDM7 Median					EDM8 Median					EDM9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.4sec	0.4939	0.6135	0.6266	0.6972	13.9sec	0.5543	0.6000	0.6243	0.7035	27.3sec	0.2315	0.4889	0.5557	0.6132	4.9sec	0.5446	0.6095	0.6365	0.6555	3sec	0.5806	0.6280	0.6538	0.6887
	Level 2	28.8sec	0.6289	0.6443	0.7184	0.8265	27.8sec	0.6331	0.7240	0.7747	0.8288	54.6sec	0.2219	0.5169	0.6152	0.6932	9.9sec	0.6619	0.7198	0.7535	0.7715	6sec	0.6996	0.7243	0.7706	0.8065
	Level 3	57.5sec	0.6388	0.7481	0.7916	0.8851	55.5sec	0.7428	0.8260	0.8765	0.9073	1.8min	0.3395	0.5534	0.7023	0.7543	19.7sec	0.7726	0.8018	0.8470	0.8815	12sec	0.7751	0.8284	0.8486	0.9103
	Level 4	1.9min	0.6504	0.8021	0.8360	0.9201	1.9min	0.8078	0.8838	0.9253	0.9521	3.6min	0.4851	0.6296	0.7145	0.8070	39.4sec	0.8447	0.8758	0.9125	0.9245	24.1sec	0.8266	0.8802	0.9092	0.9532
30 days before	**Level 5**	3.8min	0.7214	0.8126	0.8877	0.9490	3.7min	0.8213	0.9151	0.9528	0.9728	7.3min	0.5408	0.6850	0.7604	0.8428	1.3min	0.9066	0.9207	0.9425	0.9564	48.2sec	0.8846	0.9148	0.9461	0.9713
	Level 6	7.7min	0.7965	0.8693	0.9191	0.9685	7.4min	0.8675	0.9404	0.9683	0.9820	14.6min	0.5583	0.7016	0.8253	0.8851	2.6min	0.9369	0.9465	0.9565	0.9713	1.6min	0.9197	0.9385	0.9657	0.9817
	Level 7	15.3min	0.8591	0.9087	0.9397	0.9795	14.8min	0.8972	0.9537	0.9762	0.9871	29.1min	0.5885	0.7340	0.8548	0.9151	5.3min	0.9517	0.9638	0.9680	0.9796	3.2min	0.9423	0.9572	0.9751	0.9870
	Level 8	30.7min	0.8946	0.9394	0.9528	0.9861	29.6min	0.9108	0.9610	0.9810	0.9896	58.3min	0.5993	0.7757	0.8612	0.9277	10.5min	0.9573	0.9693	0.9729	0.9829	6.4min	0.9489	0.9677	0.9802	0.9901
	Level 9	61.3min	0.9106	0.9475	0.9586	0.9859	59.2min	0.9014	0.9604	0.9802	0.9896	116.6min	0.5837	0.7559	0.8444	0.9152	21min	0.9504	0.9643	0.9714	0.9810	12.9min	0.9544	0.9684	0.9811	0.9909
	Level 1	8.5sec	0.5403	0.5899	0.6362	0.6781	6.1sec	0.5626	0.6084	0.6332	0.6827	11sec	0.4446	0.5383	0.5927	0.6458	2.2sec	0.5793	0.6225	0.6481	0.6753	1.6sec	0.5806	0.6127	0.6358	0.6664
	Level 2	17sec	0.6085	0.6789	0.7279	0.8039	12.3sec	0.6627	0.7175	0.7616	0.8050	22sec	0.4609	0.6024	0.6583	0.7490	4.3sec	0.6799	0.7421	0.7697	0.8064	3.1sec	0.6854	0.7110	0.7438	0.7864
	Level 3	33.9sec	0.6631	0.7490	0.8003	0.8708	24.6sec	0.7449	0.8076	0.8507	0.8957	43.9sec	0.5149	0.6605	0.7365	0.8248	8.6sec	0.7829	0.8197	0.8589	0.8933	6.3sec	0.7645	0.8001	0.8298	0.8787
	Level 4	1.1min	0.7293	0.8141	0.8559	0.9144	49.1sec	0.8094	0.8579	0.9035	0.9431	1.5min	0.5764	0.7164	0.8044	0.8838	17.2sec	0.8452	0.8807	0.9142	0.9355	12.6sec	0.8228	0.8555	0.8817	0.9282
60 days before	**Level 5**	2.3min	0.7812	0.8588	0.9002	0.9398	1.6min	0.8450	0.8995	0.9347	0.9687	2.9min	0.6495	0.7640	0.8484	0.9141	34.4sec	0.9016	0.9227	0.9439	0.9610	25.2sec	0.8731	0.9007	0.9161	0.9578
	Level 6	4.5min	0.8332	0.8961	0.9254	0.9596	3.3min	0.8820	0.9343	0.9546	0.9810	5.9min	0.6824	0.8243	0.8921	0.9347	1.1min	0.9289	0.9475	0.9608	0.9736	50.4sec	0.9076	0.9294	0.9387	0.9741
	Level 7	9min	0.8826	0.9227	0.9425	0.9728	6.5min	0.9101	0.9519	0.9693	0.9868	11.7min	0.7242	0.8663	0.9255	0.9538	2.3min	0.9495	0.9639	0.9708	0.9806	1.7min	0.9323	0.9491	0.9578	0.9830
	Level 8	18.1min	0.9065	0.9457	0.9553	0.9811	13.1min	0.9289	0.9619	0.9779	0.9895	23.4min	0.7330	0.8950	0.9445	0.9658	4.6min	0.9587	0.9709	0.9774	0.9844	3.4min	0.9451	0.9613	0.9694	0.9883
	Level 9	36.2min	0.9187	0.9510	0.9617	0.9840	26.2min	0.9364	0.9657	0.9790	0.9894	46.9min	0.6814	0.8995	0.9437	0.9709	9.2min	0.9533	0.9670	0.9787	0.9853	6.7min	0.9450	0.9638	0.9711	0.9897
	Level 1	5.8sec	0.5521	0.5931	0.6431	0.6746	3.7sec	0.5715	0.6088	0.6346	0.6747	6.4sec	0.4751	0.5569	0.6045	0.6455	1.4sec	0.5795	0.6289	0.6487	0.6730	1sec	0.5943	0.6228	0.6428	0.6663
	Level 2	11.5sec	0.6195	0.6899	0.7390	0.7938	7.3sec	0.6627	0.7224	0.7511	0.7938	12.9sec	0.5013	0.6236	0.6838	0.7501	2.8sec	0.6822	0.7457	0.7737	0.8064	2sec	0.6953	0.7240	0.7480	0.7849
	Level 3	23.1sec	0.6867	0.7674	0.8003	0.8677	14.6sec	0.7449	0.8046	0.8311	0.8839	25.7sec	0.5550	0.7058	0.7547	0.8327	5.6sec	0.7832	0.8313	0.8611	0.8926	4sec	0.7682	0.8081	0.8313	0.8675
	Level 4	46.1sec	0.7438	0.8155	0.8559	0.9116	29.2sec	0.8072	0.8533	0.8838	0.9352	51.4sec	0.6331	0.7669	0.8208	0.8925	11.1sec	0.8542	0.8867	0.9181	0.9366	8sec	0.8255	0.8624	0.8869	0.9180
3 months before	**Level 5**	1.5min	0.7879	0.8588	0.9002	0.9403	58.5sec	0.8435	0.8935	0.9171	0.9581	1.7min	0.6857	0.8196	0.8735	0.9168	22.2sec	0.8993	0.9250	0.9467	0.9626	16sec	0.8753	0.9027	0.9231	0.9473
	Level 6	3.1min	0.8407	0.9016	0.9287	0.9622	1.9min	0.8820	0.9221	0.9444	0.9716	3.4min	0.7249	0.8642	0.9117	0.9409	44.4sec	0.9291	0.9484	0.9624	0.9761	32sec	0.9096	0.9313	0.9474	0.9685
	Level 7	6.1min	0.8893	0.9294	0.9470	0.9756	3.9min	0.9101	0.9446	0.9627	0.9791	6.9min	0.7684	0.9020	0.9395	0.9584	1.5min	0.9495	0.9641	0.9735	0.9835	1.1min	0.9330	0.9513	0.9625	0.9791
	Level 8	12.3min	0.9211	0.9478	0.9602	0.9815	7.8min	0.9289	0.9607	0.9716	0.9827	13.7min	0.8015	0.9254	0.9536	0.9683	3min	0.9589	0.9717	0.9788	0.9869	2.1min	0.9451	0.9630	0.9707	0.9847
	Level 9	24.6min	0.9301	0.9538	0.9667	0.9843	15.6min	0.9364	0.9643	0.9743	0.9846	27.4min	0.8032	0.9324	0.9620	0.9717	5.9min	0.9593	0.9697	0.9806	0.9867	4.3min	0.9462	0.9667	0.9754	0.9867
	Level 1	3.9sec	0.5764	0.6278	0.6537	0.6854	2.3sec	0.5958	0.6275	0.6486	0.6783	3.1sec	0.5457	0.6191	0.6487	0.6752	1.1sec	0.6163	0.6430	0.6580	0.6781	1sec	0.6114	0.6382	0.6534	0.6796
	Level 2	7.8sec	0.6792	0.7318	0.7712	0.8114	4.6sec	0.6935	0.7355	0.7670	0.7989	6.3sec	0.6240	0.7175	0.7642	0.8066	2.2sec	0.7305	0.7679	0.7870	0.8133	2sec	0.7177	0.7600	0.7817	0.8094
	Level 3	15.6sec	0.7540	0.8100	0.8429	0.8875	9.2sec	0.7710	0.8116	0.8438	0.8744	12.6sec	0.7023	0.8010	0.8393	0.8792	4.4sec	0.8180	0.8573	0.8753	0.8942	4sec	0.8058	0.8466	0.8696	0.8919
	Level 4	31.3sec	0.8083	0.8612	0.8903	0.9257	18.5sec	0.8271	0.8589	0.8867	0.9171	25.2sec	0.7642	0.8490	0.8890	0.9214	8.7sec	0.8782	0.9128	0.9254	0.9410	7.9sec	0.8641	0.9003	0.9228	0.9405
1 Year before	**Level 5**	1min	0.8539	0.8945	0.9219	0.9499	37sec	0.8648	0.8961	0.9169	0.9459	50.4sec	0.8145	0.8870	0.9175	0.9467	17.5sec	0.9161	0.9416	0.9513	0.9655	15.8sec	0.9027	0.9333	0.9515	0.9656
	Level 6	2.1min	0.8883	0.9213	0.9454	0.9665	1.2min	0.9037	0.9260	0.9409	0.9629	1.7min	0.8605	0.9176	0.9408	0.9657	35sec	0.9399	0.9581	0.9668	0.9778	31.6sec	0.9323	0.9549	0.9680	0.9791
	Level 7	4.2min	0.9193	0.9445	0.9617	0.9770	2.5min	0.9290	0.9473	0.9584	0.9745	3.4min	0.8964	0.9419	0.9577	0.9764	1.2min	0.9565	0.9701	0.9766	0.9843	1.1min	0.9524	0.9682	0.9778	0.9860
	Level 8	8.3min	0.9422	0.9595	0.9721	0.9833	4.9min	0.9460	0.9613	0.9695	0.9813	6.7min	0.9236	0.9564	0.9687	0.9826	2.3min	0.9668	0.9778	0.9827	0.9883	2.1min	0.9642	0.9767	0.9836	0.9897
	Level 9	16.7min	0.9487	0.9662	0.9763	0.9857	9.9min	0.9532	0.9667	0.9739	0.9835	13.4min	0.9292	0.9617	0.9727	0.9848	4.7min	0.9690	0.9803	0.9847	0.9898	4.2min	0.9680	0.9796	0.9857	0.9908

Notes: This table reports EDM future contracts median results for wavelet correlations with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDM contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.13: EDU futures contracts median results for ask variance

Ask Variance		EDU0 Median					EDU1 Median					EDU2 Median					EDU3 Median					EDU4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.4sec	1.4791	1.6272	1.7915	1.9337	11.3sec	1.4579	1.5702	1.7218	2.0623	13.8sec	1.4637	1.5115	1.7113	2.3705	16.5sec	1.5758	1.9030	2.8953	4.2028	6.4sec	1.5492	1.6334	1.7394	2.0933
	Level 2	28.8sec	1.3060	1.4624	1.5974	1.8260	22.6sec	1.2497	1.3291	1.5133	1.8590	27.5sec	1.2441	1.3617	1.5203	2.1684	33sec	1.3138	1.8335	3.2474	5.2670	12.8sec	1.3768	1.4167	1.5745	1.7294
	Level 3	57.5sec	1.2022	1.3130	1.4512	1.6476	45.1sec	1.1349	1.1927	1.3178	1.5397	55sec	1.1479	1.2742	1.4054	1.8735	1.1min	1.1799	1.5483	2.8466	5.7508	25.5sec	1.2372	1.3413	1.3984	1.5293
30	**Level 4**	1.9min	1.1139	1.2022	1.3339	1.4360	1.5min	1.0815	1.1360	1.1997	1.3334	1.8min	1.1125	1.1834	1.2504	1.6236	2.2min	1.0942	1.2787	1.9930	5.6263	51sec	1.1541	1.2374	1.2965	1.3512
days	**Level 5**	3.8min	1.0662	1.1536	1.2554	1.3198	3min	1.0482	1.0876	1.1266	1.2291	3.7min	1.0676	1.1260	1.1812	1.4503	4.4min	1.0519	1.1669	1.5134	3.9783	1.7min	1.0955	1.1427	1.1882	1.2766
before	**Level 6**	7.7min	1.0486	1.1182	1.1835	1.2383	6min	1.0292	1.0579	1.0839	1.1623	7.3min	1.0464	1.0851	1.1348	1.3034	8.8min	1.0269	1.1104	1.2794	2.7553	3.4min	1.0588	1.0848	1.1075	1.1838
	Level 7	15.3min	1.0323	1.0866	1.1502	1.1786	12min	1.0187	1.0408	1.0559	1.1083	14.7min	1.0423	1.0587	1.0951	1.2356	17.6min	1.0142	1.0714	1.1540	2.0547	6.8min	1.0351	1.0462	1.0712	1.1044
	Level 8	30.7min	1.0224	1.0612	1.1102	1.1413	24.1min	1.0132	1.0284	1.0359	1.0714	29.4min	1.0250	1.0484	1.0609	1.2126	35.2min	1.0086	1.0451	1.0897	1.8562	13.6min	1.0211	1.0259	1.0427	1.0602
	Level 9	61.3min	1.0176	1.0487	1.0949	1.1268	48.1min	1.0110	1.0230	1.0307	1.0728	58.7min	1.0186	1.0426	1.0582	1.2443	70.4min	1.0055	1.0379	1.0761	1.7059	27.2min	1.0160	1.0179	1.0302	1.0439
	Level 1	5.6sec	1.5317	1.6280	1.7550	1.9075	5.5sec	1.4872	1.5745	1.6497	1.9258	6.5sec	1.4720	1.6142	1.7393	1.9765	7.5sec	1.5041	1.6861	1.9030	2.9046	4sec	1.5353	1.6527	1.7394	2.0810
	Level 2	11.2sec	1.3091	1.4262	1.5291	1.7588	10.9sec	1.2635	1.3516	1.4685	1.6301	13.1sec	1.2709	1.3788	1.5246	1.8410	15sec	1.2503	1.4597	1.8096	4.4006	7.9sec	1.3350	1.4308	1.5618	1.8090
	Level 3	22.5sec	1.1989	1.2982	1.4215	1.6418	21.8sec	1.1487	1.1975	1.3126	1.4929	26.1sec	1.1894	1.2740	1.3981	1.5761	29.9sec	1.1637	1.3452	1.5483	3.8230	15.8sec	1.2219	1.3204	1.4083	1.6553
60	**Level 4**	44.9sec	1.1170	1.1961	1.3080	1.4322	43.7sec	1.0868	1.1248	1.1949	1.3290	52.2sec	1.1182	1.1898	1.2682	1.3880	59.9sec	1.1260	1.2427	1.3364	2.4286	31.6sec	1.1386	1.2228	1.2965	1.4812
days	**Level 5**	1.5min	1.0712	1.1398	1.2310	1.2890	1.5min	1.0551	1.0777	1.1284	1.2249	1.7min	1.0845	1.1347	1.1794	1.2483	2min	1.0728	1.1549	1.2078	2.0554	1.1min	1.0811	1.1307	1.1880	1.3114
before	**Level 6**	3min	1.0498	1.0879	1.1512	1.2135	2.9min	1.0334	1.0561	1.0886	1.1544	3.5min	1.0559	1.0813	1.1252	1.1705	4min	1.0385	1.0857	1.1295	1.6874	2.1min	1.0490	1.0795	1.1075	1.2097
	Level 7	6min	1.0323	1.0567	1.0928	1.1699	5.8min	1.0212	1.0388	1.0577	1.1040	7min	1.0359	1.0530	1.0809	1.1318	8min	1.0212	1.0476	1.0802	1.4861	4.2min	1.0300	1.0446	1.0661	1.1259
	Level 8	12min	1.0207	1.0400	1.0609	1.1288	11.6min	1.0144	1.0268	1.0373	1.0709	13.9min	1.0235	1.0388	1.0544	1.1059	16min	1.0139	1.0290	1.0491	1.3240	8.4min	1.0191	1.0258	1.0427	1.0747
	Level 9	24min	1.0163	1.0342	1.0470	1.1026	23.3min	1.0120	1.0200	1.0305	1.0586	27.8min	1.0182	1.0333	1.0440	1.1043	31.9min	1.0091	1.0192	1.0379	1.2174	16.9min	1.0131	1.0187	1.0319	1.0563
	Level 1	3.4sec	1.5089	1.5973	1.7015	1.8591	3.5sec	1.4783	1.5622	1.6386	1.8155	4.3sec	1.4951	1.6073	1.7143	1.9472	4.3sec	1.5087	1.6663	1.7751	2.7278	2.7sec	1.5548	1.6695	1.7820	2.0184
	Level 2	6.9sec	1.2988	1.3894	1.4762	1.7184	7.1sec	1.2564	1.3210	1.4238	1.5823	8.5sec	1.2870	1.3842	1.4946	1.8976	8.6sec	1.3332	1.4370	1.5358	2.3376	5.5sec	1.3350	1.4633	1.5839	1.8974
	Level 3	13.7sec	1.1867	1.2671	1.3298	1.5286	14.1sec	1.1433	1.1879	1.2817	1.3969	17.1sec	1.1894	1.2703	1.3532	1.5788	17.2sec	1.2142	1.3041	1.3741	2.0467	10.9sec	1.2219	1.3232	1.4301	1.6830
3	**Level 4**	27.4sec	1.1155	1.1805	1.2401	1.3906	28.3sec	1.0868	1.1192	1.1790	1.3069	34.1sec	1.1182	1.1697	1.2476	1.3959	34.4sec	1.1314	1.2149	1.2774	1.8469	21.8sec	1.1477	1.2228	1.3011	1.5049
months	**Level 5**	54.8sec	1.0713	1.1212	1.1747	1.2717	56.5sec	1.0572	1.0782	1.1240	1.2020	1.1min	1.0800	1.1134	1.1682	1.2555	1.1min	1.0788	1.1303	1.1722	1.5969	43.7sec	1.0872	1.1456	1.1973	1.3233
before	**Level 6**	1.8min	1.0492	1.0796	1.1334	1.1918	1.9min	1.0367	1.0561	1.0815	1.1429	2.3min	1.0534	1.0760	1.1174	1.1769	2.3min	1.0459	1.0766	1.1045	1.3524	1.5min	1.0561	1.0895	1.1253	1.2155
	Level 7	3.7min	1.0319	1.0519	1.0854	1.1547	3.8min	1.0234	1.0380	1.0553	1.0962	4.6min	1.0340	1.0473	1.0715	1.1345	4.6min	1.0259	1.0454	1.0656	1.1955	2.9min	1.0355	1.0502	1.0768	1.1267
	Level 8	7.3min	1.0206	1.0344	1.0543	1.1122	7.5min	1.0155	1.0258	1.0358	1.0637	9.1min	1.0220	1.0353	1.0492	1.1005	9.2min	1.0156	1.0289	1.0391	1.1268	5.8min	1.0218	1.0306	1.0473	1.0822
	Level 9	14.6min	1.0161	1.0300	1.0433	1.0962	15.1min	1.0120	1.0200	1.0285	1.0512	18.2min	1.0171	1.0260	1.0418	1.0819	18.4min	1.0110	1.0205	1.0309	1.0996	11.6min	1.0154	1.0227	1.0364	1.0654
	Level 1	1.8sec	1.4876	1.5394	1.5977	1.7397	2.2sec	1.5003	1.5775	1.6580	1.7920	2.9sec	1.4875	1.5726	1.6271	1.7594	3.5sec	1.5186	1.6288	1.7209	1.9864	1.9sec	1.5291	1.6052	1.7014	1.8435
	Level 2	3.5sec	1.2564	1.3115	1.3793	1.4957	4.3sec	1.2740	1.3475	1.4508	1.5819	5.9sec	1.2673	1.3541	1.4165	1.5797	7.1sec	1.2960	1.3953	1.5130	1.8524	3.8sec	1.3069	1.3941	1.4787	1.6421
	Level 3	7.1sec	1.1441	1.1978	1.2519	1.3434	8.7sec	1.1641	1.2347	1.3055	1.4317	11.7sec	1.1613	1.2247	1.2804	1.4109	14.1sec	1.1764	1.2624	1.3537	1.6045	7.7sec	1.1875	1.2603	1.3280	1.4669
1	**Level 4**	14.2sec	1.0889	1.1314	1.1683	1.2498	17.4sec	1.1026	1.1560	1.2090	1.3116	23.4sec	1.0972	1.1447	1.1905	1.2862	28.2sec	1.1151	1.1715	1.2314	1.4102	15.3sec	1.1194	1.1701	1.2237	1.3350
Year	**Level 5**	28.4sec	1.0595	1.0900	1.1194	1.1887	34.7sec	1.0660	1.1052	1.1423	1.2252	46.8sec	1.0614	1.0919	1.1279	1.1877	56.5sec	1.0618	1.1043	1.1475	1.2630	30.7sec	1.0740	1.1085	1.1475	1.2179
before	**Level 6**	56.7sec	1.0401	1.0624	1.0836	1.1352	1.2min	1.0433	1.0723	1.0974	1.1588	1.6min	1.0370	1.0586	1.0823	1.1214	1.9min	1.0349	1.0655	1.0901	1.1669	1min	1.0435	1.0637	1.0910	1.1366
	Level 7	1.9min	1.0267	1.0426	1.0571	1.0928	2.3min	1.0280	1.0462	1.0648	1.1067	3.1min	1.0235	1.0371	1.0519	1.0793	3.8min	1.0207	1.0386	1.0538	1.1002	2min	1.0261	1.0386	1.0551	1.0849
	Level 8	3.8min	1.0178	1.0285	1.0401	1.0639	4.6min	1.0186	1.0309	1.0424	1.0700	6.2min	1.0154	1.0242	1.0336	1.0525	7.5min	1.0127	1.0242	1.0353	1.0648	4.1min	1.0160	1.0248	1.0345	1.0524
	Level 9	7.6min	1.0142	1.0229	1.0328	1.0528	9.3min	1.0148	1.0248	1.0325	1.0575	12.5min	1.0114	1.0183	1.0253	1.0425	15.1min	1.0098	1.0180	1.0282	1.0531	8.2min	1.0125	1.0189	1.0262	1.0399

Notes: This table reports EDU future contracts median results for ask variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDU contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.13: EDU futures contracts median results for ask variance – Continued

Ask Variance		EDU5 Median					EDU6 Median					EDU7 Median					EDU8 Median					EDU9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	21.2sec	1.4939	1.5973	1.7050	3.6834	20.5sec	1.4527	1.5836	1.7364	2.5229	14.7sec	1.4873	1.5952	1.7373	2.0647	7.5sec	1.5218	1.6317	1.7215	1.8668	5.4sec	1.5091	1.5640	1.6651	1.7681
	Level 2	42.4sec	1.2789	1.3256	1.6774	3.2708	41.1sec	1.3001	1.3910	1.6666	2.1759	29.4sec	1.2536	1.4121	1.4961	1.6966	14.9sec	1.3264	1.4233	1.4749	1.7215	10.9sec	1.2390	1.3386	1.4165	1.5481
	Level 3	1.4min	1.1282	1.1649	1.3095	2.4172	1.4min	1.1872	1.2899	1.4914	1.8910	58.8sec	1.1305	1.1985	1.2965	1.3541	29.8sec	1.2041	1.2748	1.3269	1.5694	21.7sec	1.1330	1.1980	1.3068	1.3655
	Level 4	2.8min	1.0617	1.0864	1.4004	1.8345	2.7min	1.1054	1.2138	1.3369	1.7350	2min	1.0606	1.0860	1.1613	1.1972	59.6sec	1.1313	1.1887	1.2378	1.4553	43.5sec	1.0891	1.1219	1.2076	1.2498
	Level 5	5.7min	1.0310	1.0519	1.2703	1.5508	5.5min	1.0504	1.1507	1.3181	1.5409	3.9min	1.0277	1.0417	1.0997	1.1171	2min	1.0949	1.1300	1.1710	1.3767	1.4min	1.0637	1.0706	1.1311	1.1874
	Level 6	11.3min	1.0187	1.0348	1.1708	1.4173	11min	1.0303	1.1104	1.2099	1.4222	7.8min	1.0151	1.0250	1.0595	1.0846	4min	1.0708	1.0984	1.1197	1.2565	2.9min	1.0410	1.0529	1.0907	1.1317
	Level 7	22.6min	1.0144	1.0266	1.1049	1.3030	21.9min	1.0231	1.0872	1.1507	1.3612	15.7min	1.0105	1.0197	1.0374	1.0562	8min	1.0484	1.0697	1.0861	1.1811	5.8min	1.0285	1.0386	1.0658	1.0985
	Level 8	45.2min	1.0129	1.0194	1.0716	1.2216	43.8min	1.0204	1.0783	1.1301	1.3145	31.4min	1.0080	1.0165	1.0372	1.0446	15.9min	1.0384	1.0571	1.0684	1.1520	11.6min	1.0194	1.0311	1.0502	1.0783
	Level 9	90.4min	1.0128	1.0183	1.0571	1.1734	87.6min	1.0219	1.0823	1.1446	1.3214	62.8min	1.0087	1.0171	1.0393	1.0593	31.8min	1.0399	1.0633	1.0752	1.1842	23.2min	1.0173	1.0320	1.0439	1.0694
60 days before	Level 1	12.3sec	1.4805	1.6089	1.8349	2.6970	8.1sec	1.5043	1.5634	1.6890	1.8820	6.3sec	1.4959	1.5618	1.6791	2.0533	3sec	1.5218	1.5964	1.6748	1.8354	2.4sec	1.5239	1.6141	1.6739	1.7665
	Level 2	24.7sec	1.2770	1.4006	1.5924	2.3279	16.2sec	1.2860	1.3612	1.4585	1.7548	12.7sec	1.2789	1.3514	1.4420	1.6973	5.9sec	1.2871	1.3707	1.4599	1.5879	4.9sec	1.2970	1.3708	1.4906	1.5626
	Level 3	49.3sec	1.1649	1.2744	1.4208	2.0252	32.4sec	1.1477	1.2211	1.3063	1.7053	25.3sec	1.1552	1.1968	1.2651	1.4124	11.9sec	1.1786	1.2336	1.3154	1.4002	9.8sec	1.1680	1.2567	1.3331	1.4014
	Level 4	1.6min	1.0864	1.1944	1.3212	1.6858	1.1min	1.0780	1.1384	1.2322	1.5055	50.6sec	1.0731	1.1077	1.1668	1.3088	23.8sec	1.1200	1.1609	1.2082	1.2770	19.5sec	1.1033	1.1669	1.2291	1.3080
	Level 5	3.3min	1.0519	1.1392	1.2196	1.4653	2.2min	1.0430	1.0964	1.1610	1.3466	1.7min	1.0380	1.0676	1.0999	1.2349	47.6sec	1.0808	1.1181	1.1411	1.2273	39sec	1.0663	1.1078	1.1567	1.2336
	Level 6	6.6min	1.0348	1.0803	1.1582	1.3643	4.3min	1.0283	1.0653	1.1239	1.2708	3.4min	1.0213	1.0428	1.0661	1.1512	1.6min	1.0558	1.0778	1.1015	1.1787	1.3min	1.0447	1.0723	1.1088	1.1645
	Level 7	13.2min	1.0235	1.0585	1.1096	1.2740	8.6min	1.0180	1.0503	1.0846	1.2244	6.8min	1.0138	1.0304	1.0461	1.1095	3.2min	1.0410	1.0558	1.0738	1.1414	2.6min	1.0332	1.0490	1.0764	1.1074
	Level 8	26.3min	1.0183	1.0472	1.0751	1.2019	17.3min	1.0144	1.0394	1.0688	1.1919	13.5min	1.0112	1.0246	1.0380	1.0829	6.3min	1.0311	1.0418	1.0590	1.1083	5.2min	1.0235	1.0343	1.0551	1.0797
	Level 9	52.6min	1.0165	1.0453	1.0597	1.1568	34.6min	1.0146	1.0326	1.0632	1.1989	27min	1.0117	1.0238	1.0354	1.0750	12.7min	1.0281	1.0434	1.0621	1.1147	10.4min	1.0243	1.0314	1.0480	1.0767
3 months before	Level 1	6.9sec	1.4939	1.6009	1.7191	2.0708	4.6sec	1.4983	1.5622	1.6467	1.7880	4sec	1.4977	1.6086	1.7416	1.9981	1.7sec	1.5054	1.5776	1.6525	1.7803	1.6sec	1.5250	1.5795	1.6632	1.7412
	Level 2	13.9sec	1.2827	1.3614	1.5200	1.9789	9.2sec	1.2652	1.3567	1.4203	1.7198	7.9sec	1.2820	1.3730	1.5003	1.7579	3.4sec	1.2813	1.3398	1.4185	1.5548	3.2sec	1.2829	1.3689	1.4334	1.5445
	Level 3	27.7sec	1.1714	1.2416	1.3829	1.7628	18.4sec	1.1431	1.2266	1.3006	1.5500	15.8sec	1.1562	1.2400	1.3316	1.6019	6.8sec	1.1720	1.2113	1.2587	1.3782	6.4sec	1.1656	1.2361	1.3129	1.3828
	Level 4	55.4sec	1.0982	1.1524	1.2745	1.4507	36.8sec	1.0838	1.1426	1.2149	1.3724	31.7sec	1.0800	1.1434	1.2078	1.4594	13.6sec	1.1036	1.1427	1.1783	1.2674	12.8sec	1.1020	1.1611	1.2206	1.2686
	Level 5	1.8min	1.0563	1.1070	1.1921	1.3734	1.2min	1.0504	1.0994	1.1523	1.2867	1.1min	1.0403	1.0930	1.1266	1.3570	27.2sec	1.0635	1.0942	1.1245	1.1858	25.6sec	1.0663	1.1078	1.1526	1.1944
	Level 6	3.7min	1.0376	1.0755	1.1254	1.2567	2.5min	1.0303	1.0687	1.1096	1.2036	2.1min	1.0224	1.0602	1.0864	1.2402	54.3sec	1.0433	1.0639	1.0878	1.1280	51.3sec	1.0457	1.0721	1.0984	1.1366
	Level 7	7.4min	1.0241	1.0536	1.0908	1.1802	4.9min	1.0185	1.0503	1.0757	1.1455	4.2min	1.0157	1.0384	1.0617	1.1600	1.8min	1.0308	1.0448	1.0653	1.0928	1.7min	1.0338	1.0473	1.0681	1.0996
	Level 8	14.8min	1.0186	1.0400	1.0623	1.1330	9.8min	1.0160	1.0379	1.0555	1.1175	8.5min	1.0131	1.0295	1.0454	1.1147	3.6min	1.0239	1.0336	1.0517	1.0742	3.4min	1.0237	1.0340	1.0508	1.0770
	Level 9	29.6min	1.0172	1.0375	1.0522	1.1200	19.6min	1.0144	1.0318	1.0473	1.1374	16.9min	1.0145	1.0261	1.0452	1.0986	7.2min	1.0212	1.0321	1.0501	1.0801	6.8min	1.0218	1.0301	1.0437	1.0703
1 Year before	Level 1	3.8sec	1.4617	1.5332	1.5952	1.7242	2.5sec	1.4884	1.5389	1.5900	1.6809	2.3sec	1.4762	1.5512	1.6348	1.7946	1.1sec	1.4764	1.5202	1.5639	1.6581	1.2sec	1.4814	1.5314	1.5852	1.6747
	Level 2	7.6sec	1.2363	1.3034	1.3542	1.4851	5sec	1.2485	1.3073	1.3625	1.4585	4.7sec	1.2447	1.3067	1.3924	1.5744	2.2sec	1.2295	1.2699	1.3109	1.4080	2.3sec	1.2411	1.2881	1.3354	1.4334
	Level 3	15.2sec	1.1332	1.1867	1.2313	1.3519	10sec	1.1404	1.1951	1.2339	1.3260	9.3sec	1.1317	1.1824	1.2583	1.3977	4.3sec	1.1160	1.1417	1.1722	1.2499	4.7sec	1.1231	1.1565	1.1981	1.3072
	Level 4	30.3sec	1.0813	1.1211	1.1610	1.2513	20sec	1.0874	1.1298	1.1642	1.2335	18.7sec	1.0779	1.1169	1.1671	1.2846	8.6sec	1.0637	1.0805	1.0991	1.1617	9.3sec	1.0640	1.0899	1.1275	1.2188
	Level 5	1min	1.0514	1.0841	1.1159	1.1778	40sec	1.0582	1.0906	1.1187	1.1688	37.4sec	1.0460	1.0817	1.1150	1.2096	17.3sec	1.0366	1.0507	1.0635	1.1154	18.7sec	1.0358	1.0576	1.0842	1.1465
	Level 6	2min	1.0340	1.0589	1.0831	1.1274	1.3min	1.0396	1.0641	1.0842	1.1241	1.2min	1.0302	1.0569	1.0818	1.1572	34.5sec	1.0233	1.0349	1.0437	1.0797	37.3sec	1.0216	1.0375	1.0588	1.0980
	Level 7	4min	1.0227	1.0398	1.0577	1.0866	2.7min	1.0264	1.0446	1.0587	1.0899	2.5min	1.0204	1.0397	1.0563	1.1150	1.2min	1.0158	1.0241	1.0310	1.0578	1.2min	1.0142	1.0257	1.0399	1.0681
	Level 8	8.1min	1.0158	1.0284	1.0417	1.0619	5.3min	1.0188	1.0321	1.0426	1.0659	5min	1.0154	1.0293	1.0424	1.0829	2.3min	1.0117	1.0177	1.0231	1.0448	2.5min	1.0110	1.0189	1.0293	1.0498
	Level 9	16.2min	1.0132	1.0247	1.0344	1.0515	10.7min	1.0161	1.0272	1.0373	1.0577	10min	1.0135	1.0256	1.0375	1.0705	4.6min	1.0101	1.0157	1.0205	1.0416	5min	1.0100	1.0167	1.0258	1.0437

Notes: This table reports EDU future contracts median results for ask variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDU contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.14: EDU futures contracts median results for bid variance

Bid Variance		EDU0 Median					EDU1 Median					EDU2 Median					EDU3 Median					EDU4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.2sec	1.4815	1.7232	1.7753	2.2153	11.6sec	1.4669	1.5548	1.6884	2.0953	13.3sec	1.4679	1.5115	1.6939	2.4387	16.8sec	1.5864	2.0556	2.8987	4.2048	5.6sec	1.5144	1.6376	1.7242	2.0994
	Level 2	26.4sec	1.3010	1.4474	1.6715	1.9064	23.2sec	1.2497	1.3339	1.5129	1.8908	26.6sec	1.2608	1.4001	1.6590	2.3005	33.5sec	1.3143	1.9449	3.2356	5.2405	11.1sec	1.3588	1.4134	1.5791	1.7278
	Level 3	52.8sec	1.2009	1.2742	1.4570	1.6807	46.4sec	1.1335	1.1907	1.3029	1.5605	53.3sec	1.1591	1.2882	1.4377	1.9818	1.1min	1.1801	1.5198	2.8655	5.7154	22.3sec	1.2273	1.3259	1.4203	1.5290
30	**Level 4**	1.8min	1.1152	1.1750	1.3415	1.5111	1.5min	1.0791	1.1344	1.1835	1.3408	1.8min	1.1142	1.1880	1.2799	1.7098	2.2min	1.0947	1.2730	2.0196	5.5443	44.6sec	1.1466	1.2036	1.2840	1.3764
days	**Level 5**	3.5min	1.0637	1.1314	1.2414	1.4040	3.1min	1.0459	1.0863	1.1191	1.2337	3.6min	1.0726	1.1233	1.2040	1.5312	4.5min	1.0535	1.1367	1.5411	4.0662	1.5min	1.0863	1.1210	1.1841	1.2205
before	**Level 6**	7min	1.0465	1.1089	1.1742	1.2903	6.2min	1.0290	1.0557	1.0785	1.1582	7.1min	1.0489	1.0827	1.1474	1.3648	8.9min	1.0284	1.0886	1.2991	3.0442	3min	1.0562	1.0815	1.1134	1.1466
	Level 7	14.1min	1.0323	1.0870	1.1460	1.2366	12.4min	1.0200	1.0405	1.0534	1.1057	14.2min	1.0421	1.0547	1.0941	1.2906	17.9min	1.0174	1.0624	1.1683	2.5280	5.9min	1.0357	1.0457	1.0666	1.1048
	Level 8	28.2min	1.0240	1.0656	1.1225	1.1920	24.8min	1.0148	1.0335	1.0420	1.0766	28.4min	1.0277	1.0496	1.0761	1.2840	35.8min	1.0118	1.0392	1.1108	2.2681	11.9min	1.0243	1.0329	1.0505	1.0796
	Level 9	56.3min	1.0232	1.0594	1.1294	1.2324	49.5min	1.0178	1.0347	1.0521	1.0742	56.8min	1.0229	1.0623	1.0946	1.3691	71.6min	1.0079	1.0261	1.1090	2.1168	23.8min	1.0209	1.0273	1.0389	1.0750
	Level 1	5.4sec	1.5402	1.6401	1.7596	1.9144	5.5sec	1.4869	1.5728	1.6603	1.9354	6.1sec	1.4853	1.5897	1.7468	1.9689	7.3sec	1.5024	1.6824	1.9218	2.9212	3.5sec	1.5146	1.6449	1.7242	2.0880
	Level 2	10.7sec	1.3140	1.4352	1.5523	1.7827	11.1sec	1.2586	1.3450	1.4625	1.6524	12.2sec	1.2667	1.3703	1.5339	1.8292	14.6sec	1.2515	1.4596	1.7518	4.3797	7sec	1.3252	1.4187	1.5340	1.8443
	Level 3	21.4sec	1.2009	1.2715	1.4035	1.5962	22.2sec	1.1447	1.1929	1.2952	1.4689	24.5sec	1.1880	1.2726	1.3697	1.5940	29.2sec	1.1776	1.2931	1.5198	3.7756	14sec	1.1901	1.2994	1.4153	1.6751
60	**Level 4**	42.8sec	1.1158	1.1766	1.3016	1.4183	44.4sec	1.0835	1.1231	1.1789	1.3342	48.9sec	1.1144	1.1800	1.2505	1.3502	58.5sec	1.1269	1.2012	1.2930	2.4473	28.1sec	1.1097	1.1962	1.2840	1.5020
days	**Level 5**	1.4min	1.0690	1.1256	1.1989	1.3046	1.5min	1.0518	1.0779	1.1223	1.2291	1.6min	1.0734	1.1222	1.1807	1.2492	1.9min	1.0756	1.1349	1.2023	2.1410	56.2sec	1.0690	1.1210	1.1841	1.3099
before	**Level 6**	2.9min	1.0465	1.0862	1.1369	1.2175	3min	1.0324	1.0520	1.0854	1.1539	3.3min	1.0479	1.0794	1.1134	1.1858	3.9min	1.0410	1.0812	1.1317	1.7689	1.9min	1.0458	1.0721	1.1082	1.2214
	Level 7	5.7min	1.0323	1.0620	1.0963	1.1804	5.9min	1.0219	1.0393	1.0585	1.1020	6.5min	1.0349	1.0541	1.0769	1.1616	7.8min	1.0268	1.0499	1.0883	1.5342	3.7min	1.0299	1.0414	1.0641	1.1450
	Level 8	11.4min	1.0240	1.0457	1.0710	1.1393	11.8min	1.0168	1.0297	1.0436	1.0751	13min	1.0239	1.0435	1.0621	1.1747	15.6min	1.0192	1.0315	1.0591	1.4101	7.5min	1.0228	1.0299	1.0463	1.0955
	Level 9	22.8min	1.0207	1.0424	1.0654	1.1726	23.7min	1.0165	1.0317	1.0433	1.0667	26.1min	1.0203	1.0434	1.0659	1.2384	31.2min	1.0128	1.0245	1.0649	1.3007	15min	1.0185	1.0266	1.0378	1.0856
	Level 1	3.2sec	1.5140	1.5954	1.7169	1.8370	3.6sec	1.4758	1.5591	1.6344	1.7988	4sec	1.5045	1.5911	1.6974	1.9505	4.2sec	1.5113	1.6738	1.8028	2.6935	2.5sec	1.5490	1.6582	1.7935	2.0742
	Level 2	6.5sec	1.3031	1.3911	1.4630	1.7504	7.1sec	1.2487	1.3204	1.4233	1.5420	8sec	1.2902	1.3708	1.4953	1.8618	8.5sec	1.2849	1.4270	1.5173	2.2371	5sec	1.3313	1.4470	1.5791	1.8761
	Level 3	13sec	1.1898	1.2612	1.3292	1.5786	14.2sec	1.1379	1.1884	1.2723	1.3912	16sec	1.1880	1.2584	1.3368	1.6160	16.9sec	1.1944	1.2731	1.3507	1.9874	10sec	1.2032	1.3228	1.4346	1.7018
3	**Level 4**	26sec	1.1142	1.1725	1.2250	1.3996	28.5sec	1.0856	1.1224	1.1658	1.3084	32.1sec	1.1139	1.1669	1.2387	1.3529	33.9sec	1.1269	1.1761	1.2439	1.7638	20sec	1.1330	1.2034	1.2879	1.4643
months	**Level 5**	52sec	1.0676	1.1080	1.1650	1.2793	56.9sec	1.0571	1.0780	1.1132	1.1934	1.1min	1.0721	1.1068	1.1598	1.2528	1.1min	1.0756	1.1188	1.1494	1.5112	40sec	1.0865	1.1323	1.1893	1.3324
before	**Level 6**	1.7min	1.0469	1.0746	1.1197	1.1961	1.9min	1.0347	1.0527	1.0775	1.1413	2.1min	1.0474	1.0710	1.1010	1.1878	2.3min	1.0416	1.0764	1.0997	1.3269	1.3min	1.0531	1.0859	1.1234	1.2101
	Level 7	3.5min	1.0327	1.0490	1.0801	1.1608	3.8min	1.0241	1.0370	1.0536	1.0979	4.3min	1.0326	1.0466	1.0668	1.1552	4.5min	1.0268	1.0471	1.0633	1.2137	2.7min	1.0334	1.0525	1.0788	1.1412
	Level 8	6.9min	1.0240	1.0373	1.0576	1.1304	7.6min	1.0176	1.0274	1.0391	1.0710	8.5min	1.0233	1.0349	1.0525	1.1247	9min	1.0192	1.0306	1.0442	1.1369	5.3min	1.0236	1.0348	1.0549	1.0913
	Level 9	13.9min	1.0220	1.0330	1.0546	1.1324	15.2min	1.0162	1.0259	1.0377	1.0647	17.1min	1.0196	1.0344	1.0576	1.1293	18.1min	1.0139	1.0251	1.0368	1.1246	10.7min	1.0198	1.0302	1.0450	1.0915
	Level 1	1.7sec	1.4864	1.5404	1.5884	1.7281	2.2sec	1.4928	1.5735	1.6521	1.7817	2.8sec	1.4800	1.5649	1.6187	1.7641	3.5sec	1.5113	1.6141	1.7208	2.0035	1.8sec	1.5211	1.6019	1.6789	1.8278
	Level 2	3.4sec	1.2553	1.3074	1.3719	1.4733	4.3sec	1.2699	1.3478	1.4440	1.5710	5.6sec	1.2629	1.3409	1.3975	1.5671	7sec	1.2879	1.3938	1.5036	1.8452	3.7sec	1.2945	1.3776	1.4653	1.6349
	Level 3	6.9sec	1.1433	1.1941	1.2400	1.3450	8.7sec	1.1607	1.2244	1.2904	1.4009	11.3sec	1.1543	1.2076	1.2722	1.3819	14.1sec	1.1766	1.2538	1.3346	1.5643	7.4sec	1.1760	1.2398	1.3142	1.4417
1	**Level 4**	13.8sec	1.0900	1.1285	1.1627	1.2451	17.3sec	1.0998	1.1495	1.1968	1.2884	22.5sec	1.0927	1.1343	1.1715	1.2555	28.1sec	1.1064	1.1594	1.2112	1.3636	14.7sec	1.1076	1.1564	1.2039	1.3062
Year	**Level 5**	27.5sec	1.0582	1.0870	1.1140	1.1745	34.6sec	1.0647	1.0973	1.1331	1.2148	45.1sec	1.0579	1.0857	1.1140	1.1719	56.3sec	1.0610	1.1004	1.1352	1.2273	29.4sec	1.0662	1.0975	1.1307	1.2008
before	**Level 6**	55.1sec	1.0386	1.0591	1.0798	1.1232	1.2min	1.0405	1.0670	1.0922	1.1487	1.5min	1.0362	1.0555	1.0753	1.1125	1.9min	1.0342	1.0626	1.0881	1.1509	58.9sec	1.0407	1.0609	1.0820	1.1302
	Level 7	1.8min	1.0260	1.0409	1.0548	1.0937	2.3min	1.0278	1.0450	1.0635	1.1011	3min	1.0238	1.0371	1.0498	1.0745	3.8min	1.0200	1.0377	1.0562	1.1111	2min	1.0262	1.0387	1.0538	1.0824
	Level 8	3.7min	1.0186	1.0292	1.0400	1.0728	4.6min	1.0204	1.0327	1.0442	1.0728	6min	1.0163	1.0258	1.0350	1.0554	7.5min	1.0138	1.0256	1.0393	1.0838	3.9min	1.0184	1.0268	1.0364	1.0580
	Level 9	7.3min	1.0160	1.0249	1.0357	1.0671	9.2min	1.0180	1.0285	1.0404	1.0666	12min	1.0139	1.0220	1.0309	1.0525	15min	1.0119	1.0221	1.0339	1.0944	7.9min	1.0151	1.0236	1.0326	1.0532

Notes: This table reports EDU future contracts median results for bid variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDU contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.14: EDU futures contracts median results for bid variance – Continued

Bid Variance		EDU5 Median					EDU6 Median					EDU7 Median					EDU8 Median					EDU9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	1.4889	1.5987	1.6992	3.5609	20.5sec	1.4540	1.5760	1.7862	2.5838	14.7sec	1.4894	1.5938	1.7322	2.0386	7.5sec	1.5427	1.6400	1.6993	1.9870	5.4sec	1.5045	1.5732	1.6481	1.7582
	Level 2	42.4sec	1.2668	1.3222	1.6472	3.1185	41.1sec	1.2979	1.4001	1.6601	2.3053	29.4sec	1.2548	1.3825	1.4832	1.6705	14.9sec	1.3353	1.4398	1.5224	1.7386	10.9sec	1.2336	1.3297	1.4012	1.5807
	Level 3	1.4min	1.1295	1.1583	1.3093	2.3135	1.4min	1.1668	1.3017	1.4311	2.0043	58.8sec	1.1270	1.1983	1.2785	1.3364	29.8sec	1.2419	1.3029	1.3889	1.5173	21.7sec	1.1291	1.1947	1.2881	1.4169
30	**Level 4**	2.8min	1.0654	1.0786	1.4155	1.8031	2.7min	1.1078	1.2058	1.3108	1.8708	2min	1.0602	1.0893	1.1545	1.1984	59.6sec	1.1524	1.2009	1.2428	1.4624	43.5sec	1.0850	1.1182	1.2006	1.2988
days	**Level 5**	5.6min	1.0338	1.0507	1.2709	1.5193	5.5min	1.0517	1.1428	1.2967	1.6514	3.9min	1.0276	1.0419	1.0781	1.1196	2min	1.1077	1.1367	1.1625	1.3654	1.4min	1.0608	1.0773	1.1251	1.2148
before	**Level 6**	11.3min	1.0215	1.0334	1.1714	1.4056	10.9min	1.0270	1.1044	1.2720	1.4394	7.8min	1.0152	1.0246	1.0443	1.0787	4min	1.0688	1.0974	1.1214	1.2645	2.9min	1.0388	1.0572	1.0870	1.1545
	Level 7	22.6min	1.0138	1.0223	1.1059	1.3096	21.9min	1.0204	1.0824	1.2172	1.3408	15.7min	1.0102	1.0187	1.0314	1.0565	8min	1.0512	1.0708	1.0942	1.1990	5.8min	1.0257	1.0422	1.0680	1.1066
	Level 8	45.2min	1.0114	1.0172	1.0701	1.2252	43.8min	1.0188	1.0715	1.1767	1.3029	31.4min	1.0079	1.0153	1.0264	1.0476	15.9min	1.0390	1.0580	1.0781	1.1686	11.6min	1.0191	1.0336	1.0556	1.0806
	Level 9	90.4min	1.0133	1.0186	1.0520	1.2097	87.6min	1.0206	1.0774	1.1828	1.3517	62.7min	1.0087	1.0163	1.0279	1.0522	31.8min	1.0394	1.0630	1.0780	1.1818	23.2min	1.0171	1.0318	1.0515	1.0701
	Level 1	12.3sec	1.4762	1.6095	1.8369	2.5998	8.1sec	1.5059	1.5678	1.6846	1.9263	6.3sec	1.4902	1.5612	1.6760	2.0386	3sec	1.5329	1.5966	1.6755	1.8195	2.4sec	1.5157	1.5961	1.6668	1.7266
	Level 2	24.7sec	1.2717	1.3987	1.5791	2.3626	16.2sec	1.2912	1.3527	1.4609	1.8139	12.7sec	1.2770	1.3495	1.4491	1.6732	5.9sec	1.3015	1.3713	1.4864	1.6270	4.9sec	1.2970	1.3588	1.4791	1.5807
	Level 3	49.3sec	1.1583	1.2820	1.4188	2.0453	32.4sec	1.1511	1.2187	1.3104	1.7671	25.3sec	1.1382	1.1863	1.2621	1.4320	11.9sec	1.1836	1.2430	1.3315	1.4749	9.8sec	1.1604	1.2648	1.3118	1.4128
60	**Level 4**	1.6min	1.0786	1.1953	1.3208	1.7195	1.1min	1.0787	1.1402	1.2225	1.5172	50.6sec	1.0700	1.1072	1.1593	1.2929	23.8sec	1.1260	1.1653	1.2191	1.3404	19.5sec	1.0984	1.1624	1.2211	1.2988
days	**Level 5**	3.3min	1.0507	1.1295	1.2321	1.4616	2.2min	1.0426	1.0980	1.1624	1.3859	1.7min	1.0369	1.0680	1.1015	1.2235	47.6sec	1.0825	1.1149	1.1524	1.2648	39sec	1.0681	1.1061	1.1621	1.2148
before	**Level 6**	6.6min	1.0334	1.0853	1.1658	1.3485	4.3min	1.0260	1.0669	1.1184	1.3221	3.4min	1.0202	1.0402	1.0624	1.1471	1.6min	1.0559	1.0819	1.1064	1.1931	1.3min	1.0455	1.0707	1.1170	1.1545
	Level 7	13.1min	1.0206	1.0577	1.1059	1.2721	8.6min	1.0167	1.0515	1.0824	1.2669	6.7min	1.0133	1.0287	1.0441	1.0867	3.2min	1.0413	1.0582	1.0788	1.1434	2.6min	1.0327	1.0458	1.0790	1.1066
	Level 8	26.3min	1.0159	1.0460	1.0713	1.1946	17.3min	1.0131	1.0385	1.0647	1.2321	13.5min	1.0113	1.0249	1.0350	1.0760	6.3min	1.0318	1.0439	1.0626	1.1181	5.2min	1.0254	1.0357	1.0559	1.0750
	Level 9	52.6min	1.0163	1.0385	1.0653	1.1667	34.6min	1.0129	1.0333	1.0587	1.2153	27min	1.0118	1.0227	1.0354	1.0598	12.7min	1.0284	1.0440	1.0615	1.1289	10.4min	1.0215	1.0328	1.0478	1.0676
	Level 1	6.9sec	1.4889	1.5987	1.7221	2.0651	4.6sec	1.4997	1.5645	1.6494	1.7862	4sec	1.4972	1.6184	1.7382	1.9815	1.7sec	1.5155	1.5889	1.6491	1.8006	1.6sec	1.5179	1.5899	1.6573	1.7251
	Level 2	13.9sec	1.2877	1.3628	1.5216	2.0222	9.2sec	1.2620	1.3580	1.4204	1.7177	7.9sec	1.2793	1.3675	1.5163	1.8089	3.4sec	1.2873	1.3405	1.4334	1.5799	3.2sec	1.2862	1.3588	1.4247	1.5547
	Level 3	27.7sec	1.1732	1.2402	1.3960	1.7464	18.4sec	1.1508	1.2243	1.3039	1.5592	15.8sec	1.1560	1.2412	1.3312	1.6191	6.8sec	1.1741	1.2109	1.2767	1.4131	6.4sec	1.1631	1.2321	1.3033	1.4012
3	**Level 4**	55.4sec	1.0991	1.1555	1.2816	1.4556	36.8sec	1.0839	1.1451	1.2131	1.3714	31.7sec	1.0740	1.1389	1.1980	1.4611	13.6sec	1.1050	1.1452	1.1893	1.2850	12.8sec	1.1005	1.1584	1.2151	1.2832
months	**Level 5**	1.8min	1.0553	1.1102	1.1964	1.3883	1.2min	1.0510	1.1014	1.1521	1.2880	1.1min	1.0378	1.0771	1.1243	1.3327	27.2sec	1.0654	1.0967	1.1316	1.1912	25.6sec	1.0669	1.1053	1.1541	1.2014
before	**Level 6**	3.7min	1.0360	1.0773	1.1426	1.3030	2.5min	1.0270	1.0695	1.1085	1.1882	2.1min	1.0219	1.0505	1.0862	1.2249	54.3sec	1.0432	1.0653	1.0907	1.1323	51.3sec	1.0459	1.0677	1.1017	1.1403
	Level 7	7.4min	1.0228	1.0539	1.0951	1.1885	4.9min	1.0182	1.0508	1.0765	1.1364	4.2min	1.0146	1.0348	1.0599	1.1526	1.8min	1.0308	1.0453	1.0662	1.0999	1.7min	1.0330	1.0458	1.0700	1.1034
	Level 8	14.8min	1.0164	1.0389	1.0688	1.1249	9.8min	1.0146	1.0364	1.0535	1.1386	8.4min	1.0117	1.0267	1.0437	1.1050	3.6min	1.0234	1.0332	1.0518	1.0802	3.4min	1.0245	1.0327	1.0515	1.0747
	Level 9	29.6min	1.0181	1.0341	1.0520	1.1089	19.6min	1.0138	1.0309	1.0473	1.1364	16.9min	1.0124	1.0271	1.0397	1.0895	7.2min	1.0211	1.0303	1.0484	1.0851	6.8min	1.0198	1.0296	1.0460	1.0684
	Level 1	3.8sec	1.4616	1.5324	1.5937	1.7314	2.5sec	1.4848	1.5390	1.5914	1.6789	2.3sec	1.4704	1.5501	1.6362	1.7920	1.1sec	1.4760	1.5227	1.5622	1.6540	1.2sec	1.4822	1.5325	1.5887	1.6699
	Level 2	7.6sec	1.2377	1.3009	1.3591	1.4874	5sec	1.2480	1.3088	1.3615	1.4553	4.7sec	1.2433	1.3064	1.3909	1.5747	2.2sec	1.2299	1.2698	1.3086	1.4205	2.3sec	1.2398	1.2877	1.3340	1.4295
	Level 3	15.1sec	1.1335	1.1848	1.2331	1.3511	10sec	1.1407	1.1920	1.2370	1.3297	9.3sec	1.1321	1.1801	1.2519	1.4018	4.3sec	1.1160	1.1426	1.1718	1.2532	4.7sec	1.1226	1.1575	1.1988	1.3017
1	**Level 4**	30.3sec	1.0790	1.1204	1.1602	1.2545	20sec	1.0871	1.1296	1.1650	1.2371	18.7sec	1.0756	1.1154	1.1691	1.2848	8.6sec	1.0642	1.0812	1.0992	1.1636	9.3sec	1.0643	1.0892	1.1254	1.2101
Year	**Level 5**	1min	1.0499	1.0836	1.1153	1.1787	40sec	1.0583	1.0918	1.1187	1.1699	37.4sec	1.0456	1.0795	1.1139	1.2092	17.3sec	1.0363	1.0508	1.0631	1.1133	18.7sec	1.0362	1.0579	1.0828	1.1474
before	**Level 6**	2min	1.0326	1.0585	1.0829	1.1302	1.3min	1.0397	1.0635	1.0836	1.1228	1.2min	1.0287	1.0551	1.0812	1.1515	34.5sec	1.0228	1.0347	1.0434	1.0802	37.3sec	1.0216	1.0380	1.0586	1.0978
	Level 7	4min	1.0213	1.0406	1.0582	1.0852	2.7min	1.0268	1.0442	1.0583	1.0873	2.5min	1.0192	1.0379	1.0580	1.1136	1.2min	1.0157	1.0239	1.0309	1.0585	1.2min	1.0145	1.0256	1.0396	1.0690
	Level 8	8.1min	1.0154	1.0291	1.0419	1.0600	5.3min	1.0188	1.0322	1.0423	1.0652	5min	1.0142	1.0269	1.0424	1.0814	2.3min	1.0116	1.0177	1.0237	1.0452	2.5min	1.0110	1.0185	1.0292	1.0515
	Level 9	16.2min	1.0137	1.0246	1.0350	1.0521	10.7min	1.0158	1.0268	1.0359	1.0561	10min	1.0129	1.0249	1.0363	1.0703	4.6min	1.0103	1.0153	1.0204	1.0442	5min	1.0101	1.0162	1.0250	1.0450

Notes: This table reports EDU future contracts median results for bid variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDU contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.15: EDU futures contracts median results for bid–ask covariance

Bid–Ask Covariance		EDU0 Median					EDU1 Median					EDU2 Median					EDU3 Median					EDU4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.8sec	1.4563	1.6762	1.7797	1.9267	11.4sec	1.4627	1.5594	1.6988	2.0810	13.5sec	1.4512	1.5108	1.6962	2.4105	16.6sec	1.5754	1.9721	2.8953	4.2078	6sec	1.5170	1.6328	1.7187	2.0937
	Level 2	27.6sec	1.2150	1.4451	1.5539	1.8064	22.9sec	1.2495	1.3272	1.5125	1.8824	27.1sec	1.2481	1.3692	1.6248	2.2371	33.3sec	1.3013	1.8953	3.2413	5.2383	12sec	1.3552	1.4044	1.5464	1.7203
	Level 3	55.2sec	1.1293	1.2685	1.3923	1.6161	45.8sec	1.1316	1.1875	1.3076	1.5203	54.2sec	1.1501	1.2628	1.3708	1.8974	1.1min	1.1799	1.5062	2.8464	5.6774	23.9sec	1.2003	1.3055	1.3708	1.5202
30	**Level 4**	1.8min	1.0874	1.1602	1.3083	1.4326	1.5min	1.0769	1.1243	1.1849	1.3088	1.8min	1.1045	1.1577	1.2604	1.5916	2.2min	1.0941	1.2731	1.9926	5.4498	47.8sec	1.1350	1.1966	1.2719	1.3207
days	**Level 5**	3.7min	1.0575	1.1041	1.1979	1.2854	3.1min	1.0434	1.0773	1.1179	1.2041	3.6min	1.0639	1.1047	1.1729	1.4271	4.4min	1.0517	1.1364	1.5092	3.8040	1.6min	1.0806	1.1159	1.1573	1.2022
before	**Level 6**	7.4min	1.0380	1.0723	1.1327	1.1827	6.1min	1.0248	1.0474	1.0727	1.1295	7.2min	1.0400	1.0696	1.0953	1.2566	8.9min	1.0265	1.0774	1.2672	2.5653	3.2min	1.0463	1.0648	1.0892	1.1155
	Level 7	14.7min	1.0250	1.0468	1.0799	1.1175	12.2min	1.0146	1.0299	1.0441	1.0725	14.4min	1.0246	1.0425	1.0600	1.1557	17.7min	1.0135	1.0451	1.1327	1.8822	6.4min	1.0258	1.0332	1.0432	1.0656
	Level 8	29.4min	1.0149	1.0304	1.0652	1.0771	24.4min	1.0088	1.0189	1.0254	1.0460	28.9min	1.0140	1.0271	1.0364	1.0995	35.5min	1.0076	1.0208	1.0631	1.6581	12.8min	1.0133	1.0178	1.0208	1.0369
	Level 9	58.8min	1.0097	1.0194	1.0482	1.0657	48.8min	1.0060	1.0128	1.0173	1.0317	57.8min	1.0122	1.0167	1.0246	1.0788	71min	1.0040	1.0099	1.0286	1.4409	25.5min	1.0073	1.0092	1.0135	1.0209
	Level 1	5.5sec	1.5158	1.6291	1.7494	1.8677	5.5sec	1.4848	1.5727	1.6516	1.9280	6.3sec	1.4694	1.5916	1.7398	2.0047	7.4sec	1.5032	1.6780	1.9052	2.9048	3.7sec	1.5178	1.6373	1.7187	2.0483
	Level 2	11sec	1.2984	1.4144	1.5209	1.7453	11sec	1.2639	1.3476	1.4597	1.6242	12.6sec	1.2679	1.3692	1.5263	1.7762	14.8sec	1.2502	1.4623	1.7607	4.3900	7.5sec	1.3219	1.4125	1.5362	1.7776
	Level 3	21.9sec	1.1859	1.2604	1.3535	1.6079	22sec	1.1453	1.1879	1.2936	1.4554	25.3sec	1.1753	1.2600	1.3468	1.5709	29.6sec	1.1674	1.3169	1.5062	3.7985	14.9sec	1.1909	1.2929	1.3713	1.6268
60	**Level 4**	43.9sec	1.1047	1.1649	1.2567	1.3799	44sec	1.0809	1.1205	1.1747	1.3086	50.6sec	1.1108	1.1692	1.2427	1.3241	59.2sec	1.1138	1.2074	1.2894	2.4144	29.9sec	1.1082	1.1840	1.2717	1.4467
days	**Level 5**	1.5min	1.0577	1.1055	1.1642	1.2434	1.5min	1.0480	1.0699	1.1127	1.2028	1.7min	1.0678	1.1081	1.1568	1.1973	2min	1.0727	1.1116	1.1743	2.0465	59.7sec	1.0628	1.1076	1.1573	1.2560
before	**Level 6**	2.9min	1.0386	1.0652	1.0987	1.1476	2.9min	1.0282	1.0458	1.0719	1.1256	3.4min	1.0415	1.0655	1.0925	1.1312	3.9min	1.0381	1.0680	1.0991	1.6635	2min	1.0343	1.0572	1.0853	1.1588
	Level 7	5.9min	1.0250	1.0382	1.0575	1.1028	5.9min	1.0165	1.0289	1.0435	1.0725	6.7min	1.0241	1.0398	1.0529	1.0835	7.9min	1.0203	1.0336	1.0611	1.4014	4min	1.0180	1.0305	1.0432	1.0889
	Level 8	11.7min	1.0143	1.0232	1.0331	1.0728	11.7min	1.0102	1.0184	1.0254	1.0434	13.5min	1.0140	1.0225	1.0299	1.0574	15.8min	1.0124	1.0180	1.0314	1.2292	8min	1.0100	1.0174	1.0210	1.0520
	Level 9	23.4min	1.0086	1.0140	1.0211	1.0570	23.5min	1.0064	1.0126	1.0172	1.0277	27min	1.0083	1.0144	1.0177	1.0396	31.6min	1.0064	1.0101	1.0183	1.1251	15.9min	1.0054	1.0092	1.0127	1.0304
	Level 1	3.3sec	1.5004	1.5854	1.6861	1.8037	3.5sec	1.4660	1.5580	1.6312	1.8058	4.1sec	1.4952	1.5916	1.6975	1.9462	4.3sec	1.5115	1.6643	1.7779	2.7143	2.6sec	1.5486	1.6513	1.7956	2.0483
	Level 2	6.7sec	1.2787	1.3840	1.4573	1.7048	7.1sec	1.2464	1.3129	1.4155	1.5568	8.3sec	1.2864	1.3732	1.4809	1.7855	8.5sec	1.2970	1.4271	1.5013	2.2684	5.2sec	1.3219	1.4420	1.5464	1.7776
	Level 3	13.3sec	1.1666	1.2456	1.3051	1.4990	14.2sec	1.1388	1.1833	1.2690	1.3856	16.5sec	1.1761	1.2498	1.3300	1.5726	17.1sec	1.1932	1.2822	1.3480	1.9586	10.5sec	1.1962	1.3077	1.4010	1.6344
3	**Level 4**	26.7sec	1.0966	1.1489	1.1989	1.3341	28.4sec	1.0822	1.1127	1.1620	1.2867	33.1sec	1.1073	1.1463	1.2251	1.3291	34.2sec	1.1229	1.1666	1.2288	1.6712	20.9sec	1.1274	1.1936	1.2717	1.4465
months	**Level 5**	53.4sec	1.0580	1.0913	1.1299	1.2262	56.7sec	1.0514	1.0709	1.1045	1.1786	1.1min	1.0665	1.0966	1.1405	1.2022	1.1min	1.0727	1.1023	1.1371	1.4325	41.8sec	1.0774	1.1179	1.1644	1.2950
before	**Level 6**	1.8min	1.0383	1.0571	1.0841	1.1419	1.9min	1.0308	1.0458	1.0661	1.1203	2.2min	1.0424	1.0607	1.0851	1.1350	2.3min	1.0399	1.0581	1.0774	1.2798	1.4min	1.0415	1.0679	1.0940	1.1658
	Level 7	3.6min	1.0235	1.0336	1.0529	1.0911	3.8min	1.0183	1.0289	1.0407	1.0713	4.4min	1.0241	1.0348	1.0491	1.0912	4.6min	1.0212	1.0326	1.0476	1.1627	2.8min	1.0227	1.0363	1.0493	1.0889
	Level 8	7.1min	1.0126	1.0187	1.0276	1.0678	7.6min	1.0105	1.0170	1.0246	1.0430	8.8min	1.0140	1.0193	1.0289	1.0631	9.1min	1.0122	1.0174	1.0243	1.0792	5.6min	1.0122	1.0186	1.0247	1.0520
	Level 9	14.2min	1.0075	1.0119	1.0163	1.0485	15.1min	1.0065	1.0104	1.0161	1.0266	17.7min	1.0074	1.0125	1.0173	1.0404	18.2min	1.0055	1.0096	1.0133	1.0334	11.1min	1.0068	1.0102	1.0135	1.0292
	Level 1	1.7sec	1.4828	1.5348	1.5860	1.7148	2.2sec	1.4911	1.5701	1.6476	1.7783	2.9sec	1.4796	1.5638	1.6114	1.7520	3.5sec	1.5069	1.6108	1.7090	1.9793	1.9sec	1.5187	1.5950	1.6770	1.8164
	Level 2	3.5sec	1.2494	1.3001	1.3621	1.4715	4.3sec	1.2646	1.3387	1.4300	1.5522	5.7sec	1.2563	1.3348	1.3917	1.5624	7sec	1.2901	1.3830	1.4988	1.7780	3.8sec	1.2877	1.3751	1.4555	1.6028
	Level 3	7sec	1.1382	1.1842	1.2274	1.3149	8.7sec	1.1531	1.2107	1.2834	1.3895	11.5sec	1.1492	1.1995	1.2593	1.3681	14.1sec	1.1674	1.2461	1.3274	1.5436	7.5sec	1.1697	1.2340	1.3033	1.4134
1	**Level 4**	14sec	1.0814	1.1171	1.1502	1.2134	17.3sec	1.0920	1.1388	1.1808	1.2641	23sec	1.0857	1.1254	1.1618	1.2420	28.2sec	1.0989	1.1515	1.2022	1.3482	15sec	1.0995	1.1439	1.1921	1.2785
Year	**Level 5**	27.9sec	1.0493	1.0750	1.0980	1.1409	34.7sec	1.0572	1.0862	1.1134	1.1726	45.9sec	1.0502	1.0772	1.1033	1.1565	56.4sec	1.0551	1.0882	1.1215	1.2090	30.1sec	1.0589	1.0876	1.1156	1.1783
before	**Level 6**	55.9sec	1.0318	1.0475	1.0629	1.0934	1.2min	1.0349	1.0548	1.0727	1.1173	1.5min	1.0295	1.0450	1.0635	1.0949	1.9min	1.0304	1.0493	1.0690	1.1253	1min	1.0333	1.0494	1.0674	1.1034
	Level 7	1.9min	1.0192	1.0289	1.0385	1.0579	2.3min	1.0206	1.0326	1.0440	1.0717	3.1min	1.0168	1.0277	1.0374	1.0548	3.8min	1.0159	1.0273	1.0377	1.0714	2min	1.0177	1.0270	1.0362	1.0547
	Level 8	3.7min	1.0108	1.0176	1.0235	1.0362	4.6min	1.0117	1.0189	1.0261	1.0436	6.1min	1.0093	1.0161	1.0214	1.0311	7.5min	1.0086	1.0149	1.0207	1.0388	4min	1.0093	1.0145	1.0190	1.0286
	Level 9	7.5min	1.0068	1.0113	1.0153	1.0224	9.3min	1.0074	1.0122	1.0163	1.0291	12.3min	1.0056	1.0095	1.0135	1.0201	15min	1.0038	1.0081	1.0118	1.0240	8min	1.0054	1.0083	1.0109	1.0161

Notes: This table reports EDU future contracts median results for bid–ask covariance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDU contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.15: EDU futures contracts median results for bid–ask covariance – Continued

Bid–Ask Covariance		EDU5 Median					EDU6 Median					EDU7 Median					EDU8 Median					EDU9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	21.2sec	1.4909	1.5985	1.7009	3.6210	20.5sec	1.4529	1.5787	1.7592	2.5518	14.7sec	1.4882	1.5937	1.7344	2.0514	7.5sec	1.5245	1.6092	1.6847	1.8957	5.4sec	1.5035	1.5654	1.6604	1.7529
	Level 2	42.4sec	1.2717	1.3222	1.6605	3.1905	41.1sec	1.3023	1.3846	1.6651	2.2357	29.4sec	1.2514	1.3966	1.4890	1.6747	14.9sec	1.3232	1.4057	1.4852	1.5406	10.9sec	1.2320	1.3272	1.3899	1.5576
	Level 3	1.4min	1.1272	1.1604	1.3074	2.3589	1.4min	1.1733	1.2803	1.4489	1.9140	58.8sec	1.1288	1.1974	1.2892	1.3364	29.8sec	1.1907	1.2527	1.2905	1.4189	21.7sec	1.1233	1.1835	1.2747	1.3782
	Level 4	2.8min	1.0620	1.0813	1.4029	1.8098	2.7min	1.1062	1.1970	1.3018	1.7296	2min	1.0598	1.0858	1.1585	1.1946	59.6sec	1.1118	1.1643	1.1945	1.3038	43.5sec	1.0776	1.1082	1.1843	1.2373
	Level 5	5.6min	1.0303	1.0482	1.2629	1.5156	5.5min	1.0503	1.1276	1.2773	1.5208	3.9min	1.0266	1.0397	1.0915	1.1107	2min	1.0737	1.1014	1.1205	1.2200	1.4min	1.0499	1.0628	1.1094	1.1591
	Level 6	11.3min	1.0178	1.0294	1.1578	1.3872	11min	1.0274	1.0856	1.2011	1.3774	7.8min	1.0134	1.0223	1.0444	1.0615	4min	1.0463	1.0644	1.0777	1.1575	2.9min	1.0312	1.0406	1.0715	1.1054
	Level 7	22.6min	1.0122	1.0185	1.0881	1.2762	21.9min	1.0155	1.0625	1.1396	1.2805	15.7min	1.0081	1.0164	1.0252	1.0395	8min	1.0306	1.0413	1.0505	1.1010	5.8min	1.0187	1.0260	1.0480	1.0699
	Level 8	45.2min	1.0082	1.0117	1.0525	1.1800	43.8min	1.0133	1.0504	1.0961	1.2131	31.4min	1.0054	1.0109	1.0189	1.0326	15.9min	1.0209	1.0290	1.0386	1.0773	11.6min	1.0114	1.0182	1.0310	1.0460
	Level 9	90.4min	1.0068	1.0090	1.0357	1.1334	87.6min	1.0159	1.0490	1.0915	1.1994	62.7min	1.0054	1.0093	1.0176	1.0360	31.8min	1.0183	1.0286	1.0379	1.0773	23.2min	1.0091	1.0151	1.0238	1.0365
60 days before	Level 1	12.3sec	1.4781	1.6076	1.8354	2.6433	8.1sec	1.5022	1.5651	1.6731	1.8970	6.3sec	1.4930	1.5604	1.6770	2.0514	3sec	1.5234	1.5884	1.6731	1.8158	2.4sec	1.5178	1.5928	1.6635	1.7242
	Level 2	24.7sec	1.2746	1.3966	1.5831	2.3391	16.2sec	1.2873	1.3518	1.4587	1.7712	12.7sec	1.2759	1.3472	1.4447	1.6843	5.9sec	1.2763	1.3575	1.4523	1.5371	4.9sec	1.2908	1.3590	1.4558	1.5450
	Level 3	49.3sec	1.1604	1.2713	1.4066	2.0279	32.4sec	1.1483	1.2177	1.3044	1.7046	25.3sec	1.1382	1.1863	1.2658	1.4060	11.9sec	1.1666	1.2180	1.2839	1.3921	9.8sec	1.1621	1.2505	1.3000	1.3799
	Level 4	1.6min	1.0813	1.1855	1.3075	1.6891	1.1min	1.0755	1.1328	1.2127	1.4854	50.6sec	1.0691	1.1021	1.1598	1.2610	23.8sec	1.1045	1.1318	1.1807	1.2487	19.5sec	1.0946	1.1511	1.2028	1.2595
	Level 5	3.3min	1.0482	1.1216	1.2098	1.4405	2.2min	1.0407	1.0912	1.1444	1.3250	1.7min	1.0358	1.0610	1.0940	1.1635	47.6sec	1.0662	1.0877	1.1126	1.1675	39sec	1.0597	1.0953	1.1370	1.1810
	Level 6	6.6min	1.0294	1.0733	1.1477	1.3342	4.3min	1.0233	1.0576	1.1009	1.2294	3.4min	1.0180	1.0375	1.0556	1.1177	1.6min	1.0400	1.0572	1.0736	1.1060	1.3min	1.0347	1.0599	1.0873	1.1194
	Level 7	13.1min	1.0185	1.0471	1.0942	1.2405	8.6min	1.0147	1.0382	1.0685	1.1740	6.8min	1.0106	1.0236	1.0362	1.0766	3.2min	1.0246	1.0373	1.0482	1.0744	2.6min	1.0220	1.0376	1.0541	1.0759
	Level 8	26.3min	1.0117	1.0344	1.0575	1.1559	17.3min	1.0106	1.0287	1.0479	1.1320	13.5min	1.0071	1.0171	1.0267	1.0510	6.3min	1.0169	1.0252	1.0330	1.0510	5.2min	1.0136	1.0232	1.0338	1.0460
	Level 9	52.6min	1.0090	1.0262	1.0464	1.0965	34.6min	1.0091	1.0226	1.0390	1.1175	27min	1.0065	1.0140	1.0237	1.0368	12.7min	1.0131	1.0220	1.0291	1.0443	10.4min	1.0116	1.0173	1.0246	1.0365
3 months before	Level 1	6.9sec	1.4909	1.5994	1.7204	2.0655	4.6sec	1.4990	1.5651	1.6459	1.7788	4sec	1.4964	1.6071	1.7409	1.9862	1.7sec	1.5066	1.5697	1.6446	1.7700	1.6sec	1.5195	1.5820	1.6588	1.7250
	Level 2	13.9sec	1.2791	1.3592	1.5165	1.9970	9.2sec	1.2602	1.3545	1.4160	1.6803	7.9sec	1.2796	1.3687	1.5047	1.7708	3.4sec	1.2743	1.3262	1.4104	1.5330	3.2sec	1.2783	1.3590	1.4193	1.5305
	Level 3	27.7sec	1.1698	1.2362	1.3834	1.7539	18.4sec	1.1448	1.2200	1.2957	1.5444	15.8sec	1.1526	1.2369	1.3236	1.5858	6.8sec	1.1639	1.1956	1.2513	1.3538	6.4sec	1.1606	1.2264	1.2864	1.3753
	Level 4	55.4sec	1.0923	1.1476	1.2710	1.4514	36.8sec	1.0809	1.1380	1.2076	1.3573	31.7sec	1.0729	1.1303	1.1890	1.4274	13.6sec	1.0962	1.1270	1.1504	1.2225	12.8sec	1.0945	1.1496	1.1983	1.2477
	Level 5	1.8min	1.0546	1.0990	1.1839	1.3715	1.2min	1.0488	1.0931	1.1344	1.2710	1.1min	1.0370	1.0800	1.1130	1.3092	27.2sec	1.0555	1.0743	1.0948	1.1428	25.6sec	1.0588	1.0953	1.1291	1.1712
	Level 6	3.7min	1.0322	1.0672	1.1160	1.2541	2.5min	1.0274	1.0628	1.0934	1.1664	2.1min	1.0195	1.0444	1.0721	1.1926	54.3sec	1.0342	1.0457	1.0630	1.0920	51.3sec	1.0353	1.0599	1.0810	1.1118
	Level 7	7.4min	1.0193	1.0436	1.0747	1.1509	4.9min	1.0155	1.0407	1.0652	1.1057	4.2min	1.0117	1.0280	1.0475	1.1154	1.8min	1.0223	1.0295	1.0413	1.0578	1.7min	1.0227	1.0376	1.0503	1.0703
	Level 8	14.8min	1.0120	1.0288	1.0470	1.0953	9.8min	1.0125	1.0282	1.0436	1.0937	8.4min	1.0081	1.0205	1.0317	1.0741	3.6min	1.0142	1.0188	1.0280	1.0409	3.4min	1.0149	1.0232	1.0310	1.0469
	Level 9	29.6min	1.0100	1.0244	1.0357	1.0690	19.6min	1.0095	1.0220	1.0333	1.0796	16.9min	1.0074	1.0171	1.0273	1.0607	7.2min	1.0106	1.0148	1.0233	1.0382	6.8min	1.0119	1.0165	1.0226	1.0360
1 Year before	Level 1	3.8sec	1.4614	1.5335	1.5947	1.7306	2.5sec	1.4869	1.5374	1.5891	1.6770	2.3sec	1.4722	1.5493	1.6298	1.7926	1.1sec	1.4746	1.5187	1.5603	1.6521	1.2sec	1.4817	1.5298	1.5836	1.6664
	Level 2	7.6sec	1.2352	1.2996	1.3536	1.4824	5sec	1.2443	1.3054	1.3581	1.4522	4.7sec	1.2409	1.3028	1.3820	1.5604	2.2sec	1.2275	1.2668	1.3030	1.4034	2.3sec	1.2365	1.2835	1.3274	1.4193
	Level 3	15.1sec	1.1313	1.1826	1.2289	1.3444	10sec	1.1383	1.1900	1.2293	1.3178	9.3sec	1.1294	1.1762	1.2490	1.3877	4.3sec	1.1134	1.1382	1.1652	1.2358	4.7sec	1.1197	1.1530	1.1864	1.2864
	Level 4	30.3sec	1.0775	1.1172	1.1536	1.2463	20sec	1.0830	1.1258	1.1577	1.2226	18.7sec	1.0732	1.1095	1.1580	1.2610	8.6sec	1.0599	1.0755	1.0929	1.1393	9.3sec	1.0607	1.0836	1.1158	1.1933
	Level 5	1min	1.0474	1.0788	1.1068	1.1633	40sec	1.0533	1.0846	1.1111	1.1569	37.4sec	1.0419	1.0742	1.1050	1.1831	17.3sec	1.0328	1.0445	1.0554	1.0888	18.7sec	1.0316	1.0488	1.0718	1.1245
	Level 6	2min	1.0296	1.0525	1.0733	1.1155	1.3min	1.0347	1.0557	1.0741	1.1082	1.2min	1.0262	1.0490	1.0698	1.1278	34.5sec	1.0189	1.0277	1.0349	1.0576	37.3sec	1.0173	1.0294	1.0456	1.0804
	Level 7	4min	1.0189	1.0339	1.0482	1.0718	2.7min	1.0226	1.0366	1.0492	1.0731	2.5min	1.0166	1.0319	1.0447	1.0840	1.2min	1.0116	1.0175	1.0222	1.0375	1.2min	1.0096	1.0179	1.0289	1.0494
	Level 8	8.1min	1.0119	1.0221	1.0313	1.0466	5.3min	1.0143	1.0243	1.0327	1.0494	5min	1.0109	1.0209	1.0299	1.0555	2.3min	1.0074	1.0111	1.0143	1.0253	2.5min	1.0061	1.0112	1.0184	1.0310
	Level 9	16.2min	1.0091	1.0169	1.0241	1.0353	10.7min	1.0109	1.0189	1.0248	1.0369	10min	1.0080	1.0165	1.0226	1.0401	4.6min	1.0055	1.0080	1.0102	1.0203	5min	1.0041	1.0081	1.0137	1.0226

Notes: This table reports EDU future contracts median results for bid–ask covariance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDU contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.16: EDU futures contracts median results for wavelet correlations

Wavelet Correlation		EDU0 Median					EDU1 Median					EDU2 Median					EDU3 Median					EDU4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	13.8sec	0.4514	0.5633	0.5836	0.6750	11.4sec	0.4773	0.5931	0.6446	0.6817	13.5sec	0.4387	0.5956	0.6619	0.6900	16.6sec	0.2497	0.3465	0.5077	0.6322	6sec	0.4763	0.5800	0.6107	0.6603
	Level 2	27.6sec	0.5246	0.6123	0.6940	0.7686	22.9sec	0.5289	0.6665	0.7559	0.8002	27.1sec	0.4981	0.6348	0.7295	0.7947	33.3sec	0.1951	0.4781	0.5942	0.7627	12sec	0.5788	0.6333	0.7075	0.7359
	Level 3	55.2sec	0.5950	0.6971	0.7865	0.8327	45.8sec	0.6408	0.7675	0.8414	0.8822	54.2sec	0.5896	0.7127	0.7786	0.8647	1.1min	0.1782	0.5114	0.6836	0.8492	23.9sec	0.6540	0.7041	0.7542	0.8148
	Level 4	1.8min	0.6618	0.7459	0.8523	0.8967	1.5min	0.7458	0.8483	0.8855	0.9267	1.8min	0.6746	0.7894	0.8558	0.9013	2.2min	0.1853	0.6114	0.7877	0.9143	47.8sec	0.7265	0.7788	0.8308	0.8721
	Level 5	3.7min	0.7122	0.8064	0.8865	0.9401	3.1min	0.8106	0.8941	0.9277	0.9561	3.6min	0.7351	0.8349	0.8903	0.9327	4.4min	0.2459	0.7268	0.8803	0.9497	1.6min	0.8193	0.8445	0.8920	0.9205
	Level 6	7.4min	0.7750	0.8537	0.9131	0.9556	6.1min	0.8634	0.9275	0.9505	0.9718	7.2min	0.7839	0.8779	0.9260	0.9543	8.9min	0.3301	0.8085	0.9272	0.9726	3.2min	0.8721	0.8981	0.9246	0.9468
	Level 7	14.7min	0.8086	0.8780	0.9258	0.9687	12.2min	0.9044	0.9495	0.9616	0.9804	14.4min	0.7922	0.9162	0.9486	0.9640	17.7min	0.4003	0.8775	0.9537	0.9829	6.4min	0.9051	0.9376	0.9563	0.9655
	Level 8	29.4min	0.8389	0.8925	0.9412	0.9765	24.4min	0.9289	0.9615	0.9679	0.9854	28.9min	0.7854	0.9318	0.9550	0.9748	35.5min	0.4448	0.9173	0.9715	0.9884	12.8min	0.9263	0.9520	0.9682	0.9762
	Level 9	58.8min	0.8114	0.8870	0.9468	0.9773	48.8min	0.9309	0.9546	0.9666	0.9825	57.8min	0.7598	0.9148	0.9431	0.9786	71min	0.4838	0.9203	0.9804	0.9922	25.5min	0.9302	0.9625	0.9734	0.9795
60 days before	Level 1	5.5sec	0.5224	0.5694	0.6103	0.6493	5.5sec	0.5167	0.6039	0.6373	0.6725	6.3sec	0.5079	0.5725	0.6291	0.6733	7.4sec	0.3423	0.5204	0.5944	0.6656	3.7sec	0.4789	0.5822	0.6088	0.6603
	Level 2	11sec	0.5610	0.6487	0.6976	0.7610	11sec	0.6052	0.6853	0.7435	0.7945	12.6sec	0.5468	0.6520	0.7298	0.7894	14.8sec	0.2283	0.5708	0.6851	0.7991	7.5sec	0.5434	0.6525	0.7054	0.7546
	Level 3	21.9sec	0.6265	0.7172	0.7884	0.8327	22sec	0.6808	0.7768	0.8399	0.8736	25.3sec	0.6275	0.7301	0.7858	0.8418	29.6sec	0.2649	0.6580	0.7733	0.8492	14.9sec	0.5975	0.7076	0.7769	0.8403
	Level 4	43.9sec	0.7051	0.7719	0.8499	0.8963	44sec	0.7495	0.8515	0.8929	0.9229	50.6sec	0.7406	0.7997	0.8474	0.8973	59.2sec	0.4086	0.7734	0.8325	0.8874	29.9sec	0.6692	0.7811	0.8383	0.9012
	Level 5	1.5min	0.7665	0.8410	0.8885	0.9355	1.5min	0.8136	0.8913	0.9288	0.9507	1.7min	0.8005	0.8469	0.8911	0.9316	2min	0.4671	0.8317	0.8811	0.9297	59.7sec	0.7670	0.8457	0.8921	0.9355
	Level 6	2.9min	0.8214	0.8811	0.9219	0.9556	2.9min	0.8667	0.9233	0.9507	0.9686	3.4min	0.8433	0.8981	0.9264	0.9543	3.9min	0.5653	0.8836	0.9249	0.9607	2min	0.8190	0.9057	0.9347	0.9562
	Level 7	5.9min	0.8472	0.9141	0.9446	0.9687	5.9min	0.9074	0.9457	0.9628	0.9786	6.7min	0.8609	0.9286	0.9487	0.9663	7.9min	0.6518	0.9189	0.9524	0.9739	4min	0.8734	0.9410	0.9608	0.9710
	Level 8	11.7min	0.8778	0.9353	0.9577	0.9765	11.7min	0.9301	0.9585	0.9715	0.9834	13.5min	0.8513	0.9416	0.9583	0.9767	15.8min	0.7092	0.9442	0.9695	0.9812	8min	0.9128	0.9573	0.9717	0.9777
	Level 9	23.4min	0.8528	0.9396	0.9600	0.9798	23.5min	0.9375	0.9588	0.9698	0.9837	27min	0.8075	0.9382	0.9584	0.9801	31.6min	0.7688	0.9391	0.9761	0.9874	15.9min	0.9212	0.9641	0.9743	0.9818
3 months before	Level 1	3.3sec	0.5445	0.5836	0.6292	0.6605	3.5sec	0.5560	0.6120	0.6416	0.6776	4.1sec	0.5130	0.5902	0.6285	0.6672	4.3sec	0.3998	0.5608	0.5978	0.6634	2.6sec	0.4821	0.5581	0.6039	0.6456
	Level 2	6.7sec	0.5713	0.6864	0.7199	0.7674	7.1sec	0.6485	0.7036	0.7576	0.8008	8.3sec	0.5468	0.6708	0.7295	0.7777	8.5sec	0.4781	0.6597	0.7013	0.7857	5.2sec	0.5335	0.6386	0.6922	0.7512
	Level 3	13.3sec	0.6335	0.7548	0.7932	0.8405	14.2sec	0.7188	0.7873	0.8426	0.8788	16.5sec	0.6275	0.7489	0.7952	0.8444	17.1sec	0.5114	0.7410	0.7892	0.8426	10.5sec	0.5876	0.7006	0.7565	0.8312
	Level 4	26.7sec	0.7145	0.8169	0.8576	0.8975	28.4sec	0.7645	0.8587	0.8932	0.9211	33.1sec	0.7406	0.8081	0.8601	0.8980	34.2sec	0.6114	0.8047	0.8504	0.8885	20.9sec	0.6841	0.7769	0.8312	0.8826
	Level 5	53.4sec	0.7818	0.8622	0.9033	0.9367	56.7sec	0.8380	0.8994	0.9277	0.9460	1.1min	0.8005	0.8625	0.9048	0.9332	1.1min	0.7268	0.8738	0.8961	0.9301	41.8sec	0.7510	0.8411	0.8833	0.9204
	Level 6	1.8min	0.8363	0.8948	0.9331	0.9552	1.9min	0.8762	0.9283	0.9502	0.9664	2.2min	0.8433	0.9082	0.9338	0.9552	2.3min	0.7737	0.9121	0.9292	0.9602	1.4min	0.8264	0.8909	0.9219	0.9495
	Level 7	3.6min	0.8615	0.9259	0.9535	0.9683	3.8min	0.9108	0.9493	0.9651	0.9765	4.4min	0.8694	0.9383	0.9560	0.9685	4.6min	0.8353	0.9409	0.9551	0.9745	2.8min	0.8762	0.9275	0.9516	0.9677
	Level 8	7.1min	0.8846	0.9463	0.9646	0.9766	7.6min	0.9337	0.9628	0.9734	0.9827	8.8min	0.8892	0.9505	0.9665	0.9772	9.1min	0.8821	0.9580	0.9711	0.9821	5.6min	0.9164	0.9499	0.9668	0.9769
	Level 9	14.2min	0.8831	0.9492	0.9683	0.9785	15.1min	0.9392	0.9638	0.9749	0.9841	17.7min	0.8886	0.9457	0.9668	0.9810	18.2min	0.8947	0.9649	0.9761	0.9868	11.1min	0.9162	0.9570	0.9718	0.9806
1 Year before	Level 1	1.7sec	0.5803	0.6298	0.6492	0.6730	2.2sec	0.5621	0.6053	0.6356	0.6699	2.9sec	0.5669	0.6178	0.6390	0.6757	3.5sec	0.4996	0.5811	0.6199	0.6618	1.9sec	0.5471	0.5956	0.6242	0.6574
	Level 2	3.5sec	0.6799	0.7291	0.7650	0.7970	4.3sec	0.6369	0.6934	0.7423	0.7880	5.7sec	0.6381	0.7156	0.7458	0.7919	7sec	0.5444	0.6651	0.7180	0.7766	3.8sec	0.6116	0.6824	0.7259	0.7725
	Level 3	7sec	0.7436	0.8067	0.8375	0.8749	8.7sec	0.7143	0.7753	0.8174	0.8623	11.5sec	0.7237	0.7861	0.8281	0.8663	14.1sec	0.6426	0.7512	0.7977	0.8501	7.5sec	0.6936	0.7609	0.8066	0.8503
	Level 4	14sec	0.8057	0.8602	0.8864	0.9180	17.3sec	0.7764	0.8363	0.8706	0.9095	23sec	0.7965	0.8536	0.8816	0.9152	28.2sec	0.7334	0.8261	0.8631	0.9045	15sec	0.7656	0.8307	0.8647	0.9028
	Level 5	27.9sec	0.8516	0.8981	0.9200	0.9456	34.7sec	0.8281	0.8836	0.9117	0.9399	45.9sec	0.8533	0.8977	0.9210	0.9453	56.4sec	0.8178	0.8810	0.9100	0.9434	30.1sec	0.8328	0.8844	0.9112	0.9379
	Level 6	55.9sec	0.8904	0.9264	0.9442	0.9632	1.2min	0.8729	0.9162	0.9374	0.9612	1.5min	0.8989	0.9299	0.9474	0.9651	1.9min	0.8698	0.9191	0.9411	0.9670	1min	0.8848	0.9242	0.9426	0.9609
	Level 7	1.9min	0.9144	0.9481	0.9607	0.9748	2.3min	0.9089	0.9407	0.9571	0.9734	3.1min	0.9307	0.9526	0.9642	0.9768	3.8min	0.9010	0.9469	0.9638	0.9807	2min	0.9239	0.9489	0.9628	0.9745
	Level 8	3.7min	0.9322	0.9617	0.9718	0.9818	4.6min	0.9322	0.9577	0.9684	0.9801	6.1min	0.9475	0.9661	0.9749	0.9839	7.5min	0.9231	0.9622	0.9750	0.9868	4min	0.9452	0.9649	0.9739	0.9819
	Level 9	7.5min	0.9374	0.9656	0.9758	0.9843	9.3min	0.9376	0.9613	0.9723	0.9824	12.3min	0.9501	0.9700	0.9785	0.9863	15min	0.9138	0.9675	0.9784	0.9886	8min	0.9495	0.9684	0.9769	0.9851

Notes: This table reports EDU future contracts median results for wavelet correlations with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDU contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.16: EDU futures contracts median results for wavelet correlations – Continued

Wavelet Correlation		EDU5 Median					EDU6 Median					EDU7 Median					EDU8 Median					EDU9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	**Level 1**	21.2sec	0.2892	0.6060	0.6257	0.6904	20.5sec	0.4337	0.5703	0.6501	0.6897	14.7sec	0.4905	0.5773	0.6405	0.6714	7.5sec	0.5033	0.5887	0.6115	0.6482	5.4sec	0.5688	0.6070	0.6376	0.6647
	Level 2	42.4sec	0.3339	0.6766	0.7627	0.8005	41.1sec	0.4652	0.6041	0.7156	0.7974	29.4sec	0.5986	0.6798	0.7373	0.7969	14.9sec	0.5752	0.6631	0.6970	0.7489	10.9sec	0.6326	0.7184	0.7524	0.8106
	Level 3	1.4min	0.4518	0.8058	0.8717	0.8900	1.4min	0.5158	0.7017	0.7696	0.8808	58.8sec	0.7483	0.7871	0.8435	0.8873	29.8sec	0.6590	0.7262	0.7678	0.8052	21.7sec	0.7058	0.7823	0.8423	0.8857
	Level 4	2.8min	0.5552	0.8081	0.9279	0.9456	2.7min	0.5525	0.7720	0.8343	0.9183	2min	0.8345	0.8687	0.9180	0.9432	59.6sec	0.6838	0.8064	0.8335	0.8678	43.5sec	0.7699	0.8365	0.8961	0.9217
	Level 5	5.6min	0.6702	0.8672	0.9522	0.9708	5.5min	0.6120	0.7966	0.8822	0.9544	3.9min	0.8931	0.9312	0.9609	0.9731	2min	0.7324	0.8625	0.8815	0.9028	1.4min	0.8232	0.8900	0.9292	0.9427
	Level 6	11.3min	0.7285	0.9086	0.9683	0.9815	11min	0.6948	0.8267	0.9088	0.9741	7.8min	0.9271	0.9595	0.9764	0.9850	4min	0.7908	0.8948	0.9113	0.9356	2.9min	0.8662	0.9220	0.9480	0.9627
	Level 7	22.6min	0.7718	0.9363	0.9792	0.9871	21.9min	0.7512	0.8508	0.9239	0.9818	15.7min	0.9465	0.9708	0.9817	0.9899	8min	0.8340	0.9177	0.9367	0.9513	5.8min	0.9037	0.9404	0.9621	0.9750
	Level 8	45.2min	0.8356	0.9517	0.9838	0.9890	43.8min	0.7712	0.8641	0.9367	0.9836	31.4min	0.9546	0.9747	0.9856	0.9922	15.9min	0.8557	0.9296	0.9458	0.9625	11.6min	0.9254	0.9517	0.9689	0.9812
	Level 9	90.4min	0.8579	0.9594	0.9822	0.9879	87.6min	0.7522	0.8627	0.9351	0.9821	62.7min	0.9504	0.9732	0.9844	0.9914	31.8min	0.8462	0.9280	0.9413	0.9621	23.2min	0.9345	0.9531	0.9702	0.9832
60 days before	**Level 1**	12.3sec	0.3846	0.5482	0.6235	0.6775	8.1sec	0.5195	0.5936	0.6378	0.6641	6.3sec	0.4905	0.6002	0.6407	0.6710	3sec	0.5496	0.6044	0.6267	0.6524	2.4sec	0.5792	0.6008	0.6270	0.6598
	Level 2	24.7sec	0.4233	0.6358	0.7154	0.7864	16.2sec	0.5513	0.6845	0.7393	0.7745	12.7sec	0.5977	0.6930	0.7418	0.7831	5.9sec	0.6146	0.6730	0.7300	0.7683	4.9sec	0.6326	0.6784	0.7363	0.7710
	Level 3	49.3sec	0.4923	0.7095	0.7814	0.8634	32.4sec	0.5670	0.7632	0.8205	0.8687	25.3sec	0.6983	0.7927	0.8432	0.8786	11.9sec	0.6780	0.7517	0.8049	0.8449	9.8sec	0.7078	0.7629	0.7949	0.8617
	Level 4	1.6min	0.5829	0.7603	0.8383	0.9272	1.1min	0.6598	0.8180	0.8770	0.9271	50.6sec	0.7734	0.8662	0.9035	0.9346	23.8sec	0.7461	0.8221	0.8594	0.8881	19.5sec	0.7699	0.8199	0.8622	0.9104
	Level 5	3.3min	0.6845	0.8181	0.8911	0.9517	2.2min	0.7216	0.8603	0.9107	0.9592	1.7min	0.8174	0.9084	0.9413	0.9644	47.6sec	0.7906	0.8679	0.8980	0.9238	39sec	0.8232	0.8620	0.9066	0.9363
	Level 6	6.6min	0.7418	0.8613	0.9218	0.9677	4.3min	0.7566	0.8941	0.9373	0.9747	3.4min	0.8718	0.9419	0.9646	0.9802	1.6min	0.8381	0.9047	0.9259	0.9471	1.3min	0.8662	0.8962	0.9357	0.9565
	Level 7	13.1min	0.7864	0.9058	0.9467	0.9798	8.6min	0.7895	0.9239	0.9510	0.9836	6.8min	0.9202	0.9589	0.9749	0.9869	3.2min	0.8746	0.9291	0.9465	0.9604	2.6min	0.9037	0.9282	0.9565	0.9683
	Level 8	26.3min	0.8371	0.9338	0.9566	0.9844	17.3min	0.8124	0.9393	0.9630	0.9871	13.5min	0.9293	0.9683	0.9775	0.9888	6.3min	0.8944	0.9421	0.9586	0.9691	5.2min	0.9302	0.9473	0.9658	0.9752
	Level 9	52.6min	0.8571	0.9402	0.9654	0.9839	34.6min	0.8234	0.9445	0.9678	0.9873	27min	0.9436	0.9660	0.9785	0.9883	12.7min	0.8858	0.9429	0.9595	0.9724	10.4min	0.9366	0.9552	0.9692	0.9789
3 months before	**Level 1**	6.9sec	0.4842	0.5827	0.6257	0.6716	4.6sec	0.5599	0.6066	0.6404	0.6668	4sec	0.5047	0.5753	0.6179	0.6679	1.7sec	0.5554	0.6064	0.6294	0.6599	1.6sec	0.5797	0.6046	0.6293	0.6588
	Level 2	13.9sec	0.4945	0.6644	0.7401	0.7766	9.2sec	0.5822	0.7062	0.7366	0.7924	7.9sec	0.5528	0.6595	0.7313	0.7817	3.4sec	0.6330	0.6977	0.7460	0.7768	3.2sec	0.6432	0.7058	0.7363	0.7775
	Level 3	27.7sec	0.5726	0.7309	0.8095	0.8523	18.4sec	0.6414	0.7676	0.8177	0.8689	15.8sec	0.6177	0.7512	0.8057	0.8650	6.8sec	0.7077	0.7833	0.8258	0.8517	6.4sec	0.7137	0.7681	0.8119	0.8598
	Level 4	55.4sec	0.6870	0.7820	0.8673	0.9098	36.8sec	0.7292	0.8258	0.8735	0.9226	31.7sec	0.6845	0.8347	0.8780	0.9311	13.6sec	0.7783	0.8408	0.8732	0.9050	12.8sec	0.7793	0.8254	0.8637	0.9087
	Level 5	1.8min	0.7203	0.8402	0.9014	0.9476	1.2min	0.7764	0.8719	0.9105	0.9515	1.1min	0.7505	0.8894	0.9284	0.9636	27.2sec	0.8395	0.8837	0.9119	0.9386	25.6sec	0.8324	0.8687	0.9063	0.9373
	Level 6	3.7min	0.7675	0.8786	0.9288	0.9653	2.5min	0.8416	0.9055	0.9358	0.9737	2.1min	0.8164	0.9207	0.9520	0.9785	54.3sec	0.8832	0.9169	0.9387	0.9586	51.3sec	0.8771	0.9102	0.9368	0.9561
	Level 7	7.4min	0.8414	0.9135	0.9511	0.9777	4.9min	0.8800	0.9292	0.9517	0.9821	4.2min	0.8676	0.9435	0.9663	0.9856	1.8min	0.9092	0.9379	0.9567	0.9701	1.7min	0.9063	0.9353	0.9565	0.9681
	Level 8	14.8min	0.8889	0.9396	0.9644	0.9838	9.8min	0.8783	0.9496	0.9653	0.9857	8.4min	0.9050	0.9581	0.9740	0.9885	3.6min	0.9258	0.9507	0.9678	0.9771	3.4min	0.9305	0.9517	0.9684	0.9761
	Level 9	29.6min	0.9018	0.9516	0.9676	0.9822	19.6min	0.8800	0.9553	0.9706	0.9864	16.9min	0.9178	0.9618	0.9736	0.9877	7.2min	0.9216	0.9539	0.9706	0.9794	6.8min	0.9360	0.9563	0.9716	0.9805
1 Year before	**Level 1**	3.8sec	0.5776	0.6279	0.6527	0.6842	2.5sec	0.5956	0.6286	0.6500	0.6735	2.3sec	0.5581	0.6114	0.6452	0.6801	1.1sec	0.6046	0.6401	0.6570	0.6775	1.2sec	0.5991	0.6295	0.6525	0.6747
	Level 2	7.6sec	0.6723	0.7361	0.7693	0.8080	5sec	0.6871	0.7346	0.7644	0.8013	4.7sec	0.6351	0.7202	0.7656	0.8043	2.2sec	0.7040	0.7647	0.7876	0.8131	2.3sec	0.7010	0.7498	0.7767	0.8067
	Level 3	15.1sec	0.7401	0.8118	0.8445	0.8822	10sec	0.7521	0.8087	0.8395	0.8767	9.3sec	0.7134	0.7988	0.8480	0.8833	4.3sec	0.7980	0.8535	0.8752	0.8961	4.7sec	0.7684	0.8347	0.8640	0.8908
	Level 4	30.3sec	0.7972	0.8620	0.8927	0.9268	20sec	0.8083	0.8584	0.8854	0.9199	18.7sec	0.7783	0.8560	0.8966	0.9297	8.6sec	0.8594	0.9100	0.9249	0.9397	9.3sec	0.8266	0.8886	0.9181	0.9396
	Level 5	1min	0.8484	0.8971	0.9237	0.9525	40sec	0.8548	0.8943	0.9160	0.9449	37.4sec	0.8270	0.8978	0.9266	0.9564	17.3sec	0.8982	0.9407	0.9517	0.9650	18.7sec	0.8722	0.9236	0.9453	0.9651
	Level 6	2min	0.8848	0.9235	0.9449	0.9684	1.3min	0.8906	0.9229	0.9404	0.9618	1.2min	0.8685	0.9249	0.9483	0.9721	34.5sec	0.9257	0.9586	0.9665	0.9777	37.3sec	0.9117	0.9447	0.9634	0.9790
	Level 7	4min	0.9215	0.9452	0.9610	0.9792	2.7min	0.9197	0.9450	0.9578	0.9739	2.5min	0.8980	0.9452	0.9635	0.9812	1.2min	0.9448	0.9701	0.9767	0.9846	1.2min	0.9356	0.9620	0.9751	0.9858
	Level 8	8.1min	0.9434	0.9599	0.9720	0.9848	5.3min	0.9388	0.9599	0.9690	0.9815	5min	0.9248	0.9596	0.9739	0.9860	2.3min	0.9567	0.9770	0.9826	0.9886	2.5min	0.9517	0.9717	0.9818	0.9891
	Level 9	16.2min	0.9505	0.9663	0.9761	0.9865	10.7min	0.9469	0.9654	0.9739	0.9844	10min	0.9343	0.9651	0.9758	0.9872	4.6min	0.9577	0.9801	0.9849	0.9898	5min	0.9576	0.9756	0.9841	0.9901

Notes: This table reports EDU future contracts median results for wavelet correlations with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDU contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.17: EDZ futures contracts median results for ask variance

Ask Variance		EDZ0 Median					EDZ1 Median					EDZ2 Median					EDZ3 Median					EDZ4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.8sec	1.4907	1.6065	1.6344	1.7314	13.8sec	1.5539	1.6382	1.8776	2.4397	16.5sec	1.4445	1.7410	1.9792	3.5679	13.4sec	1.5087	1.5484	2.1038	4.6585	4.4sec	1.4919	1.5927	1.7327	1.8763
	Level 2	17.6sec	1.2755	1.3333	1.4241	1.5626	27.5sec	1.3187	1.4075	1.6114	1.9836	32.9sec	1.3971	1.5277	1.6826	7.5526	26.9sec	1.2698	1.4556	2.3247	3.6550	8.8sec	1.2920	1.3653	1.4875	1.8359
	Level 3	35.2sec	1.1404	1.1976	1.2540	1.4082	55sec	1.1619	1.2398	1.3154	1.9220	1.1min	1.2979	1.4120	1.4981	6.2150	53.8sec	1.1510	1.4803	2.1579	2.5906	17.6sec	1.1827	1.2568	1.3090	1.8033
30	**Level 4**	1.2min	1.0851	1.1352	1.1996	1.2893	1.8min	1.0848	1.1178	1.1872	1.6334	2.2min	1.1767	1.2542	1.3555	4.5544	1.8min	1.0859	1.4333	1.6730	3.0192	35.3sec	1.1210	1.1733	1.2011	1.7348
days	**Level 5**	2.3min	1.0566	1.0920	1.1325	1.2127	3.7min	1.0432	1.0764	1.1338	1.4330	4.4min	1.1033	1.1595	1.2197	3.0670	3.6min	1.0512	1.3271	1.4165	2.9318	1.2min	1.0807	1.1133	1.1558	1.5795
before	**Level 6**	4.7min	1.0387	1.0592	1.0967	1.1714	7.3min	1.0265	1.0520	1.0966	1.2932	8.8min	1.0600	1.0924	1.1382	2.4152	7.2min	1.0297	1.1697	1.2690	2.3212	2.4min	1.0503	1.0675	1.0829	1.4049
	Level 7	9.4min	1.0258	1.0399	1.0629	1.1331	14.7min	1.0170	1.0371	1.0679	1.1972	17.6min	1.0375	1.0556	1.0854	2.1893	14.3min	1.0176	1.0940	1.1501	1.8004	4.7min	1.0271	1.0385	1.0448	1.2329
	Level 8	18.7min	1.0179	1.0284	1.0469	1.0966	29.3min	1.0109	1.0248	1.0488	1.1281	35.1min	1.0232	1.0368	1.0536	1.8654	28.7min	1.0107	1.0577	1.1069	1.5411	9.4min	1.0175	1.0224	1.0264	1.1285
	Level 9	37.5min	1.0140	1.0250	1.0383	1.0784	58.7min	1.0082	1.0201	1.0374	1.0846	70.3min	1.0173	1.0259	1.0455	1.9323	57.4min	1.0091	1.0413	1.0862	1.5106	18.8min	1.0119	1.0177	1.0277	1.0762
	Level 1	4.2sec	1.5083	1.6065	1.6511	1.8350	6.8sec	1.5253	1.6179	1.6634	2.2052	7.5sec	1.5000	1.6036	1.8945	2.5724	11.4sec	1.5000	1.6542	2.0068	4.2128	2.6sec	1.4930	1.5859	1.7069	1.9121
	Level 2	8.3sec	1.2770	1.3537	1.4402	1.6959	13.6sec	1.3094	1.3712	1.4486	1.9391	15sec	1.2725	1.4783	1.6068	2.1825	22.8sec	1.2616	1.4752	1.8492	4.6143	5.2sec	1.2905	1.3621	1.4898	1.8054
	Level 3	16.7sec	1.1421	1.2332	1.3180	1.5167	27.2sec	1.1703	1.2234	1.3060	1.5957	29.9sec	1.1546	1.2630	1.4462	1.9264	45.6sec	1.1335	1.4218	1.5450	4.5187	10.5sec	1.1813	1.2562	1.3405	1.7021
60	**Level 4**	33.4sec	1.0879	1.1455	1.2224	1.3069	54.3sec	1.0927	1.1392	1.2128	1.3872	59.8sec	1.0986	1.1644	1.3002	1.6306	1.5min	1.0792	1.3078	1.4566	4.2281	21sec	1.1098	1.1732	1.2215	1.5829
days	**Level 5**	1.1min	1.0608	1.1025	1.1391	1.2697	1.8min	1.0549	1.0903	1.1419	1.2875	2min	1.0510	1.1046	1.1995	1.4639	3min	1.0558	1.2131	1.3271	3.4948	41.9sec	1.0670	1.1150	1.1410	1.4243
before	**Level 6**	2.2min	1.0410	1.0720	1.0954	1.1753	3.6min	1.0353	1.0608	1.1000	1.1958	4min	1.0303	1.0635	1.1176	1.3528	6.1min	1.0355	1.1256	1.1890	2.5972	1.4min	1.0413	1.0672	1.0805	1.2490
	Level 7	4.5min	1.0257	1.0426	1.0634	1.1331	7.2min	1.0235	1.0401	1.0638	1.1201	8min	1.0155	1.0358	1.0780	1.2559	12.2min	1.0194	1.0814	1.1344	2.0453	2.8min	1.0258	1.0391	1.0469	1.1432
	Level 8	8.9min	1.0174	1.0272	1.0422	1.0966	14.5min	1.0159	1.0263	1.0422	1.0809	16min	1.0085	1.0225	1.0476	1.2247	24.3min	1.0114	1.0554	1.0884	1.7007	5.6min	1.0153	1.0233	1.0315	1.0871
	Level 9	17.8min	1.0129	1.0205	1.0326	1.0784	29min	1.0126	1.0201	1.0327	1.0664	31.9min	1.0079	1.0175	1.0380	1.3645	48.6min	1.0091	1.0407	1.0622	1.5481	11.2min	1.0113	1.0183	1.0277	1.0695
	Level 1	2.6sec	1.5169	1.6041	1.6602	1.8170	4.2sec	1.5214	1.6094	1.6591	1.9832	4.5sec	1.4561	1.5804	1.7515	2.0107	6.4sec	1.5000	1.5645	1.6786	2.5400	1.9sec	1.4965	1.6176	1.7070	1.9121
	Level 2	5.1sec	1.2797	1.3537	1.4355	1.6243	8.5sec	1.3098	1.3643	1.4413	1.8016	9sec	1.2709	1.3898	1.4937	1.9003	12.8sec	1.2500	1.3566	1.5299	2.5405	3.7sec	1.2938	1.3956	1.4911	1.7417
	Level 3	10.2sec	1.1595	1.2436	1.3177	1.4215	17sec	1.1706	1.2219	1.3044	1.5461	18sec	1.1546	1.2482	1.3443	1.7522	25.6sec	1.1290	1.2379	1.4353	2.3276	7.5sec	1.1813	1.2827	1.3588	1.5673
3	**Level 4**	20.5sec	1.0995	1.1669	1.2231	1.2989	34sec	1.0978	1.1392	1.2110	1.3679	36sec	1.0986	1.1372	1.2343	1.5701	51.3sec	1.0784	1.1494	1.3207	1.9514	15sec	1.1098	1.1836	1.2414	1.4155
months	**Level 5**	40.9sec	1.0658	1.1101	1.1433	1.2095	1.1min	1.0580	1.0903	1.1413	1.2433	1.2min	1.0619	1.0857	1.1474	1.4053	1.7min	1.0545	1.1035	1.2209	1.6692	29.9sec	1.0692	1.1185	1.1601	1.2944
before	**Level 6**	1.4min	1.0423	1.0720	1.0961	1.1684	2.3min	1.0391	1.0604	1.0973	1.1752	2.4min	1.0326	1.0549	1.0938	1.2570	3.4min	1.0321	1.0742	1.1497	1.4183	59.9sec	1.0442	1.0720	1.1009	1.1870
	Level 7	2.7min	1.0261	1.0436	1.0643	1.1177	4.5min	1.0245	1.0398	1.0628	1.1158	4.8min	1.0182	1.0337	1.0544	1.1561	6.8min	1.0183	1.0446	1.0953	1.2578	2min	1.0270	1.0427	1.0595	1.1070
	Level 8	5.5min	1.0169	1.0284	1.0410	1.0803	9.1min	1.0163	1.0261	1.0399	1.0765	9.6min	1.0122	1.0221	1.0367	1.1172	13.7min	1.0089	1.0299	1.0612	1.1704	4min	1.0162	1.0259	1.0370	1.0645
	Level 9	10.9min	1.0124	1.0214	1.0321	1.0570	18.1min	1.0114	1.0201	1.0299	1.0533	19.2min	1.0089	1.0173	1.0329	1.1075	27.4min	1.0070	1.0240	1.0501	1.1790	8min	1.0117	1.0212	1.0289	1.0508
	Level 1	1.7sec	1.4912	1.5445	1.6008	1.7083	2.6sec	1.4958	1.5675	1.6246	1.7582	3sec	1.4956	1.5691	1.6344	1.7926	3.9sec	1.5174	1.6051	1.7029	1.9474	1.5sec	1.5016	1.5721	1.6531	1.7728
	Level 2	3.3sec	1.2638	1.3266	1.3739	1.4925	5.1sec	1.2627	1.3385	1.3925	1.5532	6sec	1.2725	1.3449	1.4286	1.6134	7.8sec	1.2864	1.3892	1.5052	1.7573	3sec	1.2762	1.3572	1.4279	1.5514
	Level 3	6.6sec	1.1510	1.2055	1.2494	1.3551	10.3sec	1.1521	1.2045	1.2618	1.3741	11.9sec	1.1684	1.2240	1.2899	1.4565	15.5sec	1.1766	1.2561	1.3378	1.5507	5.9sec	1.1655	1.2416	1.3023	1.4124
1	**Level 4**	13.3sec	1.0954	1.1350	1.1755	1.2486	20.5sec	1.0953	1.1303	1.1746	1.2757	23.9sec	1.1049	1.1431	1.1926	1.3149	31sec	1.1072	1.1656	1.2224	1.3865	11.9sec	1.1006	1.1609	1.2063	1.2941
Year	**Level 5**	26.5sec	1.0629	1.0917	1.1229	1.1760	41.1sec	1.0597	1.0882	1.1224	1.2007	47.8sec	1.0647	1.0916	1.1278	1.1997	1min	1.0654	1.1003	1.1410	1.2678	23.7sec	1.0636	1.1062	1.1369	1.1990
before	**Level 6**	53.1sec	1.0411	1.0622	1.0837	1.1189	1.4min	1.0410	1.0597	1.0838	1.1351	1.6min	1.0419	1.0601	1.0835	1.1276	2.1min	1.0357	1.0606	1.0845	1.1649	47.5sec	1.0398	1.0663	1.0868	1.1309
	Level 7	1.8min	1.0278	1.0423	1.0564	1.0807	2.7min	1.0257	1.0386	1.0554	1.0870	3.2min	1.0269	1.0382	1.0522	1.0855	4.1min	1.0216	1.0344	1.0505	1.0974	1.6min	1.0241	1.0388	1.0534	1.0778
	Level 8	3.5min	1.0188	1.0285	1.0389	1.0545	5.5min	1.0169	1.0251	1.0367	1.0578	6.4min	1.0170	1.0250	1.0348	1.0540	8.3min	1.0128	1.0211	1.0307	1.0622	3.2min	1.0154	1.0248	1.0336	1.0512
	Level 9	7.1min	1.0145	1.0230	1.0308	1.0451	11min	1.0128	1.0193	1.0285	1.0436	12.7min	1.0124	1.0196	1.0270	1.0438	16.5min	1.0091	1.0157	1.0240	1.0500	6.3min	1.0121	1.0192	1.0257	1.0391

Notes: This table reports EDZ future contracts median results for ask variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDZ contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.17: EDZ futures contracts median results for ask variance – Continued

Ask Variance		EDZ5 Median					EDZ6 Median					EDZ7 Median					EDZ8 Median					EDZ9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	26.7sec	1.5349	1.5633	1.6477	2.2323	19.7sec	1.5091	1.5625	1.7139	1.8924	8.1sec	1.4599	1.5293	1.6363	1.7567	8.5sec	1.4474	1.5496	1.6244	1.7531	5.7sec	1.5866	1.7021	1.8985	2.1905
	Level 2	53.3sec	1.2967	1.3629	1.4227	2.3356	39.5sec	1.2816	1.3606	1.4466	1.5336	16.2sec	1.2048	1.2821	1.3702	1.5676	17sec	1.2189	1.2758	1.3683	1.4443	11.5sec	1.3468	1.4833	1.6702	1.8576
	Level 3	1.8min	1.1587	1.2038	1.3177	2.1264	1.3min	1.1595	1.2289	1.3367	1.4819	32.5sec	1.1006	1.1488	1.2256	1.2774	33.9sec	1.0989	1.1354	1.1997	1.2431	23sec	1.2231	1.3040	1.5293	1.6962
30	Level 4	3.6min	1.0965	1.1787	1.1968	1.8343	2.6min	1.1116	1.1671	1.2385	1.4222	1.1min	1.0515	1.0953	1.1191	1.1410	1.1min	1.0489	1.0670	1.0998	1.1655	46sec	1.1568	1.2367	1.4291	1.5497
days	Level 5	7.1min	1.0669	1.1367	1.1507	1.6415	5.3min	1.0749	1.1077	1.1756	1.3702	2.2min	1.0230	1.0529	1.0763	1.0972	2.3min	1.0273	1.0361	1.0542	1.0917	1.5min	1.1005	1.1845	1.2677	1.4404
before	Level 6	14.2min	1.0511	1.1020	1.1127	1.5422	10.5min	1.0597	1.0814	1.1530	1.2808	4.3min	1.0113	1.0313	1.0521	1.0643	4.5min	1.0158	1.0214	1.0304	1.0534	3.1min	1.0626	1.1266	1.1924	1.3659
	Level 7	28.5min	1.0402	1.0700	1.0918	1.4106	21.1min	1.0479	1.0666	1.1254	1.2724	8.7min	1.0072	1.0219	1.0329	1.0462	9min	1.0107	1.0138	1.0207	1.0367	6.1min	1.0425	1.0883	1.1513	1.2793
	Level 8	56.9min	1.0309	1.0530	1.0804	1.3333	42.1min	1.0389	1.0593	1.1030	1.2588	17.3min	1.0060	1.0185	1.0267	1.0381	18.1min	1.0079	1.0102	1.0154	1.0284	12.3min	1.0263	1.0715	1.1302	1.2496
	Level 9	113.8min	1.0300	1.0506	1.0791	1.3059	84.2min	1.0346	1.0673	1.1199	1.2863	34.6min	1.0065	1.0185	1.0285	1.0427	36.2min	1.0067	1.0098	1.0136	1.0282	24.5min	1.0175	1.0674	1.1298	1.2926
	Level 1	10.6sec	1.5469	1.6600	1.7758	2.0532	9.1sec	1.5304	1.6349	1.7471	2.2062	4.1sec	1.4785	1.5242	1.6269	1.7525	4.5sec	1.4575	1.5347	1.6174	1.7531	2.6sec	1.5866	1.6856	1.7720	2.0667
	Level 2	21.2sec	1.3043	1.4346	1.5410	1.8857	18.2sec	1.3164	1.4217	1.5135	1.9858	8.3sec	1.2323	1.2917	1.3702	1.5169	9sec	1.2189	1.2727	1.3681	1.4528	5.1sec	1.3468	1.4763	1.6414	1.8551
	Level 3	42.4sec	1.1853	1.3092	1.3641	1.6323	36.3sec	1.1795	1.3121	1.4435	1.8165	16.5sec	1.1183	1.1513	1.2256	1.3384	18.1sec	1.1052	1.1366	1.1840	1.2431	10.2sec	1.2278	1.2907	1.5011	1.6897
60	Level 4	1.4min	1.1157	1.2016	1.2890	1.5028	1.2min	1.1139	1.2245	1.3324	1.6481	33.1sec	1.0582	1.0964	1.1276	1.1943	36.2sec	1.0521	1.0672	1.0936	1.1385	20.5sec	1.1313	1.2118	1.3192	1.5354
days	Level 5	2.8min	1.0793	1.1478	1.1979	1.4288	2.4min	1.0782	1.1525	1.2514	1.4636	1.1min	1.0358	1.0596	1.0831	1.1293	1.2min	1.0283	1.0413	1.0547	1.0900	40.9sec	1.0947	1.1606	1.2371	1.4215
before	Level 6	5.7min	1.0582	1.1068	1.1355	1.3282	4.8min	1.0602	1.1163	1.1756	1.3308	2.2min	1.0191	1.0391	1.0558	1.0986	2.4min	1.0178	1.0226	1.0330	1.0520	1.4min	1.0609	1.1136	1.1717	1.3248
	Level 7	11.3min	1.0366	1.0712	1.0962	1.2248	9.7min	1.0482	1.0825	1.1361	1.2662	4.4min	1.0126	1.0265	1.0418	1.0717	4.8min	1.0110	1.0156	1.0213	1.0357	2.7min	1.0361	1.0735	1.1152	1.2581
	Level 8	22.6min	1.0240	1.0516	1.0918	1.1638	19.4min	1.0375	1.0613	1.1061	1.2307	8.8min	1.0105	1.0208	1.0334	1.0569	9.6min	1.0082	1.0108	1.0156	1.0261	5.5min	1.0263	1.0484	1.0811	1.1957
	Level 9	45.2min	1.0206	1.0470	1.0717	1.1299	38.7min	1.0302	1.0643	1.1036	1.2601	17.7min	1.0112	1.0192	1.0300	1.0525	19.3min	1.0072	1.0102	1.0136	1.0245	10.9min	1.0187	1.0391	1.0805	1.1899
	Level 1	5.6sec	1.5288	1.5885	1.6964	1.8688	5.1sec	1.5243	1.6199	1.7688	2.0495	2.7sec	1.4564	1.5196	1.6079	1.7472	2.8sec	1.4694	1.5336	1.6228	1.7443	1.5sec	1.5243	1.6515	1.7290	1.9959
	Level 2	11.1sec	1.3043	1.3764	1.4700	1.7385	10.1sec	1.3061	1.4171	1.5066	1.8257	5.4sec	1.2179	1.2759	1.3501	1.5155	5.7sec	1.2240	1.2725	1.3493	1.4363	3sec	1.3336	1.4540	1.5465	1.7881
	Level 3	22.2sec	1.1828	1.2502	1.3376	1.5646	20.3sec	1.1781	1.2935	1.3844	1.6208	10.7sec	1.1164	1.1511	1.2216	1.3242	11.3sec	1.1089	1.1370	1.1793	1.2407	6.1sec	1.2186	1.2907	1.4031	1.5960
3	Level 4	44.4sec	1.1101	1.1823	1.2473	1.4391	40.6sec	1.1116	1.1941	1.2961	1.4481	21.5sec	1.0599	1.0924	1.1276	1.1938	22.7sec	1.0546	1.0683	1.0911	1.1345	12.1sec	1.1314	1.2118	1.2932	1.4639
months	Level 5	1.5min	1.0704	1.1361	1.1745	1.2984	1.4min	1.0815	1.1313	1.2122	1.3793	43sec	1.0360	1.0581	1.0826	1.1253	45.3sec	1.0290	1.0354	1.0506	1.0744	24.2sec	1.0867	1.1549	1.2094	1.3358
before	Level 6	3min	1.0497	1.0964	1.1184	1.2141	2.7min	1.0597	1.0979	1.1481	1.2808	1.4min	1.0228	1.0401	1.0550	1.0906	1.5min	1.0158	1.0203	1.0299	1.0473	48.4sec	1.0538	1.1027	1.1378	1.2622
	Level 7	5.9min	1.0360	1.0647	1.0880	1.1553	5.4min	1.0409	1.0718	1.1134	1.2194	2.9min	1.0141	1.0266	1.0408	1.0651	3min	1.0097	1.0131	1.0192	1.0336	1.6min	1.0328	1.0638	1.0976	1.1802
	Level 8	11.8min	1.0240	1.0457	1.0641	1.1261	10.8min	1.0324	1.0537	1.0886	1.1712	5.7min	1.0111	1.0212	1.0318	1.0524	6min	1.0067	1.0095	1.0139	1.0247	3.2min	1.0233	1.0422	1.0699	1.1449
	Level 9	23.7min	1.0206	1.0393	1.0582	1.1104	21.6min	1.0253	1.0466	1.0771	1.1771	11.5min	1.0115	1.0201	1.0286	1.0480	12.1min	1.0058	1.0087	1.0122	1.0221	6.5min	1.0177	1.0355	1.0604	1.1322
	Level 1	3.1sec	1.4684	1.5241	1.5763	1.7205	2.5sec	1.4986	1.5461	1.6033	1.7446	1.7sec	1.4836	1.5422	1.5975	1.6921	1.4sec	1.4745	1.5197	1.5667	1.6718	1.1sec	1.4802	1.5332	1.5868	1.7082
	Level 2	6.3sec	1.2491	1.2985	1.3501	1.4843	5.1sec	1.2563	1.3193	1.3818	1.5082	3.4sec	1.2436	1.2959	1.3519	1.4453	2.7sec	1.2309	1.2692	1.3121	1.3925	2.1sec	1.2482	1.2944	1.3574	1.5057
	Level 3	12.5sec	1.1404	1.1884	1.2295	1.3340	10.1sec	1.1454	1.1995	1.2638	1.3732	6.8sec	1.1312	1.1654	1.2138	1.2906	5.4sec	1.1133	1.1433	1.1679	1.2242	4.3sec	1.1305	1.1727	1.2362	1.3706
1	Level 4	25sec	1.0842	1.1270	1.1612	1.2357	20.2sec	1.0944	1.1397	1.1841	1.2825	13.6sec	1.0725	1.1027	1.1407	1.2029	10.8sec	1.0588	1.0779	1.0941	1.1376	8.6sec	1.0750	1.1093	1.1633	1.2788
Year	Level 5	50sec	1.0554	1.0880	1.1167	1.1722	40.5sec	1.0640	1.0987	1.1325	1.2060	27.2sec	1.0410	1.0678	1.1005	1.1476	21.7sec	1.0324	1.0447	1.0568	1.0915	17.1sec	1.0464	1.0736	1.1111	1.2023
before	Level 6	1.7min	1.0350	1.0614	1.0800	1.1198	1.3min	1.0426	1.0684	1.0934	1.1465	54.4sec	1.0267	1.0478	1.0702	1.1069	43.3sec	1.0187	1.0290	1.0377	1.0614	34.2sec	1.0302	1.0492	1.0779	1.1393
	Level 7	3.3min	1.0244	1.0427	1.0560	1.0850	2.7min	1.0293	1.0482	1.0663	1.1113	1.8min	1.0187	1.0330	1.0509	1.0766	1.4min	1.0126	1.0190	1.0265	1.0422	1.1min	1.0204	1.0344	1.0520	1.0966
	Level 8	6.7min	1.0168	1.0302	1.0406	1.0604	5.4min	1.0207	1.0349	1.0486	1.0809	3.6min	1.0140	1.0252	1.0371	1.0567	2.9min	1.0092	1.0137	1.0198	1.0319	2.3min	1.0149	1.0253	1.0383	1.0702
	Level 9	13.3min	1.0143	1.0260	1.0334	1.0507	10.8min	1.0172	1.0298	1.0417	1.0709	7.3min	1.0131	1.0224	1.0334	1.0480	5.8min	1.0080	1.0122	1.0171	1.0283	4.6min	1.0130	1.0214	1.0332	1.0622

Notes: This table reports EDZ future contracts median results for ask variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDZ contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.18: EDZ futures contracts median results for bid variance

Bid Variance		EDZ0 Median					EDZ1 Median					EDZ2 Median					EDZ3 Median					EDZ4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.6sec	1.4953	1.6052	1.6344	1.7621	13.4sec	1.5554	1.6361	1.8528	2.2436	13.3sec	1.4463	1.7428	1.9255	3.5315	15sec	1.4835	1.5523	2.0545	4.6583	4.7sec	1.4784	1.6108	1.7565	2.0055
	Level 2	17.3sec	1.2759	1.3375	1.4251	1.4881	26.9sec	1.3196	1.3848	1.5761	1.9610	26.7sec	1.3969	1.5260	1.6400	7.4605	30.1sec	1.2711	1.3896	2.9232	3.6544	9.4sec	1.2920	1.3715	1.4820	1.8312
	Level 3	34.5sec	1.1427	1.2004	1.2603	1.3369	53.8sec	1.1625	1.2308	1.3025	1.7632	53.4sec	1.2986	1.4034	1.4837	6.0892	1min	1.1497	1.3974	2.1275	5.6404	18.8sec	1.1807	1.2293	1.3530	1.5561
30	**Level 4**	1.2min	1.0841	1.1353	1.1871	1.2713	1.8min	1.0849	1.1189	1.1665	1.5834	1.8min	1.1770	1.2545	1.3463	4.4083	2min	1.0835	1.3365	1.5875	5.8904	37.5sec	1.1113	1.1373	1.1958	1.4446
days	**Level 5**	2.3min	1.0538	1.0875	1.1303	1.2061	3.6min	1.0428	1.0767	1.1086	1.3938	3.6min	1.1034	1.1626	1.2117	3.0848	4min	1.0485	1.2940	1.3208	6.0090	1.3min	1.0736	1.0870	1.1506	1.3783
before	**Level 6**	4.6min	1.0369	1.0607	1.0859	1.1659	7.2min	1.0265	1.0539	1.0810	1.3074	7.1min	1.0619	1.0930	1.1380	2.3525	8min	1.0258	1.1672	1.2154	5.3159	2.5min	1.0495	1.0565	1.0789	1.2950
	Level 7	9.2min	1.0269	1.0436	1.0631	1.1212	14.3min	1.0175	1.0417	1.0598	1.2201	14.2min	1.0381	1.0567	1.0980	2.0966	16min	1.0134	1.0855	1.1374	3.9962	5min	1.0297	1.0362	1.0479	1.2081
	Level 8	18.4min	1.0206	1.0333	1.0482	1.1095	28.7min	1.0122	1.0289	1.0487	1.1566	28.5min	1.0224	1.0405	1.0752	2.0173	32.1min	1.0084	1.0467	1.0921	3.0234	10min	1.0207	1.0244	1.0320	1.1518
	Level 9	36.8min	1.0190	1.0304	1.0511	1.1200	57.3min	1.0104	1.0262	1.0456	1.1490	57min	1.0172	1.0355	1.0724	2.2087	64.2min	1.0075	1.0311	1.0787	2.6083	20min	1.0166	1.0212	1.0320	1.1230
	Level 1	4.4sec	1.5000	1.6081	1.6522	1.7920	6.7sec	1.5267	1.6139	1.6654	2.0530	6.3sec	1.4982	1.6164	1.8956	2.4737	8.9sec	1.5000	1.6063	1.9903	4.7301	2.8sec	1.4828	1.5943	1.7021	1.9579
	Level 2	8.8sec	1.2780	1.3500	1.4419	1.7240	13.4sec	1.2906	1.3616	1.4320	1.8772	12.6sec	1.2725	1.4724	1.6067	2.3496	17.8sec	1.2655	1.4410	1.7961	5.2364	5.7sec	1.2854	1.3424	1.4794	1.7531
	Level 3	17.7sec	1.1404	1.2258	1.3250	1.4804	26.8sec	1.1632	1.2232	1.2936	1.6071	25.3sec	1.1432	1.2582	1.4377	1.8617	35.5sec	1.1397	1.3798	1.5596	6.4995	11.4sec	1.1760	1.2319	1.3524	1.5480
60	**Level 4**	35.3sec	1.0880	1.1499	1.2163	1.3341	53.6sec	1.0970	1.1392	1.1857	1.3848	50.5sec	1.0892	1.1509	1.2597	1.5775	1.2min	1.0809	1.2484	1.3790	5.9295	22.8sec	1.1099	1.1475	1.2244	1.4096
days	**Level 5**	1.2min	1.0571	1.1032	1.1318	1.2905	1.8min	1.0551	1.0880	1.1200	1.2959	1.7min	1.0487	1.0865	1.1531	1.3638	2.4min	1.0583	1.1833	1.3092	5.3517	45.5sec	1.0671	1.0945	1.1428	1.3293
before	**Level 6**	2.4min	1.0389	1.0665	1.0890	1.1997	3.6min	1.0342	1.0609	1.0861	1.2116	3.4min	1.0300	1.0588	1.1000	1.2786	4.7min	1.0337	1.1268	1.2176	4.4838	1.5min	1.0425	1.0581	1.0807	1.2327
	Level 7	4.7min	1.0265	1.0451	1.0619	1.1228	7.1min	1.0232	1.0420	1.0632	1.1411	6.7min	1.0160	1.0368	1.0523	1.1702	9.5min	1.0175	1.0841	1.1496	3.4787	3min	1.0266	1.0366	1.0494	1.1398
	Level 8	9.4min	1.0200	1.0300	1.0458	1.0957	14.3min	1.0170	1.0297	1.0432	1.0948	13.5min	1.0087	1.0242	1.0503	1.1143	18.9min	1.0106	1.0504	1.0952	2.7039	6.1min	1.0169	1.0246	1.0352	1.0907
	Level 9	18.9min	1.0160	1.0266	1.0416	1.0964	28.6min	1.0156	1.0261	1.0391	1.0774	26.9min	1.0058	1.0186	1.0443	1.1122	37.9min	1.0104	1.0422	1.0785	2.3847	12.1min	1.0129	1.0214	1.0329	1.0875
	Level 1	2.7sec	1.5098	1.6052	1.6568	1.7906	4.2sec	1.5226	1.6098	1.6583	1.9494	3.8sec	1.4737	1.5851	1.7318	1.9477	5.6sec	1.5000	1.5523	1.6726	2.3261	2sec	1.4891	1.6174	1.7223	1.9055
	Level 2	5.3sec	1.2795	1.3522	1.4387	1.6369	8.4sec	1.2908	1.3616	1.4280	1.7769	7.6sec	1.2678	1.3689	1.5000	1.7520	11.2sec	1.2501	1.3411	1.5418	2.5869	3.9sec	1.2943	1.3883	1.4877	1.6609
	Level 3	10.6sec	1.1527	1.2263	1.3066	1.4192	16.8sec	1.1710	1.2133	1.2838	1.5078	15.2sec	1.1432	1.2476	1.3499	1.6486	22.5sec	1.1296	1.2402	1.3974	2.3273	7.9sec	1.1760	1.2637	1.3544	1.5020
3	**Level 4**	21.3sec	1.0910	1.1599	1.2057	1.2793	33.5sec	1.0985	1.1358	1.1884	1.3554	30.4sec	1.0892	1.1270	1.2325	1.4610	45sec	1.0748	1.1530	1.2809	1.9064	15.7sec	1.1099	1.1732	1.2415	1.3476
months	**Level 5**	42.6sec	1.0591	1.1073	1.1356	1.2022	1.1min	1.0586	1.0886	1.1305	1.2459	1min	1.0572	1.0761	1.1321	1.3192	1.5min	1.0507	1.0933	1.2051	1.6171	31.4sec	1.0691	1.1046	1.1616	1.2616
before	**Level 6**	1.4min	1.0389	1.0683	1.0922	1.1555	2.2min	1.0390	1.0609	1.0905	1.1784	2min	1.0313	1.0550	1.0819	1.2015	3min	1.0315	1.0664	1.1384	1.3950	1min	1.0444	1.0623	1.0964	1.1811
	Level 7	2.8min	1.0268	1.0458	1.0619	1.1206	4.5min	1.0251	1.0418	1.0630	1.1208	4.1min	1.0199	1.0324	1.0511	1.1518	6min	1.0161	1.0468	1.0925	1.2686	2.1min	1.0288	1.0382	1.0605	1.1162
	Level 8	5.7min	1.0199	1.0309	1.0455	1.0788	8.9min	1.0175	1.0289	1.0424	1.0850	8.1min	1.0122	1.0211	1.0333	1.1111	12min	1.0088	1.0313	1.0641	1.1959	4.2min	1.0183	1.0273	1.0405	1.0795
	Level 9	11.3min	1.0170	1.0266	1.0410	1.0781	17.9min	1.0143	1.0256	1.0376	1.0695	16.2min	1.0092	1.0179	1.0371	1.1088	24min	1.0088	1.0278	1.0573	1.1568	8.4min	1.0145	1.0248	1.0353	1.0720
	Level 1	1.6sec	1.4854	1.5481	1.6018	1.7098	2.5sec	1.4978	1.5696	1.6213	1.7527	2.8sec	1.4883	1.5624	1.6300	1.7841	3.7sec	1.5168	1.6011	1.6907	1.9659	1.5sec	1.4969	1.5671	1.6410	1.7603
	Level 2	3.2sec	1.2631	1.3224	1.3671	1.4817	5.1sec	1.2659	1.3346	1.3859	1.5355	5.6sec	1.2725	1.3428	1.4194	1.5956	7.4sec	1.2828	1.3857	1.4986	1.7383	3.1sec	1.2723	1.3407	1.4165	1.5417
	Level 3	6.5sec	1.1488	1.2001	1.2408	1.3349	10.2sec	1.1497	1.2005	1.2553	1.3769	11.2sec	1.1590	1.2160	1.2785	1.4133	14.8sec	1.1663	1.2508	1.3266	1.5245	6.1sec	1.1616	1.2218	1.2783	1.3706
1	**Level 4**	12.9sec	1.0902	1.1308	1.1634	1.2296	20.4sec	1.0918	1.1250	1.1642	1.2642	22.4sec	1.0980	1.1331	1.1812	1.2740	29.5sec	1.0995	1.1526	1.2045	1.3725	12.2sec	1.0952	1.1432	1.1880	1.2646
Year	**Level 5**	25.9sec	1.0592	1.0874	1.1102	1.1618	40.8sec	1.0575	1.0856	1.1113	1.1900	44.7sec	1.0612	1.0844	1.1180	1.1902	59sec	1.0599	1.0919	1.1279	1.2385	24.4sec	1.0591	1.0920	1.1279	1.1755
before	**Level 6**	51.8sec	1.0398	1.0597	1.0771	1.1110	1.4min	1.0387	1.0569	1.0777	1.1238	1.5min	1.0387	1.0553	1.0761	1.1190	2min	1.0340	1.0569	1.0821	1.1559	48.8sec	1.0366	1.0592	1.0821	1.1152
	Level 7	1.7min	1.0275	1.0406	1.0546	1.0776	2.7min	1.0260	1.0392	1.0538	1.0864	3min	1.0252	1.0371	1.0511	1.0834	3.9min	1.0210	1.0341	1.0505	1.1041	1.6min	1.0238	1.0376	1.0519	1.0765
	Level 8	3.5min	1.0200	1.0291	1.0394	1.0566	5.4min	1.0180	1.0275	1.0392	1.0660	6min	1.0169	1.0267	1.0369	1.0636	7.9min	1.0136	1.0229	1.0349	1.0765	3.3min	1.0159	1.0265	1.0364	1.0555
	Level 9	6.9min	1.0175	1.0259	1.0355	1.0520	10.9min	1.0150	1.0236	1.0334	1.0598	11.9min	1.0142	1.0234	1.0341	1.0617	15.7min	1.0110	1.0201	1.0297	1.0669	6.5min	1.0135	1.0223	1.0305	1.0493

Notes: This table reports EDZ future contracts median results for bid variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDZ contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.18: EDZ futures contracts median results for bid variance – Continued

Bid Variance		EDZ5 Median					EDZ6 Median					EDZ7 Median					EDZ8 Median					EDZ9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	26.7sec	1.5407	1.5691	1.6596	2.1615	19.7sec	1.5281	1.5657	1.7211	1.9085	8.1sec	1.4586	1.5287	1.6377	1.7504	8.5sec	1.4424	1.5449	1.6145	1.7511	5.7sec	1.5718	1.6633	1.8557	2.0180
	Level 2	53.3sec	1.2952	1.3532	1.4329	2.2768	39.5sec	1.2782	1.3464	1.4300	1.6164	16.2sec	1.2085	1.2821	1.3681	1.5647	17sec	1.2189	1.2816	1.3570	1.4462	11.5sec	1.3580	1.4987	1.7286	1.8368
	Level 3	1.8min	1.1586	1.2189	1.3070	2.0851	1.3min	1.1668	1.2439	1.3357	1.4438	32.4sec	1.1015	1.1478	1.2182	1.2835	33.9sec	1.0984	1.1392	1.1899	1.2506	23sec	1.2147	1.3349	1.4916	1.8506
30	Level 4	3.6min	1.0965	1.1673	1.1977	1.7981	2.6min	1.1054	1.1611	1.2494	1.4020	1.1min	1.0497	1.0824	1.1219	1.1443	1.1min	1.0519	1.0670	1.1054	1.1476	46sec	1.1390	1.2378	1.3316	1.5883
days	Level 5	7.1min	1.0660	1.1269	1.1453	1.6282	5.3min	1.0711	1.1202	1.1817	1.3675	2.2min	1.0231	1.0421	1.0770	1.0942	2.3min	1.0276	1.0348	1.0591	1.0863	1.5min	1.0922	1.1886	1.2932	1.3993
before	Level 6	14.2min	1.0483	1.0969	1.1106	1.5453	10.5min	1.0498	1.0819	1.1609	1.3141	4.3min	1.0117	1.0247	1.0482	1.0576	4.5min	1.0166	1.0213	1.0318	1.0518	3.1min	1.0518	1.1244	1.2312	1.2868
	Level 7	28.4min	1.0375	1.0674	1.0821	1.4352	21min	1.0444	1.0680	1.1252	1.2579	8.7min	1.0073	1.0216	1.0314	1.0433	9min	1.0108	1.0139	1.0189	1.0340	6.1min	1.0338	1.0923	1.1846	1.2410
	Level 8	56.9min	1.0319	1.0545	1.0720	1.3402	42.1min	1.0379	1.0644	1.1099	1.2051	17.3min	1.0059	1.0183	1.0265	1.0368	18.1min	1.0080	1.0100	1.0141	1.0256	12.3min	1.0246	1.0690	1.1342	1.2084
	Level 9	113.8min	1.0343	1.0547	1.0694	1.3069	84.2min	1.0408	1.0676	1.1197	1.2138	34.6min	1.0066	1.0184	1.0280	1.0399	36.2min	1.0068	1.0101	1.0136	1.0251	24.5min	1.0196	1.0637	1.1311	1.2220
	Level 1	10.6sec	1.5447	1.6582	1.7813	2.0615	9.1sec	1.5406	1.6324	1.7511	2.1591	4.1sec	1.4788	1.5229	1.6312	1.7382	4.5sec	1.4580	1.5411	1.6125	1.7511	2.6sec	1.5718	1.6635	1.7806	1.9988
	Level 2	21.2sec	1.3027	1.4400	1.5578	1.8743	18.2sec	1.3250	1.4257	1.5323	1.9376	8.3sec	1.2278	1.2881	1.3681	1.5011	9sec	1.2189	1.2723	1.3541	1.4462	5.1sec	1.3560	1.4750	1.6187	1.8310
	Level 3	42.4sec	1.1836	1.3007	1.4066	1.6012	36.3sec	1.1748	1.3043	1.4114	1.7450	16.5sec	1.1210	1.1550	1.2182	1.3307	18.1sec	1.1078	1.1400	1.1889	1.2506	10.2sec	1.2228	1.3200	1.4600	1.7593
60	Level 4	1.4min	1.1146	1.1991	1.2858	1.4711	1.2min	1.1093	1.2269	1.3373	1.5690	33.1sec	1.0589	1.0928	1.1235	1.1922	36.2sec	1.0525	1.0685	1.0929	1.1408	20.5sec	1.1390	1.2276	1.3230	1.5461
days	Level 5	2.8min	1.0775	1.1453	1.1947	1.3930	2.4min	1.0712	1.1576	1.2217	1.4028	1.1min	1.0340	1.0553	1.0770	1.1204	1.2min	1.0288	1.0406	1.0561	1.0776	40.9sec	1.0922	1.1574	1.2342	1.3842
before	Level 6	5.7min	1.0578	1.1035	1.1363	1.3110	4.8min	1.0528	1.1203	1.1642	1.3287	2.2min	1.0204	1.0376	1.0513	1.0846	2.4min	1.0166	1.0234	1.0333	1.0482	1.4min	1.0518	1.1098	1.1796	1.2725
	Level 7	11.3min	1.0353	1.0708	1.0969	1.2218	9.7min	1.0446	1.0802	1.1417	1.2518	4.4min	1.0141	1.0266	1.0356	1.0616	4.8min	1.0108	1.0148	1.0214	1.0320	2.7min	1.0338	1.0724	1.1290	1.2004
	Level 8	22.6min	1.0298	1.0515	1.0780	1.1614	19.4min	1.0372	1.0637	1.1095	1.2087	8.8min	1.0118	1.0202	1.0324	1.0495	9.6min	1.0080	1.0106	1.0153	1.0256	5.5min	1.0246	1.0556	1.0991	1.1699
	Level 9	45.2min	1.0275	1.0463	1.0732	1.1287	38.7min	1.0334	1.0608	1.0994	1.2384	17.6min	1.0114	1.0186	1.0299	1.0447	19.3min	1.0075	1.0102	1.0135	1.0236	10.9min	1.0196	1.0558	1.0843	1.1726
	Level 1	5.5sec	1.5262	1.5922	1.6996	1.8806	5.1sec	1.5340	1.6243	1.7525	2.0492	2.7sec	1.4581	1.5146	1.6048	1.7260	2.8sec	1.4693	1.5341	1.6151	1.7418	1.5sec	1.5352	1.6480	1.7119	1.9548
	Level 2	11.1sec	1.3011	1.3711	1.4756	1.7083	10.1sec	1.3033	1.4119	1.5210	1.8143	5.4sec	1.2176	1.2775	1.3490	1.5138	5.7sec	1.2237	1.2709	1.3473	1.4402	3sec	1.3403	1.4430	1.5487	1.7542
	Level 3	22.2sec	1.1808	1.2479	1.3211	1.5333	20.3sec	1.1744	1.3015	1.3977	1.6004	10.7sec	1.1175	1.1559	1.2168	1.3225	11.3sec	1.1082	1.1393	1.1813	1.2435	6.1sec	1.2188	1.3098	1.4039	1.6078
3	Level 4	44.4sec	1.1037	1.1817	1.2335	1.4429	40.6sec	1.1059	1.1958	1.3006	1.4460	21.5sec	1.0603	1.0945	1.1246	1.1906	22.7sec	1.0541	1.0682	1.0893	1.1272	12.1sec	1.1372	1.2184	1.3038	1.4306
months	Level 5	1.5min	1.0701	1.1303	1.1607	1.3002	1.4min	1.0714	1.1375	1.2121	1.3536	43sec	1.0345	1.0557	1.0786	1.1213	45.3sec	1.0288	1.0352	1.0524	1.0730	24.2sec	1.0861	1.1436	1.2126	1.3184
before	Level 6	3min	1.0495	1.0919	1.1121	1.1809	2.7min	1.0557	1.0999	1.1562	1.2791	1.4min	1.0215	1.0380	1.0539	1.0850	1.5min	1.0159	1.0200	1.0307	1.0428	48.4sec	1.0524	1.0966	1.1417	1.2463
	Level 7	5.9min	1.0353	1.0635	1.0786	1.1336	5.4min	1.0405	1.0698	1.1115	1.2336	2.9min	1.0148	1.0267	1.0369	1.0624	3min	1.0096	1.0126	1.0193	1.0302	1.6min	1.0332	1.0644	1.1007	1.1891
	Level 8	11.8min	1.0268	1.0450	1.0633	1.1101	10.8min	1.0273	1.0558	1.0784	1.1927	5.7min	1.0116	1.0204	1.0286	1.0471	6min	1.0066	1.0094	1.0141	1.0233	3.2min	1.0223	1.0460	1.0660	1.1432
	Level 9	23.7min	1.0238	1.0386	1.0548	1.0909	21.6min	1.0244	1.0477	1.0681	1.1857	11.5min	1.0114	1.0185	1.0276	1.0433	12.1min	1.0058	1.0083	1.0128	1.0219	6.5min	1.0180	1.0386	1.0626	1.1292
	Level 1	3.1sec	1.4671	1.5250	1.5805	1.7168	2.5sec	1.4961	1.5476	1.6056	1.7439	1.7sec	1.4849	1.5420	1.5970	1.6891	1.4sec	1.4738	1.5188	1.5663	1.6693	1.1sec	1.4866	1.5359	1.5879	1.7028
	Level 2	6.3sec	1.2479	1.2986	1.3514	1.4818	5.1sec	1.2551	1.3192	1.3846	1.5165	3.4sec	1.2463	1.2962	1.3505	1.4485	2.7sec	1.2298	1.2691	1.3115	1.3915	2.1sec	1.2512	1.2944	1.3573	1.5013
	Level 3	12.5sec	1.1400	1.1891	1.2286	1.3304	10.1sec	1.1449	1.1983	1.2637	1.3793	6.8sec	1.1298	1.1677	1.2145	1.2960	5.4sec	1.1124	1.1438	1.1664	1.2234	4.3sec	1.1323	1.1714	1.2345	1.3600
1	Level 4	25sec	1.0848	1.1269	1.1625	1.2321	20.2sec	1.0950	1.1373	1.1833	1.2860	13.6sec	1.0724	1.1033	1.1395	1.2040	10.8sec	1.0576	1.0781	1.0951	1.1349	8.6sec	1.0770	1.1097	1.1632	1.2798
Year	Level 5	50sec	1.0556	1.0880	1.1156	1.1709	40.5sec	1.0646	1.0978	1.1344	1.2075	27.2sec	1.0404	1.0687	1.0958	1.1433	21.7sec	1.0315	1.0443	1.0571	1.0877	17.1sec	1.0481	1.0743	1.1131	1.2065
before	Level 6	1.7min	1.0352	1.0609	1.0816	1.1177	1.3min	1.0435	1.0678	1.0941	1.1499	54.4sec	1.0263	1.0470	1.0690	1.1054	43.3sec	1.0188	1.0288	1.0378	1.0612	34.2sec	1.0315	1.0493	1.0766	1.1445
	Level 7	3.3min	1.0239	1.0429	1.0557	1.0805	2.7min	1.0287	1.0479	1.0668	1.1095	1.8min	1.0180	1.0328	1.0494	1.0748	1.4min	1.0124	1.0196	1.0265	1.0431	1.1min	1.0212	1.0339	1.0537	1.1003
	Level 8	6.7min	1.0174	1.0304	1.0400	1.0621	5.4min	1.0207	1.0343	1.0491	1.0777	3.6min	1.0135	1.0248	1.0371	1.0557	2.9min	1.0089	1.0141	1.0199	1.0316	2.3min	1.0149	1.0247	1.0385	1.0730
	Level 9	13.3min	1.0152	1.0255	1.0347	1.0564	10.8min	1.0177	1.0297	1.0425	1.0680	7.3min	1.0119	1.0222	1.0327	1.0478	5.8min	1.0079	1.0125	1.0173	1.0283	4.6min	1.0130	1.0210	1.0336	1.0638

Notes: This table reports EDZ future contracts median results for bid variance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDZ contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.19: EDZ futures contracts median results for bid–ask covariance

Bid–Ask Covariance		EDZ0 Median					EDZ1 Median					EDZ2 Median					EDZ3 Median					EDZ4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
30 days before	Level 1	8.7sec	1.4920	1.6057	1.6306	1.7303	13.6sec	1.5544	1.6351	1.8600	2.2897	14.9sec	1.4453	1.7418	1.9381	3.5041	14.2sec	1.4910	1.5502	2.0219	4.6584	4.5sec	1.4807	1.5881	1.7394	1.8414
	Level 2	17.4sec	1.2741	1.3340	1.4184	1.5139	27.2sec	1.3186	1.3724	1.5955	1.9543	29.8sec	1.3969	1.5261	1.6258	7.4702	28.5sec	1.2703	1.3991	2.4109	3.6547	9.1sec	1.2828	1.3615	1.4759	1.7892
	Level 3	34.8sec	1.1375	1.1951	1.2532	1.3521	54.4sec	1.1612	1.2119	1.3077	1.8932	59.6sec	1.2981	1.3927	1.4767	6.1199	57sec	1.1500	1.4152	2.1380	3.4114	18.2sec	1.1733	1.2344	1.3201	1.5963
	Level 4	1.2min	1.0780	1.1286	1.1695	1.2483	1.8min	1.0829	1.1171	1.1629	1.5684	2min	1.1763	1.2427	1.3342	4.4485	1.9min	1.0841	1.3534	1.6067	3.6165	36.4sec	1.1026	1.1448	1.1835	1.5016
	Level 5	2.3min	1.0477	1.0789	1.1110	1.1718	3.6min	1.0421	1.0683	1.1012	1.3693	4min	1.1024	1.1506	1.1929	3.0036	3.8min	1.0488	1.2681	1.3259	3.5880	1.2min	1.0609	1.0860	1.1503	1.3981
	Level 6	4.6min	1.0298	1.0492	1.0668	1.1198	7.3min	1.0242	1.0476	1.0708	1.2585	8min	1.0591	1.0846	1.1153	2.2662	7.6min	1.0255	1.1372	1.1938	2.9685	2.4min	1.0362	1.0484	1.0780	1.2678
	Level 7	9.3min	1.0178	1.0294	1.0427	1.0788	14.5min	1.0147	1.0303	1.0473	1.1608	15.9min	1.0345	1.0476	1.0681	2.0120	15.2min	1.0129	1.0634	1.1095	2.1848	4.9min	1.0196	1.0253	1.0337	1.1428
	Level 8	18.6min	1.0105	1.0170	1.0269	1.0529	29min	1.0085	1.0189	1.0322	1.0893	31.8min	1.0175	1.0258	1.0392	1.6681	30.4min	1.0069	1.0267	1.0643	1.5886	9.7min	1.0101	1.0130	1.0173	1.0620
	Level 9	37.2min	1.0066	1.0108	1.0195	1.0429	58min	1.0052	1.0111	1.0204	1.0538	63.6min	1.0084	1.0148	1.0249	1.6553	60.8min	1.0053	1.0122	1.0394	1.3192	19.4min	1.0056	1.0065	1.0109	1.0295
60 days before	Level 1	4.3sec	1.5000	1.6057	1.6437	1.8076	6.7sec	1.5255	1.6091	1.6595	2.1786	6.9sec	1.5000	1.6092	1.8950	2.5391	10.1sec	1.5000	1.6194	1.9873	4.4494	2.7sec	1.4806	1.5798	1.6854	1.8785
	Level 2	8.6sec	1.2739	1.3408	1.4322	1.6908	13.5sec	1.2932	1.3643	1.4184	1.9425	13.8sec	1.2724	1.4700	1.6040	2.2034	20.3sec	1.2627	1.4325	1.7590	4.8654	5.5sec	1.2798	1.3393	1.4718	1.7526
	Level 3	17.2sec	1.1374	1.2206	1.2947	1.4949	27sec	1.1581	1.2119	1.2852	1.5938	27.6sec	1.1362	1.2643	1.4133	1.8321	40.6sec	1.1346	1.3811	1.5563	5.0608	10.9sec	1.1708	1.2354	1.3357	1.5759
	Level 4	34.4sec	1.0780	1.1404	1.1989	1.2752	54sec	1.0898	1.1328	1.1715	1.3753	55.2sec	1.0951	1.1645	1.2592	1.5598	1.4min	1.0762	1.2573	1.3858	4.5296	21.9sec	1.1024	1.1468	1.2115	1.4379
	Level 5	1.1min	1.0487	1.0947	1.1161	1.2466	1.8min	1.0507	1.0831	1.1149	1.2499	1.8min	1.0502	1.0871	1.1311	1.3743	2.7min	1.0543	1.1719	1.2784	3.8531	43.7sec	1.0604	1.0861	1.1238	1.3297
	Level 6	2.3min	1.0301	1.0551	1.0723	1.1460	3.6min	1.0297	1.0500	1.0721	1.1673	3.7min	1.0243	1.0554	1.0680	1.2413	5.4min	1.0331	1.1086	1.1707	2.9579	1.5min	1.0350	1.0484	1.0700	1.1901
	Level 7	4.6min	1.0193	1.0324	1.0430	1.0788	7.2min	1.0182	1.0317	1.0486	1.1019	7.4min	1.0121	1.0274	1.0444	1.1337	10.8min	1.0164	1.0603	1.1083	2.1957	2.9min	1.0194	1.0258	1.0350	1.0911
	Level 8	9.2min	1.0114	1.0178	1.0270	1.0523	14.4min	1.0110	1.0190	1.0278	1.0611	14.7min	1.0056	1.0136	1.0222	1.0694	21.6min	1.0080	1.0288	1.0585	1.6772	5.8min	1.0100	1.0132	1.0181	1.0432
	Level 9	18.3min	1.0063	1.0107	1.0169	1.0300	28.8min	1.0070	1.0119	1.0185	1.0376	29.4min	1.0019	1.0061	1.0144	1.0353	43.3min	1.0040	1.0171	1.0311	1.4137	11.7min	1.0054	1.0069	1.0108	1.0216
3 months before	Level 1	2.6sec	1.5093	1.6054	1.6565	1.7932	4.2sec	1.5217	1.6040	1.6585	1.9525	4.2sec	1.4543	1.5664	1.7428	1.9614	6sec	1.5000	1.5531	1.6609	2.5546	1.9sec	1.4867	1.6166	1.7110	1.8963
	Level 2	5.2sec	1.2741	1.3503	1.4267	1.6162	8.4sec	1.2919	1.3605	1.4177	1.7856	8.3sec	1.2688	1.3819	1.4827	1.7783	12sec	1.2500	1.3536	1.4964	2.6444	3.8sec	1.2888	1.3871	1.4826	1.6797
	Level 3	10.4sec	1.1490	1.2208	1.2854	1.3977	16.9sec	1.1653	1.2103	1.2811	1.5219	16.6sec	1.1389	1.2466	1.3319	1.6390	24.1sec	1.1289	1.2317	1.4087	2.3275	7.7sec	1.1726	1.2583	1.3521	1.4959
	Level 4	20.9sec	1.0934	1.1482	1.1917	1.2606	33.7sec	1.0944	1.1307	1.1752	1.3414	33.2sec	1.0898	1.1255	1.2172	1.4331	48.1sec	1.0700	1.1395	1.2769	1.8727	15.3sec	1.1024	1.1676	1.2263	1.3334
	Level 5	41.7sec	1.0543	1.0969	1.1184	1.1768	1.1min	1.0557	1.0838	1.1213	1.2250	1.1min	1.0546	1.0759	1.1223	1.2915	1.6min	1.0501	1.0794	1.1983	1.5855	30.7sec	1.0613	1.0978	1.1442	1.2401
	Level 6	1.4min	1.0337	1.0583	1.0762	1.1205	2.2min	1.0352	1.0500	1.0778	1.1556	2.2min	1.0298	1.0476	1.0652	1.1676	3.2min	1.0311	1.0611	1.1233	1.3454	1min	1.0366	1.0531	1.0794	1.1412
	Level 7	2.8min	1.0203	1.0329	1.0450	1.0758	4.5min	1.0214	1.0316	1.0486	1.0982	4.4min	1.0151	1.0262	1.0378	1.0920	6.4min	1.0151	1.0333	1.0752	1.2002	2min	1.0200	1.0287	1.0417	1.0742
	Level 8	5.6min	1.0114	1.0185	1.0269	1.0399	9min	1.0115	1.0186	1.0277	1.0596	8.9min	1.0076	1.0132	1.0198	1.0462	12.8min	1.0065	1.0181	1.0432	1.1140	4.1min	1.0102	1.0155	1.0226	1.0370
	Level 9	11.1min	1.0067	1.0108	1.0170	1.0251	18min	1.0067	1.0110	1.0170	1.0351	17.7min	1.0039	1.0081	1.0117	1.0275	25.7min	1.0029	1.0122	1.0201	1.0599	8.2min	1.0059	1.0085	1.0131	1.0216
1 Year before	Level 1	1.6sec	1.4866	1.5417	1.5968	1.7013	2.6sec	1.4914	1.5647	1.6158	1.7503	2.9sec	1.4830	1.5542	1.6202	1.7757	3.8sec	1.5169	1.5917	1.6852	1.9382	1.5sec	1.4938	1.5567	1.6302	1.7545
	Level 2	3.3sec	1.2615	1.3186	1.3580	1.4744	5.1sec	1.2597	1.3280	1.3792	1.5206	5.8sec	1.2648	1.3298	1.4087	1.5631	7.6sec	1.2774	1.3772	1.4757	1.7108	3sec	1.2606	1.3331	1.3986	1.5323
	Level 3	6.6sec	1.1457	1.1928	1.2283	1.3202	10.2sec	1.1456	1.1935	1.2420	1.3440	11.6sec	1.1480	1.2011	1.2642	1.3986	15.1sec	1.1604	1.2360	1.3149	1.5038	6sec	1.1500	1.2092	1.2633	1.3690
	Level 4	13.1sec	1.0861	1.1210	1.1527	1.2130	20.5sec	1.0861	1.1171	1.1540	1.2433	23.1sec	1.0898	1.1214	1.1645	1.2654	30.3sec	1.0967	1.1455	1.1955	1.3379	12sec	1.0882	1.1322	1.1728	1.2482
	Level 5	26.2sec	1.0526	1.0766	1.0999	1.1388	40.9sec	1.0534	1.0747	1.0999	1.1680	46.2sec	1.0546	1.0743	1.1022	1.1620	1min	1.0537	1.0819	1.1135	1.2105	24.1sec	1.0517	1.0795	1.1074	1.1547
	Level 6	52.4sec	1.0328	1.0483	1.0633	1.0860	1.4min	1.0336	1.0477	1.0657	1.1076	1.5min	1.0307	1.0448	1.0617	1.1000	2min	1.0307	1.0476	1.0658	1.1235	48.1sec	1.0291	1.0462	1.0642	1.0914
	Level 7	1.7min	1.0203	1.0292	1.0382	1.0530	2.7min	1.0203	1.0290	1.0411	1.0650	3.1min	1.0183	1.0270	1.0359	1.0592	4min	1.0156	1.0258	1.0368	1.0675	1.6min	1.0163	1.0256	1.0346	1.0505
	Level 8	3.5min	1.0119	1.0174	1.0231	1.0321	5.5min	1.0117	1.0173	1.0236	1.0373	6.2min	1.0103	1.0159	1.0211	1.0346	8.1min	1.0081	1.0136	1.0199	1.0378	3.2min	1.0088	1.0136	1.0181	1.0274
	Level 9	7min	1.0072	1.0110	1.0147	1.0203	10.9min	1.0070	1.0109	1.0155	1.0245	12.3min	1.0061	1.0100	1.0137	1.0220	16.1min	1.0040	1.0071	1.0112	1.0198	6.4min	1.0049	1.0075	1.0104	1.0161

Notes: This table reports EDZ future contracts median results for bid–ask covariance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDZ contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.19: EDZ futures contracts median results for bid–ask covariance – Continued

Bid–Ask Covariance		EDZ5 Median					EDZ6 Median					EDZ7 Median					EDZ8 Median					EDZ9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	26.7sec	1.5369	1.5663	1.6509	2.1945	19.7sec	1.5014	1.5588	1.7031	1.8923	8.1sec	1.4589	1.5287	1.6367	1.7527	8.5sec	1.4445	1.5441	1.6159	1.7512	5.7sec	1.5670	1.6784	1.8569	2.0672
	Level 2	53.3sec	1.2954	1.3561	1.4244	2.2997	39.5sec	1.2731	1.3369	1.4280	1.5440	16.2sec	1.2057	1.2815	1.3678	1.5650	17sec	1.2181	1.2778	1.3565	1.4359	11.5sec	1.3408	1.4788	1.6747	1.8228
	Level 3	1.8min	1.1577	1.2089	1.3096	2.0887	1.3min	1.1305	1.2295	1.3184	1.4179	32.5sec	1.1008	1.1468	1.2196	1.2792	33.9sec	1.0973	1.1360	1.1973	1.2377	23sec	1.2046	1.3036	1.4762	1.6413
30	**Level 4**	3.6min	1.0949	1.1662	1.1924	1.7903	2.6min	1.0802	1.1657	1.2324	1.3795	1.1min	1.0503	1.0808	1.1169	1.1392	1.1min	1.0478	1.0645	1.0973	1.1347	46sec	1.1239	1.2077	1.2936	1.4754
days	**Level 5**	7.1min	1.0636	1.1231	1.1411	1.5929	5.3min	1.0633	1.0940	1.1654	1.3204	2.2min	1.0222	1.0402	1.0687	1.0882	2.3min	1.0251	1.0315	1.0514	1.0803	1.5min	1.0770	1.1475	1.2060	1.3449
before	**Level 6**	14.2min	1.0454	1.0915	1.0990	1.4845	10.5min	1.0439	1.0706	1.1201	1.2268	4.3min	1.0103	1.0231	1.0433	1.0491	4.5min	1.0144	1.0166	1.0249	1.0427	3.1min	1.0514	1.0837	1.1422	1.2257
	Level 7	28.4min	1.0330	1.0585	1.0693	1.3529	21.1min	1.0297	1.0475	1.0900	1.1989	8.7min	1.0058	1.0146	1.0259	1.0327	9min	1.0080	1.0093	1.0132	1.0248	6.1min	1.0303	1.0528	1.0992	1.1432
	Level 8	56.9min	1.0232	1.0380	1.0544	1.2464	42.1min	1.0235	1.0414	1.0757	1.1507	17.3min	1.0041	1.0117	1.0180	1.0244	18.1min	1.0052	1.0061	1.0083	1.0159	12.3min	1.0167	1.0339	1.0627	1.0962
	Level 9	113.8min	1.0191	1.0302	1.0460	1.1857	84.2min	1.0224	1.0419	1.0759	1.1408	34.6min	1.0038	1.0119	1.0160	1.0233	36.2min	1.0036	1.0051	1.0065	1.0130	24.5min	1.0102	1.0303	1.0581	1.0833
	Level 1	10.6sec	1.5448	1.6585	1.7769	2.0573	9.1sec	1.5391	1.6288	1.7454	2.1799	4.1sec	1.4790	1.5231	1.6288	1.7412	4.5sec	1.4576	1.5384	1.6138	1.7512	2.6sec	1.5670	1.6724	1.7734	2.0091
	Level 2	21.2sec	1.3026	1.4398	1.5449	1.8767	18.2sec	1.3175	1.4068	1.5233	1.9491	8.3sec	1.2263	1.2888	1.3678	1.5050	9sec	1.2181	1.2698	1.3559	1.4483	5.1sec	1.3466	1.4519	1.6342	1.7938
	Level 3	42.4sec	1.1830	1.3043	1.3722	1.5984	36.3sec	1.1698	1.3006	1.4162	1.7660	16.5sec	1.1169	1.1508	1.2196	1.3299	18.1sec	1.1043	1.1362	1.1819	1.2377	10.2sec	1.2162	1.2911	1.4205	1.6078
60	**Level 4**	1.4min	1.1127	1.1952	1.2769	1.4673	1.2min	1.1046	1.2205	1.3024	1.5718	33.1sec	1.0572	1.0881	1.1169	1.1821	36.2sec	1.0499	1.0656	1.0894	1.1303	20.5sec	1.1285	1.1938	1.2886	1.4557
days	**Level 5**	2.8min	1.0740	1.1373	1.1817	1.3830	2.4min	1.0654	1.1566	1.1995	1.3825	1.1min	1.0322	1.0527	1.0698	1.1096	1.2min	1.0255	1.0369	1.0498	1.0645	40.9sec	1.0770	1.1362	1.1804	1.3240
before	**Level 6**	5.7min	1.0540	1.0930	1.1208	1.2728	4.8min	1.0450	1.0996	1.1356	1.2717	2.2min	1.0166	1.0346	1.0456	1.0737	2.4min	1.0147	1.0187	1.0268	1.0344	1.4min	1.0514	1.0837	1.1222	1.2073
	Level 7	11.3min	1.0321	1.0596	1.0839	1.1739	9.7min	1.0311	1.0672	1.1026	1.2001	4.4min	1.0096	1.0215	1.0291	1.0506	4.8min	1.0082	1.0104	1.0159	1.0212	2.7min	1.0303	1.0528	1.0802	1.1256
	Level 8	22.6min	1.0192	1.0392	1.0636	1.1078	19.4min	1.0252	1.0457	1.0766	1.1493	8.8min	1.0068	1.0155	1.0218	1.0380	9.6min	1.0055	1.0066	1.0104	1.0155	5.5min	1.0175	1.0335	1.0499	1.0834
	Level 9	45.2min	1.0155	1.0301	1.0482	1.0784	38.7min	1.0213	1.0403	1.0654	1.1304	17.7min	1.0066	1.0138	1.0191	1.0295	19.3min	1.0040	1.0053	1.0079	1.0125	10.9min	1.0111	1.0254	1.0383	1.0738
	Level 1	5.6sec	1.5271	1.5865	1.6964	1.8634	5.1sec	1.5353	1.6206	1.7469	2.0494	2.7sec	1.4568	1.5155	1.6051	1.7297	2.8sec	1.4690	1.5331	1.6183	1.7411	1.5sec	1.5270	1.6556	1.7161	1.9535
	Level 2	11.1sec	1.2929	1.3687	1.4680	1.7170	10.1sec	1.3039	1.3967	1.5074	1.8244	5.4sec	1.2163	1.2762	1.3481	1.5142	5.7sec	1.2239	1.2689	1.3492	1.4359	3sec	1.3293	1.4385	1.5316	1.7400
	Level 3	22.2sec	1.1800	1.2432	1.3186	1.5562	20.3sec	1.1669	1.2946	1.3837	1.5954	10.7sec	1.1158	1.1515	1.2148	1.3163	11.3sec	1.1069	1.1362	1.1775	1.2355	6.1sec	1.2086	1.2889	1.3708	1.5676
3	**Level 4**	44.4sec	1.1025	1.1692	1.2318	1.4297	40.6sec	1.1040	1.1873	1.2845	1.4283	21.5sec	1.0580	1.0886	1.1183	1.1818	22.7sec	1.0522	1.0658	1.0846	1.1238	12.1sec	1.1263	1.1938	1.2640	1.3602
months	**Level 5**	1.5min	1.0632	1.1247	1.1527	1.2795	1.4min	1.0676	1.1276	1.1915	1.3204	43sec	1.0329	1.0537	1.0729	1.1098	45.3sec	1.0266	1.0319	1.0464	1.0641	24.2sec	1.0749	1.1331	1.1761	1.2339
before	**Level 6**	3min	1.0424	1.0821	1.1026	1.1583	2.7min	1.0462	1.0894	1.1290	1.2268	1.4min	1.0198	1.0341	1.0456	1.0738	1.5min	1.0137	1.0172	1.0247	1.0343	48.4sec	1.0462	1.0814	1.1111	1.1650
	Level 7	5.9min	1.0288	1.0527	1.0666	1.1084	5.4min	1.0325	1.0588	1.0871	1.1614	2.9min	1.0113	1.0219	1.0300	1.0509	3min	1.0073	1.0096	1.0140	1.0210	1.6min	1.0273	1.0480	1.0671	1.1153
	Level 8	11.8min	1.0192	1.0343	1.0436	1.0819	10.8min	1.0217	1.0416	1.0592	1.1211	5.7min	1.0078	1.0153	1.0211	1.0360	6min	1.0044	1.0061	1.0086	1.0146	3.2min	1.0171	1.0297	1.0431	1.0768
	Level 9	23.7min	1.0153	1.0259	1.0354	1.0660	21.6min	1.0187	1.0338	1.0526	1.1108	11.5min	1.0068	1.0132	1.0178	1.0291	12.1min	1.0033	1.0048	1.0065	1.0115	6.5min	1.0108	1.0231	1.0335	1.0612
	Level 1	3.1sec	1.4677	1.5245	1.5779	1.7169	2.5sec	1.4956	1.5445	1.6021	1.7439	1.7sec	1.4822	1.5402	1.5955	1.6875	1.4sec	1.4735	1.5194	1.5648	1.6657	1.1sec	1.4828	1.5284	1.5824	1.6931
	Level 2	6.3sec	1.2466	1.2967	1.3480	1.4838	5.1sec	1.2537	1.3162	1.3798	1.5066	3.4sec	1.2409	1.2930	1.3479	1.4448	2.7sec	1.2301	1.2678	1.3102	1.3878	2.1sec	1.2462	1.2883	1.3476	1.4989
	Level 3	12.5sec	1.1385	1.1864	1.2241	1.3257	10.1sec	1.1417	1.1968	1.2576	1.3597	6.8sec	1.1267	1.1628	1.2085	1.2827	5.4sec	1.1114	1.1406	1.1627	1.2143	4.3sec	1.1253	1.1615	1.2229	1.3375
1	**Level 4**	25sec	1.0833	1.1223	1.1550	1.2246	20.2sec	1.0896	1.1327	1.1759	1.2694	13.6sec	1.0694	1.0982	1.1333	1.1893	10.8sec	1.0564	1.0736	1.0890	1.1233	8.6sec	1.0693	1.0993	1.1482	1.2405
Year	**Level 5**	50sec	1.0523	1.0823	1.1080	1.1594	40.5sec	1.0593	1.0915	1.1240	1.1878	27.2sec	1.0377	1.0628	1.0885	1.1289	21.7sec	1.0290	1.0399	1.0513	1.0752	17.1sec	1.0387	1.0630	1.0960	1.1708
before	**Level 6**	1.7min	1.0314	1.0549	1.0712	1.1059	1.3min	1.0378	1.0614	1.0837	1.1273	54.4sec	1.0231	1.0403	1.0591	1.0895	43.3sec	1.0155	1.0239	1.0301	1.0467	34.2sec	1.0230	1.0385	1.0613	1.1084
	Level 7	3.3min	1.0199	1.0357	1.0468	1.0685	2.7min	1.0232	1.0394	1.0551	1.0869	1.8min	1.0146	1.0265	1.0390	1.0594	1.4min	1.0092	1.0141	1.0188	1.0289	1.1min	1.0136	1.0236	1.0383	1.0671
	Level 8	6.7min	1.0136	1.0232	1.0307	1.0451	5.4min	1.0158	1.0264	1.0369	1.0598	3.6min	1.0101	1.0179	1.0269	1.0391	2.9min	1.0059	1.0089	1.0122	1.0182	2.3min	1.0084	1.0147	1.0243	1.0430
	Level 9	13.3min	1.0099	1.0178	1.0237	1.0354	10.8min	1.0120	1.0197	1.0277	1.0469	7.3min	1.0080	1.0137	1.0205	1.0293	5.8min	1.0044	1.0065	1.0089	1.0136	4.6min	1.0061	1.0107	1.0176	1.0328

Notes: This table reports EDZ future contracts median results for bid–ask covariance with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDZ contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.20: EDZ futures contracts median results for wavelet correlations

Wavelet Correlation		EDZ0 Median					EDZ1 Median					EDZ2 Median					EDZ3 Median					EDZ4 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.7sec	0.5735	0.6121	0.6259	0.6771	13.6sec	0.4550	0.5681	0.6119	0.6488	14.9sec	0.3424	0.5194	0.5784	0.6944	14.2sec	0.3385	0.5139	0.6554	0.6817	4.5sec	0.4986	0.5693	0.6208	0.6764
	Level 2	17.4sec	0.6748	0.7025	0.7486	0.7850	27.2sec	0.5148	0.6579	0.7252	0.7645	29.8sec	0.2875	0.6098	0.6561	0.7161	28.5sec	0.2743	0.4525	0.7468	0.8000	9.1sec	0.5461	0.6748	0.7292	0.7740
	Level 3	34.8sec	0.7490	0.7959	0.8379	0.8769	54.4sec	0.5737	0.7687	0.8183	0.8694	59.6sec	0.3170	0.6744	0.7130	0.7705	57sec	0.3035	0.5188	0.7836	0.8889	18.2sec	0.6426	0.7391	0.8135	0.8470
	Level 4	1.2min	0.7945	0.8594	0.8823	0.9257	1.8min	0.6595	0.8608	0.8946	0.9274	2min	0.3819	0.7437	0.7979	0.8497	1.9min	0.3854	0.6617	0.8268	0.9411	36.4sec	0.6922	0.8362	0.8793	0.8999
30 days before	**Level 5**	2.3min	0.8318	0.8850	0.9223	0.9520	3.6min	0.7402	0.9039	0.9297	0.9599	4min	0.4620	0.8253	0.8610	0.9064	3.8min	0.4585	0.7638	0.8556	0.9696	1.2min	0.7255	0.8691	0.9199	0.9315
	Level 6	4.6min	0.8655	0.9235	0.9445	0.9662	7.3min	0.7902	0.9295	0.9490	0.9742	8min	0.5370	0.8788	0.9152	0.9417	7.6min	0.4989	0.8362	0.9111	0.9845	2.4min	0.7722	0.9268	0.9465	0.9528
	Level 7	9.3min	0.8924	0.9417	0.9594	0.9741	14.5min	0.8436	0.9466	0.9620	0.9833	15.9min	0.5927	0.9107	0.9465	0.9633	15.2min	0.5542	0.9012	0.9514	0.9920	4.9min	0.8278	0.9543	0.9651	0.9712
	Level 8	18.6min	0.9074	0.9540	0.9697	0.9806	29min	0.8831	0.9593	0.9721	0.9880	31.8min	0.6222	0.9301	0.9613	0.9781	30.4min	0.6124	0.9383	0.9716	0.9956	9.7min	0.8682	0.9690	0.9761	0.9797
	Level 9	37.2min	0.9050	0.9517	0.9714	0.9822	58min	0.8874	0.9605	0.9751	0.9898	63.6min	0.6033	0.9325	0.9658	0.9831	60.8min	0.6490	0.9398	0.9790	0.9971	19.4min	0.8905	0.9690	0.9792	0.9836
	Level 1	4.3sec	0.5580	0.6052	0.6218	0.6667	6.7sec	0.4871	0.6005	0.6196	0.6550	6.9sec	0.4042	0.5275	0.6186	0.6674	10.1sec	0.2115	0.5081	0.6357	0.6667	2.7sec	0.5110	0.5877	0.6272	0.6744
	Level 2	8.6sec	0.5800	0.6935	0.7408	0.7825	13.5sec	0.5327	0.6983	0.7344	0.7748	13.8sec	0.4256	0.6224	0.6791	0.7859	20.3sec	0.2102	0.5730	0.7196	0.7903	5.5sec	0.5715	0.6760	0.7450	0.7780
	Level 3	17.2sec	0.6755	0.7547	0.8158	0.8769	27sec	0.6222	0.7731	0.8175	0.8597	27.6sec	0.5371	0.6956	0.7948	0.8747	40.6sec	0.1566	0.6503	0.7291	0.8776	10.9sec	0.6460	0.7394	0.8118	0.8503
	Level 4	34.4sec	0.7496	0.8222	0.8696	0.9191	54sec	0.7221	0.8433	0.8778	0.9116	55.2sec	0.6339	0.7938	0.8689	0.9181	1.4min	0.1687	0.7256	0.8101	0.9253	21.9sec	0.7099	0.8168	0.8715	0.9009
60 days before	**Level 5**	1.1min	0.7749	0.8836	0.9065	0.9460	1.8min	0.7717	0.8929	0.9191	0.9478	1.8min	0.7333	0.8672	0.9204	0.9536	2.7min	0.1897	0.7683	0.8594	0.9449	43.7sec	0.7533	0.8751	0.9136	0.9371
	Level 6	2.3min	0.8336	0.9183	0.9377	0.9626	3.6min	0.8253	0.9207	0.9426	0.9669	3.7min	0.7821	0.9091	0.9445	0.9709	5.4min	0.2310	0.8288	0.8967	0.9674	1.5min	0.8123	0.9253	0.9451	0.9592
	Level 7	4.6min	0.8906	0.9417	0.9569	0.9741	7.2min	0.8763	0.9405	0.9597	0.9774	7.4min	0.8546	0.9503	0.9645	0.9842	10.8min	0.2940	0.8754	0.9236	0.9828	2.9min	0.8776	0.9529	0.9647	0.9741
	Level 8	9.2min	0.9127	0.9562	0.9708	0.9804	14.4min	0.9134	0.9586	0.9712	0.9832	14.7min	0.8974	0.9521	0.9764	0.9913	21.6min	0.3751	0.9132	0.9554	0.9895	5.8min	0.9169	0.9660	0.9760	0.9834
	Level 9	18.3min	0.9121	0.9600	0.9740	0.9843	28.8min	0.9282	0.9624	0.9746	0.9847	29.4min	0.8991	0.9576	0.9817	0.9942	43.3min	0.4231	0.9312	0.9685	0.9897	11.7min	0.9195	0.9682	0.9791	0.9873
	Level 1	2.6sec	0.5585	0.6040	0.6251	0.6623	4.2sec	0.5130	0.6056	0.6213	0.6568	4.2sec	0.5144	0.5792	0.6319	0.6794	6sec	0.4299	0.5979	0.6442	0.6667	1.9sec	0.5248	0.5806	0.6183	0.6716
	Level 2	5.2sec	0.6110	0.6951	0.7397	0.7816	8.4sec	0.5629	0.7023	0.7354	0.7747	8.3sec	0.5776	0.6673	0.7307	0.7940	12sec	0.3866	0.6486	0.7456	0.8000	3.8sec	0.6021	0.6722	0.7203	0.7726
	Level 3	10.4sec	0.7046	0.7671	0.8156	0.8676	16.9sec	0.6634	0.7802	0.8266	0.8540	16.6sec	0.6097	0.7436	0.8022	0.8768	24.1sec	0.4297	0.7156	0.8063	0.8853	7.7sec	0.6661	0.7383	0.7913	0.8503
	Level 4	20.9sec	0.7817	0.8328	0.8652	0.9166	33.7sec	0.7379	0.8433	0.8826	0.9104	33.2sec	0.6956	0.8167	0.8875	0.9188	48.1sec	0.5246	0.7807	0.8673	0.9304	15.3sec	0.7421	0.8055	0.8524	0.9009
3 months before	**Level 5**	41.7sec	0.8318	0.8808	0.9042	0.9442	1.1min	0.8028	0.8929	0.9188	0.9447	1.1min	0.7627	0.8834	0.9316	0.9491	1.6min	0.6184	0.8298	0.9147	0.9517	30.7sec	0.7927	0.8609	0.9053	0.9354
	Level 6	1.4min	0.8655	0.9156	0.9363	0.9626	2.2min	0.8488	0.9207	0.9437	0.9624	2.2min	0.8326	0.9278	0.9494	0.9699	3.2min	0.7169	0.8785	0.9377	0.9695	1min	0.8467	0.9121	0.9413	0.9575
	Level 7	2.8min	0.8924	0.9417	0.9565	0.9739	4.5min	0.8922	0.9408	0.9599	0.9755	4.4min	0.8822	0.9527	0.9700	0.9811	6.4min	0.7883	0.9153	0.9553	0.9841	2min	0.8959	0.9429	0.9632	0.9720
	Level 8	5.6min	0.9270	0.9567	0.9701	0.9805	9min	0.9217	0.9593	0.9719	0.9828	8.9min	0.9026	0.9679	0.9798	0.9885	12.8min	0.8362	0.9398	0.9697	0.9913	4.1min	0.9264	0.9611	0.9734	0.9821
	Level 9	11.1min	0.9276	0.9613	0.9741	0.9832	18min	0.9350	0.9639	0.9754	0.9859	17.7min	0.9047	0.9646	0.9825	0.9912	25.7min	0.8645	0.9458	0.9729	0.9913	8.2min	0.9328	0.9659	0.9758	0.9857
	Level 1	1.6sec	0.5849	0.6245	0.6460	0.6736	2.6sec	0.5705	0.6169	0.6375	0.6676	2.9sec	0.5605	0.6136	0.6401	0.6719	3.8sec	0.5087	0.5915	0.6255	0.6593	1.5sec	0.5681	0.6095	0.6383	0.6680
	Level 2	3.3sec	0.6756	0.7316	0.7565	0.7918	5.1sec	0.6512	0.7217	0.7494	0.7900	5.8sec	0.6267	0.7053	0.7448	0.7859	7.6sec	0.5753	0.6687	0.7217	0.7795	3sec	0.6486	0.7062	0.7464	0.7860
	Level 3	6.6sec	0.7493	0.8063	0.8334	0.8710	10.2sec	0.7263	0.7975	0.8330	0.8698	11.6sec	0.7076	0.7825	0.8224	0.8628	15.1sec	0.6560	0.7540	0.8005	0.8574	6sec	0.7296	0.7823	0.8185	0.8609
	Level 4	13.1sec	0.8133	0.8596	0.8844	0.9175	20.5sec	0.7910	0.8591	0.8889	0.9159	23.1sec	0.7849	0.8470	0.8835	0.9108	30.3sec	0.7286	0.8303	0.8679	0.9095	12sec	0.7908	0.8418	0.8752	0.9131
1 Year before	**Level 5**	26.2sec	0.8610	0.9011	0.9196	0.9441	40.9sec	0.8403	0.9001	0.9213	0.9456	46.2sec	0.8402	0.8947	0.9222	0.9423	1min	0.8074	0.8866	0.9160	0.9435	24.1sec	0.8507	0.8866	0.9158	0.9442
	Level 6	52.4sec	0.9008	0.9287	0.9437	0.9618	1.4min	0.8898	0.9279	0.9462	0.9627	1.5min	0.8937	0.9297	0.9479	0.9627	2min	0.8651	0.9247	0.9463	0.9671	48.1sec	0.8967	0.9242	0.9442	0.9647
	Level 7	1.7min	0.9282	0.9484	0.9611	0.9733	2.7min	0.9204	0.9490	0.9624	0.9746	3.1min	0.9230	0.9515	0.9642	0.9754	4min	0.9057	0.9519	0.9670	0.9794	1.6min	0.9290	0.9508	0.9638	0.9767
	Level 8	3.5min	0.9464	0.9622	0.9718	0.9804	5.5min	0.9381	0.9626	0.9733	0.9823	6.2min	0.9402	0.9646	0.9741	0.9834	8.1min	0.9289	0.9664	0.9777	0.9866	3.2min	0.9474	0.9651	0.9744	0.9844
	Level 9	7min	0.9508	0.9658	0.9748	0.9829	10.9min	0.9436	0.9678	0.9771	0.9852	12.3min	0.9419	0.9670	0.9771	0.9860	16.1min	0.9373	0.9712	0.9804	0.9891	6.4min	0.9530	0.9704	0.9782	0.9867

Notes: This table reports EDZ future contracts median results for wavelet correlations with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDZ contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Table A.20: EDZ futures contracts median results for wavelet correlations – Continued

Wavelet Correlation		EDZ5 Median					EDZ6 Median					EDZ7 Median					EDZ8 Median					EDZ9 Median				
		Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%	Time scale	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	26.7sec	0.4782	0.6193	0.6396	0.6491	19.7sec	0.5240	0.5828	0.6412	0.6544	8.1sec	0.5713	0.6118	0.6550	0.6856	8.5sec	0.5711	0.6202	0.6475	0.6933	5.7sec	0.4956	0.5451	0.6031	0.6362
	Level 2	53.3sec	0.5003	0.7206	0.7448	0.7721	39.5sec	0.6187	0.6995	0.7431	0.7824	16.2sec	0.6391	0.7327	0.7828	0.8275	17sec	0.6915	0.7385	0.7860	0.8204	11.5sec	0.5444	0.5870	0.6706	0.7364
	Level 3	1.8min	0.5107	0.7670	0.8240	0.8635	1.3min	0.6926	0.7574	0.8041	0.8571	32.5sec	0.7791	0.8293	0.8738	0.9078	33.9sec	0.7996	0.8411	0.8784	0.9104	23sec	0.5404	0.6758	0.7497	0.8232
	Level 4	3.6min	0.5756	0.8414	0.8576	0.9123	2.6min	0.7133	0.8009	0.8648	0.9046	1.1min	0.8739	0.8946	0.9291	0.9527	1.1min	0.8714	0.9072	0.9386	0.9506	46sec	0.6296	0.7534	0.8087	0.8779
30 days before	**Level 5**	7.1min	0.6273	0.8780	0.8895	0.9382	5.3min	0.7312	0.8506	0.9003	0.9336	2.2min	0.9139	0.9304	0.9656	0.9774	2.3min	0.9206	0.9453	0.9671	0.9731	1.5min	0.7146	0.7918	0.8487	0.9156
	Level 6	14.2min	0.6611	0.9029	0.9161	0.9540	10.5min	0.7610	0.8614	0.9281	0.9525	4.3min	0.9455	0.9565	0.9786	0.9884	4.5min	0.9507	0.9696	0.9802	0.9837	3.1min	0.7771	0.8187	0.9001	0.9508
	Level 7	28.4min	0.7067	0.9264	0.9410	0.9639	21.1min	0.7950	0.8917	0.9377	0.9575	8.7min	0.9585	0.9700	0.9807	0.9928	9min	0.9671	0.9819	0.9868	0.9893	6.1min	0.8058	0.8523	0.9241	0.9673
	Level 8	56.9min	0.7532	0.9377	0.9535	0.9692	42.1min	0.8298	0.9016	0.9402	0.9635	17.3min	0.9645	0.9753	0.9835	0.9941	18.1min	0.9750	0.9863	0.9903	0.9921	12.3min	0.8275	0.8827	0.9381	0.9760
	Level 9	113.8min	0.7702	0.9410	0.9532	0.9669	84.2min	0.8238	0.8941	0.9371	0.9608	34.6min	0.9616	0.9732	0.9826	0.9935	36.2min	0.9755	0.9866	0.9900	0.9933	24.5min	0.8183	0.8856	0.9408	0.9808
	Level 1	10.6sec	0.4851	0.5630	0.6048	0.6474	9.1sec	0.4642	0.5711	0.6126	0.6491	4.1sec	0.5794	0.6171	0.6572	0.6809	4.5sec	0.5711	0.6210	0.6505	0.6859	2.6sec	0.5025	0.5646	0.6030	0.6383
	Level 2	21.2sec	0.5335	0.6583	0.6988	0.7676	18.2sec	0.5163	0.6526	0.7014	0.7547	8.3sec	0.6718	0.7327	0.7772	0.8160	9sec	0.6915	0.7401	0.7869	0.8204	5.1sec	0.5479	0.6247	0.6855	0.7398
	Level 3	42.4sec	0.6245	0.7199	0.7707	0.8449	36.3sec	0.5736	0.7085	0.7667	0.8512	16.5sec	0.7561	0.8275	0.8680	0.8949	18.1sec	0.7996	0.8418	0.8778	0.9027	10.2sec	0.5995	0.6868	0.7614	0.8205
	Level 4	1.4min	0.6798	0.7804	0.8350	0.8972	1.2min	0.6374	0.7478	0.8151	0.9015	33.1sec	0.8399	0.8907	0.9178	0.9453	36.2sec	0.8766	0.9172	0.9373	0.9501	20.5sec	0.6650	0.7573	0.8165	0.8793
60 days before	**Level 5**	2.8min	0.7179	0.8372	0.8780	0.9281	2.4min	0.7131	0.8186	0.8639	0.9335	1.1min	0.8946	0.9288	0.9480	0.9706	1.2min	0.9280	0.9473	0.9625	0.9720	40.9sec	0.7304	0.8124	0.8675	0.9211
	Level 6	5.7min	0.7628	0.8815	0.9076	0.9453	4.8min	0.7527	0.8590	0.8926	0.9499	2.2min	0.9224	0.9526	0.9641	0.9809	2.4min	0.9541	0.9678	0.9776	0.9837	1.4min	0.7879	0.8509	0.9021	0.9524
	Level 7	11.3min	0.8185	0.9155	0.9340	0.9659	9.7min	0.7989	0.8759	0.9257	0.9573	4.4min	0.9440	0.9668	0.9742	0.9869	4.8min	0.9690	0.9791	0.9857	0.9893	2.7min	0.8341	0.8886	0.9329	0.9679
	Level 8	22.6min	0.8610	0.9279	0.9513	0.9711	19.4min	0.8274	0.9013	0.9402	0.9641	8.8min	0.9536	0.9701	0.9804	0.9889	9.6min	0.9751	0.9850	0.9897	0.9920	5.5min	0.8585	0.9152	0.9490	0.9768
	Level 9	45.2min	0.8860	0.9349	0.9567	0.9732	38.7min	0.8078	0.9096	0.9427	0.9677	17.7min	0.9583	0.9718	0.9822	0.9887	19.3min	0.9769	0.9867	0.9900	0.9926	10.9min	0.8615	0.9280	0.9498	0.9812
	Level 1	5.6sec	0.5318	0.5900	0.6286	0.6552	5.1sec	0.4880	0.5719	0.6183	0.6519	2.7sec	0.5797	0.6251	0.6604	0.6860	2.8sec	0.5741	0.6191	0.6518	0.6806	1.5sec	0.5116	0.5851	0.6075	0.6514
	Level 2	11.1sec	0.5854	0.6787	0.7329	0.7686	10.1sec	0.5512	0.6623	0.7150	0.7673	5.4sec	0.6662	0.7420	0.7839	0.8252	5.7sec	0.6943	0.7422	0.7869	0.8172	3sec	0.5701	0.6489	0.6944	0.7461
	Level 3	22.2sec	0.6522	0.7588	0.8038	0.8469	20.3sec	0.6248	0.7194	0.7689	0.8515	10.7sec	0.7648	0.8228	0.8666	0.8949	11.3sec	0.8042	0.8465	0.8777	0.9024	6.1sec	0.6220	0.7145	0.7638	0.8205
	Level 4	44.4sec	0.6931	0.8145	0.8514	0.9060	40.6sec	0.6916	0.7723	0.8420	0.9042	21.5sec	0.8412	0.8900	0.9152	0.9444	22.7sec	0.8872	0.9181	0.9361	0.9487	12.1sec	0.6991	0.7711	0.8223	0.8793
3 months before	**Level 5**	1.5min	0.7691	0.8656	0.8860	0.9345	1.4min	0.7388	0.8251	0.8795	0.9334	43sec	0.8932	0.9284	0.9473	0.9672	45.3sec	0.9320	0.9502	0.9660	0.9720	24.2sec	0.7585	0.8267	0.8749	0.9207
	Level 6	3min	0.8468	0.9003	0.9162	0.9529	2.7min	0.7818	0.8679	0.9103	0.9472	1.4min	0.9220	0.9494	0.9637	0.9794	1.5min	0.9589	0.9703	0.9804	0.9843	48.4sec	0.8024	0.8761	0.9123	0.9502
	Level 7	5.9min	0.8821	0.9279	0.9405	0.9659	5.4min	0.8106	0.9000	0.9358	0.9611	2.9min	0.9427	0.9646	0.9741	0.9861	3min	0.9707	0.9810	0.9876	0.9905	1.6min	0.8410	0.9095	0.9406	0.9679
	Level 8	11.8min	0.9008	0.9412	0.9572	0.9739	10.8min	0.8384	0.9280	0.9477	0.9735	5.7min	0.9553	0.9728	0.9802	0.9887	6min	0.9773	0.9861	0.9907	0.9934	3.2min	0.8748	0.9386	0.9561	0.9781
	Level 9	23.7min	0.9167	0.9481	0.9629	0.9768	21.6min	0.8434	0.9364	0.9551	0.9762	11.5min	0.9587	0.9735	0.9820	0.9888	12.1min	0.9786	0.9874	0.9918	0.9942	6.5min	0.8856	0.9411	0.9633	0.9823
	Level 1	3.1sec	0.5825	0.6327	0.6558	0.6816	2.5sec	0.5734	0.6230	0.6462	0.6684	1.7sec	0.5920	0.6262	0.6487	0.6734	1.4sec	0.5990	0.6384	0.6584	0.6785	1.1sec	0.5873	0.6298	0.6511	0.6727
	Level 2	6.3sec	0.6749	0.7400	0.7701	0.8013	5.1sec	0.6594	0.7226	0.7581	0.7968	3.4sec	0.6904	0.7406	0.7715	0.8024	2.7sec	0.7187	0.7625	0.7879	0.8132	2.1sec	0.6661	0.7368	0.7726	0.7992
	Level 3	12.5sec	0.7517	0.8139	0.8410	0.8772	10.1sec	0.7250	0.7915	0.8351	0.8734	6.8sec	0.7716	0.8239	0.8570	0.8851	5.4sec	0.8174	0.8574	0.8743	0.8990	4.3sec	0.7353	0.8100	0.8537	0.8831
	Level 4	25sec	0.8116	0.8602	0.8874	0.9218	20.2sec	0.7776	0.8454	0.8795	0.9133	13.6sec	0.8306	0.8778	0.9065	0.9325	10.8sec	0.8812	0.9132	0.9276	0.9456	8.6sec	0.7814	0.8597	0.9012	0.9285
1 Year before	**Level 5**	50sec	0.8541	0.8964	0.9191	0.9473	40.5sec	0.8282	0.8820	0.9110	0.9394	27.2sec	0.8747	0.9126	0.9358	0.9611	21.7sec	0.9194	0.9460	0.9575	0.9695	17.1sec	0.8289	0.8984	0.9309	0.9541
	Level 6	1.7min	0.8947	0.9245	0.9426	0.9660	1.3min	0.8696	0.9141	0.9365	0.9583	54.4sec	0.9047	0.9355	0.9552	0.9743	43.3sec	0.9424	0.9636	0.9720	0.9816	34.2sec	0.8737	0.9288	0.9530	0.9695
	Level 7	3.3min	0.9255	0.9473	0.9588	0.9767	2.7min	0.9013	0.9374	0.9544	0.9721	1.8min	0.9304	0.9530	0.9684	0.9823	1.4min	0.9587	0.9742	0.9807	0.9878	1.1min	0.9088	0.9491	0.9673	0.9792
	Level 8	6.7min	0.9416	0.9615	0.9705	0.9829	5.4min	0.9279	0.9534	0.9668	0.9797	3.6min	0.9473	0.9643	0.9759	0.9867	2.9min	0.9694	0.9805	0.9860	0.9912	2.3min	0.9320	0.9629	0.9759	0.9854
	Level 9	13.3min	0.9466	0.9664	0.9751	0.9851	10.8min	0.9363	0.9594	0.9712	0.9826	7.3min	0.9543	0.9685	0.9784	0.9883	5.8min	0.9725	0.9830	0.9876	0.9921	4.6min	0.9400	0.9674	0.9795	0.9872

Notes: This table reports EDZ future contracts median results for wavelet correlations with wavelet levels 1 – 9. The study eliminates days with less than 5,000 bid or offer updates, and compares different periods before the settlement date: 30 days, 60 days, 3 months and 1 year before Eurodollar contract maturity date. For these four sub-samples, I calculate all the timescales for nine levels for EDZ contracts. Within the sub-groups, the wavelet results are classified based on prices. So I have different timescales for 0–25% prices, 26–50% prices, 51–75% prices and 76–100% prices in the 30-day group, 60-day group, 3-month group and 1-year group before maturity.

Appendix A.3. Other Volatility Results: Bootstrap Mean, Mean ,Max, Min and Standard Deviation

Table A.21: EDH0 Other Results Table

EDH0	Ask Variance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	10.1sec	1.6339	1.8312	1.9699	3.2844	1.6321	1.8311	1.9695	3.261	1.6933	1.8912	2.0378	4.6008	1.4709	1.7346	1.8974	2.0935	0.0917	0.058	0.0673	1.1297
	Level 2	20.2sec	1.4552	1.6194	1.7143	3.4564	1.4538	1.6189	1.714	3.4415	1.5446	1.6658	1.7566	6.1316	1.2255	1.554	1.6689	1.7978	0.1373	0.0435	0.0334	1.7763
	Level 3	40.4sec	1.2858	1.4182	1.5344	3.2424	1.2873	1.4181	1.5348	3.2339	1.3396	1.4513	1.617	5.4959	1.1613	1.3683	1.4648	1.6822	0.0719	0.032	0.0641	1.7345
30	**Level 4**	1.3min	1.1977	1.2812	1.4069	4.8118	1.1968	1.2811	1.4082	4.7642	1.2669	1.2918	1.5108	12.9249	1.1198	1.2738	1.345	1.5128	0.0543	0.0068	0.0668	4.8426
days	**Level 5**	2.7min	1.137	1.2035	1.3168	5.4472	1.1373	1.204	1.3166	5.2817	1.1743	1.2219	1.4116	17.2983	1.0834	1.1807	1.2421	1.4469	0.0352	0.0167	0.0701	6.7999
before	**Level 6**	5.4min	1.1026	1.1543	1.2329	3.8002	1.1029	1.1544	1.2341	3.8158	1.1249	1.174	1.3432	11.0928	1.0592	1.1293	1.1819	1.3738	0.0261	0.0202	0.0628	4.1534
	Level 7	10.8min	1.0762	1.1155	1.1766	3.0827	1.0761	1.1155	1.1774	3.0658	1.0929	1.1216	1.2766	8.1171	1.0458	1.105	1.1292	1.2961	0.022	0.0074	0.0575	2.9197
	Level 8	21.5min	1.0539	1.0798	1.1442	2.4846	1.0535	1.0798	1.1445	2.4476	1.0697	1.0872	1.2157	6.0501	1.0327	1.0719	1.1184	1.2255	0.0185	0.0059	0.0406	2.0653
	Level 9	43.1min	1.0405	1.0679	1.1303	2.0844	1.0403	1.0681	1.1309	2.0925	1.0518	1.0864	1.2002	4.8971	1.0218	1.0584	1.088	1.2059	0.0136	0.0111	0.0422	1.5906
	Level 1	4.5sec	1.5406	1.74	1.8922	2.9669	1.5414	1.7395	1.8924	2.9729	1.6694	1.836	1.9848	4.8734	1.3948	1.6802	1.8374	1.9866	0.1035	0.0524	0.045	1.1595
	Level 2	9sec	1.3235	1.5368	1.6729	3.1115	1.3231	1.5369	1.6726	3.0988	1.4233	1.6067	1.7281	6.1316	1.2255	1.4678	1.6175	1.7316	0.0771	0.043	0.0377	1.7223
	Level 3	18sec	1.2299	1.3849	1.5001	3.3567	1.2299	1.385	1.4997	3.3348	1.3069	1.4369	1.5646	10.2776	1.125	1.3249	1.4446	1.583	0.0618	0.0404	0.0441	2.8047
60	**Level 4**	36.1sec	1.1486	1.2745	1.3865	4.1378	1.1483	1.2743	1.3861	4.1809	1.2114	1.3079	1.4629	12.9249	1.0625	1.2115	1.3203	1.467	0.0435	0.0237	0.053	4.4737
days	**Level 5**	1.2min	1.099	1.1915	1.2875	4.0456	1.0994	1.1916	1.2876	4.0517	1.1466	1.2173	1.365	17.2983	1.0313	1.1579	1.2219	1.3982	0.03	0.0168	0.0486	5.1494
before	**Level 6**	2.4min	1.0748	1.1326	1.2059	2.9241	1.0745	1.1324	1.2056	2.9013	1.1058	1.1661	1.2472	11.0928	1.0157	1.1142	1.1693	1.294	0.0256	0.0178	0.0273	3.0981
	Level 7	4.8min	1.0488	1.0937	1.1442	2.2759	1.049	1.0938	1.144	2.3078	1.0631	1.1196	1.1679	8.1171	1.0081	1.0704	1.1207	1.198	0.0162	0.0157	0.0189	2.159
	Level 8	9.6min	1.0312	1.0642	1.1069	1.9111	1.0313	1.0641	1.1068	1.9129	1.0418	1.0803	1.1375	6.0501	1.0044	1.0425	1.0813	1.1378	0.0105	0.0132	0.0201	1.521
	Level 9	19.2min	1.0237	1.0503	1.0908	1.6818	1.0238	1.0504	1.091	1.6867	1.0301	1.0655	1.126	4.8971	1.0029	1.0358	1.0657	1.1304	0.0083	0.0108	0.0197	1.16
	Level 1	2.6sec	1.5316	1.6971	1.837	2.624	1.5318	1.6971	1.8371	2.6236	1.6469	1.74	1.8947	4.8734	1.3948	1.6495	1.7571	1.8974	0.0758	0.025	0.0406	1.0612
	Level 2	5.3sec	1.3168	1.4781	1.6292	2.6523	1.3163	1.4782	1.6294	2.6402	1.3956	1.554	1.6881	6.1316	1.2255	1.4076	1.5664	1.695	0.0574	0.052	0.0354	1.5355
	Level 3	10.5sec	1.2176	1.3391	1.4564	2.7496	1.2175	1.3395	1.4566	2.7426	1.2524	1.4011	1.5125	10.2776	1.125	1.2763	1.4077	1.5519	0.039	0.0378	0.0333	2.4101
3	**Level 4**	21.1sec	1.1477	1.2398	1.3258	3.2479	1.1477	1.2395	1.3255	3.2706	1.1753	1.2789	1.3878	12.9249	1.0625	1.1897	1.2793	1.4177	0.0307	0.0348	0.038	3.8265
months	**Level 5**	42.2sec	1.0994	1.1613	1.2309	3.1974	1.0993	1.1613	1.2308	3.1481	1.1243	1.1947	1.2959	17.2983	1.0313	1.1257	1.1955	1.3105	0.0224	0.0226	0.0309	4.3354
before	**Level 6**	1.4min	1.0685	1.1082	1.1649	2.3845	1.0686	1.1082	1.1652	2.3447	1.0811	1.1262	1.2079	11.0928	1.0157	1.0814	1.1293	1.2174	0.0168	0.0128	0.0263	2.6142
	Level 7	2.8min	1.0456	1.0706	1.1167	1.92	1.0458	1.0706	1.1165	1.9254	1.0567	1.0909	1.1462	8.1171	1.0081	1.0594	1.0925	1.149	0.0124	0.0102	0.0165	1.8193
	Level 8	5.6min	1.0308	1.0473	1.083	1.6422	1.0309	1.0473	1.083	1.6497	1.0418	1.0607	1.1082	6.0501	1.0044	1.0423	1.0643	1.1098	0.0091	0.0057	0.0136	1.2789
	Level 9	11.2min	1.0244	1.0402	1.0684	1.5069	1.0244	1.0401	1.0684	1.4937	1.0318	1.0465	1.088	4.8971	1.0029	1.0356	1.0515	1.0901	0.0073	0.0039	0.0123	0.9721
	Level 1	1.4sec	1.4803	1.5431	1.6162	1.9599	1.4804	1.5431	1.6163	1.9598	1.5134	1.5761	1.6719	4.8734	1.3699	1.5134	1.5773	1.6759	0.0309	0.0168	0.0279	0.6252
	Level 2	2.7sec	1.2485	1.307	1.385	1.7998	1.2485	1.3069	1.385	1.8012	1.2794	1.3386	1.4529	6.1316	1.1432	1.2802	1.3394	1.453	0.0293	0.0166	0.031	0.8641
	Level 3	5.4sec	1.1382	1.1916	1.2585	1.7074	1.1381	1.1916	1.2584	1.7131	1.164	1.2211	1.3128	10.2776	1.0612	1.1659	1.2212	1.3173	0.0229	0.0166	0.0259	1.2739
1	**Level 4**	10.9sec	1.0842	1.1279	1.1828	1.7609	1.0841	1.128	1.1829	1.7556	1.1069	1.1523	1.2202	12.9249	1.032	1.1071	1.1525	1.2258	0.0187	0.0114	0.019	1.9922
Year	**Level 5**	21.8sec	1.0545	1.089	1.1297	1.6629	1.0544	1.089	1.1297	1.6637	1.0733	1.1037	1.1581	17.2983	1.0184	1.0737	1.1044	1.1584	0.0145	0.008	0.0157	2.2052
before	**Level 6**	43.5sec	1.0362	1.0609	1.0913	1.4292	1.0362	1.0609	1.0913	1.4287	1.0489	1.0746	1.1116	11.0928	1.011	1.0503	1.0747	1.112	0.0107	0.0063	0.0115	1.3343
	Level 7	1.5min	1.0246	1.0413	1.062	1.2951	1.0246	1.0413	1.062	1.2967	1.0338	1.049	1.0758	8.1171	1.007	1.0341	1.0494	1.0762	0.0077	0.0043	0.0076	0.9267
	Level 8	2.9min	1.0176	1.0294	1.0437	1.207	1.0176	1.0293	1.0437	1.2104	1.0242	1.0348	1.0534	6.0501	1.0044	1.0242	1.0349	1.054	0.0056	0.003	0.0054	0.651
	Level 9	5.8min	1.015	1.0249	1.0369	1.1687	1.015	1.0249	1.0369	1.167	1.0203	1.0293	1.0458	4.8971	1.0029	1.0203	1.0293	1.0458	0.0047	0.0026	0.0052	0.4941

Table A.21: EDH0 Other Results Table –Continued

EDH0 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.9sec	1.6213	1.792	1.945	3.0973	1.6217	1.7925	1.947	3.1119	1.7193	1.8435	2.03	4.1491	1.4662	1.7565	1.8577	2.1023	0.0972	0.0363	0.0613	0.8939
	Level 2	17.9sec	1.4037	1.6051	1.7796	3.38	1.4042	1.6049	1.779	3.378	1.4922	1.6638	1.8769	6.3636	1.2431	1.5598	1.6684	1.9471	0.1018	0.0487	0.0928	1.825
	Level 3	35.8sec	1.2569	1.3968	1.5192	3.7495	1.2563	1.396	1.5188	3.6637	1.31	1.4522	1.6474	8.0258	1.1954	1.3421	1.4544	1.9588	0.0488	0.0528	0.0818	2.644
30	**Level 4**	1.2min	1.1625	1.271	1.3614	3.805	1.1626	1.2709	1.3621	3.8373	1.1893	1.2855	1.4901	9.1081	1.1312	1.2511	1.3129	1.5988	0.0275	0.0155	0.0737	3.2798
days	**Level 5**	2.4min	1.1134	1.1863	1.2743	3.2807	1.1129	1.1863	1.2747	3.2716	1.1394	1.1985	1.3752	8.0655	1.0885	1.1697	1.2226	1.4043	0.0228	0.0108	0.0592	2.8363
before	**Level 6**	4.8min	1.0849	1.1337	1.2169	2.4671	1.0852	1.1337	1.2164	2.4802	1.1195	1.1473	1.3018	4.8069	1.0558	1.1247	1.1685	1.3513	0.0293	0.0086	0.0544	1.513
	Level 7	9.5min	1.0683	1.1069	1.1789	2.0567	1.0686	1.1068	1.1787	2.0515	1.0989	1.1118	1.2412	3.2494	1.038	1.0998	1.1224	1.3023	0.0266	0.0051	0.0434	0.9414
	Level 8	19.1min	1.0545	1.0847	1.1613	1.7367	1.0546	1.0847	1.1602	1.7474	1.0719	1.0888	1.2167	2.5075	1.0365	1.0804	1.0948	1.296	0.0161	0.0031	0.0439	0.5773
	Level 9	38.2min	1.0513	1.0812	1.1839	1.6315	1.0515	1.0812	1.1844	1.6245	1.0718	1.0903	1.2707	2.0364	1.0345	1.0734	1.1074	1.372	0.0152	0.0079	0.0606	0.3334
	Level 1	4.3sec	1.5314	1.7143	1.8422	2.7963	1.5317	1.714	1.8414	2.7983	1.6563	1.7583	1.9535	4.1491	1.3987	1.662	1.7656	1.9545	0.092	0.0368	0.064	0.9004
	Level 2	8.7sec	1.3117	1.4921	1.6504	2.8648	1.3107	1.4922	1.6498	2.8677	1.4244	1.569	1.7967	6.3636	1.2304	1.4431	1.5711	1.8113	0.0751	0.0415	0.0708	1.4669
	Level 3	17.3sec	1.217	1.3424	1.4556	2.8276	1.2168	1.3425	1.4558	2.8439	1.2796	1.4058	1.486	8.0258	1.125	1.2817	1.4124	1.5524	0.051	0.035	0.0225	2.0371
60	**Level 4**	34.7sec	1.1376	1.2304	1.3215	2.8074	1.1376	1.2305	1.321	2.7871	1.1832	1.2753	1.3777	9.1081	1.0626	1.1878	1.2771	1.3802	0.0376	0.0344	0.0348	2.4747
days	**Level 5**	1.2min	1.0917	1.1556	1.2345	2.3734	1.0918	1.1554	1.2343	2.3885	1.123	1.1875	1.2692	8.0655	1.0315	1.1242	1.1922	1.2892	0.0262	0.0237	0.0287	2.1144
before	**Level 6**	2.3min	1.0645	1.1134	1.1792	1.9266	1.0643	1.1135	1.1792	1.9204	1.0811	1.132	1.2309	4.8069	1.0161	1.0917	1.1358	1.2331	0.0201	0.0139	0.03	1.1713
	Level 7	4.6min	1.0446	1.0863	1.1447	1.6588	1.0446	1.0863	1.1446	1.6592	1.0602	1.1082	1.1928	3.2494	1.0088	1.0676	1.1108	1.1965	0.0141	0.0152	0.0273	0.753
	Level 8	9.2min	1.0338	1.0646	1.1208	1.4839	1.034	1.0644	1.1206	1.4816	1.0461	1.0847	1.1663	2.5075	1.0059	1.0469	1.0859	1.1713	0.0113	0.0151	0.0272	0.4768
	Level 9	18.5min	1.03	1.0593	1.1267	1.4275	1.0299	1.0591	1.127	1.4292	1.0392	1.0771	1.1681	2.0364	1.0059	1.0402	1.0892	1.1927	0.0102	0.0144	0.0281	0.3037
	Level 1	2.5sec	1.5286	1.6975	1.7945	2.501	1.5294	1.6974	1.7948	2.5008	1.6353	1.7539	1.8554	4.1491	1.3987	1.6408	1.7565	1.8577	0.0724	0.0326	0.0314	0.8435
	Level 2	5.1sec	1.3126	1.4548	1.6165	2.5033	1.3121	1.4544	1.6163	2.4955	1.3916	1.5084	1.6845	6.3636	1.2304	1.3922	1.5598	1.6937	0.057	0.0375	0.0422	1.2965
	Level 3	10.2sec	1.2159	1.3154	1.4437	2.4127	1.216	1.3151	1.4435	2.4002	1.266	1.3521	1.4776	8.0258	1.125	1.2724	1.3828	1.4784	0.0396	0.0318	0.0276	1.7578
3	**Level 4**	20.4sec	1.1456	1.2145	1.3044	2.3215	1.1459	1.2147	1.3048	2.3194	1.1832	1.2577	1.357	9.1081	1.0626	1.1878	1.2653	1.3579	0.0335	0.0253	0.033	2.099
months	**Level 5**	40.8sec	1.0978	1.1473	1.2123	2.0087	1.0973	1.1473	1.2122	2.0209	1.1267	1.1736	1.2455	8.0655	1.0315	1.1269	1.1758	1.2642	0.0241	0.0181	0.0259	1.7788
before	**Level 6**	1.4min	1.0662	1.1032	1.1495	1.6836	1.0662	1.1031	1.1495	1.6853	1.0811	1.1195	1.1755	4.8069	1.0161	1.0823	1.1208	1.1966	0.017	0.0139	0.0199	1.0002
	Level 7	2.7min	1.044	1.0696	1.1134	1.497	1.044	1.0696	1.1135	1.4951	1.0537	1.0867	1.1359	3.2494	1.0088	1.0549	1.0908	1.1507	0.011	0.0088	0.0152	0.6498
	Level 8	5.4min	1.0316	1.0489	1.0863	1.3723	1.0315	1.0488	1.0864	1.3687	1.0414	1.0683	1.112	2.5075	1.0059	1.0439	1.0685	1.124	0.0085	0.0062	0.014	0.4166
	Level 9	10.9min	1.0271	1.0437	1.0839	1.3379	1.0271	1.0437	1.084	1.3361	1.0345	1.057	1.12	2.0364	1.0059	1.0355	1.0593	1.1305	0.0075	0.0058	0.019	0.2792
	Level 1	1.3sec	1.4808	1.5432	1.6152	1.9204	1.4808	1.5431	1.6154	1.9215	1.5148	1.5756	1.6703	4.1491	1.3715	1.516	1.5762	1.674	0.0308	0.0171	0.0263	0.5144
	Level 2	2.7sec	1.2479	1.3064	1.383	1.7583	1.2481	1.3064	1.3832	1.759	1.2792	1.3379	1.4306	6.3636	1.1427	1.2792	1.3401	1.4401	0.0293	0.0168	0.0255	0.7391
	Level 3	5.3sec	1.1377	1.1924	1.2555	1.6288	1.1378	1.1924	1.2553	1.6247	1.1668	1.2213	1.3037	8.0258	1.0611	1.1673	1.222	1.31	0.0229	0.014	0.0216	0.936
1	**Level 4**	10.6sec	1.0845	1.1276	1.1807	1.5229	1.0845	1.1276	1.1807	1.5224	1.1064	1.1491	1.2175	9.1081	1.0322	1.107	1.1499	1.219	0.0187	0.0112	0.0174	1.0854
Year	**Level 5**	21.3sec	1.055	1.0885	1.1283	1.3899	1.055	1.0884	1.1283	1.3924	1.0752	1.1016	1.1544	8.0655	1.019	1.0754	1.1038	1.1548	0.0145	0.0082	0.0143	0.9093
before	**Level 6**	42.6sec	1.0365	1.0604	1.0898	1.2713	1.0365	1.0604	1.0898	1.2694	1.0497	1.0715	1.1112	4.8069	1.0112	1.0502	1.0719	1.1122	0.0107	0.006	0.0116	0.5259
	Level 7	1.4min	1.0248	1.0413	1.0613	1.1933	1.0247	1.0413	1.0612	1.1941	1.034	1.0475	1.0749	3.2494	1.0069	1.0343	1.0482	1.0752	0.0076	0.0042	0.0081	0.3497
	Level 8	2.8min	1.0176	1.0297	1.0438	1.1422	1.0176	1.0297	1.0437	1.1438	1.0243	1.0354	1.0534	2.5075	1.0047	1.0243	1.0357	1.0542	0.0056	0.0031	0.0052	0.2334
	Level 9	5.7min	1.0151	1.0254	1.0375	1.1298	1.015	1.0254	1.0375	1.1303	1.0206	1.0304	1.0463	2.0364	1.0038	1.0207	1.0305	1.0464	0.0047	0.0027	0.0049	0.1753

Table A.21: EDH0 Other Results Table –Continued

EDH0 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	9.5sec	1.6163	1.7904	1.9253	3.1958	1.6157	1.7904	1.925	3.1969	1.7084	1.8323	1.9665	4.2038	1.4632	1.7179	1.9032	2.0944	0.0968	0.0444	0.0244	1.0134
	Level 2	19sec	1.3932	1.5754	1.6951	3.2599	1.3958	1.5752	1.6957	3.2568	1.4821	1.6229	1.7543	5.7085	1.2239	1.5506	1.653	1.7788	0.105	0.0304	0.0446	1.6088
	Level 3	38.1sec	1.2481	1.3564	1.4637	3.1654	1.2479	1.3561	1.4641	3.1316	1.2852	1.3786	1.5499	5.6441	1.1636	1.3057	1.4111	1.6364	0.0521	0.0323	0.0553	1.8044
30	**Level 4**	1.3min	1.1573	1.2399	1.3095	3.8604	1.1572	1.2399	1.3095	3.8567	1.1992	1.2565	1.4017	9.4035	1.1127	1.2281	1.2643	1.488	0.0332	0.0147	0.0586	3.4717
days	**Level 5**	2.5min	1.1014	1.1638	1.2099	3.5838	1.1013	1.1639	1.2092	3.6349	1.1194	1.1885	1.2721	10.1742	1.0714	1.141	1.1889	1.3509	0.0203	0.0205	0.0353	3.7883
before	**Level 6**	5.1min	1.0676	1.1056	1.1498	2.498	1.068	1.1056	1.1492	2.4958	1.0869	1.1216	1.2001	5.5431	1.043	1.088	1.1243	1.2663	0.0191	0.0131	0.0301	1.8637
	Level 7	10.2min	1.0448	1.073	1.1048	1.857	1.0449	1.0728	1.1045	1.8624	1.0597	1.0837	1.1383	3.1599	1.0272	1.0645	1.0912	1.1645	0.0158	0.0081	0.0194	0.9489
	Level 8	20.3min	1.0287	1.0459	1.0683	1.4643	1.0286	1.0459	1.0686	1.4728	1.04	1.054	1.0869	2.0959	1.0164	1.0416	1.0585	1.1101	0.0107	0.005	0.0119	0.4905
	Level 9	40.6min	1.0198	1.0331	1.0527	1.2963	1.0198	1.0331	1.0527	1.2966	1.0264	1.0386	1.0782	1.6482	1.0109	1.0276	1.04	1.0833	0.0073	0.0049	0.016	0.2777
	Level 1	4.4sec	1.5264	1.703	1.8434	2.8193	1.526	1.7028	1.8434	2.8309	1.6495	1.7772	1.9136	4.2038	1.3942	1.6557	1.7851	1.9179	0.0935	0.0398	0.044	0.9943
	Level 2	8.8sec	1.3019	1.4625	1.6103	2.6152	1.302	1.4625	1.6113	2.6294	1.3881	1.5563	1.6713	5.7085	1.2239	1.3975	1.5564	1.672	0.0668	0.052	0.0461	1.2917
	Level 3	17.7sec	1.208	1.3042	1.3971	2.5064	1.208	1.3045	1.3969	2.5184	1.2781	1.3416	1.4442	5.6441	1.125	1.2784	1.3512	1.4802	0.0508	0.0227	0.0332	1.4697
60	**Level 4**	35.4sec	1.127	1.2005	1.2679	2.8569	1.1267	1.2006	1.2677	2.8537	1.172	1.2285	1.3134	9.4035	1.0625	1.1762	1.2289	1.3345	0.0336	0.0204	0.0278	2.6429
days	**Level 5**	1.2min	1.077	1.129	1.1832	2.5754	1.0768	1.1291	1.1833	2.5783	1.0913	1.1602	1.1968	10.1742	1.0313	1.098	1.1631	1.2302	0.0184	0.0198	0.0123	2.788
before	**Level 6**	2.4min	1.0487	1.0856	1.1245	1.8752	1.049	1.0856	1.1244	1.8814	1.0651	1.1067	1.1499	5.5431	1.0157	1.0697	1.1068	1.1656	0.0136	0.0122	0.0141	1.4069
	Level 7	4.7min	1.0298	1.0545	1.0861	1.4961	1.0297	1.0546	1.086	1.4977	1.0382	1.0654	1.102	3.1599	1.0081	1.0393	1.0682	1.1031	0.0089	0.0088	0.0116	0.7408
	Level 8	9.4min	1.0168	1.0327	1.0535	1.2805	1.0168	1.0327	1.0534	1.2773	1.023	1.0416	1.0624	2.0959	1.0044	1.0231	1.0427	1.0688	0.0051	0.0071	0.0072	0.3867
	Level 9	18.9min	1.0088	1.0197	1.0359	1.1783	1.0087	1.0198	1.0359	1.1761	1.0131	1.0276	1.0447	1.6482	1.0029	1.0132	1.0277	1.0459	0.0036	0.0056	0.0055	0.2247
	Level 1	2.6sec	1.5202	1.68	1.7933	2.5249	1.5208	1.6799	1.7931	2.5174	1.6311	1.7084	1.8602	4.2038	1.3942	1.6379	1.7179	1.8674	0.0709	0.0249	0.0424	0.9199
	Level 2	5.2sec	1.2993	1.4251	1.5813	2.3276	1.299	1.425	1.5812	2.3177	1.372	1.4745	1.6469	5.7085	1.2239	1.3834	1.4821	1.653	0.0517	0.0315	0.0413	1.132
	Level 3	10.4sec	1.1983	1.2902	1.3781	2.1697	1.198	1.2903	1.3779	2.1704	1.2446	1.3307	1.4367	5.6441	1.125	1.2464	1.3329	1.4442	0.0356	0.0225	0.0335	1.2839
3	**Level 4**	20.7sec	1.1268	1.1887	1.249	2.3403	1.127	1.1888	1.2492	2.3454	1.158	1.223	1.2741	9.4035	1.0625	1.1635	1.2242	1.3081	0.0261	0.0198	0.0191	2.246
months	**Level 5**	41.5sec	1.0797	1.1181	1.1688	2.139	1.0798	1.1182	1.1686	2.1244	1.0955	1.1433	1.1889	10.1742	1.0313	1.0976	1.1434	1.1917	0.0164	0.015	0.0149	2.332
before	**Level 6**	1.4min	1.0505	1.075	1.1096	1.6356	1.0505	1.0749	1.1095	1.636	1.0606	1.088	1.1302	5.5431	1.0157	1.0609	1.0906	1.1313	0.0109	0.0097	0.0117	1.1838
	Level 7	2.8min	1.0305	1.0458	1.0716	1.3644	1.0305	1.0458	1.0715	1.3637	1.0369	1.0565	1.091	3.1599	1.0081	1.0372	1.0588	1.0912	0.0072	0.0072	0.011	0.6256
	Level 8	5.5min	1.0179	1.0276	1.0443	1.2056	1.0179	1.0276	1.0443	1.205	1.023	1.0359	1.0575	2.0959	1.0044	1.0231	1.036	1.058	0.0047	0.0044	0.0071	0.3276
	Level 9	11.1min	1.0102	1.0188	1.03	1.1335	1.0102	1.0188	1.03	1.1317	1.0141	1.0233	1.0386	1.6482	1.0029	1.015	1.0251	1.04	0.0037	0.0028	0.0045	0.1916
	Level 1	1.3sec	1.4781	1.5388	1.6087	1.9209	1.4783	1.5387	1.6088	1.9182	1.5121	1.57	1.6597	4.2038	1.369	1.5132	1.5706	1.6642	0.0309	0.0171	0.026	0.5498
	Level 2	2.7sec	1.2441	1.2984	1.371	1.6885	1.2443	1.2984	1.371	1.696	1.2725	1.3275	1.4173	5.7085	1.1424	1.274	1.3276	1.4195	0.0283	0.0144	0.0253	0.6391
	Level 3	5.4sec	1.1323	1.1804	1.2405	1.5351	1.1325	1.1803	1.2407	1.539	1.1579	1.2048	1.2818	5.6441	1.0603	1.1583	1.2053	1.2848	0.021	0.0133	0.0229	0.7015
1	**Level 4**	10.8sec	1.0773	1.1147	1.1614	1.5019	1.0774	1.1146	1.1615	1.4969	1.0978	1.1316	1.1883	9.4035	1.0309	1.0984	1.1316	1.1886	0.0162	0.0093	0.0163	1.16
Year	**Level 5**	21.5sec	1.0474	1.0747	1.1069	1.3896	1.0474	1.0748	1.1069	1.3866	1.0632	1.089	1.1278	10.1742	1.0172	1.0639	1.0891	1.128	0.0121	0.0074	0.0123	1.174
before	**Level 6**	43.1sec	1.0292	1.0473	1.0688	1.2296	1.0292	1.0473	1.0689	1.2296	1.0394	1.0552	1.0824	5.5431	1.0099	1.0397	1.0557	1.0832	0.0084	0.0048	0.0084	0.6025
	Level 7	1.4min	1.018	1.0292	1.0426	1.1361	1.018	1.0292	1.0426	1.1368	1.0246	1.0344	1.0516	3.1599	1.0057	1.0246	1.0347	1.0519	0.0054	0.003	0.0054	0.3211
	Level 8	2.9min	1.0113	1.0182	1.0266	1.0809	1.0113	1.0182	1.0266	1.0805	1.0154	1.0216	1.0326	2.0959	1.0035	1.0154	1.0221	1.033	0.0034	0.0017	0.0032	0.1695
	Level 9	5.7min	1.0079	1.0128	1.0188	1.0538	1.0079	1.0129	1.0188	1.0536	1.0108	1.015	1.0229	1.6482	1.0025	1.0108	1.015	1.0232	0.0024	0.0013	0.0024	0.1004

Table A.21: EDH0 Other Results Table –Continued

EDH0 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	9.5sec	0.3460	0.5137	0.5579	0.6187	0.3455	0.5140	0.5581	0.6185	0.4757	0.5383	0.5693	0.6820	0.2410	0.4926	0.5425	0.5816	0.1060	0.0163	0.0112	0.0389
	Level 2	19sec	0.3558	0.5637	0.6234	0.7158	0.3566	0.5634	0.6235	0.7153	0.5136	0.5994	0.6411	0.8044	0.1571	0.5328	0.6010	0.6701	0.1471	0.0297	0.0187	0.0551
	Level 3	38.1sec	0.3715	0.6601	0.7174	0.7973	0.3735	0.6599	0.7172	0.7970	0.5105	0.6876	0.7451	0.8366	0.1246	0.6070	0.6886	0.7633	0.1829	0.0342	0.0270	0.0312
30	**Level 4**	1.3min	0.4159	0.7347	0.7867	0.8599	0.4184	0.7358	0.7870	0.8605	0.6255	0.7617	0.7993	0.8840	0.1098	0.6711	0.7779	0.8409	0.2449	0.0375	0.0097	0.0205
days	**Level 5**	2.5min	0.4784	0.7853	0.8429	0.8987	0.4723	0.7858	0.8430	0.8989	0.7121	0.8179	0.8549	0.9187	0.1240	0.7272	0.8343	0.8777	0.2615	0.0349	0.0077	0.0185
before	**Level 6**	5.1min	0.5220	0.8227	0.8819	0.9222	0.5178	0.8234	0.8821	0.9220	0.7400	0.8558	0.8892	0.9471	0.2080	0.7682	0.8716	0.8933	0.2424	0.0358	0.0067	0.0247
	Level 7	10.2min	0.5653	0.8491	0.9035	0.9365	0.5693	0.8493	0.9035	0.9363	0.7679	0.8909	0.9093	0.9634	0.3077	0.8057	0.8994	0.9100	0.2244	0.0311	0.0042	0.0233
	Level 8	20.3min	0.6212	0.8623	0.9220	0.9485	0.6200	0.8629	0.9220	0.9484	0.7716	0.9134	0.9256	0.9648	0.3988	0.8219	0.9185	0.9330	0.1811	0.0331	0.0026	0.0145
	Level 9	40.6min	0.6359	0.8452	0.9249	0.9511	0.6354	0.8461	0.9249	0.9511	0.7288	0.9030	0.9316	0.9666	0.4911	0.7870	0.9172	0.9330	0.1209	0.0429	0.0067	0.0137
	Level 1	4.4sec	0.3882	0.5460	0.5852	0.6559	0.3894	0.5459	0.5852	0.6550	0.5116	0.5687	0.6017	0.7149	0.2410	0.5119	0.5693	0.6038	0.1116	0.0191	0.0122	0.0390
	Level 2	8.8sec	0.4092	0.6103	0.6741	0.7649	0.4101	0.6099	0.6740	0.7652	0.5521	0.6374	0.6929	0.8127	0.1571	0.5566	0.6411	0.7020	0.1413	0.0258	0.0154	0.0429
	Level 3	17.7sec	0.4576	0.6893	0.7487	0.8231	0.4575	0.6893	0.7487	0.8231	0.6442	0.7114	0.7802	0.8889	0.1246	0.6730	0.7231	0.7815	0.1803	0.0125	0.0168	0.0351
60	**Level 4**	35.4sec	0.5116	0.7601	0.8158	0.8799	0.5132	0.7599	0.8162	0.8800	0.7246	0.7841	0.8419	0.9411	0.1098	0.7258	0.7842	0.8452	0.2122	0.0205	0.0217	0.0297
days	**Level 5**	1.2min	0.5731	0.8133	0.8680	0.9163	0.5750	0.8134	0.8682	0.9164	0.7757	0.8421	0.8895	0.9695	0.1240	0.7879	0.8448	0.8905	0.2157	0.0203	0.0169	0.0226
before	**Level 6**	2.4min	0.6311	0.8520	0.8997	0.9399	0.6286	0.8517	0.8997	0.9399	0.8110	0.8834	0.9160	0.9841	0.2080	0.8124	0.8859	0.9250	0.2037	0.0229	0.0106	0.0182
	Level 7	4.7min	0.6843	0.8767	0.9225	0.9574	0.6803	0.8767	0.9225	0.9574	0.8358	0.9024	0.9366	0.9913	0.3077	0.8383	0.9062	0.9432	0.1920	0.0214	0.0119	0.0132
	Level 8	9.4min	0.7214	0.8954	0.9412	0.9672	0.7216	0.8955	0.9414	0.9672	0.8537	0.9219	0.9552	0.9942	0.3988	0.8574	0.9229	0.9560	0.1624	0.0223	0.0126	0.0107
	Level 9	18.9min	0.7234	0.8913	0.9458	0.9708	0.7231	0.8915	0.9459	0.9710	0.8384	0.9285	0.9614	0.9942	0.4911	0.8561	0.9292	0.9623	0.1235	0.0243	0.0123	0.0097
	Level 1	2.6sec	0.4343	0.5581	0.5907	0.6556	0.4346	0.5582	0.5907	0.6552	0.5383	0.5702	0.6095	0.7149	0.2410	0.5390	0.5730	0.6115	0.1115	0.0099	0.0104	0.0311
	Level 2	5.2sec	0.4638	0.6218	0.6897	0.7634	0.4639	0.6220	0.6898	0.7635	0.5904	0.6630	0.7183	0.8127	0.1571	0.5937	0.6634	0.7186	0.1383	0.0192	0.0171	0.0332
	Level 3	10.4sec	0.5254	0.6961	0.7622	0.8233	0.5255	0.6961	0.7623	0.8232	0.6764	0.7396	0.7859	0.8889	0.1246	0.6768	0.7408	0.7899	0.1757	0.0177	0.0181	0.0275
3	**Level 4**	20.7sec	0.5835	0.7688	0.8257	0.8731	0.5830	0.7687	0.8256	0.8734	0.7364	0.7951	0.8419	0.9411	0.1098	0.7369	0.7993	0.8452	0.1986	0.0199	0.0156	0.0263
months	**Level 5**	41.5sec	0.6410	0.8269	0.8734	0.9119	0.6428	0.8271	0.8732	0.9117	0.7910	0.8521	0.8874	0.9695	0.1240	0.8029	0.8549	0.8875	0.1996	0.0184	0.0130	0.0206
before	**Level 6**	1.4min	0.6910	0.8718	0.9076	0.9381	0.6934	0.8717	0.9076	0.9381	0.8357	0.8933	0.9240	0.9841	0.2080	0.8507	0.8935	0.9250	0.1890	0.0157	0.0113	0.0154
	Level 7	2.8min	0.7385	0.8996	0.9360	0.9582	0.7392	0.8997	0.9360	0.9580	0.8690	0.9203	0.9480	0.9913	0.3077	0.8804	0.9222	0.9491	0.1765	0.0131	0.0068	0.0103
	Level 8	5.5min	0.7711	0.9216	0.9548	0.9694	0.7728	0.9217	0.9548	0.9695	0.8897	0.9360	0.9580	0.9942	0.3988	0.8993	0.9475	0.9603	0.1504	0.0120	0.0028	0.0082
	Level 9	11.1min	0.7728	0.9243	0.9591	0.9737	0.7720	0.9244	0.9590	0.9737	0.8846	0.9461	0.9657	0.9942	0.4911	0.8929	0.9495	0.9666	0.1224	0.0166	0.0043	0.0072
	Level 1	1.3sec	0.5406	0.6194	0.6483	0.6756	0.5412	0.6195	0.6483	0.6756	0.5974	0.6347	0.6596	0.7291	0.2410	0.5987	0.6351	0.6602	0.0807	0.0101	0.0070	0.0146
	Level 2	2.7sec	0.6094	0.7237	0.7659	0.8017	0.6090	0.7236	0.7659	0.8017	0.6944	0.7474	0.7817	0.8751	0.1571	0.6990	0.7475	0.7818	0.1071	0.0136	0.0097	0.0195
	Level 3	5.4sec	0.6757	0.7972	0.8392	0.8794	0.6759	0.7972	0.8391	0.8792	0.7633	0.8188	0.8567	0.9424	0.1246	0.7670	0.8202	0.8570	0.1206	0.0138	0.0096	0.0182
1	**Level 4**	10.8sec	0.7367	0.8474	0.8872	0.9223	0.7362	0.8475	0.8872	0.9223	0.8204	0.8702	0.9033	0.9688	0.1098	0.8214	0.8708	0.9039	0.1288	0.0127	0.0086	0.0162
Year	**Level 5**	21.5sec	0.7884	0.8868	0.9189	0.9479	0.7891	0.8868	0.9190	0.9480	0.8660	0.9078	0.9299	0.9814	0.1240	0.8662	0.9078	0.9301	0.1262	0.0115	0.0068	0.0132
before	**Level 6**	43.1sec	0.8340	0.9179	0.9432	0.9649	0.8332	0.9179	0.9432	0.9649	0.8991	0.9332	0.9522	0.9889	0.2080	0.8999	0.9333	0.9526	0.1196	0.0098	0.0052	0.0100
	Level 7	1.4min	0.8693	0.9426	0.9604	0.9759	0.8682	0.9425	0.9604	0.9759	0.9300	0.9547	0.9669	0.9931	0.3077	0.9303	0.9548	0.9671	0.1109	0.0073	0.0038	0.0073
	Level 8	2.9min	0.8940	0.9582	0.9712	0.9827	0.8935	0.9582	0.9712	0.9827	0.9486	0.9658	0.9762	0.9953	0.3988	0.9493	0.9660	0.9763	0.0985	0.0048	0.0029	0.0054
	Level 9	5.7min	0.8990	0.9640	0.9753	0.9852	0.8985	0.9640	0.9753	0.9852	0.9556	0.9705	0.9797	0.9962	0.4911	0.9558	0.9706	0.9798	0.0921	0.0046	0.0025	0.0046

Table A.22: EDH1 Other Results Table

EDH1	Ask Variance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	11.6sec	1.4963	1.5955	1.9262	3.6821	1.4963	1.5953	1.9280	3.6944	1.5309	1.7041	2.0818	5.0000	1.4401	1.5580	1.8508	2.1554	0.0345	0.0620	0.1055	1.1657
	Level 2	23.3sec	1.2497	1.3720	1.5747	6.3541	1.2502	1.3721	1.5749	6.3525	1.2926	1.4312	1.6395	17.0000	1.1799	1.3097	1.4703	1.9347	0.0451	0.0453	0.0796	6.0570
	Level 3	46.6sec	1.1511	1.2509	1.3824	15.4509	1.1509	1.2509	1.3828	15.2959	1.2061	1.2724	1.4513	65.0000	1.0939	1.2361	1.2965	1.5523	0.0544	0.0142	0.0699	27.7975
30	**Level 4**	1.6min	1.0980	1.1779	1.3082	53.8211	1.0983	1.1776	1.3103	53.1995	1.1459	1.1984	1.4259	257.0000	1.0444	1.1550	1.2531	1.4328	0.0370	0.0199	0.0790	113.9292
days	**Level 5**	3.1min	1.0761	1.1486	1.2316	191.5651	1.0767	1.1488	1.2319	193.2922	1.1107	1.1687	1.3233	958.7579	1.0586	1.1164	1.1958	1.3511	0.0235	0.0212	0.0611	427.9086
before	**Level 6**	6.2min	1.0531	1.1179	1.1637	167.7484	1.0530	1.1177	1.1623	161.0670	1.0725	1.1402	1.2073	797.4716	1.0334	1.0937	1.1434	1.2590	0.0158	0.0212	0.0303	355.7617
	Level 7	12.4min	1.0377	1.0906	1.1258	218.2786	1.0378	1.0908	1.1257	219.5738	1.0501	1.1067	1.1440	1090.2603	1.0270	1.0643	1.1147	1.2104	0.0102	0.0178	0.0129	486.7293
	Level 8	24.8min	1.0286	1.0680	1.1035	233.9167	1.0286	1.0679	1.1031	232.7610	1.0448	1.0767	1.1138	1156.7544	1.0202	1.0527	1.0791	1.1667	0.0100	0.0094	0.0162	516.5285
	Level 9	49.7min	1.0243	1.0592	1.1000	531.3740	1.0242	1.0593	1.0994	530.3128	1.0424	1.0684	1.1185	2644.6460	1.0159	1.0477	1.0721	1.1700	0.0110	0.0080	0.0228	1181.9484
	Level 1	5.4sec	1.5094	1.6132	1.7710	3.4475	1.5103	1.6129	1.7706	3.4490	1.5580	1.6724	1.8691	5.0000	1.4401	1.5582	1.6769	1.9104	0.0344	0.0414	0.0682	1.3667
	Level 2	10.8sec	1.2723	1.4091	1.5439	7.1845	1.2719	1.4094	1.5437	7.1246	1.3551	1.4415	1.6395	17.0000	1.1799	1.3677	1.4543	1.6410	0.0549	0.0291	0.0794	6.9053
	Level 3	21.6sec	1.1712	1.2677	1.4026	16.1233	1.1711	1.2675	1.4022	16.0078	1.2378	1.3004	1.5067	65.0000	1.0939	1.2406	1.3071	1.5167	0.0538	0.0189	0.0588	24.2436
60	**Level 4**	43.3sec	1.1127	1.1871	1.2964	51.4016	1.1125	1.1868	1.2959	50.8840	1.1550	1.2105	1.3825	257.0000	1.0444	1.1575	1.2379	1.4259	0.0330	0.0178	0.0511	99.2594
days	**Level 5**	1.4min	1.0776	1.1398	1.2191	145.8949	1.0777	1.1400	1.2196	145.6501	1.1107	1.1644	1.3030	958.7579	1.0532	1.1164	1.1687	1.3233	0.0207	0.0172	0.0468	322.0273
before	**Level 6**	2.9min	1.0506	1.0983	1.1564	190.4808	1.0506	1.0984	1.1563	191.5067	1.0725	1.1239	1.2073	1099.9268	1.0334	1.0740	1.1241	1.2556	0.0155	0.0161	0.0275	405.3943
	Level 7	5.8min	1.0326	1.0690	1.1144	389.7008	1.0324	1.0688	1.1143	390.3449	1.0471	1.0817	1.1441	2798.2683	1.0187	1.0496	1.0826	1.1700	0.0103	0.0121	0.0196	912.5857
	Level 8	11.5min	1.0217	1.0513	1.0862	897.2863	1.0217	1.0513	1.0862	916.3443	1.0313	1.0601	1.1122	7993.1951	1.0116	1.0372	1.0656	1.1138	0.0071	0.0074	0.0189	2512.9090
	Level 9	23.1min	1.0173	1.0424	1.0750	1535.5368	1.0173	1.0422	1.0748	1544.5795	1.0281	1.0509	1.1178	12788.5122	1.0084	1.0314	1.0551	1.1185	0.0068	0.0064	0.0187	4037.0914
	Level 1	3.2sec	1.5093	1.6082	1.7309	2.9154	1.5099	1.6081	1.7310	2.9303	1.5489	1.6654	1.8146	5.0000	1.4401	1.5543	1.6724	1.8292	0.0278	0.0407	0.0442	1.3339
	Level 2	6.4sec	1.2809	1.3961	1.5117	5.2107	1.2808	1.3959	1.5110	5.3091	1.3473	1.4350	1.6307	17.0000	1.1799	1.3551	1.4409	1.6341	0.0459	0.0292	0.0729	6.1416
	Level 3	12.9sec	1.1746	1.2599	1.3565	11.2316	1.1746	1.2601	1.3561	11.1781	1.2245	1.2976	1.4262	65.0000	1.0939	1.2345	1.2988	1.4429	0.0424	0.0201	0.0464	20.6840
3	**Level 4**	25.8sec	1.1158	1.1760	1.2507	34.5040	1.1157	1.1762	1.2505	34.3865	1.1511	1.2057	1.2948	257.0000	1.0444	1.1546	1.2059	1.3115	0.0289	0.0174	0.0279	83.1680
months	**Level 5**	51.6sec	1.0781	1.1243	1.1768	95.8178	1.0779	1.1244	1.1766	97.5299	1.0978	1.1461	1.2266	958.7579	1.0436	1.1036	1.1522	1.2365	0.0189	0.0145	0.0214	267.6326
before	**Level 6**	1.7min	1.0504	1.0840	1.1250	125.5019	1.0502	1.0840	1.1249	128.0687	1.0653	1.0987	1.1513	1099.9268	1.0222	1.0663	1.0995	1.1533	0.0143	0.0114	0.0176	338.0440
	Level 7	3.4min	1.0322	1.0548	1.0892	256.2740	1.0321	1.0548	1.0896	260.6077	1.0435	1.0653	1.1147	2798.2683	1.0119	1.0435	1.0672	1.1197	0.0101	0.0081	0.0147	755.9415
	Level 8	6.9min	1.0210	1.0377	1.0637	616.3745	1.0209	1.0377	1.0638	611.2640	1.0289	1.0491	1.0791	7993.1951	1.0079	1.0290	1.0503	1.0872	0.0067	0.0063	0.0099	2063.7107
	Level 9	13.8min	1.0155	1.0305	1.0534	1042.6547	1.0156	1.0305	1.0533	1030.0835	1.0214	1.0388	1.0721	12788.5122	1.0084	1.0220	1.0424	1.0779	0.0045	0.0044	0.0097	3323.3390
	Level 1	1.9sec	1.4952	1.5648	1.6388	2.0349	1.4952	1.5648	1.6389	2.0341	1.5345	1.5931	1.6837	5.0000	1.4121	1.5351	1.5938	1.6841	0.0285	0.0171	0.0267	0.8170
	Level 2	3.8sec	1.2669	1.3414	1.4098	2.4199	1.2667	1.3414	1.4098	2.4181	1.3097	1.3696	1.4501	17.0000	1.1799	1.3102	1.3697	1.4521	0.0322	0.0172	0.0257	3.3154
	Level 3	7.6sec	1.1571	1.2178	1.2729	3.6071	1.1571	1.2179	1.2729	3.6744	1.1952	1.2406	1.3027	65.0000	1.0939	1.1955	1.2456	1.3062	0.0274	0.0145	0.0174	10.6108
1	**Level 4**	15.3sec	1.0993	1.1439	1.1873	8.8305	1.0993	1.1439	1.1874	9.0277	1.1256	1.1649	1.2155	257.0000	1.0444	1.1259	1.1650	1.2176	0.0198	0.0112	0.0151	41.6783
Year	**Level 5**	30.5sec	1.0655	1.0966	1.1303	24.1680	1.0655	1.0966	1.1303	23.7668	1.0844	1.1090	1.1538	958.7579	1.0280	1.0844	1.1096	1.1540	0.0137	0.0074	0.0124	132.6997
before	**Level 6**	1min	1.0428	1.0651	1.0887	30.1177	1.0427	1.0650	1.0887	30.8824	1.0559	1.0740	1.1012	1099.9268	1.0183	1.0565	1.0748	1.1017	0.0095	0.0050	0.0082	168.3194
	Level 7	2min	1.0280	1.0431	1.0589	63.3032	1.0280	1.0431	1.0589	61.9162	1.0362	1.0501	1.0696	2798.2683	1.0119	1.0362	1.0502	1.0698	0.0065	0.0039	0.0059	373.1828
	Level 8	4.1min	1.0188	1.0293	1.0403	142.0639	1.0188	1.0294	1.0403	144.0808	1.0247	1.0342	1.0475	7993.1951	1.0079	1.0248	1.0344	1.0483	0.0045	0.0029	0.0038	1007.1234
	Level 9	8.1min	1.0148	1.0235	1.0328	242.3191	1.0148	1.0235	1.0328	242.2347	1.0194	1.0279	1.0380	12788.5122	1.0065	1.0194	1.0281	1.0388	0.0035	0.0025	0.0027	1627.0770

Table A.22: EDH1 Other Results Table –Continued

EDH1 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	12.6sec	1.5014	1.5930	1.8470	3.6770	1.5013	1.5932	1.8481	3.6891	1.5409	1.7252	1.9178	5.0000	1.4514	1.5530	1.7843	1.9565	0.0335	0.0740	0.0610	1.2765
	Level 2	25.2sec	1.2495	1.3719	1.5321	6.9499	1.2500	1.3709	1.5297	6.8213	1.2830	1.4640	1.6330	17.0000	1.1921	1.2901	1.4657	1.7228	0.0382	0.0649	0.0799	6.0261
	Level 3	50.3sec	1.1370	1.2478	1.3408	15.6445	1.1368	1.2479	1.3407	16.0632	1.1694	1.2769	1.3654	65.0000	1.0951	1.2065	1.3015	1.4942	0.0373	0.0265	0.0274	27.4419
30	**Level 4**	1.7min	1.0918	1.1637	1.2332	53.8618	1.0918	1.1634	1.2333	53.5058	1.1187	1.1778	1.2780	257.0000	1.0462	1.1382	1.1843	1.3291	0.0300	0.0161	0.0513	113.7619
days	**Level 5**	3.4min	1.0710	1.1132	1.1917	142.8960	1.0712	1.1136	1.1916	142.6457	1.0957	1.1337	1.2343	702.8427	1.0561	1.0978	1.1449	1.2354	0.0161	0.0145	0.0420	313.1635
before	**Level 6**	6.7min	1.0531	1.0865	1.1518	379.5139	1.0535	1.0864	1.1517	379.9093	1.0741	1.1052	1.1737	1887.9213	1.0344	1.0779	1.1324	1.1964	0.0168	0.0112	0.0186	843.0077
	Level 7	13.4min	1.0416	1.0777	1.1306	792.6539	1.0416	1.0778	1.1310	775.6584	1.0605	1.0960	1.1465	3866.8876	1.0269	1.0629	1.1001	1.1825	0.0160	0.0140	0.0213	1728.0514
	Level 8	26.8min	1.0353	1.0760	1.1238	1683.1432	1.0356	1.0760	1.1235	1769.7617	1.0612	1.0859	1.1551	8837.3146	1.0177	1.0643	1.0914	1.1945	0.0179	0.0087	0.0297	3950.8831
	Level 9	53.7min	1.0385	1.0799	1.1461	4134.7347	1.0381	1.0800	1.1450	4126.4540	1.0630	1.0860	1.2115	20619.0674	1.0118	1.0662	1.1015	1.2859	0.0229	0.0079	0.0535	9219.6517
	Level 1	5.4sec	1.5130	1.6114	1.7525	3.4220	1.5134	1.6114	1.7527	3.4264	1.5530	1.6432	1.8196	5.0000	1.4514	1.5581	1.6841	1.8784	0.0316	0.0345	0.0448	1.4321
	Level 2	10.7sec	1.2653	1.4065	1.5018	7.3658	1.2652	1.4058	1.5020	7.3613	1.3374	1.4504	1.5536	17.0000	1.1921	1.3556	1.4589	1.6330	0.0420	0.0324	0.0370	6.8666
	Level 3	21.5sec	1.1599	1.2672	1.3512	21.2186	1.1596	1.2675	1.3514	21.2928	1.2288	1.3010	1.4191	65.0000	1.0951	1.2331	1.3015	1.4253	0.0445	0.0257	0.0367	29.4687
60	**Level 4**	43sec	1.1061	1.1704	1.2547	62.3299	1.1057	1.1703	1.2543	61.3326	1.1382	1.1843	1.2902	257.0000	1.0462	1.1439	1.1935	1.2988	0.0273	0.0119	0.0343	99.6703
days	**Level 5**	1.4min	1.0740	1.1185	1.1898	136.2412	1.0739	1.1188	1.1898	133.3640	1.0978	1.1426	1.2263	702.8427	1.0507	1.0986	1.1449	1.2343	0.0176	0.0150	0.0350	240.5060
before	**Level 6**	2.9min	1.0493	1.0867	1.1417	319.8357	1.0494	1.0868	1.1415	316.2060	1.0721	1.1052	1.1737	1887.9213	1.0287	1.0741	1.1061	1.1952	0.0157	0.0108	0.0251	632.3635
	Level 7	5.7min	1.0329	1.0677	1.1121	634.6128	1.0330	1.0677	1.1119	651.2476	1.0495	1.0788	1.1465	3866.8876	1.0141	1.0565	1.0860	1.1467	0.0122	0.0080	0.0232	1356.0739
	Level 8	11.5min	1.0237	1.0571	1.0947	1367.9120	1.0236	1.0570	1.0949	1399.4813	1.0344	1.0673	1.1414	8837.3146	1.0121	1.0434	1.0719	1.1551	0.0086	0.0083	0.0206	3014.1823
	Level 9	22.9min	1.0218	1.0567	1.0972	3021.3779	1.0216	1.0567	1.0972	3052.2270	1.0331	1.0799	1.1653	20619.0674	1.0118	1.0336	1.0812	1.2115	0.0083	0.0130	0.0258	6868.7552
	Level 1	3.2sec	1.5104	1.6068	1.7274	2.9254	1.5102	1.6071	1.7274	2.9080	1.5439	1.6459	1.7883	5.0000	1.4514	1.5477	1.6649	1.8107	0.0258	0.0377	0.0444	1.3773
	Level 2	6.3sec	1.2768	1.3864	1.4860	5.4330	1.2766	1.3867	1.4860	5.4583	1.3374	1.4295	1.5536	17.0000	1.1921	1.3470	1.4303	1.5591	0.0385	0.0265	0.0411	6.1703
	Level 3	12.6sec	1.1680	1.2518	1.3273	14.6060	1.1680	1.2520	1.3273	14.7025	1.2237	1.2912	1.3765	65.0000	1.0951	1.2267	1.2916	1.3957	0.0387	0.0216	0.0315	25.5212
3	**Level 4**	25.2sec	1.1116	1.1653	1.2281	41.3946	1.1116	1.1654	1.2278	41.3475	1.1456	1.1802	1.2772	257.0000	1.0462	1.1483	1.1813	1.2780	0.0267	0.0097	0.0338	85.1007
months	**Level 5**	50.4sec	1.0759	1.1115	1.1581	88.9056	1.0760	1.1115	1.1578	89.3350	1.0978	1.1278	1.2207	702.8427	1.0436	1.0986	1.1296	1.2231	0.0185	0.0118	0.0278	203.3197
before	**Level 6**	1.7min	1.0493	1.0780	1.1154	207.1743	1.0491	1.0779	1.1155	211.2052	1.0668	1.0912	1.1579	1887.9213	1.0222	1.0676	1.0951	1.1599	0.0144	0.0072	0.0214	529.8051
	Level 7	3.4min	1.0320	1.0561	1.0867	442.0011	1.0320	1.0562	1.0868	434.5511	1.0435	1.0651	1.1182	3866.8876	1.0119	1.0451	1.0676	1.1337	0.0106	0.0067	0.0158	1132.6060
	Level 8	6.7min	1.0227	1.0412	1.0715	932.8788	1.0226	1.0413	1.0717	933.3631	1.0311	1.0520	1.0914	8837.3146	1.0075	1.0312	1.0575	1.0915	0.0078	0.0068	0.0118	2511.1983
	Level 9	13.4min	1.0193	1.0364	1.0699	2053.7782	1.0194	1.0364	1.0700	2035.1946	1.0270	1.0490	1.0860	20619.0674	1.0068	1.0300	1.0507	1.1015	0.0064	0.0060	0.0128	5704.9404
	Level 1	1.9sec	1.4950	1.5641	1.6370	2.0378	1.4949	1.5641	1.6371	2.0348	1.5328	1.5958	1.6762	5.0000	1.4121	1.5334	1.5958	1.6795	0.0281	0.0164	0.0233	0.8330
	Level 2	3.8sec	1.2653	1.3380	1.4060	2.4464	1.2654	1.3379	1.4060	2.4428	1.3079	1.3655	1.4477	17.0000	1.1921	1.3079	1.3657	1.4480	0.0299	0.0174	0.0242	3.3622
	Level 3	7.7sec	1.1540	1.2125	1.2674	4.4554	1.1540	1.2126	1.2674	4.4849	1.1881	1.2371	1.2959	65.0000	1.0951	1.1889	1.2379	1.2968	0.0250	0.0151	0.0185	13.3121
1	**Level 4**	15.3sec	1.0966	1.1377	1.1770	10.5194	1.0967	1.1375	1.1769	10.6444	1.1197	1.1571	1.2006	257.0000	1.0462	1.1197	1.1576	1.2009	0.0189	0.0123	0.0127	43.6179
Year	**Level 5**	30.6sec	1.0628	1.0908	1.1196	21.2185	1.0628	1.0908	1.1197	21.8317	1.0791	1.1028	1.1395	702.8427	1.0282	1.0793	1.1034	1.1398	0.0127	0.0073	0.0100	102.9732
before	**Level 6**	1min	1.0410	1.0609	1.0821	50.3101	1.0411	1.0609	1.0821	50.3568	1.0531	1.0706	1.0929	1887.9213	1.0179	1.0531	1.0712	1.0945	0.0090	0.0052	0.0065	265.3716
	Level 7	2min	1.0273	1.0419	1.0571	99.7779	1.0272	1.0420	1.0571	102.6796	1.0348	1.0494	1.0659	3866.8876	1.0119	1.0353	1.0495	1.0664	0.0062	0.0040	0.0048	565.0814
	Level 8	4.1min	1.0195	1.0309	1.0422	215.9211	1.0195	1.0309	1.0422	219.5753	1.0253	1.0364	1.0492	8837.3146	1.0075	1.0254	1.0366	1.0496	0.0047	0.0031	0.0037	1248.9204
	Level 9	8.2min	1.0174	1.0277	1.0381	467.2206	1.0174	1.0277	1.0380	477.8167	1.0223	1.0327	1.0444	20619.0674	1.0068	1.0224	1.0328	1.0448	0.0042	0.0030	0.0035	2826.0898

Table A.22: EDH1 Other Results Table –Continued

EDH1	Bid Ask	Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	12.1sec	1.5002	1.5874	1.8889	3.6469	1.5004	1.5859	1.8888	3.6813	1.5332	1.7076	1.9485	5.0000	1.4445	1.5354	1.8344	2.0115	0.0357	0.0691	0.0518	1.2346
	Level 2	24.2sec	1.2500	1.3517	1.5311	6.5067	1.2507	1.3518	1.5310	6.5181	1.2917	1.4335	1.5760	17.0000	1.1818	1.2933	1.4667	1.8031	0.0446	0.0564	0.0529	6.0345
	Level 3	48.4sec	1.1394	1.2295	1.3443	15.4867	1.1381	1.2297	1.3435	15.4000	1.1778	1.2715	1.3752	65.0000	1.0868	1.1899	1.2725	1.3830	0.0434	0.0331	0.0486	27.7475
30	**Level 4**	1.6min	1.0852	1.1494	1.2233	52.0304	1.0861	1.1492	1.2238	53.0942	1.1198	1.1729	1.2806	257.0000	1.0451	1.1333	1.1738	1.3165	0.0291	0.0169	0.0518	113.9878
days	**Level 5**	3.2min	1.0661	1.1019	1.1550	162.3403	1.0664	1.1017	1.1551	164.6187	1.0899	1.1085	1.2105	815.8143	1.0492	1.0919	1.1102	1.2294	0.0181	0.0063	0.0424	364.0296
before	**Level 6**	6.5min	1.0428	1.0672	1.1006	33.2735	1.0429	1.0673	1.1005	34.4879	1.0543	1.0719	1.1266	165.1916	1.0246	1.0614	1.0765	1.1409	0.0123	0.0046	0.0206	73.0687
	Level 7	12.9min	1.0267	1.0461	1.0759	128.6538	1.0268	1.0460	1.0760	130.7268	1.0333	1.0530	1.0926	646.9170	1.0183	1.0392	1.0640	1.1013	0.0064	0.0058	0.0123	288.5600
	Level 8	25.8min	1.0176	1.0321	1.0541	153.0627	1.0176	1.0321	1.0541	157.5894	1.0236	1.0348	1.0597	782.1114	1.0119	1.0275	1.0425	1.0686	0.0050	0.0032	0.0080	349.1188
	Level 9	51.7min	1.0107	1.0257	1.0420	291.7860	1.0107	1.0258	1.0420	297.4140	1.0168	1.0284	1.0506	1481.4234	1.0053	1.0229	1.0314	1.0686	0.0045	0.0027	0.0081	661.8815
	Level 1	5.4sec	1.5064	1.6096	1.7560	3.4294	1.5065	1.6097	1.7561	3.4268	1.5394	1.6641	1.8586	5.0000	1.4445	1.5552	1.6649	1.9135	0.0292	0.0400	0.0667	1.4096
	Level 2	10.8sec	1.2600	1.3930	1.5044	7.2689	1.2596	1.3931	1.5042	7.1891	1.3047	1.4335	1.5725	17.0000	1.1818	1.3111	1.4411	1.5760	0.0402	0.0410	0.0480	6.9023
	Level 3	21.6sec	1.1531	1.2565	1.3442	17.3244	1.1531	1.2564	1.3445	17.2672	1.2028	1.2947	1.3830	65.0000	1.0868	1.2322	1.2968	1.3972	0.0410	0.0209	0.0323	26.1400
60	**Level 4**	43.1sec	1.0865	1.1562	1.2280	30.7789	1.0860	1.1561	1.2281	30.0744	1.1198	1.1730	1.2806	257.0000	1.0000	1.1333	1.1738	1.2806	0.0380	0.0155	0.0368	80.1636
days	**Level 5**	1.4min	-49.3730	1.1029	1.1529	84.2095	-50.1411	1.1028	1.1535	85.2012	1.0834	1.1172	1.2019	815.8143	-511.0000	1.0899	1.1197	1.2035	161.9293	0.0083	0.0291	256.7948
before	**Level 6**	2.9min	1.0358	1.0670	1.0984	18.2650	1.0357	1.0670	1.0986	18.1239	1.0543	1.0765	1.1266	165.1916	1.0000	1.0614	1.0767	1.1300	0.0161	0.0050	0.0178	51.6793
	Level 7	5.7min	1.0178	1.0403	1.0610	67.7920	1.0178	1.0404	1.0611	65.9749	1.0327	1.0463	1.0769	646.9170	1.0000	1.0330	1.0511	1.0854	0.0108	0.0047	0.0086	204.1230
	Level 8	11.5min	1.0103	1.0266	1.0398	77.0880	1.0103	1.0267	1.0398	79.3538	1.0163	1.0323	1.0552	782.1114	1.0000	1.0219	1.0332	1.0573	0.0060	0.0038	0.0086	246.9241
	Level 9	23min	1.0059	1.0165	1.0283	153.2417	1.0059	1.0165	1.0284	149.2447	1.0118	1.0229	1.0373	1481.4234	1.0000	1.0119	1.0230	1.0411	0.0036	0.0040	0.0048	468.0800
	Level 1	3.2sec	1.5067	1.6048	1.7189	2.9120	1.5064	1.6048	1.7189	2.9123	1.5394	1.6641	1.7875	5.0000	1.4445	1.5423	1.6649	1.8210	0.0250	0.0418	0.0444	1.3589
	Level 2	6.4sec	1.2709	1.3777	1.4845	5.3242	1.2710	1.3773	1.4838	5.3390	1.3111	1.4246	1.5725	17.0000	1.1818	1.3154	1.4248	1.5743	0.0368	0.0309	0.0518	6.1615
	Level 3	12.8sec	1.1617	1.2413	1.3196	11.6311	1.1618	1.2410	1.3198	11.9977	1.2028	1.2715	1.3752	65.0000	1.0868	1.2083	1.2725	1.3830	0.0360	0.0184	0.0370	22.3332
3	**Level 4**	25.5sec	1.0957	1.1497	1.2061	20.9494	1.0953	1.1496	1.2060	20.4882	1.1295	1.1695	1.2557	257.0000	1.0000	1.1333	1.1729	1.2596	0.0345	0.0123	0.0286	65.7880
months	**Level 5**	51sec	-35.3923	1.0964	1.1312	55.9599	-33.0710	1.0964	1.1312	57.2057	1.0831	1.1085	1.1588	815.8143	-511.0000	1.0834	1.1102	1.1612	132.2151	0.0079	0.0158	209.9327
before	**Level 6**	1.7min	1.0369	1.0612	1.0847	12.6575	1.0370	1.0612	1.0846	12.4609	1.0527	1.0682	1.1019	165.1916	1.0000	1.0543	1.0713	1.1065	0.0141	0.0046	0.0092	42.2568
	Level 7	3.4min	1.0187	1.0368	1.0530	44.7279	1.0188	1.0369	1.0531	44.3426	1.0293	1.0434	1.0640	646.9170	1.0000	1.0327	1.0435	1.0661	0.0093	0.0034	0.0061	166.6979
	Level 8	6.8min	1.0107	1.0221	1.0329	53.5615	1.0106	1.0221	1.0329	53.2526	1.0160	1.0265	1.0391	782.1114	1.0000	1.0163	1.0275	1.0425	0.0052	0.0026	0.0031	201.6329
	Level 9	13.6min	1.0060	1.0126	1.0228	94.8090	1.0060	1.0126	1.0228	99.8412	1.0096	1.0153	1.0283	1481.4234	1.0000	1.0103	1.0168	1.0284	0.0029	0.0013	0.0035	382.2033
	Level 1	1.9sec	1.4917	1.5593	1.6317	2.0264	1.4917	1.5593	1.6317	2.0254	1.5287	1.5845	1.6751	5.0000	1.4109	1.5316	1.5882	1.6777	0.0270	0.0162	0.0261	0.8259
	Level 2	3.8sec	1.2606	1.3290	1.3947	2.4066	1.2605	1.3291	1.3947	2.4046	1.2988	1.3566	1.4335	17.0000	1.1818	1.2995	1.3572	1.4349	0.0295	0.0172	0.0240	3.3354
	Level 3	7.6sec	1.1485	1.2028	1.2515	3.7834	1.1486	1.2028	1.2516	3.8374	1.1830	1.2261	1.2755	65.0000	1.0868	1.1835	1.2264	1.2766	0.0243	0.0130	0.0157	11.4696
1	**Level 4**	15.3sec	1.0887	1.1257	1.1606	5.8556	1.0886	1.1257	1.1606	5.7368	1.1114	1.1432	1.1844	257.0000	1.0000	1.1124	1.1437	1.1850	0.0203	0.0096	0.0113	32.0852
Year	**Level 5**	30.6sec	-6.9211	1.0788	1.1028	13.7200	-6.9451	1.0788	1.1028	14.2812	1.0701	1.0899	1.1194	815.8143	-511.0000	1.0704	1.0912	1.1197	64.0070	0.0057	0.0078	101.8171
before	**Level 6**	1min	1.0334	1.0488	1.0645	3.7903	1.0333	1.0488	1.0645	3.7540	1.0426	1.0552	1.0727	165.1916	1.0000	1.0427	1.0552	1.0737	0.0082	0.0040	0.0049	20.5033
	Level 7	2min	1.0192	1.0291	1.0387	10.7150	1.0192	1.0291	1.0387	11.2001	1.0250	1.0341	1.0438	646.9170	1.0000	1.0250	1.0341	1.0441	0.0054	0.0027	0.0032	80.7263
	Level 8	4.1min	1.0111	1.0172	1.0230	12.6865	1.0111	1.0172	1.0230	13.2719	1.0148	1.0202	1.0261	782.1114	1.0000	1.0149	1.0202	1.0262	0.0032	0.0017	0.0018	97.6306
	Level 9	8.2min	1.0067	1.0106	1.0141	24.2519	1.0067	1.0106	1.0141	24.1824	1.0090	1.0121	1.0162	1481.4234	1.0000	1.0091	1.0121	1.0165	0.0019	0.0009	0.0012	185.0465

Table A.22: EDH1 Other Results Table –Continued

EDH1 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	12.1sec	0.3057	0.5494	0.6409	0.6666	0.3054	0.5492	0.6410	0.6663	0.5111	0.5796	0.6439	0.6890	0.2000	0.5214	0.6381	0.6490	0.1283	0.0230	0.0025	0.0150
	Level 2	24.2sec	0.2586	0.6609	0.7428	0.8011	0.2553	0.6606	0.7427	0.8006	0.5804	0.6830	0.7752	0.8388	0.0588	0.6124	0.7177	0.7794	0.2003	0.0316	0.0249	0.0250
	Level 3	48.4sec	0.2932	0.7535	0.8064	0.8799	0.2881	0.7535	0.8063	0.8804	0.6693	0.7832	0.8288	0.9131	0.0154	0.7324	0.7924	0.8552	0.2470	0.0213	0.0160	0.0292
30	**Level 4**	1.6min	0.3619	0.8197	0.8621	0.9166	0.3625	0.8193	0.8623	0.9165	0.7524	0.8490	0.8786	0.9559	0.0039	0.7825	0.8517	0.8939	0.2759	0.0337	0.0121	0.0257
days	**Level 5**	3.2min	0.4063	0.8488	0.9021	0.9336	0.4055	0.8484	0.9021	0.9337	0.8095	0.8821	0.9109	0.9469	0.0014	0.8102	0.8912	0.9127	0.3146	0.0319	0.0087	0.0139
before	**Level 6**	6.5min	0.4384	0.8756	0.9244	0.9495	0.4322	0.8757	0.9245	0.9494	0.8358	0.9048	0.9278	0.9667	0.0005	0.8520	0.9202	0.9310	0.3479	0.0203	0.0038	0.0151
	Level 7	12.9min	0.4514	0.8901	0.9319	0.9603	0.4526	0.8900	0.9319	0.9603	0.8457	0.9124	0.9408	0.9738	0.0003	0.8722	0.9208	0.9429	0.3623	0.0193	0.0096	0.0147
	Level 8	25.8min	0.4746	0.8968	0.9317	0.9659	0.4681	0.8966	0.9316	0.9658	0.8372	0.9209	0.9396	0.9826	0.0001	0.8657	0.9233	0.9424	0.3739	0.0245	0.0067	0.0165
	Level 9	51.7min	0.4504	0.8830	0.9274	0.9639	0.4491	0.8840	0.9272	0.9636	0.7776	0.9208	0.9379	0.9883	0.0000	0.8254	0.9227	0.9408	0.3635	0.0406	0.0072	0.0212
	Level 1	5.4sec	0.3468	0.5709	0.6209	0.6611	0.3475	0.5709	0.6208	0.6610	0.5324	0.5938	0.6418	0.6890	0.2000	0.5496	0.6086	0.6439	0.1506	0.0146	0.0135	0.0139
	Level 2	10.8sec	0.3086	0.6659	0.7117	0.7911	0.3061	0.6661	0.7117	0.7912	0.6124	0.6855	0.7377	0.8388	0.0588	0.6436	0.6895	0.7477	0.2354	0.0164	0.0165	0.0264
	Level 3	21.6sec	0.3188	0.7404	0.7893	0.8637	0.3200	0.7404	0.7892	0.8635	0.7016	0.7683	0.8110	0.9131	0.0154	0.7047	0.7686	0.8138	0.2833	0.0201	0.0160	0.0333
60	**Level 4**	43.1sec	0.3654	0.7977	0.8545	0.9048	0.3649	0.7978	0.8546	0.9049	0.7700	0.8379	0.8742	0.9559	0.0039	0.7751	0.8444	0.8786	0.3152	0.0223	0.0088	0.0229
days	**Level 5**	1.4min	0.3915	0.8410	0.8940	0.9313	0.3907	0.8411	0.8940	0.9314	0.8102	0.8734	0.9102	0.9517	0.0014	0.8155	0.8752	0.9109	0.3369	0.0248	0.0120	0.0152
before	**Level 6**	2.9min	0.4086	0.8764	0.9202	0.9532	0.4110	0.8765	0.9202	0.9531	0.8367	0.9040	0.9310	0.9721	0.0005	0.8520	0.9048	0.9328	0.3515	0.0194	0.0091	0.0143
	Level 7	5.7min	0.4348	0.8998	0.9366	0.9682	0.4369	0.8997	0.9367	0.9681	0.8720	0.9208	0.9465	0.9861	0.0003	0.8722	0.9270	0.9529	0.3657	0.0187	0.0071	0.0114
	Level 8	11.5min	0.4579	0.9136	0.9462	0.9770	0.4535	0.9136	0.9461	0.9770	0.8657	0.9329	0.9584	0.9880	0.0001	0.8761	0.9370	0.9668	0.3736	0.0169	0.0075	0.0082
	Level 9	23min	0.4403	0.9118	0.9464	0.9790	0.4432	0.9118	0.9464	0.9789	0.8254	0.9249	0.9675	0.9883	0.0000	0.8581	0.9261	0.9679	0.3653	0.0206	0.0117	0.0079
	Level 1	3.2sec	0.4099	0.5793	0.6226	0.6623	0.4101	0.5793	0.6226	0.6623	0.5523	0.6006	0.6461	0.6890	0.2000	0.5592	0.6076	0.6477	0.1522	0.0150	0.0148	0.0114
	Level 2	6.4sec	0.4070	0.6734	0.7216	0.7844	0.4064	0.6734	0.7214	0.7840	0.6414	0.6992	0.7424	0.8388	0.0588	0.6436	0.6995	0.7477	0.2398	0.0185	0.0137	0.0241
	Level 3	12.8sec	0.4316	0.7540	0.7989	0.8574	0.4339	0.7538	0.7989	0.8571	0.7165	0.7742	0.8152	0.9131	0.0154	0.7265	0.7745	0.8172	0.2835	0.0177	0.0137	0.0289
3	**Level 4**	25.5sec	0.4868	0.8150	0.8581	0.8999	0.4869	0.8151	0.8582	0.9001	0.7825	0.8465	0.8709	0.9559	0.0039	0.7830	0.8473	0.8729	0.3115	0.0223	0.0072	0.0222
months	**Level 5**	51sec	0.5267	0.8639	0.8996	0.9298	0.5222	0.8642	0.8998	0.9296	0.8176	0.8853	0.9102	0.9582	0.0014	0.8192	0.8867	0.9109	0.3325	0.0201	0.0095	0.0161
before	**Level 6**	1.7min	0.5542	0.8966	0.9277	0.9534	0.5515	0.8968	0.9277	0.9533	0.8621	0.9131	0.9367	0.9783	0.0005	0.8637	0.9164	0.9374	0.3495	0.0169	0.0062	0.0132
	Level 7	3.4min	0.5813	0.9203	0.9469	0.9691	0.5794	0.9203	0.9468	0.9691	0.8820	0.9367	0.9568	0.9883	0.0003	0.8943	0.9389	0.9583	0.3602	0.0132	0.0060	0.0100
	Level 8	6.8min	0.5992	0.9332	0.9604	0.9780	0.5984	0.9332	0.9604	0.9779	0.9162	0.9457	0.9697	0.9926	0.0001	0.9163	0.9506	0.9698	0.3674	0.0102	0.0062	0.0075
	Level 9	13.6min	0.5932	0.9346	0.9650	0.9811	0.5908	0.9347	0.9649	0.9810	0.9078	0.9518	0.9708	0.9933	0.0000	0.9208	0.9533	0.9737	0.3642	0.0112	0.0055	0.0062
	Level 1	1.9sec	0.5325	0.6112	0.6396	0.6691	0.5329	0.6112	0.6396	0.6692	0.5954	0.6266	0.6522	0.7082	0.2000	0.5966	0.6271	0.6524	0.1053	0.0088	0.0066	0.0127
	Level 2	3.8sec	0.6010	0.7118	0.7478	0.7908	0.6020	0.7118	0.7478	0.7907	0.6906	0.7323	0.7646	0.8388	0.0588	0.6908	0.7325	0.7646	0.1614	0.0125	0.0096	0.0189
	Level 3	7.6sec	0.6685	0.7894	0.8250	0.8670	0.6678	0.7895	0.8251	0.8670	0.7711	0.8084	0.8411	0.9131	0.0154	0.7717	0.8088	0.8417	0.1900	0.0117	0.0101	0.0191
1	**Level 4**	15.3sec	0.7301	0.8500	0.8794	0.9121	0.7298	0.8500	0.8794	0.9121	0.8327	0.8642	0.8931	0.9559	0.0039	0.8329	0.8646	0.8931	0.2016	0.0092	0.0094	0.0159
Year	**Level 5**	30.6sec	0.7774	0.8935	0.9170	0.9411	0.7788	0.8934	0.9170	0.9411	0.8774	0.9068	0.9265	0.9726	0.0014	0.8776	0.9068	0.9267	0.2133	0.0081	0.0061	0.0113
before	**Level 6**	1min	0.8141	0.9243	0.9427	0.9606	0.8147	0.9243	0.9427	0.9606	0.9136	0.9341	0.9495	0.9824	0.0005	0.9150	0.9341	0.9496	0.2214	0.0057	0.0045	0.0084
	Level 7	2min	0.8413	0.9461	0.9599	0.9736	0.8409	0.9461	0.9599	0.9736	0.9377	0.9529	0.9659	0.9883	0.0003	0.9382	0.9530	0.9663	0.2244	0.0043	0.0036	0.0060
	Level 8	4.1min	0.8572	0.9596	0.9701	0.9809	0.8568	0.9596	0.9701	0.9809	0.9527	0.9649	0.9753	0.9926	0.0001	0.9531	0.9650	0.9753	0.2258	0.0035	0.0028	0.0045
	Level 9	8.2min	0.8555	0.9635	0.9731	0.9830	0.8556	0.9635	0.9731	0.9829	0.9571	0.9683	0.9781	0.9933	0.0000	0.9575	0.9686	0.9781	0.2275	0.0033	0.0028	0.0041

Table A.23: EDH2 Other Results Table

EDH2 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.3sec	1.4870	1.5839	1.7984	2.5877	1.4875	1.5836	1.7977	2.5831	1.5167	1.6312	1.9626	3.7911	1.4309	1.5536	1.6459	1.9969	0.0344	0.0290	0.1147	0.7344
	Level 2	28.5sec	1.2496	1.3241	1.5465	3.4692	1.2488	1.3240	1.5454	3.4212	1.2838	1.3488	1.6973	8.8589	1.1774	1.2952	1.3810	1.9119	0.0427	0.0231	0.1267	3.0435
	Level 3	57.1sec	1.1416	1.1898	1.3825	3.7278	1.1413	1.1894	1.3836	3.7005	1.1682	1.2112	1.5871	11.4556	1.0897	1.1739	1.2232	1.6089	0.0337	0.0159	0.1361	4.3364
30	**Level 4**	1.9min	1.0860	1.1264	1.2490	3.1422	1.0856	1.1267	1.2480	3.1017	1.1103	1.1455	1.3569	9.3799	1.0512	1.1122	1.1512	1.4778	0.0257	0.0147	0.0912	3.5102
days	**Level 5**	3.8min	1.0548	1.0847	1.1736	2.4662	1.0548	1.0845	1.1739	2.5001	1.0686	1.1007	1.2725	7.0571	1.0393	1.0709	1.1162	1.3097	0.0138	0.0115	0.0657	2.5477
before	**Level 6**	7.6min	1.0389	1.0619	1.1215	1.8093	1.0390	1.0620	1.1211	1.8430	1.0478	1.0776	1.1860	4.2164	1.0283	1.0480	1.0792	1.2271	0.0092	0.0111	0.0449	1.3269
	Level 7	15.2min	1.0278	1.0475	1.0859	1.4846	1.0278	1.0475	1.0855	1.4840	1.0348	1.0601	1.1235	2.7507	1.0179	1.0349	1.0623	1.1534	0.0077	0.0097	0.0274	0.7081
	Level 8	30.4min	1.0195	1.0356	1.0615	1.3398	1.0195	1.0357	1.0617	1.3364	1.0267	1.0444	1.0881	2.2037	1.0116	1.0284	1.0445	1.0926	0.0063	0.0069	0.0195	0.4851
	Level 9	60.9min	1.0150	1.0291	1.0478	1.2989	1.0149	1.0291	1.0481	1.2962	1.0225	1.0359	1.0624	2.0981	1.0079	1.0238	1.0363	1.0692	0.0058	0.0053	0.0133	0.4486
	Level 1	6.5sec	1.5002	1.5819	1.6842	2.1867	1.5005	1.5822	1.6840	2.1832	1.5536	1.6267	1.7586	3.7911	1.4309	1.5555	1.6312	1.7701	0.0375	0.0276	0.0499	0.6046
	Level 2	13sec	1.2771	1.3512	1.4400	2.3963	1.2773	1.3510	1.4402	2.4493	1.3116	1.3726	1.5198	8.8589	1.1774	1.3191	1.3749	1.5200	0.0394	0.0180	0.0482	2.1389
	Level 3	26sec	1.1585	1.2145	1.3079	2.4841	1.1588	1.2143	1.3082	2.4781	1.1815	1.2517	1.3543	11.4556	1.0897	1.1851	1.2545	1.3646	0.0273	0.0182	0.0395	2.9828
60	**Level 4**	52sec	1.0976	1.1444	1.2017	2.1456	1.0974	1.1445	1.2017	2.1304	1.1144	1.1646	1.2342	9.3799	1.0512	1.1207	1.1714	1.2497	0.0214	0.0138	0.0288	2.4074
days	**Level 5**	1.7min	1.0606	1.0975	1.1347	1.7944	1.0607	1.0975	1.1349	1.8018	1.0741	1.1139	1.1638	7.0571	1.0393	1.0819	1.1159	1.1780	0.0123	0.0101	0.0161	1.7448
before	**Level 6**	3.5min	1.0419	1.0658	1.0890	1.4581	1.0420	1.0658	1.0892	1.4631	1.0541	1.0762	1.1087	4.2164	1.0283	1.0545	1.0775	1.1220	0.0091	0.0070	0.0109	0.9148
	Level 7	6.9min	1.0285	1.0433	1.0607	1.2735	1.0285	1.0434	1.0606	1.2716	1.0349	1.0480	1.0737	2.7507	1.0179	1.0352	1.0507	1.0740	0.0065	0.0037	0.0068	0.4921
	Level 8	13.9min	1.0188	1.0289	1.0408	1.1868	1.0187	1.0288	1.0409	1.1886	1.0246	1.0323	1.0453	2.2037	1.0116	1.0257	1.0327	1.0503	0.0046	0.0022	0.0048	0.3380
	Level 9	27.7min	1.0136	1.0222	1.0318	1.1650	1.0137	1.0222	1.0319	1.1620	1.0183	1.0254	1.0364	2.0981	1.0079	1.0188	1.0257	1.0373	0.0038	0.0022	0.0043	0.3116
	Level 1	4.2sec	1.5044	1.5956	1.7015	2.0919	1.5048	1.5958	1.7016	2.0943	1.5536	1.6436	1.7701	3.7911	1.4309	1.5555	1.6437	1.7756	0.0348	0.0332	0.0483	0.5340
	Level 2	8.4sec	1.2805	1.3622	1.4466	2.2284	1.2803	1.3620	1.4470	2.2311	1.3191	1.3934	1.5087	8.8589	1.1774	1.3244	1.3945	1.5198	0.0350	0.0192	0.0355	1.8466
	Level 3	16.8sec	1.1632	1.2262	1.3118	2.1774	1.1631	1.2262	1.3120	2.2110	1.1851	1.2598	1.3543	11.4556	1.0897	1.1909	1.2688	1.3646	0.0236	0.0197	0.0289	2.5628
3	**Level 4**	33.6sec	1.1025	1.1512	1.2108	1.9421	1.1027	1.1512	1.2107	1.9277	1.1207	1.1737	1.2497	9.3799	1.0512	1.1255	1.1748	1.2501	0.0196	0.0150	0.0255	2.0658
months	**Level 5**	1.1min	1.0657	1.1012	1.1397	1.6461	1.0656	1.1011	1.1396	1.6605	1.0862	1.1162	1.1644	7.0571	1.0393	1.0878	1.1233	1.1754	0.0131	0.0098	0.0136	1.4958
before	**Level 6**	2.2min	1.0446	1.0671	1.0913	1.3826	1.0446	1.0671	1.0911	1.3879	1.0571	1.0775	1.1087	4.2164	1.0283	1.0582	1.0776	1.1142	0.0090	0.0057	0.0100	0.7850
	Level 7	4.5min	1.0294	1.0433	1.0604	1.2294	1.0293	1.0433	1.0604	1.2307	1.0353	1.0489	1.0716	2.7507	1.0179	1.0367	1.0507	1.0737	0.0060	0.0034	0.0060	0.4226
	Level 8	9min	1.0188	1.0282	1.0403	1.1569	1.0188	1.0282	1.0403	1.1587	1.0246	1.0317	1.0445	2.2037	1.0116	1.0247	1.0323	1.0453	0.0042	0.0022	0.0044	0.2909
	Level 9	17.9min	1.0138	1.0213	1.0310	1.1328	1.0137	1.0213	1.0309	1.1358	1.0175	1.0248	1.0364	2.0981	1.0079	1.0175	1.0254	1.0373	0.0035	0.0021	0.0039	0.2676
	Level 1	2.9sec	1.4870	1.5611	1.6301	1.8898	1.4869	1.5611	1.6302	1.8888	1.5337	1.5936	1.6674	5.0000	1.3909	1.5337	1.5944	1.6689	0.0312	0.0175	0.0218	0.4971
	Level 2	5.7sec	1.2628	1.3334	1.3976	1.9392	1.2625	1.3334	1.3976	1.9339	1.3054	1.3624	1.4414	17.0142	1.1774	1.3073	1.3637	1.4433	0.0321	0.0164	0.0236	2.1276
	Level 3	11.4sec	1.1535	1.2108	1.2633	2.2348	1.1534	1.2108	1.2634	2.2245	1.1851	1.2312	1.3050	42.6691	1.0897	1.1856	1.2318	1.3052	0.0236	0.0123	0.0219	5.2899
1	**Level 4**	22.8sec	1.0951	1.1372	1.1803	2.7346	1.0951	1.1371	1.1803	2.7397	1.1155	1.1542	1.2192	84.5089	1.0512	1.1157	1.1548	1.2209	0.0167	0.0114	0.0188	10.4345
Year	**Level 5**	45.7sec	1.0604	1.0917	1.1225	3.8193	1.0604	1.0917	1.1225	3.9140	1.0765	1.1029	1.1495	167.8169	1.0303	1.0767	1.1030	1.1497	0.0110	0.0081	0.0145	20.8264
before	**Level 6**	1.5min	1.0396	1.0610	1.0808	6.2004	1.0396	1.0610	1.0808	6.4103	1.0519	1.0687	1.0990	334.6071	1.0144	1.0521	1.0687	1.1000	0.0079	0.0051	0.0094	41.6777
	Level 7	3min	1.0255	1.0395	1.0526	11.6597	1.0255	1.0395	1.0526	11.5550	1.0341	1.0450	1.0640	668.2143	1.0083	1.0343	1.0451	1.0641	0.0054	0.0031	0.0061	83.3856
	Level 8	6.1min	1.0164	1.0258	1.0349	21.0909	1.0164	1.0258	1.0349	21.9475	1.0217	1.0294	1.0427	1335.4289	1.0052	1.0220	1.0295	1.0430	0.0035	0.0021	0.0043	166.7914
	Level 9	12.2min	1.0123	1.0194	1.0266	39.4176	1.0123	1.0194	1.0266	42.7965	1.0164	1.0220	1.0323	2669.8575	1.0038	1.0169	1.0222	1.0329	0.0028	0.0016	0.0031	333.5951

Table A.23: EDH2 Other Results Table –Continued

EDH2 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.1sec	1.4966	1.5724	1.8660	2.6812	1.4963	1.5720	1.8662	2.6972	1.5331	1.6096	2.0013	3.7360	1.4331	1.5405	1.7560	2.0094	0.0377	0.0258	0.1031	0.7376
	Level 2	26.2sec	1.2497	1.3389	1.6386	3.9298	1.2501	1.3384	1.6387	4.0025	1.2936	1.4368	1.8961	8.7259	1.1685	1.2958	1.4933	1.9327	0.0513	0.0525	0.1625	2.9939
	Level 3	52.4sec	1.1363	1.2048	1.4432	5.2520	1.1371	1.2043	1.4450	5.2643	1.1721	1.2565	1.6396	11.2910	1.0801	1.1725	1.2777	1.6879	0.0397	0.0299	0.1513	4.7848
30	**Level 4**	1.7min	1.0803	1.1397	1.2703	6.2332	1.0805	1.1397	1.2693	6.3551	1.1003	1.1609	1.4060	17.8889	1.0551	1.1057	1.1973	1.4451	0.0231	0.0193	0.0832	7.2692
days	**Level 5**	3.5min	1.0505	1.0931	1.1723	9.0333	1.0507	1.0931	1.1718	9.0516	1.0646	1.1170	1.2537	34.5895	1.0347	1.0650	1.1251	1.2757	0.0146	0.0168	0.0495	14.4623
before	**Level 6**	7min	1.0350	1.0675	1.1256	14.3527	1.0349	1.0676	1.1259	15.1492	1.0431	1.0840	1.1809	68.1713	1.0235	1.0528	1.0884	1.1835	0.0100	0.0104	0.0369	29.6636
	Level 7	14min	1.0275	1.0524	1.1017	28.2767	1.0272	1.0523	1.1012	28.2713	1.0362	1.0646	1.1293	135.4103	1.0181	1.0422	1.0689	1.1325	0.0082	0.0077	0.0270	59.8954
	Level 8	28min	1.0219	1.0431	1.0801	54.8600	1.0219	1.0430	1.0796	55.0722	1.0310	1.0537	1.1075	270.1567	1.0143	1.0347	1.0546	1.1093	0.0071	0.0079	0.0215	120.2363
	Level 9	55.9min	1.0210	1.0424	1.0741	109.2014	1.0209	1.0423	1.0744	108.8805	1.0294	1.0507	1.0985	539.4586	1.0131	1.0326	1.0527	1.1183	0.0077	0.0083	0.0200	240.7005
	Level 1	6sec	1.4996	1.5778	1.6818	2.2626	1.4996	1.5778	1.6821	2.2570	1.5405	1.6158	1.7622	3.7360	1.4331	1.5448	1.6248	1.7911	0.0347	0.0249	0.0527	0.6321
	Level 2	12.1sec	1.2770	1.3496	1.4583	2.7547	1.2770	1.3494	1.4588	2.7464	1.3225	1.3796	1.5104	8.7259	1.1685	1.3244	1.4160	1.5393	0.0445	0.0202	0.0340	2.2448
	Level 3	24.2sec	1.1550	1.2232	1.3101	3.2088	1.1545	1.2231	1.3098	3.2016	1.1811	1.2531	1.3534	11.2910	1.0801	1.1966	1.2565	1.3562	0.0316	0.0216	0.0409	3.6146
60	**Level 4**	48.3sec	1.0938	1.1477	1.2072	3.5395	1.0936	1.1477	1.2075	3.6001	1.1131	1.1627	1.2412	17.8889	1.0551	1.1220	1.1645	1.2529	0.0206	0.0121	0.0291	5.3006
days	**Level 5**	1.6min	1.0586	1.0985	1.1384	4.6577	1.0585	1.0985	1.1382	4.7660	1.0757	1.1120	1.1626	34.5895	1.0347	1.0841	1.1146	1.1633	0.0130	0.0085	0.0175	10.0250
before	**Level 6**	3.2min	1.0400	1.0665	1.0927	7.7707	1.0399	1.0665	1.0928	7.5054	1.0535	1.0744	1.1158	68.1713	1.0235	1.0561	1.0762	1.1164	0.0099	0.0066	0.0126	20.1378
	Level 7	6.4min	1.0284	1.0462	1.0642	13.3841	1.0283	1.0462	1.0642	13.4518	1.0363	1.0502	1.0760	135.4103	1.0181	1.0373	1.0529	1.0802	0.0069	0.0045	0.0075	40.4512
	Level 8	12.9min	1.0205	1.0330	1.0479	25.4236	1.0206	1.0330	1.0479	25.6214	1.0267	1.0380	1.0537	270.1567	1.0125	1.0295	1.0398	1.0546	0.0050	0.0026	0.0047	81.1035
	Level 9	25.8min	1.0179	1.0287	1.0423	50.2732	1.0179	1.0287	1.0423	50.0767	1.0231	1.0333	1.0507	539.4586	1.0105	1.0237	1.0336	1.0527	0.0046	0.0031	0.0065	162.3097
	Level 1	3.9sec	1.5047	1.5944	1.7001	2.1510	1.5045	1.5942	1.7007	2.1479	1.5448	1.6428	1.7804	3.7360	1.4331	1.5511	1.6447	1.7911	0.0333	0.0316	0.0479	0.5667
	Level 2	7.9sec	1.2795	1.3623	1.4523	2.4420	1.2800	1.3619	1.4520	2.4452	1.3244	1.3993	1.5104	8.7259	1.1685	1.3250	1.4160	1.5180	0.0397	0.0231	0.0302	1.9667
	Level 3	15.7sec	1.1605	1.2286	1.3025	2.7410	1.1601	1.2285	1.3022	2.7338	1.1951	1.2565	1.3493	11.2910	1.0801	1.1966	1.2575	1.3534	0.0282	0.0214	0.0324	3.1589
3	**Level 4**	31.5sec	1.0989	1.1482	1.2046	2.9523	1.0986	1.1484	1.2048	3.0005	1.1220	1.1609	1.2412	17.8889	1.0551	1.1259	1.1627	1.2414	0.0193	0.0102	0.0254	4.5971
months	**Level 5**	1min	1.0623	1.0975	1.1355	3.8500	1.0623	1.0975	1.1357	3.8296	1.0837	1.1105	1.1626	34.5895	1.0347	1.0841	1.1120	1.1633	0.0132	0.0068	0.0164	8.6239
before	**Level 6**	2.1min	1.0412	1.0657	1.0897	5.7538	1.0413	1.0657	1.0897	5.8168	1.0535	1.0744	1.1108	68.1713	1.0235	1.0561	1.0744	1.1110	0.0086	0.0060	0.0110	17.2647
	Level 7	4.2min	1.0284	1.0448	1.0609	9.6762	1.0284	1.0448	1.0609	10.1620	1.0363	1.0498	1.0703	135.4103	1.0181	1.0373	1.0500	1.0760	0.0060	0.0042	0.0069	34.6507
	Level 8	8.4min	1.0205	1.0314	1.0451	18.9182	1.0204	1.0314	1.0451	19.0779	1.0267	1.0347	1.0537	270.1567	1.0125	1.0271	1.0358	1.0546	0.0045	0.0023	0.0057	69.4591
	Level 9	16.8min	1.0180	1.0273	1.0396	36.9767	1.0180	1.0273	1.0396	37.0123	1.0231	1.0315	1.0507	539.4586	1.0105	1.0233	1.0326	1.0511	0.0044	0.0027	0.0063	138.9976
	Level 1	2.7sec	1.4868	1.5604	1.6297	1.9029	1.4867	1.5604	1.6298	1.8996	1.5308	1.5932	1.6732	4.8397	1.3975	1.5313	1.5982	1.6733	0.0300	0.0168	0.0203	0.5015
	Level 2	5.5sec	1.2612	1.3302	1.3968	1.8608	1.2611	1.3304	1.3968	1.8509	1.3062	1.3571	1.4381	8.7259	1.1685	1.3068	1.3578	1.4392	0.0329	0.0144	0.0250	1.3244
	Level 3	10.9sec	1.1506	1.2070	1.2567	1.8928	1.1506	1.2070	1.2568	1.9077	1.1852	1.2255	1.2952	15.1670	1.0801	1.1858	1.2263	1.2953	0.0254	0.0118	0.0207	2.3261
1	**Level 4**	21.8sec	1.0919	1.1329	1.1704	2.0584	1.0918	1.1329	1.1704	2.0615	1.1137	1.1481	1.2071	25.5841	1.0516	1.1154	1.1483	1.2076	0.0166	0.0104	0.0172	3.7690
Year	**Level 5**	43.7sec	1.0578	1.0882	1.1138	2.3680	1.0577	1.0882	1.1138	2.3451	1.0753	1.0978	1.1383	35.1681	1.0307	1.0757	1.0982	1.1393	0.0110	0.0074	0.0123	5.9326
before	**Level 6**	1.5min	1.0376	1.0590	1.0759	2.9099	1.0376	1.0590	1.0759	2.8627	1.0497	1.0660	1.0897	68.1713	1.0144	1.0502	1.0661	1.0903	0.0078	0.0047	0.0075	9.7005
	Level 7	2.9min	1.0249	1.0397	1.0518	5.2416	1.0250	1.0397	1.0518	5.2295	1.0333	1.0451	1.0621	135.4103	1.0083	1.0334	1.0452	1.0624	0.0055	0.0034	0.0049	23.0532
	Level 8	5.8min	1.0174	1.0278	1.0374	9.3573	1.0175	1.0278	1.0374	9.3116	1.0239	1.0316	1.0445	270.1567	1.0054	1.0239	1.0317	1.0446	0.0039	0.0025	0.0039	46.1625
	Level 9	11.6min	1.0147	1.0236	1.0321	17.5177	1.0147	1.0236	1.0321	17.5350	1.0200	1.0273	1.0388	539.4586	1.0041	1.0201	1.0273	1.0388	0.0033	0.0021	0.0035	92.3542

Table A.23: EDH2 Other Results Table –Continued

EDH2 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.7sec	1.4945	1.5751	1.7853	2.5335	1.4942	1.5750	1.7855	2.5227	1.5394	1.6166	1.9279	3.7671	1.4311	1.5462	1.6294	1.9943	0.0393	0.0252	0.1089	0.7395
	Level 2	27.4sec	1.2433	1.3250	1.6159	3.4045	1.2434	1.3255	1.6166	3.3790	1.2869	1.3891	1.9214	8.8068	1.1705	1.2934	1.4730	1.9444	0.0450	0.0345	0.1796	3.0348
	Level 3	54.8sec	1.1327	1.1798	1.4161	4.1677	1.1324	1.1796	1.4182	4.0632	1.1587	1.2057	1.5614	11.3798	1.0803	1.1594	1.2761	1.6864	0.0346	0.0190	0.1338	4.1744
30	**Level 4**	1.8min	1.0725	1.1159	1.2527	3.1811	1.0725	1.1159	1.2534	3.1646	1.0906	1.1318	1.4255	9.2937	1.0455	1.1016	1.1361	1.4531	0.0208	0.0114	0.1101	3.4375
days	**Level 5**	3.7min	1.0379	1.0647	1.1250	2.3723	1.0380	1.0647	1.1253	2.3749	1.0516	1.0753	1.1632	6.7435	1.0310	1.0562	1.0881	1.2345	0.0086	0.0079	0.0356	2.4424
before	**Level 6**	7.3min	0.9725	1.0422	1.0828	1.6934	0.9714	1.0421	1.0827	1.7095	1.0344	1.0526	1.1151	3.8352	0.7557	1.0347	1.0580	1.1406	0.1207	0.0071	0.0269	1.1886
	Level 7	14.6min	0.9092	1.0282	1.0552	1.3392	0.9094	1.0283	1.0553	1.3417	1.0216	1.0376	1.0790	2.2750	0.4797	1.0226	1.0386	1.0849	0.2402	0.0055	0.0190	0.5220
	Level 8	29.2min	0.9248	1.0178	1.0358	1.1841	0.9272	1.0179	1.0358	1.1855	1.0132	1.0232	1.0541	1.6591	0.5951	1.0145	1.0263	1.0607	0.1857	0.0036	0.0128	0.2649
	Level 9	58.4min	0.8598	1.0118	1.0250	1.1249	0.8617	1.0118	1.0250	1.1224	1.0084	1.0147	1.0365	1.4256	0.2849	1.0099	1.0178	1.0431	0.3224	0.0019	0.0076	0.1696
	Level 1	6.3sec	1.4993	1.5776	1.6692	2.1602	1.4996	1.5776	1.6693	2.1498	1.5462	1.6166	1.7480	3.7671	1.4311	1.5518	1.6208	1.7646	0.0359	0.0255	0.0479	0.5912
	Level 2	12.5sec	1.2715	1.3454	1.4450	2.4346	1.2723	1.3454	1.4449	2.4491	1.3116	1.3746	1.5116	8.8068	1.1705	1.3126	1.3785	1.5306	0.0426	0.0211	0.0457	2.1181
	Level 3	25.1sec	1.1478	1.2072	1.3004	2.6295	1.1479	1.2073	1.3004	2.6433	1.1709	1.2528	1.3391	11.3798	1.0803	1.1722	1.2544	1.3540	0.0276	0.0251	0.0350	2.9706
60	**Level 4**	50.2sec	1.0876	1.1276	1.1938	2.1347	1.0873	1.1278	1.1938	2.1473	1.1091	1.1538	1.2281	9.2937	1.0455	1.1101	1.1602	1.2326	0.0209	0.0143	0.0268	2.3830
days	**Level 5**	1.7min	1.0474	1.0789	1.1173	1.7214	1.0474	1.0788	1.1171	1.7183	1.0609	1.0981	1.1404	6.7435	1.0310	1.0650	1.0991	1.1520	0.0112	0.0107	0.0146	1.6678
before	**Level 6**	3.3min	1.0055	1.0499	1.0724	1.3831	1.0052	1.0499	1.0723	1.3822	1.0377	1.0580	1.0940	3.8352	0.7557	1.0420	1.0624	1.0950	0.0830	0.0055	0.0098	0.8145
	Level 7	6.7min	0.9702	1.0305	1.0425	1.1937	0.9701	1.0305	1.0426	1.1918	1.0242	1.0376	1.0533	2.2750	0.4797	1.0252	1.0378	1.0582	0.1627	0.0044	0.0045	0.3600
	Level 8	13.4min	0.9743	1.0178	1.0247	1.1055	0.9733	1.0178	1.0246	1.1061	1.0136	1.0205	1.0286	1.6591	0.5951	1.0142	1.0208	1.0329	0.1255	0.0025	0.0028	0.1840
	Level 9	26.7min	0.9412	1.0105	1.0156	1.0697	0.9409	1.0105	1.0156	1.0693	1.0084	1.0124	1.0183	1.4256	0.2849	1.0087	1.0131	1.0188	0.2176	0.0009	0.0020	0.1188
	Level 1	4.1sec	1.5038	1.5911	1.6886	2.0739	1.5044	1.5911	1.6896	2.0684	1.5462	1.6339	1.7646	3.7671	1.4311	1.5518	1.6357	1.7729	0.0344	0.0317	0.0476	0.5195
	Level 2	8.1sec	1.2757	1.3548	1.4392	2.2155	1.2756	1.3548	1.4391	2.2255	1.3126	1.3891	1.5014	8.8068	1.1705	1.3185	1.3917	1.5116	0.0376	0.0199	0.0333	1.8312
	Level 3	16.3sec	1.1536	1.2159	1.2928	2.3362	1.1535	1.2158	1.2928	2.3215	1.1722	1.2530	1.3376	11.3798	1.0803	1.1781	1.2544	1.3391	0.0243	0.0234	0.0290	2.5709
3	**Level 4**	32.5sec	1.0927	1.1319	1.1934	1.9034	1.0926	1.1320	1.1936	1.9304	1.1101	1.1538	1.2281	9.2937	1.0455	1.1107	1.1561	1.2286	0.0191	0.0147	0.0244	2.0492
months	**Level 5**	1.1min	1.0524	1.0824	1.1180	1.5898	1.0524	1.0824	1.1180	1.5892	1.0663	1.0991	1.1404	6.7435	1.0310	1.0704	1.0995	1.1488	0.0120	0.0092	0.0138	1.4279
before	**Level 6**	2.2min	1.0159	1.0509	1.0721	1.3234	1.0160	1.0509	1.0722	1.3192	1.0428	1.0580	1.0863	3.8352	0.7557	1.0436	1.0604	1.0940	0.0698	0.0044	0.0084	0.6974
	Level 7	4.3min	0.9868	1.0303	1.0428	1.1634	0.9867	1.0303	1.0428	1.1626	1.0252	1.0352	1.0521	2.2750	0.4797	1.0253	1.0360	1.0533	0.1353	0.0037	0.0051	0.3088
	Level 8	8.7min	0.9859	1.0174	1.0244	1.0901	0.9854	1.0174	1.0244	1.0902	1.0140	1.0203	1.0290	1.6591	0.5951	1.0142	1.0203	1.0297	0.1041	0.0023	0.0031	0.1583
	Level 9	17.4min	0.9601	1.0105	1.0150	1.0596	0.9617	1.0105	1.0150	1.0593	1.0084	1.0125	1.0177	1.4256	0.2849	1.0087	1.0128	1.0178	0.1805	0.0011	0.0018	0.1022
	Level 1	2.8sec	1.4160	1.5556	1.6238	1.8239	1.4159	1.5555	1.6238	1.8237	1.5263	1.5884	1.6602	3.7671	-2.9475	1.5265	1.5900	1.6618	0.5505	0.0173	0.0198	0.2964
	Level 2	5.6sec	1.2566	1.3238	1.3871	1.6779	1.2564	1.3238	1.3870	1.6749	1.2996	1.3505	1.4311	8.8068	1.1705	1.2999	1.3509	1.4323	0.0313	0.0150	0.0232	0.9226
	Level 3	11.2sec	1.1455	1.1988	1.2476	1.5831	1.1456	1.1987	1.2478	1.5823	1.1737	1.2182	1.2866	11.3798	1.0802	1.1761	1.2186	1.2873	0.0231	0.0117	0.0205	1.2850
1	**Level 4**	22.3sec	1.0869	1.1225	1.1597	1.4168	1.0868	1.1226	1.1597	1.4224	1.1071	1.1372	1.1910	9.2937	1.0455	1.1072	1.1383	1.1942	0.0155	0.0094	0.0163	1.0224
Year	**Level 5**	44.7sec	1.0517	1.0773	1.1014	1.3004	1.0517	1.0773	1.1014	1.2994	1.0650	1.0880	1.1251	6.7435	1.0300	1.0657	1.0881	1.1254	0.0096	0.0067	0.0108	0.7639
before	**Level 6**	1.5min	1.0277	1.0483	1.0636	1.2332	1.0276	1.0483	1.0635	1.2357	1.0415	1.0544	1.0782	6.3588	0.7557	1.0417	1.0547	1.0784	0.0349	0.0039	0.0067	0.7363
	Level 7	3min	1.0108	1.0291	1.0387	1.2533	1.0108	1.0291	1.0387	1.2540	1.0249	1.0335	1.0460	11.7177	0.4797	1.0252	1.0336	1.0462	0.0670	0.0024	0.0036	1.3377
	Level 8	6min	1.0041	1.0171	1.0230	1.3841	1.0045	1.0171	1.0230	1.3858	1.0142	1.0198	1.0271	22.4353	0.5951	1.0142	1.0200	1.0273	0.0516	0.0016	0.0023	2.6742
	Level 9	11.9min	0.9954	1.0105	1.0144	1.6823	0.9955	1.0105	1.0144	1.7039	1.0087	1.0122	1.0174	43.8707	0.2849	1.0087	1.0124	1.0175	0.0895	0.0009	0.0014	5.3548

Table A.23: EDH2 Other Results Table –Continued

EDH2 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.7sec	0.3921	0.5514	0.6391	0.6688	0.3928	0.5512	0.6393	0.6687	0.4976	0.6213	0.6492	0.6978	0.2677	0.4997	0.6316	0.6523	0.1021	0.0432	0.0083	0.0173
	Level 2	27.4sec	0.3580	0.6286	0.7585	0.8010	0.3602	0.6283	0.7585	0.8011	0.5174	0.6960	0.7717	0.8558	0.1146	0.5274	0.7393	0.7731	0.1922	0.0613	0.0132	0.0340
	Level 3	54.8sec	0.3679	0.7150	0.8379	0.8802	0.3733	0.7143	0.8377	0.8803	0.5925	0.7959	0.8529	0.9258	0.0886	0.6099	0.8243	0.8532	0.2544	0.0755	0.0122	0.0313
30	**Level 4**	1.8min	0.4291	0.8022	0.8810	0.9257	0.4249	0.8022	0.8809	0.9259	0.6920	0.8614	0.9044	0.9478	0.0559	0.7112	0.8657	0.9089	0.3150	0.0527	0.0143	0.0199
days	**Level 5**	3.7min	0.4896	0.8619	0.9190	0.9517	0.4874	0.8613	0.9190	0.9519	0.7839	0.8953	0.9390	0.9665	0.0289	0.7977	0.9103	0.9393	0.3674	0.0354	0.0116	0.0133
before	**Level 6**	7.3min	0.5505	0.8937	0.9395	0.9661	0.5484	0.8945	0.9396	0.9663	0.8450	0.9225	0.9498	0.9770	0.0147	0.8468	0.9326	0.9587	0.3878	0.0291	0.0065	0.0094
	Level 7	14.6min	0.6034	0.9133	0.9526	0.9735	0.6040	0.9136	0.9525	0.9736	0.8830	0.9393	0.9595	0.9822	0.0074	0.8855	0.9457	0.9651	0.3911	0.0235	0.0049	0.0078
	Level 8	29.2min	0.6409	0.9302	0.9607	0.9785	0.6425	0.9303	0.9607	0.9786	0.9015	0.9491	0.9665	0.9859	0.0037	0.9029	0.9531	0.9700	0.3858	0.0189	0.0062	0.0068
	Level 9	58.4min	0.6551	0.9346	0.9611	0.9795	0.6595	0.9345	0.9610	0.9796	0.8942	0.9518	0.9684	0.9871	0.0019	0.9103	0.9524	0.9715	0.3816	0.0176	0.0074	0.0074
	Level 1	6.3sec	0.4679	0.5970	0.6354	0.6673	0.4677	0.5972	0.6354	0.6672	0.5583	0.6189	0.6474	0.6978	0.2677	0.5675	0.6209	0.6492	0.0982	0.0189	0.0091	0.0157
	Level 2	12.5sec	0.4884	0.6889	0.7428	0.7837	0.4860	0.6894	0.7429	0.7840	0.6496	0.7248	0.7551	0.8558	0.1146	0.6621	0.7268	0.7562	0.1736	0.0191	0.0102	0.0287
	Level 3	25.1sec	0.5390	0.7672	0.8199	0.8673	0.5396	0.7672	0.8198	0.8668	0.7373	0.7980	0.8357	0.9258	0.0886	0.7389	0.7985	0.8467	0.2295	0.0250	0.0135	0.0247
60	**Level 4**	50.2sec	0.6064	0.8316	0.8724	0.9143	0.6123	0.8315	0.8725	0.9147	0.7981	0.8600	0.8913	0.9478	0.0559	0.8057	0.8614	0.8984	0.2695	0.0213	0.0089	0.0176
days	**Level 5**	1.7min	0.6812	0.8806	0.9116	0.9451	0.6785	0.8806	0.9115	0.9449	0.8596	0.8993	0.9224	0.9665	0.0289	0.8602	0.9005	0.9296	0.2962	0.0142	0.0063	0.0117
before	**Level 6**	3.3min	0.7273	0.9165	0.9383	0.9616	0.7298	0.9166	0.9383	0.9617	0.8957	0.9307	0.9469	0.9770	0.0147	0.8962	0.9310	0.9492	0.3008	0.0111	0.0057	0.0092
	Level 7	6.7min	0.7688	0.9409	0.9563	0.9724	0.7696	0.9408	0.9562	0.9725	0.9258	0.9522	0.9640	0.9822	0.0074	0.9294	0.9524	0.9649	0.2941	0.0073	0.0041	0.0066
	Level 8	13.4min	0.7986	0.9552	0.9686	0.9798	0.7976	0.9551	0.9686	0.9799	0.9482	0.9634	0.9714	0.9877	0.0037	0.9491	0.9655	0.9740	0.2859	0.0049	0.0019	0.0048
	Level 9	26.7min	0.8117	0.9602	0.9725	0.9824	0.8080	0.9602	0.9725	0.9824	0.9499	0.9678	0.9768	0.9896	0.0019	0.9518	0.9684	0.9774	0.2803	0.0062	0.0027	0.0045
	Level 1	4.1sec	0.4931	0.5901	0.6287	0.6664	0.4920	0.5902	0.6288	0.6662	0.5617	0.6080	0.6474	0.6978	0.2677	0.5675	0.6087	0.6492	0.0889	0.0153	0.0130	0.0147
	Level 2	8.1sec	0.5298	0.6906	0.7358	0.7838	0.5304	0.6907	0.7357	0.7838	0.6621	0.7062	0.7551	0.8558	0.1146	0.6645	0.7146	0.7562	0.1581	0.0126	0.0131	0.0253
	Level 3	16.3sec	0.5927	0.7700	0.8157	0.8641	0.5905	0.7702	0.8156	0.8642	0.7411	0.7952	0.8367	0.9258	0.0886	0.7447	0.7959	0.8467	0.2042	0.0184	0.0148	0.0215
3	**Level 4**	32.5sec	0.6592	0.8321	0.8720	0.9117	0.6579	0.8320	0.8721	0.9118	0.8057	0.8600	0.8913	0.9478	0.0559	0.8077	0.8614	0.8947	0.2339	0.0170	0.0091	0.0161
months	**Level 5**	1.1min	0.7192	0.8820	0.9119	0.9427	0.7208	0.8820	0.9119	0.9427	0.8602	0.8993	0.9228	0.9665	0.0289	0.8622	0.9005	0.9270	0.2529	0.0119	0.0062	0.0111
before	**Level 6**	2.2min	0.7753	0.9189	0.9392	0.9611	0.7718	0.9189	0.9391	0.9612	0.9003	0.9307	0.9492	0.9770	0.0147	0.9050	0.9308	0.9498	0.2553	0.0082	0.0058	0.0077
	Level 7	4.3min	0.8115	0.9432	0.9576	0.9729	0.8119	0.9432	0.9576	0.9729	0.9343	0.9524	0.9649	0.9822	0.0074	0.9355	0.9525	0.9651	0.2494	0.0059	0.0042	0.0055
	Level 8	8.7min	0.8381	0.9573	0.9699	0.9804	0.8386	0.9574	0.9699	0.9804	0.9491	0.9655	0.9740	0.9877	0.0037	0.9497	0.9665	0.9745	0.2421	0.0050	0.0023	0.0042
	Level 9	17.4min	0.8444	0.9625	0.9737	0.9827	0.8455	0.9626	0.9737	0.9827	0.9518	0.9684	0.9774	0.9896	0.0019	0.9524	0.9694	0.9774	0.2363	0.0054	0.0026	0.0042
	Level 1	2.8sec	0.5459	0.6140	0.6411	0.6732	0.5461	0.6139	0.6411	0.6732	0.5977	0.6257	0.6533	0.7156	0.2066	0.5988	0.6277	0.6560	0.0756	0.0074	0.0070	0.0137
	Level 2	5.6sec	0.6197	0.7164	0.7520	0.7939	0.6202	0.7165	0.7520	0.7940	0.6954	0.7365	0.7656	0.8558	0.1146	0.6959	0.7369	0.7657	0.1210	0.0126	0.0082	0.0210
	Level 3	11.2sec	0.6898	0.7964	0.8288	0.8699	0.6896	0.7963	0.8288	0.8699	0.7721	0.8155	0.8438	0.9258	0.0659	0.7728	0.8160	0.8441	0.1491	0.0128	0.0083	0.0194
1	**Level 4**	22.3sec	0.7518	0.8550	0.8830	0.9164	0.7509	0.8550	0.8830	0.9164	0.8285	0.8709	0.8979	0.9509	0.0391	0.8285	0.8710	0.8982	0.1681	0.0121	0.0083	0.0140
Year	**Level 5**	44.7sec	0.8054	0.8982	0.9192	0.9457	0.8051	0.8982	0.9192	0.9458	0.8785	0.9106	0.9300	0.9703	0.0284	0.8786	0.9109	0.9306	0.1779	0.0096	0.0063	0.0098
before	**Level 6**	1.5min	0.8473	0.9297	0.9444	0.9640	0.8471	0.9297	0.9444	0.9640	0.9177	0.9380	0.9527	0.9858	0.0147	0.9183	0.9381	0.9529	0.1792	0.0064	0.0043	0.0072
	Level 7	3min	0.8777	0.9509	0.9619	0.9758	0.8787	0.9509	0.9619	0.9758	0.9415	0.9567	0.9678	0.9917	0.0074	0.9426	0.9568	0.9679	0.1770	0.0043	0.0032	0.0052
	Level 8	6min	0.8989	0.9641	0.9730	0.9829	0.8995	0.9640	0.9730	0.9830	0.9574	0.9693	0.9767	0.9947	0.0037	0.9577	0.9693	0.9768	0.1747	0.0036	0.0024	0.0037
	Level 9	11.9min	0.9051	0.9690	0.9770	0.9856	0.9045	0.9690	0.9770	0.9856	0.9626	0.9734	0.9804	0.9959	0.0019	0.9628	0.9734	0.9804	0.1762	0.0032	0.0021	0.0032

Table A.24: EDH3 Other Results Table

EDH3 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	12.4sec	1.5463	1.6194	1.7498	3.1185	1.5462	1.6196	1.7483	3.1523	1.5687	1.6373	1.9221	4.9298	1.5044	1.6010	1.6423	2.0102	0.0286	0.0182	0.1221	1.5601
	Level 2	24.7sec	1.3089	1.4652	1.6982	7.1425	1.3096	1.4652	1.6961	7.0940	1.3475	1.4733	1.8568	15.5824	1.2698	1.4543	1.5791	2.0725	0.0333	0.0098	0.1313	7.3922
	Level 3	49.4sec	1.1822	1.3721	1.5260	12.2480	1.1818	1.3727	1.5252	12.1127	1.2074	1.4121	1.7094	29.3221	1.1664	1.3182	1.4175	1.8724	0.0180	0.0487	0.1286	14.9932
30	**Level 4**	1.6min	1.1234	1.2284	1.4003	20.6257	1.1238	1.2289	1.3974	20.1983	1.1484	1.2770	1.6829	54.2730	1.0905	1.2032	1.2782	1.8744	0.0267	0.0417	0.1923	29.5376
days	**Level 5**	3.3min	1.0801	1.1287	1.2620	32.2080	1.0798	1.1282	1.2653	33.0049	1.1025	1.1547	1.4857	94.0613	1.0453	1.1088	1.1814	1.6799	0.0279	0.0238	0.1471	52.8824
before	**Level 6**	6.6min	1.0510	1.0914	1.1731	47.4860	1.0509	1.0908	1.1726	45.7222	1.0663	1.1026	1.3579	133.1838	1.0228	1.0752	1.1073	1.4011	0.0200	0.0141	0.1236	75.7463
	Level 7	13.2min	1.0287	1.0531	1.1107	34.5491	1.0289	1.0530	1.1110	34.9487	1.0428	1.0601	1.2316	101.5135	1.0117	1.0433	1.0612	1.2948	0.0134	0.0087	0.0807	57.6480
	Level 8	26.4min	1.0184	1.0304	1.0683	28.1772	1.0184	1.0305	1.0682	29.0082	1.0253	1.0334	1.1420	84.1100	1.0064	1.0257	1.0349	1.1893	0.0086	0.0042	0.0497	47.7203
	Level 9	52.7min	1.0154	1.0213	1.0525	48.2601	1.0154	1.0213	1.0521	45.8151	1.0201	1.0228	1.1079	134.4746	1.0042	1.0202	1.0231	1.1276	0.0075	0.0014	0.0388	76.7822
	Level 1	6.3sec	1.5220	1.6334	1.7951	2.9240	1.5222	1.6333	1.7959	2.9355	1.5843	1.6863	1.9158	5.0000	1.3798	1.5882	1.6924	1.9221	0.0650	0.0336	0.0819	1.2841
	Level 2	12.6sec	1.3158	1.4669	1.6876	5.9822	1.3150	1.4671	1.6857	5.9470	1.3806	1.5338	1.8568	17.0000	1.2490	1.4341	1.5791	1.9409	0.0427	0.0328	0.0900	6.4272
	Level 3	25.1sec	1.1824	1.3398	1.4593	13.6033	1.1821	1.3399	1.4592	13.6565	1.2347	1.3956	1.5108	65.0000	1.1245	1.2681	1.4121	1.7094	0.0320	0.0465	0.0393	22.8000
60	**Level 4**	50.3sec	1.1186	1.1917	1.3260	39.1500	1.1181	1.1918	1.3267	40.5102	1.1555	1.2266	1.4049	257.0000	1.0623	1.1615	1.2770	1.4979	0.0333	0.0190	0.0468	89.3627
days	**Level 5**	1.7min	1.0676	1.1156	1.2118	132.0981	1.0679	1.1156	1.2118	130.8444	1.0925	1.1428	1.2705	942.2525	1.0312	1.1024	1.1547	1.2832	0.0220	0.0134	0.0367	329.4468
before	**Level 6**	3.4min	1.0377	1.0731	1.1271	295.1300	1.0378	1.0731	1.1270	291.9886	1.0532	1.0945	1.1617	2193.8081	1.0159	1.0580	1.1026	1.1784	0.0135	0.0106	0.0217	769.8319
	Level 7	6.7min	1.0204	1.0431	1.0753	456.2525	1.0204	1.0431	1.0754	448.2258	1.0308	1.0557	1.0885	3476.3939	1.0089	1.0351	1.0601	1.1026	0.0077	0.0061	0.0111	1224.0670
	Level 8	13.4min	1.0128	1.0267	1.0462	411.5691	1.0127	1.0268	1.0461	425.2873	1.0195	1.0330	1.0573	3310.8990	1.0058	1.0224	1.0334	1.0679	0.0056	0.0038	0.0095	1166.3240
	Level 9	26.8min	1.0103	1.0204	1.0354	1705.1459	1.0102	1.0204	1.0354	1672.7940	1.0175	1.0228	1.0486	13240.5960	1.0038	1.0186	1.0231	1.0487	0.0057	0.0013	0.0103	4674.3304
	Level 1	4.5sec	1.4989	1.6036	1.7276	2.5947	1.4988	1.6032	1.7278	2.5884	1.5590	1.6373	1.8494	5.0000	1.3798	1.5687	1.6423	1.8675	0.0443	0.0254	0.0739	1.1456
	Level 2	8.9sec	1.2819	1.4139	1.5539	4.6145	1.2812	1.4134	1.5546	4.5537	1.3405	1.4495	1.6646	17.0000	1.2323	1.3475	1.4543	1.7302	0.0370	0.0320	0.0728	5.5248
	Level 3	17.9sec	1.1562	1.2611	1.3864	9.5986	1.1561	1.2611	1.3868	9.6105	1.1913	1.3014	1.4708	65.0000	1.1245	1.2074	1.3123	1.4755	0.0267	0.0292	0.0506	19.1448
3	**Level 4**	35.8sec	1.0914	1.1596	1.2408	27.7968	1.0912	1.1596	1.2406	27.4658	1.1357	1.1760	1.3314	257.0000	1.0623	1.1377	1.1847	1.3406	0.0244	0.0131	0.0520	73.8448
months	**Level 5**	1.2min	1.0520	1.0947	1.1513	84.1297	1.0521	1.0947	1.1510	87.6475	1.0734	1.1034	1.2208	942.2525	1.0312	1.0775	1.1060	1.2352	0.0164	0.0085	0.0389	270.4423
before	**Level 6**	2.4min	1.0292	1.0556	1.0939	199.4330	1.0292	1.0556	1.0935	195.0449	1.0412	1.0663	1.1292	2193.8081	1.0157	1.0429	1.0700	1.1427	0.0106	0.0075	0.0203	630.5872
	Level 7	4.8min	1.0172	1.0335	1.0570	305.0110	1.0172	1.0336	1.0569	299.1816	1.0251	1.0415	1.0781	3476.3939	1.0081	1.0256	1.0421	1.0858	0.0067	0.0059	0.0142	1000.9777
	Level 8	9.5min	1.0115	1.0211	1.0360	297.5473	1.0115	1.0211	1.0362	283.8818	1.0173	1.0257	1.0541	3310.8990	1.0044	1.0175	1.0271	1.0545	0.0048	0.0030	0.0088	953.5615
	Level 9	19.1min	1.0092	1.0184	1.0285	1083.4143	1.0092	1.0184	1.0285	1115.5547	1.0149	1.0202	1.0481	13240.5960	1.0029	1.0153	1.0205	1.0486	0.0044	0.0015	0.0090	3818.5901
	Level 1	3sec	1.5022	1.5898	1.6837	2.0310	1.5025	1.5896	1.6837	2.0291	1.5526	1.6373	1.7419	5.0000	1.3798	1.5537	1.6379	1.7436	0.0389	0.0233	0.0300	0.5911
	Level 2	6sec	1.2800	1.3830	1.4779	2.2642	1.2800	1.3830	1.4781	2.2700	1.3395	1.4309	1.5435	17.0000	1.1477	1.3405	1.4311	1.5535	0.0376	0.0281	0.0326	2.6334
	Level 3	12sec	1.1684	1.2516	1.3331	3.1339	1.1683	1.2517	1.3330	3.0984	1.2074	1.2927	1.3877	65.0000	1.0514	1.2084	1.2939	1.3956	0.0315	0.0239	0.0278	8.8196
1	**Level 4**	23.9sec	1.1058	1.1637	1.2201	6.5981	1.1056	1.1636	1.2201	6.4828	1.1407	1.1870	1.2653	257.0000	1.0303	1.1416	1.1874	1.2662	0.0242	0.0137	0.0231	33.3072
Year	**Level 5**	47.9sec	1.0650	1.1033	1.1414	17.7509	1.0650	1.1033	1.1414	18.2347	1.0878	1.1194	1.1776	942.2525	1.0267	1.0886	1.1204	1.1779	0.0169	0.0091	0.0159	120.8654
before	**Level 6**	1.6min	1.0387	1.0652	1.0907	39.8917	1.0388	1.0652	1.0907	39.2981	1.0549	1.0752	1.1102	2193.8081	1.0157	1.0552	1.0768	1.1104	0.0117	0.0063	0.0100	280.9630
	Level 7	3.2min	1.0234	1.0408	1.0568	60.1789	1.0234	1.0408	1.0568	59.7405	1.0338	1.0479	1.0677	3476.3939	1.0081	1.0339	1.0480	1.0679	0.0075	0.0040	0.0057	444.9343
	Level 8	6.4min	1.0152	1.0266	1.0372	56.7485	1.0151	1.0266	1.0372	56.7058	1.0213	1.0316	1.0444	3310.8990	1.0044	1.0215	1.0319	1.0445	0.0048	0.0028	0.0037	423.7344
	Level 9	12.8min	1.0120	1.0209	1.0294	218.0480	1.0121	1.0209	1.0294	220.3066	1.0168	1.0242	1.0357	13240.5960	1.0029	1.0172	1.0245	1.0357	0.0039	0.0021	0.0029	1694.9479

Table A.24: EDH3 Other Results Table –Continued

EDH3 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	11.6sec	1.5319	1.6120	1.7632	3.0677	1.5323	1.6124	1.7655	3.0824	1.5679	1.6342	1.9816	5.0000	1.5002	1.5774	1.6476	2.0239	0.0348	0.0306	0.1494	1.6637
	Level 2	23.2sec	1.2880	1.4994	1.6296	7.1461	1.2878	1.4991	1.6307	7.0249	1.3461	1.5584	1.7373	15.9489	1.2509	1.4543	1.5732	1.9432	0.0438	0.0535	0.0741	7.7532
	Level 3	46.4sec	1.1664	1.3888	1.4678	12.5716	1.1661	1.3868	1.4675	12.9736	1.2160	1.4371	1.4873	30.8978	1.1277	1.3214	1.4541	1.7640	0.0404	0.0593	0.0149	15.6847
30	**Level 4**	1.5min	1.0993	1.2429	1.3340	24.3643	1.0993	1.2427	1.3345	24.2865	1.1464	1.2749	1.3989	60.7956	1.0666	1.2132	1.2835	1.9505	0.0336	0.0309	0.0517	31.8802
days	**Level 5**	3.1min	1.0643	1.1407	1.2224	46.4417	1.0639	1.1405	1.2234	45.4959	1.0958	1.1524	1.2934	120.5912	1.0364	1.1248	1.1761	1.7245	0.0278	0.0142	0.0502	65.3316
before	**Level 6**	6.2min	1.0425	1.0827	1.1450	85.2921	1.0424	1.0828	1.1452	85.1958	1.0602	1.0931	1.2187	240.1825	1.0231	1.0721	1.1040	1.4400	0.0193	0.0105	0.0511	134.3684
	Level 7	12.4min	1.0271	1.0488	1.0919	159.3752	1.0267	1.0489	1.0927	163.5650	1.0380	1.0549	1.1538	479.3650	1.0122	1.0424	1.0633	1.3437	0.0112	0.0063	0.0424	273.5249
	Level 8	24.7min	1.0185	1.0328	1.0654	328.5354	1.0185	1.0329	1.0650	322.1971	1.0268	1.0378	1.1078	957.7299	1.0074	1.0278	1.0418	1.2347	0.0083	0.0050	0.0293	550.3968
	Level 9	49.5min	1.0163	1.0259	1.0652	615.2260	1.0163	1.0259	1.0657	641.2849	1.0222	1.0264	1.0983	1914.4599	1.0064	1.0252	1.0358	1.1657	0.0069	0.0007	0.0315	1102.6075
	Level 1	6.4sec	1.5220	1.6339	1.7671	2.8384	1.5224	1.6339	1.7670	2.8582	1.5767	1.6888	1.8500	5.0000	1.4646	1.5774	1.6918	1.9384	0.0397	0.0408	0.0551	1.3462
	Level 2	12.8sec	1.2988	1.4860	1.6429	5.9051	1.2988	1.4863	1.6435	5.9070	1.3599	1.5584	1.7287	17.0000	1.2491	1.4314	1.5732	1.7373	0.0447	0.0504	0.0585	6.5536
	Level 3	25.5sec	1.1717	1.3239	1.4558	13.7737	1.1721	1.3244	1.4555	13.9588	1.2305	1.3973	1.5005	65.0000	1.1246	1.2446	1.4018	1.5023	0.0396	0.0548	0.0314	22.9249
60	**Level 4**	51sec	1.1040	1.1902	1.3132	42.2602	1.1042	1.1904	1.3123	41.9998	1.1529	1.2400	1.3989	257.0000	1.0624	1.1546	1.2515	1.4124	0.0332	0.0308	0.0468	89.2419
days	**Level 5**	1.7min	1.0624	1.1138	1.1976	134.3315	1.0623	1.1139	1.1974	134.9485	1.0865	1.1439	1.2340	937.8511	1.0313	1.0898	1.1443	1.2766	0.0219	0.0198	0.0355	327.0275
before	**Level 6**	3.4min	1.0357	1.0660	1.1229	304.4374	1.0356	1.0657	1.1231	315.9014	1.0524	1.0833	1.1606	2266.8723	1.0159	1.0578	1.0931	1.1647	0.0129	0.0097	0.0261	792.6674
	Level 7	6.8min	1.0211	1.0391	1.0743	479.9253	1.0212	1.0391	1.0742	497.7681	1.0318	1.0496	1.0936	3486.9575	1.0085	1.0326	1.0549	1.1035	0.0084	0.0053	0.0145	1219.2846
	Level 8	13.6min	1.0135	1.0271	1.0520	466.6275	1.0135	1.0271	1.0521	470.0960	1.0208	1.0346	1.0615	2789.7660	1.0054	1.0216	1.0378	1.0884	0.0058	0.0049	0.0084	995.1442
	Level 9	27.2min	1.0106	1.0234	1.0507	1593.2628	1.0107	1.0234	1.0505	1635.5458	1.0170	1.0317	1.0744	11156.0638	1.0049	1.0182	1.0358	1.0869	0.0048	0.0043	0.0150	3904.6293
	Level 1	4.4sec	1.4982	1.5992	1.7206	2.5387	1.4979	1.5992	1.7205	2.5509	1.5392	1.6403	1.8304	5.0000	1.4583	1.5561	1.6476	1.8500	0.0204	0.0290	0.0535	1.1669
	Level 2	8.7sec	1.2715	1.4080	1.5609	4.5380	1.2717	1.4080	1.5604	4.5212	1.3375	1.4623	1.6582	17.0000	1.2370	1.3461	1.4639	1.6762	0.0334	0.0414	0.0600	5.6146
	Level 3	17.4sec	1.1479	1.2514	1.3849	9.8600	1.1485	1.2514	1.3848	9.8389	1.1898	1.3080	1.4581	65.0000	1.1246	1.1964	1.3133	1.4704	0.0261	0.0331	0.0505	19.2740
3	**Level 4**	34.9sec	1.0842	1.1497	1.2404	27.9085	1.0842	1.1498	1.2403	28.4740	1.1129	1.1701	1.3077	257.0000	1.0624	1.1130	1.1727	1.3265	0.0197	0.0169	0.0429	73.9408
months	**Level 5**	1.2min	1.0501	1.0897	1.1476	87.7317	1.0500	1.0896	1.1477	90.3891	1.0701	1.1039	1.2151	937.8511	1.0313	1.0703	1.1055	1.2207	0.0153	0.0102	0.0334	269.0525
before	**Level 6**	2.3min	1.0286	1.0539	1.0873	217.3196	1.0287	1.0539	1.0873	210.9964	1.0412	1.0602	1.1218	2266.8723	1.0157	1.0435	1.0642	1.1394	0.0091	0.0057	0.0200	651.0392
	Level 7	4.6min	1.0174	1.0331	1.0533	328.2132	1.0173	1.0332	1.0534	332.2179	1.0244	1.0398	1.0764	3486.9575	1.0081	1.0269	1.0400	1.0877	0.0060	0.0038	0.0129	1002.9207
	Level 8	9.3min	1.0124	1.0219	1.0407	311.3997	1.0123	1.0220	1.0407	313.7594	1.0180	1.0268	1.0575	2789.7660	1.0044	1.0186	1.0278	1.0581	0.0049	0.0023	0.0102	826.7555
	Level 9	18.6min	1.0102	1.0191	1.0382	1075.4625	1.0102	1.0191	1.0381	1090.7268	1.0152	1.0222	1.0555	11156.0638	1.0029	1.0159	1.0252	1.0715	0.0042	0.0018	0.0089	3217.0961
	Level 1	2.9sec	1.4941	1.5767	1.6679	2.0244	1.4942	1.5766	1.6678	2.0245	1.5309	1.6201	1.7198	5.0000	1.4159	1.5326	1.6253	1.7248	0.0288	0.0250	0.0290	0.5999
	Level 2	5.9sec	1.2687	1.3604	1.4625	2.2765	1.2685	1.3603	1.4627	2.2655	1.3093	1.4171	1.5297	17.0000	1.1799	1.3099	1.4176	1.5333	0.0284	0.0308	0.0312	2.6671
	Level 3	11.7sec	1.1581	1.2284	1.3088	3.1587	1.1580	1.2284	1.3089	3.1395	1.1913	1.2653	1.3583	65.0000	1.0724	1.1915	1.2664	1.3584	0.0265	0.0225	0.0254	8.9070
1	**Level 4**	23.5sec	1.0955	1.1472	1.1969	6.5866	1.0953	1.1472	1.1970	6.6705	1.1213	1.1692	1.2316	257.0000	1.0362	1.1221	1.1694	1.2335	0.0202	0.0132	0.0186	33.4771
Year	**Level 5**	46.9sec	1.0592	1.0926	1.1260	18.4628	1.0591	1.0927	1.1260	18.7610	1.0788	1.1092	1.1485	937.8511	1.0264	1.0791	1.1100	1.1499	0.0141	0.0086	0.0106	120.6183
before	**Level 6**	1.6min	1.0365	1.0585	1.0830	40.2686	1.0365	1.0585	1.0830	42.4284	1.0490	1.0700	1.0973	2266.8723	1.0156	1.0491	1.0717	1.0978	0.0096	0.0056	0.0069	291.1718
	Level 7	3.1min	1.0232	1.0384	1.0550	68.3530	1.0233	1.0384	1.0551	66.2415	1.0318	1.0451	1.0642	3486.9575	1.0081	1.0319	1.0456	1.0644	0.0067	0.0037	0.0052	449.4658
	Level 8	6.3min	1.0163	1.0282	1.0408	62.4254	1.0162	1.0281	1.0408	62.5961	1.0223	1.0334	1.0519	2789.7660	1.0044	1.0223	1.0338	1.0525	0.0049	0.0033	0.0042	375.5253
	Level 9	12.5min	1.0140	1.0253	1.0378	212.5928	1.0140	1.0253	1.0378	215.4494	1.0195	1.0314	1.0485	11156.0638	1.0029	1.0196	1.0315	1.0492	0.0045	0.0035	0.0048	1445.0578

Table A.24: EDH3 Other Results Table –Continued

EDH3	Bid Ask	Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	12sec	1.5352	1.6069	1.7408	3.0354	1.5352	1.6072	1.7437	3.0565	1.5683	1.6220	1.9499	4.9436	1.5009	1.5789	1.6422	2.0165	0.0327	0.0245	0.1449	1.6371
	Level 2	24sec	1.2907	1.4750	1.6493	6.8718	1.2910	1.4750	1.6491	6.8785	1.3468	1.5019	1.7390	15.6578	1.2540	1.4524	1.5746	1.8972	0.0413	0.0250	0.0782	7.6261
	Level 3	47.9sec	1.1658	1.3639	1.4799	12.1087	1.1652	1.3628	1.4794	12.1228	1.2102	1.3921	1.5438	29.6387	1.1335	1.3158	1.4241	1.7306	0.0371	0.0411	0.0507	15.2570
30	**Level 4**	1.6min	1.0995	1.2140	1.3374	19.6470	1.0990	1.2146	1.3380	20.8050	1.1416	1.2413	1.4556	55.5697	1.0713	1.2005	1.2741	1.9003	0.0300	0.0231	0.0823	30.1456
days	**Level 5**	3.2min	1.0578	1.1189	1.2077	35.6041	1.0584	1.1192	1.2081	35.0035	1.0938	1.1491	1.2961	99.3087	1.0352	1.0940	1.1684	1.6816	0.0256	0.0279	0.0604	55.7022
before	**Level 6**	6.4min	1.0308	1.0684	1.1237	54.3921	1.0311	1.0687	1.1245	52.9857	1.0408	1.0870	1.2062	154.2946	1.0211	1.0538	1.0931	1.3867	0.0107	0.0169	0.0546	87.7412
	Level 7	12.8min	1.0165	1.0348	1.0753	44.8143	1.0164	1.0349	1.0749	45.9556	1.0208	1.0466	1.1415	134.2977	1.0111	1.0243	1.0470	1.2708	0.0047	0.0112	0.0447	76.5082
	Level 8	25.5min	-24.3062	1.0141	1.0266	1.3147	-23.3559	1.0141	1.0265	1.3232	1.0119	1.0179	1.0307	1.7283	-96.4514	1.0122	1.0231	1.0875	48.7303	0.0033	0.0032	0.3524
	Level 9	51.1min	-102.9481	1.0093	1.0152	1.1854	-99.0461	1.0093	1.0152	1.1823	1.0067	1.0107	1.0199	1.3920	-399.1993	1.0084	1.0109	1.0688	200.1021	0.0013	0.0037	0.1819
	Level 1	6.3sec	1.5156	1.6247	1.7799	2.8638	1.5165	1.6249	1.7803	2.8554	1.5768	1.6743	1.8657	5.0000	1.3962	1.5789	1.6860	1.9499	0.0574	0.0327	0.0706	1.3298
	Level 2	12.7sec	1.3014	1.4750	1.6476	5.9399	1.3009	1.4750	1.6471	5.8368	1.3564	1.5474	1.7294	17.0000	1.2490	1.4326	1.5509	1.7390	0.0425	0.0426	0.0673	6.5102
	Level 3	25.3sec	1.1714	1.3268	1.4269	13.6145	1.1712	1.3271	1.4263	13.6329	1.2285	1.3795	1.4905	65.0000	1.1245	1.2331	1.3807	1.5438	0.0375	0.0540	0.0443	22.8660
60	**Level 4**	50.7sec	1.1036	1.1783	1.2923	41.1549	1.1032	1.1787	1.2912	40.6906	1.1526	1.2128	1.4066	257.0000	1.0621	1.1532	1.2267	1.4151	0.0320	0.0232	0.0605	89.3857
days	**Level 5**	1.7min	1.0556	1.1003	1.1798	124.8580	1.0554	1.1003	1.1801	125.7322	1.0745	1.1176	1.2247	895.6526	1.0309	1.0855	1.1432	1.2468	0.0169	0.0124	0.0290	312.9612
before	**Level 6**	3.4min	1.0286	1.0537	1.1031	267.3311	1.0287	1.0538	1.1034	268.4942	1.0398	1.0706	1.1403	1984.3263	1.0152	1.0408	1.0775	1.1409	0.0089	0.0098	0.0199	695.3584
	Level 7	6.8min	1.0144	1.0281	1.0553	324.3442	1.0145	1.0280	1.0552	319.7169	1.0203	1.0377	1.0709	2415.4842	1.0072	1.0208	1.0389	1.0771	0.0046	0.0058	0.0110	848.0954
	Level 8	13.5min	-10.9437	1.0141	1.0270	177.2289	-11.1752	1.0141	1.0269	173.6086	1.0110	1.0182	1.0336	1380.7053	-96.4514	1.0113	1.0196	1.0401	34.4568	0.0029	0.0051	487.7407
	Level 9	27min	-1088.2596	1.0090	1.0153	1.0864	-1083.8018	1.0090	1.0153	1.0882	1.0060	1.0107	1.0199	1.3920	-8277.2316	1.0067	1.0109	1.0209	2909.9562	0.0014	0.0032	0.1249
	Level 1	4.4sec	1.4916	1.5982	1.7211	2.5384	1.4923	1.5980	1.7212	2.5374	1.5244	1.6334	1.8569	5.0000	1.3962	1.5574	1.6422	1.8620	0.0334	0.0267	0.0716	1.1604
	Level 2	8.8sec	1.2716	1.4034	1.5509	4.4699	1.2719	1.4036	1.5509	4.4668	1.3354	1.4514	1.6597	17.0000	1.2336	1.3375	1.4524	1.6892	0.0321	0.0411	0.0645	5.5737
	Level 3	17.7sec	1.1455	1.2468	1.3668	9.4169	1.1454	1.2469	1.3669	9.5963	1.1809	1.3006	1.4241	65.0000	1.1241	1.1898	1.3117	1.4593	0.0227	0.0315	0.0337	19.1906
3	**Level 4**	35.3sec	1.0788	1.1474	1.2174	27.4687	1.0790	1.1474	1.2170	27.5817	1.1116	1.1576	1.2892	257.0000	1.0602	1.1186	1.1651	1.3201	0.0159	0.0139	0.0380	73.8875
months	**Level 5**	1.2min	1.0430	1.0827	1.1305	90.0044	1.0429	1.0827	1.1307	84.2270	1.0654	1.0940	1.1765	895.6526	1.0275	1.0685	1.0941	1.1989	0.0123	0.0093	0.0294	257.0740
before	**Level 6**	2.4min	1.0218	1.0439	1.0746	175.2437	1.0219	1.0439	1.0744	179.3722	1.0352	1.0536	1.1029	1984.3263	1.0118	1.0361	1.0538	1.1112	0.0071	0.0058	0.0172	570.1107
	Level 7	4.7min	1.0112	1.0235	1.0403	198.9925	1.0113	1.0235	1.0403	213.5024	1.0183	1.0276	1.0587	2415.4842	1.0064	1.0198	1.0286	1.0598	0.0037	0.0028	0.0092	694.4990
	Level 8	9.4min	-6.6481	1.0124	1.0206	119.8810	-6.4907	1.0125	1.0207	116.0867	1.0099	1.0154	1.0269	1380.7053	-96.4514	1.0105	1.0164	1.0307	27.0298	0.0015	0.0034	398.2516
	Level 9	18.8min	-674.8054	1.0075	1.0124	1.0668	-666.5694	1.0075	1.0124	1.0671	1.0051	1.0096	1.0168	1.3920	-8277.2316	1.0058	1.0099	1.0185	2289.3930	0.0012	0.0024	0.1045
	Level 1	3sec	1.4904	1.5728	1.6605	2.0108	1.4905	1.5729	1.6604	2.0148	1.5290	1.6049	1.7203	5.0000	1.3962	1.5315	1.6090	1.7298	0.0321	0.0221	0.0311	0.5958
	Level 2	5.9sec	1.2654	1.3500	1.4503	2.2514	1.2652	1.3498	1.4502	2.2437	1.3006	1.4025	1.5023	17.0000	1.1577	1.3012	1.4031	1.5030	0.0300	0.0278	0.0286	2.6422
	Level 3	11.9sec	1.1528	1.2174	1.2925	3.0736	1.1528	1.2175	1.2925	3.0737	1.1867	1.2546	1.3466	65.0000	1.0547	1.1871	1.2548	1.3472	0.0261	0.0215	0.0258	8.8403
1	**Level 4**	23.7sec	1.0894	1.1372	1.1808	6.5667	1.0894	1.1372	1.1808	6.4696	1.1159	1.1553	1.2098	257.0000	1.0231	1.1175	1.1566	1.2119	0.0184	0.0133	0.0161	33.3449
Year	**Level 5**	47.4sec	1.0524	1.0818	1.1105	18.1369	1.0524	1.0817	1.1105	17.5221	1.0686	1.0951	1.1273	895.6526	1.0179	1.0687	1.0959	1.1290	0.0125	0.0079	0.0087	114.9948
before	**Level 6**	1.6min	1.0297	1.0476	1.0667	37.6147	1.0297	1.0476	1.0667	36.1815	1.0402	1.0556	1.0781	1984.3263	1.0099	1.0403	1.0559	1.0788	0.0083	0.0049	0.0067	254.3484
	Level 7	3.2min	1.0164	1.0272	1.0382	43.2333	1.0164	1.0272	1.0382	42.8585	1.0228	1.0325	1.0456	2415.4842	1.0044	1.0228	1.0326	1.0460	0.0050	0.0029	0.0037	309.3171
	Level 8	6.3min	-0.5408	1.0155	1.0218	24.0789	-0.5887	1.0155	1.0218	23.6718	1.0124	1.0182	1.0262	1380.7053	-96.4514	1.0124	1.0184	1.0262	12.4785	0.0017	0.0022	176.6462
	Level 9	12.6min	-142.0153	1.0098	1.0136	1.0324	-141.2646	1.0098	1.0136	1.0329	1.0077	1.0118	1.0154	1.3920	-8277.2316	1.0077	1.0118	1.0155	1060.3041	0.0012	0.0012	0.0488

Table A.24: EDH3 Other Results Table –Continued

EDH3 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	12sec	0.4135	0.5907	0.6249	0.6579	0.4121	0.5908	0.6247	0.6579	0.5047	0.6070	0.6378	0.6666	0.2000	0.5734	0.6119	0.6426	0.1434	0.0168	0.0130	0.0133
	Level 2	24sec	0.3719	0.6273	0.6862	0.7885	0.3668	0.6270	0.6865	0.7886	0.5756	0.6356	0.7429	0.7994	0.0627	0.6160	0.6417	0.7713	0.2314	0.0100	0.0422	0.0152
	Level 3	47.9sec	0.3649	0.6846	0.7473	0.8701	0.3578	0.6845	0.7471	0.8704	0.6723	0.6877	0.8224	0.8868	0.0324	0.6801	0.6958	0.8468	0.3097	0.0040	0.0563	0.0209
30	**Level 4**	1.6min	0.3347	0.7622	0.8223	0.9225	0.3357	0.7620	0.8218	0.9229	0.7149	0.7791	0.8723	0.9376	0.0164	0.7395	0.7844	0.9143	0.3332	0.0203	0.0374	0.0128
days	**Level 5**	3.2min	0.3558	0.8331	0.8862	0.9497	0.3580	0.8335	0.8858	0.9497	0.7731	0.8503	0.9126	0.9649	0.0083	0.8192	0.8678	0.9276	0.3770	0.0157	0.0199	0.0195
before	**Level 6**	6.4min	0.4038	0.8924	0.9283	0.9655	0.3977	0.8924	0.9285	0.9650	0.8206	0.9058	0.9432	0.9775	0.0042	0.8777	0.9148	0.9454	0.4195	0.0141	0.0123	0.0172
	Level 7	12.8min	0.4348	0.9324	0.9559	0.9778	0.4283	0.9326	0.9559	0.9776	0.8667	0.9405	0.9634	0.9880	0.0021	0.9183	0.9480	0.9684	0.4402	0.0125	0.0069	0.0098
	Level 8	25.5min	0.4608	0.9519	0.9695	0.9847	0.4612	0.9518	0.9696	0.9845	0.9027	0.9599	0.9739	0.9926	0.0010	0.9460	0.9636	0.9782	0.4609	0.0072	0.0048	0.0074
	Level 9	51.1min	0.4781	0.9483	0.9756	0.9861	0.4726	0.9485	0.9756	0.9859	0.9105	0.9654	0.9783	0.9937	0.0005	0.9201	0.9743	0.9809	0.4783	0.0248	0.0019	0.0068
	Level 1	6.3sec	0.4032	0.5691	0.6148	0.6570	0.4047	0.5693	0.6149	0.6572	0.5159	0.5922	0.6340	0.6828	0.2000	0.5405	0.5928	0.6342	0.1352	0.0186	0.0142	0.0171
	Level 2	12.7sec	0.3475	0.6128	0.6775	0.7704	0.3496	0.6128	0.6775	0.7707	0.5756	0.6417	0.6986	0.8006	0.0588	0.5785	0.6425	0.7353	0.2020	0.0229	0.0204	0.0264
	Level 3	25.3sec	0.3638	0.6904	0.7614	0.8540	0.3653	0.6905	0.7613	0.8540	0.6657	0.7157	0.8035	0.8892	0.0154	0.6664	0.7252	0.8127	0.2605	0.0169	0.0297	0.0288
60	**Level 4**	50.7sec	0.4049	0.7677	0.8450	0.9060	0.4077	0.7677	0.8448	0.9063	0.7080	0.8065	0.8661	0.9413	0.0039	0.7149	0.8150	0.8674	0.3130	0.0289	0.0186	0.0271
days	**Level 5**	1.7min	0.4649	0.8404	0.9006	0.9418	0.4639	0.8401	0.9010	0.9417	0.7833	0.8742	0.9176	0.9696	0.0011	0.8104	0.8809	0.9204	0.3684	0.0268	0.0141	0.0195
before	**Level 6**	3.4min	0.5193	0.8946	0.9404	0.9658	0.5174	0.8944	0.9403	0.9658	0.8586	0.9231	0.9454	0.9843	0.0004	0.8616	0.9276	0.9502	0.4112	0.0221	0.0067	0.0121
	Level 7	6.8min	0.5446	0.9335	0.9636	0.9794	0.5511	0.9335	0.9636	0.9793	0.9062	0.9528	0.9684	0.9916	0.0003	0.9144	0.9583	0.9692	0.4322	0.0138	0.0036	0.0080
	Level 8	13.5min	0.5725	0.9523	0.9746	0.9867	0.5713	0.9523	0.9746	0.9867	0.9188	0.9665	0.9789	0.9947	0.0004	0.9421	0.9678	0.9796	0.4396	0.0089	0.0040	0.0057
	Level 9	27min	0.5721	0.9539	0.9781	0.9895	0.5723	0.9540	0.9781	0.9895	0.9201	0.9693	0.9822	0.9952	0.0001	0.9307	0.9743	0.9833	0.4422	0.0139	0.0031	0.0047
	Level 1	4.4sec	0.4517	0.5847	0.6275	0.6691	0.4503	0.5847	0.6274	0.6692	0.5463	0.6070	0.6497	0.6858	0.2000	0.5581	0.6096	0.6618	0.1203	0.0149	0.0128	0.0077
	Level 2	8.8sec	0.4364	0.6452	0.7139	0.7902	0.4377	0.6450	0.7136	0.7901	0.6031	0.6831	0.7477	0.8084	0.0588	0.6160	0.6838	0.7492	0.1938	0.0232	0.0226	0.0171
	Level 3	17.7sec	0.4754	0.7262	0.8025	0.8737	0.4725	0.7261	0.8028	0.8737	0.6858	0.7615	0.8405	0.8892	0.0154	0.6877	0.7645	0.8409	0.2475	0.0249	0.0231	0.0180
3	**Level 4**	35.3sec	0.5316	0.8104	0.8724	0.9249	0.5273	0.8107	0.8721	0.9246	0.7647	0.8527	0.8985	0.9413	0.0039	0.7673	0.8546	0.9023	0.2882	0.0259	0.0148	0.0157
months	**Level 5**	1.2min	0.5913	0.8759	0.9189	0.9540	0.5917	0.8761	0.9191	0.9541	0.8230	0.9046	0.9345	0.9696	0.0011	0.8310	0.9059	0.9355	0.3288	0.0209	0.0094	0.0134
before	**Level 6**	2.4min	0.6481	0.9224	0.9498	0.9732	0.6470	0.9224	0.9498	0.9731	0.8914	0.9396	0.9605	0.9845	0.0004	0.8938	0.9432	0.9612	0.3584	0.0151	0.0059	0.0082
	Level 7	4.7min	0.6855	0.9512	0.9685	0.9836	0.6865	0.9511	0.9685	0.9836	0.9290	0.9616	0.9761	0.9920	0.0003	0.9341	0.9618	0.9764	0.3758	0.0103	0.0041	0.0056
	Level 8	9.4min	0.7095	0.9622	0.9788	0.9884	0.7080	0.9622	0.9788	0.9884	0.9456	0.9730	0.9823	0.9956	0.0004	0.9460	0.9739	0.9827	0.3815	0.0085	0.0024	0.0047
	Level 9	18.8min	0.7014	0.9648	0.9815	0.9902	0.7078	0.9646	0.9815	0.9903	0.9474	0.9754	0.9850	0.9971	0.0001	0.9562	0.9783	0.9855	0.3822	0.0071	0.0020	0.0041
	Level 1	3sec	0.5156	0.6001	0.6348	0.6695	0.5156	0.6001	0.6347	0.6695	0.5798	0.6172	0.6525	0.7062	0.2000	0.5815	0.6177	0.6532	0.0788	0.0106	0.0099	0.0131
	Level 2	5.9sec	0.5602	0.6842	0.7360	0.7888	0.5611	0.6843	0.7360	0.7888	0.6522	0.7057	0.7634	0.8475	0.0588	0.6537	0.7067	0.7638	0.1239	0.0146	0.0163	0.0180
	Level 3	11.9sec	0.6354	0.7648	0.8147	0.8639	0.6355	0.7647	0.8147	0.8640	0.7362	0.7903	0.8392	0.9325	0.0154	0.7362	0.7909	0.8394	0.1551	0.0150	0.0147	0.0202
1	**Level 4**	23.7sec	0.7110	0.8359	0.8720	0.9133	0.7113	0.8360	0.8720	0.9133	0.8107	0.8553	0.8912	0.9651	0.0039	0.8119	0.8558	0.8918	0.1733	0.0131	0.0099	0.0171
Year	**Level 5**	47.4sec	0.7782	0.8884	0.9155	0.9444	0.7766	0.8884	0.9155	0.9443	0.8697	0.9016	0.9267	0.9743	0.0011	0.8707	0.9028	0.9269	0.1850	0.0084	0.0070	0.0127
before	**Level 6**	1.6min	0.8274	0.9236	0.9449	0.9650	0.8270	0.9236	0.9449	0.9648	0.9109	0.9346	0.9532	0.9846	0.0004	0.9113	0.9364	0.9533	0.1917	0.0060	0.0048	0.0090
	Level 7	3.2min	0.8606	0.9480	0.9631	0.9773	0.8602	0.9480	0.9631	0.9773	0.9395	0.9568	0.9691	0.9920	0.0003	0.9397	0.9575	0.9692	0.1949	0.0048	0.0034	0.0064
	Level 8	6.3min	0.8774	0.9609	0.9727	0.9840	0.8768	0.9609	0.9727	0.9840	0.9501	0.9677	0.9782	0.9956	0.0004	0.9506	0.9677	0.9782	0.1966	0.0039	0.0031	0.0048
	Level 9	12.6min	0.8739	0.9637	0.9754	0.9862	0.8736	0.9637	0.9754	0.9862	0.9531	0.9696	0.9808	0.9971	0.0001	0.9538	0.9697	0.9809	0.2000	0.0044	0.0033	0.0044

Table A.25: EDH4 Other Results Table

EDH4 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	9.5sec	1.5449	1.7146	1.9284	2.4280	1.5447	1.7147	1.9295	2.4357	1.6321	1.7629	1.9901	2.7327	1.5000	1.6794	1.8351	2.0510	0.0757	0.0375	0.0828	0.3492
	Level 2	19sec	1.2946	1.5048	1.8182	2.4089	1.2949	1.5045	1.8179	2.4153	1.3789	1.5992	1.8976	2.8512	1.2500	1.3999	1.7397	2.0349	0.0728	0.0940	0.0790	0.4110
	Level 3	38.1sec	1.1592	1.3749	1.5822	1.8035	1.1596	1.3719	1.5825	1.8019	1.2247	1.5128	1.6207	2.0744	1.1250	1.2326	1.5545	1.6341	0.0564	0.1148	0.0342	0.2381
30	**Level 4**	1.3min	1.0812	1.2698	1.3688	1.6153	1.0807	1.2703	1.3688	1.6155	1.1125	1.3487	1.3882	1.7636	1.0625	1.1505	1.3577	1.3885	0.0276	0.0908	0.0169	0.1997
days	**Level 5**	2.5min	1.0418	1.1677	1.2359	1.4287	1.0419	1.1668	1.2368	1.4339	1.0565	1.2037	1.2552	1.5688	1.0314	1.0902	1.2042	1.2592	0.0131	0.0526	0.0283	0.1586
before	**Level 6**	5.1min	1.0236	1.0957	1.1354	1.2619	1.0236	1.0958	1.1354	1.2646	1.0288	1.1207	1.1400	1.3565	1.0160	1.0563	1.1261	1.1464	0.0068	0.0303	0.0080	0.1075
	Level 7	10.1min	1.0146	1.0530	1.0753	1.1747	1.0146	1.0529	1.0753	1.1732	1.0195	1.0712	1.0778	1.2364	1.0090	1.0308	1.0714	1.0823	0.0053	0.0185	0.0034	0.0807
	Level 8	20.3min	1.0093	1.0283	1.0477	1.1191	1.0093	1.0283	1.0477	1.1209	1.0105	1.0362	1.0515	1.1683	1.0081	1.0172	1.0450	1.0549	0.0012	0.0091	0.0033	0.0589
	Level 9	40.6min	1.0065	1.0193	1.0366	1.0994	1.0065	1.0192	1.0365	1.0983	1.0068	1.0262	1.0386	1.1447	1.0059	1.0112	1.0344	1.0429	0.0005	0.0067	0.0021	0.0515
	Level 1	7.3sec	1.5445	1.7055	1.8684	3.0333	1.5448	1.7051	1.8696	3.0269	1.6594	1.7629	1.9901	5.0000	1.4875	1.6667	1.7952	2.0308	0.0703	0.0329	0.0765	1.1155
	Level 2	14.7sec	1.3214	1.4667	1.6726	5.3030	1.3217	1.4664	1.6702	5.2567	1.3789	1.5274	1.8433	17.0000	1.2500	1.3999	1.5281	1.8976	0.0572	0.0453	0.1274	5.4482
	Level 3	29.3sec	1.1893	1.3094	1.4829	11.7440	1.1898	1.3098	1.4835	12.1671	1.2326	1.3824	1.5725	65.0000	1.1250	1.2475	1.3886	1.6207	0.0458	0.0517	0.0772	23.4577
60	**Level 4**	58.7sec	1.1065	1.2030	1.3272	39.8720	1.1059	1.2034	1.3270	40.2170	1.1406	1.2501	1.3604	257.0000	1.0625	1.1505	1.2521	1.3882	0.0320	0.0289	0.0429	95.7338
days	**Level 5**	2min	1.0582	1.1355	1.2086	149.2379	1.0578	1.1358	1.2086	149.3075	1.0902	1.1746	1.2508	1025.0000	1.0314	1.0949	1.1793	1.2552	0.0214	0.0315	0.0247	386.1669
before	**Level 6**	3.9min	1.0316	1.0808	1.1242	578.0574	1.0317	1.0808	1.1243	587.4000	1.0550	1.1083	1.1400	4097.0000	1.0160	1.0563	1.1127	1.1400	0.0132	0.0192	0.0104	1547.5903
	Level 7	7.8min	1.0178	1.0467	1.0706	761.8824	1.0178	1.0466	1.0706	741.9078	1.0286	1.0618	1.0778	5182.2650	1.0090	1.0308	1.0649	1.0804	0.0074	0.0104	0.0051	1958.0140
	Level 8	15.6min	1.0109	1.0277	1.0431	487.3101	1.0109	1.0277	1.0432	481.5637	1.0172	1.0352	1.0515	3361.8205	1.0071	1.0208	1.0357	1.0549	0.0043	0.0055	0.0062	1270.0741
	Level 9	31.3min	1.0081	1.0186	1.0336	332.8931	1.0081	1.0186	1.0337	321.3857	1.0135	1.0229	1.0419	2241.5470	1.0058	1.0136	1.0262	1.0429	0.0030	0.0032	0.0058	846.7117
	Level 1	4.8sec	1.5322	1.6788	1.8324	2.7710	1.5319	1.6786	1.8319	2.7742	1.6395	1.7249	1.9753	5.0000	1.4711	1.6515	1.7252	1.9901	0.0520	0.0236	0.0727	0.9664
	Level 2	9.7sec	1.3079	1.4358	1.6018	4.2570	1.3077	1.4352	1.6019	4.2932	1.3678	1.4874	1.7397	17.0000	1.2114	1.3789	1.5086	1.7472	0.0543	0.0380	0.0726	4.2382
	Level 3	19.4sec	1.1792	1.2829	1.4161	8.4126	1.1794	1.2827	1.4157	8.3597	1.2233	1.3469	1.5286	65.0000	1.0937	1.2247	1.3572	1.5468	0.0434	0.0416	0.0627	17.2929
3	**Level 4**	38.8sec	1.1038	1.1849	1.2890	23.6651	1.1040	1.1846	1.2894	23.9941	1.1406	1.2292	1.3560	257.0000	1.0625	1.1425	1.2315	1.3577	0.0272	0.0272	0.0427	70.2430
months	**Level 5**	1.3min	1.0592	1.1251	1.1972	82.4932	1.0592	1.1250	1.1970	84.1343	1.0847	1.1573	1.2378	1025.0000	1.0314	1.0902	1.1640	1.2469	0.0162	0.0234	0.0220	282.8790
before	**Level 6**	2.6min	1.0325	1.0790	1.1204	317.0039	1.0325	1.0786	1.1204	323.4578	1.0459	1.0950	1.1400	4097.0000	1.0160	1.0550	1.0998	1.1400	0.0090	0.0160	0.0130	1134.0392
	Level 7	5.2min	1.0185	1.0469	1.0691	415.7997	1.0186	1.0470	1.0691	416.0231	1.0279	1.0594	1.0778	5182.2650	1.0090	1.0286	1.0618	1.0792	0.0059	0.0105	0.0051	1433.2131
	Level 8	10.3min	1.0116	1.0290	1.0431	278.2793	1.0116	1.0290	1.0431	303.9388	1.0172	1.0357	1.0513	3361.8205	1.0071	1.0208	1.0362	1.0515	0.0037	0.0052	0.0047	932.3199
	Level 9	20.7min	1.0091	1.0214	1.0335	229.0974	1.0090	1.0214	1.0334	232.3560	1.0136	1.0262	1.0419	2241.5470	1.0052	1.0151	1.0262	1.0429	0.0030	0.0036	0.0047	639.5524
	Level 1	3sec	1.5230	1.6217	1.7326	2.1276	1.5231	1.6217	1.7329	2.1312	1.5732	1.6667	1.8024	5.0000	1.4411	1.5738	1.6668	1.8025	0.0312	0.0258	0.0409	0.5840
	Level 2	6.1sec	1.3087	1.4171	1.5290	2.3551	1.3086	1.4172	1.5290	2.3498	1.3681	1.4627	1.5992	17.0000	1.1815	1.3691	1.4654	1.6052	0.0466	0.0268	0.0392	2.1960
	Level 3	12.1sec	1.1881	1.2726	1.3591	3.1121	1.1882	1.2724	1.3590	3.1144	1.2407	1.3120	1.4182	65.0000	1.0868	1.2410	1.3170	1.4227	0.0389	0.0211	0.0282	8.2450
1	**Level 4**	24.2sec	1.1158	1.1776	1.2354	6.5986	1.1160	1.1776	1.2356	6.3553	1.1507	1.2025	1.2797	257.0000	1.0465	1.1518	1.2028	1.2818	0.0275	0.0158	0.0235	32.7686
Year	**Level 5**	48.4sec	1.0703	1.1110	1.1522	19.2781	1.0702	1.1110	1.1521	19.0381	1.0925	1.1287	1.1849	1025.0000	1.0277	1.0946	1.1295	1.1863	0.0175	0.0107	0.0175	131.0407
before	**Level 6**	1.6min	1.0411	1.0674	1.0934	69.1752	1.0411	1.0674	1.0934	69.9066	1.0560	1.0800	1.1134	4097.0000	1.0157	1.0563	1.0803	1.1159	0.0109	0.0061	0.0089	524.3193
	Level 7	3.2min	1.0237	1.0401	1.0563	85.8826	1.0237	1.0401	1.0563	89.5519	1.0327	1.0469	1.0676	5182.2650	1.0081	1.0329	1.0470	1.0679	0.0064	0.0038	0.0061	663.4512
	Level 8	6.5min	1.0147	1.0250	1.0350	63.8955	1.0147	1.0251	1.0349	65.6241	1.0202	1.0294	1.0420	3361.8205	1.0044	1.0207	1.0299	1.0422	0.0040	0.0026	0.0036	435.2955
	Level 9	12.9min	1.0112	1.0190	1.0270	49.3924	1.0111	1.0190	1.0270	50.3546	1.0151	1.0217	1.0334	2241.5470	1.0029	1.0151	1.0218	1.0336	0.0031	0.0020	0.0033	301.5397

Table A.25: EDH4 Other Results Table –Continued

EDH4 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	11.8sec	1.5430	1.6991	1.9218	2.3993	1.5448	1.7000	1.9221	2.4037	1.6321	1.7417	1.9926	2.6237	1.5000	1.6625	1.8149	2.0607	0.0756	0.0329	0.0943	0.3009
	Level 2	23.6sec	1.2911	1.5094	1.8076	2.3082	1.2908	1.5097	1.8083	2.3081	1.3648	1.6655	1.8962	2.5182	1.2500	1.3996	1.7128	2.0358	0.0642	0.1276	0.0919	0.2472
	Level 3	47.1sec	1.1573	1.3406	1.5511	1.7849	1.1584	1.3399	1.5509	1.7829	1.2188	1.4168	1.6117	2.0118	1.1252	1.2245	1.4887	1.6336	0.0524	0.0848	0.0615	0.2013
30	**Level 4**	1.6min	1.0829	1.2618	1.3473	1.5385	1.0818	1.2627	1.3472	1.5338	1.1123	1.3354	1.3518	1.8574	1.0631	1.1482	1.3401	1.3597	0.0266	0.0867	0.0062	0.2805
days	**Level 5**	3.1min	1.0442	1.1543	1.2292	1.3711	1.0440	1.1545	1.2289	1.3686	1.0563	1.1781	1.2399	1.5855	1.0327	1.0957	1.2074	1.2596	0.0118	0.0394	0.0186	0.1879
before	**Level 6**	6.3min	1.0268	1.0950	1.1330	1.2509	1.0267	1.0955	1.1331	1.2527	1.0333	1.1228	1.1487	1.4002	1.0184	1.0614	1.1242	1.1547	0.0076	0.0267	0.0135	0.1300
	Level 7	12.6min	1.0172	1.0519	1.0826	1.1684	1.0174	1.0518	1.0824	1.1689	1.0244	1.0652	1.0894	1.2734	1.0128	1.0333	1.0729	1.0909	0.0061	0.0152	0.0085	0.0941
	Level 8	25.1min	1.0114	1.0307	1.0492	1.1249	1.0114	1.0306	1.0491	1.1251	1.0135	1.0400	1.0542	1.2020	1.0089	1.0189	1.0414	1.0706	0.0023	0.0105	0.0068	0.0685
	Level 9	50.3min	1.0084	1.0232	1.0373	1.1154	1.0084	1.0232	1.0374	1.1148	1.0090	1.0320	1.0408	1.1939	1.0074	1.0165	1.0344	1.0597	0.0009	0.0075	0.0032	0.0703
	Level 1	7.4sec	1.5459	1.6977	1.8647	3.1329	1.5457	1.6971	1.8653	3.1397	1.6355	1.7417	1.9926	5.5163	1.4793	1.6625	1.7954	2.0138	0.0652	0.0235	0.0782	1.3460
	Level 2	14.9sec	1.2992	1.4635	1.6773	4.7022	1.2995	1.4640	1.6767	4.7397	1.3648	1.5388	1.8159	11.4470	1.2500	1.3996	1.5625	1.8962	0.0439	0.0494	0.0898	3.8865
	Level 3	29.8sec	1.1804	1.3072	1.4329	7.3556	1.1808	1.3068	1.4335	7.2776	1.2245	1.3431	1.5523	21.1956	1.1252	1.2457	1.3656	1.6117	0.0413	0.0410	0.0672	8.7917
60	**Level 4**	59.6sec	1.0979	1.1904	1.3036	13.4437	1.0978	1.1905	1.3041	13.4882	1.1283	1.2367	1.3497	57.5096	1.0631	1.1436	1.2432	1.3518	0.0251	0.0337	0.0445	21.8183
days	**Level 5**	2min	1.0535	1.1166	1.1912	30.0784	1.0534	1.1166	1.1908	30.5525	1.0662	1.1604	1.2393	172.4252	1.0327	1.0957	1.1679	1.2399	0.0126	0.0215	0.0261	63.7463
before	**Level 6**	4min	1.0308	1.0695	1.1174	73.7809	1.0307	1.0695	1.1174	72.4790	1.0457	1.0886	1.1311	450.0430	1.0184	1.0526	1.0955	1.1487	0.0086	0.0116	0.0123	167.5145
	Level 7	7.9min	1.0184	1.0412	1.0723	120.3380	1.0184	1.0413	1.0723	123.7836	1.0289	1.0500	1.0849	826.2681	1.0124	1.0292	1.0600	1.0894	0.0062	0.0081	0.0099	310.0119
	Level 8	15.9min	1.0122	1.0260	1.0467	203.3741	1.0123	1.0260	1.0467	197.9757	1.0185	1.0333	1.0563	1360.2652	1.0068	1.0189	1.0389	1.0585	0.0046	0.0063	0.0072	512.5693
	Level 9	31.8min	1.0093	1.0219	1.0374	208.5505	1.0093	1.0220	1.0374	225.5074	1.0148	1.0305	1.0448	1554.4459	1.0045	1.0165	1.0315	1.0534	0.0040	0.0056	0.0051	586.0429
	Level 1	5.1sec	1.5230	1.6779	1.8282	2.9906	1.5229	1.6779	1.8280	2.9834	1.6326	1.7042	1.9589	5.5163	1.3882	1.6355	1.7327	1.9682	0.0668	0.0208	0.0636	1.2745
	Level 2	10.2sec	1.2877	1.4294	1.6089	4.8608	1.2878	1.4293	1.6096	4.8302	1.3648	1.4922	1.7050	15.6286	1.1973	1.3676	1.5064	1.7128	0.0539	0.0417	0.0661	4.5603
	Level 3	20.4sec	1.1717	1.2812	1.3826	7.4390	1.1717	1.2812	1.3826	7.3601	1.2236	1.3346	1.4435	30.2571	1.1033	1.2245	1.3363	1.4887	0.0406	0.0420	0.0373	9.6786
3	**Level 4**	40.7sec	1.0985	1.1785	1.2678	12.6511	1.0986	1.1785	1.2683	12.7897	1.1283	1.2283	1.3354	59.5143	1.0631	1.1312	1.2313	1.3401	0.0215	0.0306	0.0378	21.5996
months	**Level 5**	1.4min	1.0574	1.1106	1.1816	26.2385	1.0575	1.1105	1.1816	26.3455	1.0822	1.1397	1.2100	172.4252	1.0327	1.0848	1.1428	1.2316	0.0126	0.0145	0.0209	54.6661
before	**Level 6**	2.7min	1.0333	1.0687	1.1140	56.8612	1.0333	1.0687	1.1141	57.7567	1.0465	1.0881	1.1371	450.0430	1.0184	1.0481	1.0886	1.1395	0.0081	0.0109	0.0157	134.4882
	Level 7	5.4min	1.0193	1.0428	1.0711	104.2222	1.0193	1.0428	1.0710	103.2789	1.0289	1.0539	1.0835	826.2681	1.0124	1.0292	1.0561	1.0839	0.0052	0.0073	0.0101	252.5398
	Level 8	10.9min	1.0131	1.0290	1.0468	178.4323	1.0131	1.0290	1.0468	179.1766	1.0189	1.0376	1.0585	1360.2652	1.0068	1.0191	1.0389	1.0622	0.0041	0.0061	0.0071	438.9167
	Level 9	21.7min	1.0112	1.0254	1.0406	258.5440	1.0113	1.0254	1.0407	266.0228	1.0178	1.0320	1.0534	1873.4571	1.0045	1.0180	1.0324	1.0584	0.0047	0.0049	0.0061	645.9178
	Level 1	3.2sec	1.5183	1.6134	1.7214	2.1707	1.5181	1.6135	1.7213	2.1731	1.5668	1.6611	1.8015	5.5163	1.3882	1.5673	1.6625	1.8017	0.0354	0.0271	0.0371	0.7405
	Level 2	6.4sec	1.2987	1.3977	1.5142	2.4492	1.2989	1.3978	1.5140	2.4441	1.3598	1.4520	1.5921	15.6286	1.1835	1.3618	1.4522	1.5985	0.0424	0.0270	0.0428	2.4315
	Level 3	12.9sec	1.1804	1.2537	1.3391	2.8738	1.1805	1.2537	1.3391	2.8674	1.2244	1.2985	1.3879	30.2571	1.0855	1.2245	1.3003	1.3918	0.0346	0.0204	0.0259	4.9901
1	**Level 4**	25.7sec	1.1094	1.1607	1.2173	3.8950	1.1094	1.1607	1.2173	3.9356	1.1381	1.1816	1.2513	59.5143	1.0454	1.1387	1.1823	1.2526	0.0229	0.0125	0.0192	10.7805
Year	**Level 5**	51.4sec	1.0672	1.1006	1.1371	6.6934	1.0673	1.1006	1.1370	6.6979	1.0884	1.1148	1.1683	172.4252	1.0271	1.0887	1.1150	1.1688	0.0159	0.0084	0.0155	26.5475
before	**Level 6**	1.7min	1.0401	1.0622	1.0858	13.3011	1.0401	1.0622	1.0858	13.2705	1.0539	1.0720	1.1033	450.0430	1.0157	1.0542	1.0722	1.1036	0.0100	0.0052	0.0088	64.5178
	Level 7	3.4min	1.0239	1.0393	1.0543	21.6183	1.0239	1.0393	1.0543	22.9029	1.0320	1.0449	1.0655	826.2681	1.0081	1.0321	1.0453	1.0656	0.0062	0.0035	0.0059	120.5577
	Level 8	6.9min	1.0157	1.0264	1.0376	39.4624	1.0157	1.0264	1.0376	39.0467	1.0212	1.0306	1.0451	1360.2652	1.0044	1.0212	1.0306	1.0453	0.0043	0.0029	0.0044	209.6102
	Level 9	13.7min	1.0129	1.0223	1.0330	56.8835	1.0129	1.0223	1.0330	57.5498	1.0183	1.0262	1.0394	1873.4571	1.0029	1.0185	1.0265	1.0395	0.0040	0.0022	0.0039	308.8832

Table A.25: EDH4 Other Results Table –Continued

EDH4	Bid Ask Covariance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	10.6sec	1.5446	1.6921	1.9224	2.4097	1.5447	1.6919	1.9248	2.4165	1.6321	1.7309	1.9911	2.6687	1.5000	1.6704	1.8240	2.0558	0.0757	0.0275	0.0888	0.3205
	Level 2	21.3sec	1.2867	1.4884	1.8090	2.3480	1.2861	1.4901	1.8107	2.3479	1.3519	1.6258	1.8960	2.6436	1.2500	1.3706	1.7239	2.0351	0.0571	0.1243	0.0861	0.3046
	Level 3	42.6sec	1.1613	1.3315	1.5528	1.7629	1.1592	1.3318	1.5528	1.7634	1.2232	1.3842	1.6157	1.9588	1.1250	1.2245	1.4957	1.6313	0.0555	0.0737	0.0602	0.1727
30	**Level 4**	1.4min	1.0802	1.2597	1.3549	1.4895	1.0807	1.2606	1.3549	1.4887	1.1124	1.3500	1.3589	1.7009	1.0625	1.1447	1.3528	1.3812	0.0275	0.0930	0.0034	0.1838
days	**Level 5**	2.8min	1.0414	1.1504	1.2238	1.3360	1.0418	1.1506	1.2234	1.3377	1.0564	1.1752	1.2352	1.4868	1.0313	1.0863	1.2037	1.2550	0.0130	0.0430	0.0172	0.1293
before	**Level 6**	5.7min	1.0233	1.0858	1.1212	1.2034	1.0233	1.0860	1.1213	1.2021	1.0285	1.1052	1.1252	1.2974	1.0157	1.0515	1.1182	1.1453	0.0067	0.0242	0.0036	0.0831
	Level 7	11.4min	1.0135	1.0436	1.0647	1.1230	1.0135	1.0436	1.0647	1.1229	1.0176	1.0554	1.0672	1.1904	1.0081	1.0247	1.0627	1.0770	0.0049	0.0136	0.0023	0.0597
	Level 8	22.7min	1.0070	1.0200	1.0349	1.0667	1.0071	1.0201	1.0349	1.0672	1.0085	1.0258	1.0367	1.1058	1.0044	1.0107	1.0334	1.0405	0.0023	0.0066	0.0017	0.0342
	Level 9	45.4min	1.0039	1.0103	1.0199	1.0402	1.0039	1.0102	1.0199	1.0400	1.0056	1.0153	1.0203	1.0667	1.0029	1.0058	1.0197	1.0265	0.0015	0.0041	0.0003	0.0231
	Level 1	7.4sec	1.5430	1.6910	1.8650	3.6678	1.5432	1.6909	1.8650	3.6594	1.6436	1.7309	1.9911	9.0000	1.4787	1.6704	1.7951	2.0052	0.0670	0.0215	0.0773	2.5156
	Level 2	14.8sec	1.3043	1.4456	1.6625	7.6061	1.3042	1.4459	1.6623	7.7334	1.3519	1.5078	1.8123	33.0000	1.2500	1.3706	1.5601	1.8960	0.0423	0.0592	0.1006	11.3668
	Level 3	29.6sec	1.1751	1.2986	1.4214	20.9005	1.1755	1.2984	1.4219	21.6679	1.2232	1.3429	1.5470	129.0000	1.1250	1.2245	1.3472	1.6157	0.0371	0.0459	0.0732	47.4742
60	**Level 4**	59.1sec	1.0894	1.1771	1.2986	80.2679	1.0896	1.1776	1.2983	77.1399	1.1225	1.2081	1.3531	513.0000	1.0625	1.1260	1.2149	1.3589	0.0247	0.0314	0.0602	192.3001
days	**Level 5**	2min	-219.4884	1.0920	1.1633	3.3687	-218.3911	1.0921	1.1630	3.3773	1.0575	1.1090	1.2037	15.3464	-1535.0000	1.0600	1.1191	1.2313	580.5699	0.0176	0.0286	5.2821
before	**Level 6**	3.9min	-142.4866	1.0492	1.0919	3.2144	-145.2661	1.0492	1.0918	3.1584	1.0285	1.0596	1.1182	14.7902	-1023.0000	1.0301	1.0634	1.1204	387.0443	0.0100	0.0189	5.1307
	Level 7	7.9min	1.0110	1.0256	1.0484	2.3414	1.0110	1.0255	1.0483	2.3608	1.0173	1.0311	1.0627	9.7149	1.0000	1.0176	1.0374	1.0643	0.0062	0.0052	0.0091	3.2441
	Level 8	15.8min	1.0058	1.0146	1.0247	1.6402	1.0058	1.0146	1.0247	1.6435	1.0092	1.0188	1.0334	5.0520	1.0000	1.0098	1.0203	1.0346	0.0032	0.0033	0.0045	1.5039
	Level 9	31.5min	1.0027	1.0087	1.0147	1.3343	1.0027	1.0087	1.0148	1.3380	1.0046	1.0116	1.0197	3.1342	1.0000	1.0056	1.0119	1.0198	0.0014	0.0023	0.0028	0.7924
	Level 1	5sec	1.5224	1.6707	1.8129	3.0407	1.5225	1.6706	1.8122	3.0309	1.6321	1.7045	1.9475	9.0000	1.4152	1.6347	1.7309	1.9595	0.0591	0.0203	0.0593	1.9694
	Level 2	9.9sec	1.2879	1.4152	1.5906	5.4271	1.2882	1.4144	1.5907	5.3647	1.3519	1.4871	1.6991	33.0000	1.2025	1.3624	1.5065	1.7239	0.0514	0.0410	0.0629	8.5718
	Level 3	19.9sec	1.1623	1.2676	1.3692	12.2285	1.1624	1.2674	1.3690	12.8776	1.2097	1.3122	1.4249	129.0000	1.0898	1.2142	1.3318	1.4308	0.0378	0.0367	0.0309	35.0368
3	**Level 4**	39.8sec	1.0885	1.1623	1.2456	40.5470	1.0889	1.1622	1.2460	42.5838	1.1225	1.1999	1.3195	513.0000	1.0625	1.1250	1.2024	1.3500	0.0221	0.0243	0.0379	141.4243
months	**Level 5**	1.3min	-122.0723	1.0935	1.1535	2.7243	-117.1096	1.0935	1.1536	2.7225	1.0600	1.1111	1.1812	15.3464	-1535.0000	1.0699	1.1153	1.1891	426.0230	0.0133	0.0244	3.9766
before	**Level 6**	2.7min	-79.3210	1.0526	1.0892	2.4812	-77.7456	1.0526	1.0892	2.4276	1.0321	1.0650	1.1172	14.7902	-1023.0000	1.0367	1.0687	1.1182	284.0136	0.0091	0.0153	3.7847
	Level 7	5.3min	1.0130	1.0279	1.0478	1.8669	1.0130	1.0278	1.0479	1.8712	1.0173	1.0394	1.0599	9.7149	1.0000	1.0176	1.0413	1.0627	0.0050	0.0073	0.0063	2.3863
	Level 8	10.6min	1.0070	1.0155	1.0250	1.3959	1.0070	1.0155	1.0250	1.4057	1.0098	1.0205	1.0286	5.0520	1.0000	1.0099	1.0207	1.0334	0.0029	0.0040	0.0022	1.1056
	Level 9	21.2min	1.0034	1.0096	1.0145	1.2100	1.0034	1.0096	1.0145	1.2102	1.0058	1.0116	1.0195	3.1342	1.0000	1.0070	1.0119	1.0197	0.0020	0.0015	0.0021	0.5814
	Level 1	3.1sec	1.5120	1.6060	1.7156	2.1775	1.5120	1.6061	1.7157	2.1726	1.5592	1.6535	1.7879	9.0000	1.3689	1.5607	1.6562	1.7925	0.0368	0.0269	0.0377	1.0098
	Level 2	6.2sec	1.2946	1.3879	1.5041	2.5691	1.2945	1.3879	1.5041	2.5450	1.3515	1.4357	1.5780	33.0000	1.1815	1.3518	1.4361	1.5804	0.0404	0.0241	0.0425	4.1325
	Level 3	12.5sec	1.1721	1.2456	1.3283	3.9685	1.1719	1.2456	1.3283	4.0273	1.2145	1.2856	1.3770	129.0000	1.0846	1.2156	1.2863	1.3782	0.0322	0.0193	0.0274	16.3613
1	**Level 4**	25sec	1.1006	1.1504	1.2016	10.1283	1.1007	1.1505	1.2017	10.2663	1.1301	1.1734	1.2379	513.0000	1.0438	1.1311	1.1744	1.2389	0.0218	0.0126	0.0170	65.4910
Year	**Level 5**	49.9sec	-25.6340	1.0886	1.1200	1.6454	-24.1230	1.0885	1.1199	1.6418	1.0778	1.1027	1.1423	15.3464	-1535.0000	1.0781	1.1030	1.1477	196.6721	0.0073	0.0114	2.0689
before	**Level 6**	1.7min	-15.8389	1.0499	1.0687	1.4548	-15.7550	1.0499	1.0687	1.4551	1.0430	1.0593	1.0841	14.7902	-1023.0000	1.0434	1.0594	1.0846	131.1139	0.0043	0.0068	1.8240
	Level 7	3.3min	1.0169	1.0271	1.0374	1.2687	1.0168	1.0271	1.0374	1.2650	1.0224	1.0314	1.0454	9.7149	1.0000	1.0224	1.0316	1.0455	0.0043	0.0027	0.0039	1.1370
	Level 8	6.7min	1.0089	1.0145	1.0198	1.1333	1.0088	1.0145	1.0198	1.1289	1.0120	1.0170	1.0237	5.0520	1.0000	1.0121	1.0171	1.0238	0.0023	0.0015	0.0020	0.5304
	Level 9	13.3min	1.0044	1.0080	1.0115	1.0679	1.0044	1.0080	1.0115	1.0710	1.0065	1.0096	1.0142	3.1342	1.0000	1.0067	1.0097	1.0142	0.0016	0.0009	0.0013	0.2829

Table A.25: EDH4 Other Results Table –Continued

EDH4 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	10.6sec	0.4215	0.5342	0.5931	0.6479	0.4207	0.5344	0.5932	0.6484	0.4853	0.5741	0.6015	0.6667	0.3811	0.5019	0.5868	0.6127	0.0564	0.0341	0.0075	0.0309
	Level 2	21.3sec	0.4353	0.5657	0.6887	0.7767	0.4367	0.5656	0.6877	0.7760	0.4912	0.6004	0.7145	0.8000	0.3971	0.5274	0.6400	0.7327	0.0488	0.0328	0.0414	0.0375
	Level 3	42.6sec	0.5650	0.6610	0.7632	0.8641	0.5654	0.6606	0.7629	0.8644	0.6122	0.7058	0.8167	0.8888	0.4971	0.6205	0.7207	0.8204	0.0605	0.0367	0.0490	0.0382
30	**Level 4**	1.4min	0.6634	0.7440	0.8110	0.9244	0.6654	0.7439	0.8102	0.9247	0.7355	0.7488	0.8709	0.9407	0.5384	0.7398	0.7552	0.8990	0.1102	0.0043	0.0581	0.0225
days	**Level 5**	2.8min	0.7410	0.8226	0.8725	0.9580	0.7393	0.8226	0.8730	0.9579	0.7939	0.8488	0.9127	0.9683	0.6307	0.8065	0.8502	0.9467	0.0940	0.0202	0.0344	0.0109
before	**Level 6**	5.7min	0.8060	0.8848	0.9207	0.9739	0.8038	0.8846	0.9208	0.9740	0.8660	0.8907	0.9422	0.9819	0.7142	0.8706	0.9016	0.9678	0.0795	0.0094	0.0204	0.0072
	Level 7	11.4min	0.8589	0.9279	0.9551	0.9828	0.8591	0.9276	0.9549	0.9829	0.9167	0.9388	0.9678	0.9873	0.7853	0.9179	0.9404	0.9762	0.0672	0.0095	0.0137	0.0059
	Level 8	22.7min	0.8908	0.9552	0.9733	0.9887	0.8910	0.9553	0.9733	0.9887	0.9341	0.9615	0.9814	0.9911	0.8319	0.9486	0.9625	0.9867	0.0529	0.0065	0.0097	0.0022
	Level 9	45.4min	0.8989	0.9653	0.9803	0.9917	0.8994	0.9652	0.9802	0.9917	0.9437	0.9690	0.9838	0.9927	0.8376	0.9608	0.9740	0.9911	0.0552	0.0035	0.0054	0.0009
	Level 1	7.4sec	0.3613	0.5369	0.5892	0.6481	0.3616	0.5369	0.5893	0.6479	0.4966	0.5570	0.6015	0.6760	0.1813	0.5019	0.5741	0.6114	0.1208	0.0218	0.0081	0.0268
	Level 2	14.8sec	0.3259	0.5981	0.6833	0.7705	0.3280	0.5979	0.6837	0.7703	0.5274	0.6400	0.7145	0.8000	0.0874	0.5507	0.6499	0.7327	0.1779	0.0317	0.0230	0.0258
	Level 3	29.6sec	0.3804	0.6986	0.7658	0.8476	0.3822	0.6988	0.7659	0.8478	0.6205	0.7323	0.8028	0.8888	0.0472	0.6442	0.7446	0.8167	0.2584	0.0318	0.0245	0.0300
60	**Level 4**	59.1sec	0.4622	0.7672	0.8407	0.9113	0.4544	0.7676	0.8406	0.9113	0.7398	0.8044	0.8744	0.9407	0.0174	0.7409	0.8086	0.8863	0.3188	0.0266	0.0240	0.0209
days	**Level 5**	2min	0.5123	0.8403	0.8958	0.9493	0.5155	0.8401	0.8959	0.9494	0.8065	0.8562	0.9127	0.9683	0.0058	0.8069	0.8618	0.9379	0.3536	0.0181	0.0169	0.0114
before	**Level 6**	3.9min	0.5570	0.8950	0.9350	0.9701	0.5678	0.8950	0.9351	0.9702	0.8706	0.9129	0.9500	0.9819	0.0022	0.8841	0.9186	0.9563	0.3878	0.0100	0.0101	0.0080
	Level 7	7.9min	0.6104	0.9326	0.9604	0.9819	0.6098	0.9326	0.9604	0.9820	0.9179	0.9434	0.9717	0.9877	0.0012	0.9217	0.9524	0.9719	0.4114	0.0086	0.0075	0.0060
	Level 8	15.8min	0.6367	0.9555	0.9747	0.9879	0.6418	0.9554	0.9747	0.9879	0.9447	0.9625	0.9814	0.9933	0.0007	0.9467	0.9678	0.9818	0.4238	0.0066	0.0060	0.0045
	Level 9	31.5min	0.6529	0.9640	0.9786	0.9908	0.6539	0.9640	0.9785	0.9908	0.9494	0.9695	0.9838	0.9955	0.0006	0.9571	0.9704	0.9854	0.4301	0.0047	0.0053	0.0040
	Level 1	5sec	0.3837	0.5474	0.5961	0.6575	0.3835	0.5476	0.5961	0.6578	0.5081	0.5771	0.6114	0.7203	0.1813	0.5105	0.5868	0.6125	0.1260	0.0187	0.0074	0.0290
	Level 2	9.9sec	0.3695	0.6221	0.6999	0.7778	0.3677	0.6222	0.7002	0.7778	0.5838	0.6638	0.7312	0.8352	0.0640	0.5865	0.6702	0.7327	0.2053	0.0256	0.0204	0.0327
	Level 3	19.9sec	0.4185	0.7239	0.7814	0.8543	0.4166	0.7238	0.7813	0.8544	0.6717	0.7483	0.8167	0.9064	0.0331	0.6927	0.7493	0.8173	0.2671	0.0193	0.0257	0.0297
3	**Level 4**	39.8sec	0.4804	0.7886	0.8491	0.9105	0.4778	0.7891	0.8491	0.9105	0.7462	0.8122	0.8840	0.9407	0.0168	0.7488	0.8141	0.8863	0.3117	0.0230	0.0221	0.0179
months	**Level 5**	1.3min	0.5360	0.8463	0.9007	0.9458	0.5366	0.8466	0.9007	0.9458	0.8119	0.8751	0.9218	0.9683	0.0058	0.8264	0.8774	0.9240	0.3448	0.0150	0.0117	0.0112
before	**Level 6**	2.7min	0.5894	0.8978	0.9357	0.9678	0.5932	0.8977	0.9358	0.9678	0.8776	0.9186	0.9541	0.9819	0.0022	0.8794	0.9190	0.9555	0.3725	0.0127	0.0096	0.0076
	Level 7	5.3min	0.6396	0.9337	0.9589	0.9810	0.6386	0.9338	0.9590	0.9811	0.9226	0.9468	0.9717	0.9877	0.0012	0.9229	0.9489	0.9719	0.3870	0.0088	0.0067	0.0049
	Level 8	10.6min	0.6721	0.9553	0.9718	0.9871	0.6725	0.9553	0.9718	0.9871	0.9414	0.9625	0.9813	0.9933	0.0007	0.9447	0.9637	0.9814	0.3911	0.0064	0.0058	0.0040
	Level 9	21.2min	0.6797	0.9609	0.9752	0.9888	0.6780	0.9609	0.9752	0.9888	0.9449	0.9686	0.9823	0.9955	0.0005	0.9494	0.9690	0.9825	0.3946	0.0056	0.0047	0.0046
	Level 1	3.1sec	0.4887	0.5812	0.6199	0.6591	0.4886	0.5812	0.6199	0.6591	0.5550	0.6015	0.6380	0.7203	0.1813	0.5551	0.6020	0.6382	0.0883	0.0124	0.0104	0.0158
	Level 2	6.2sec	0.5312	0.6609	0.7157	0.7708	0.5313	0.6610	0.7157	0.7707	0.6256	0.6886	0.7343	0.8449	0.0640	0.6281	0.6887	0.7354	0.1428	0.0186	0.0137	0.0257
	Level 3	12.5sec	0.6013	0.7471	0.7979	0.8478	0.6018	0.7471	0.7979	0.8479	0.7185	0.7691	0.8167	0.9212	0.0331	0.7205	0.7701	0.8167	0.1765	0.0144	0.0129	0.0253
1	**Level 4**	25sec	0.6777	0.8217	0.8616	0.9017	0.6778	0.8217	0.8617	0.9018	0.7983	0.8458	0.8782	0.9566	0.0168	0.7992	0.8463	0.8787	0.1990	0.0130	0.0093	0.0189
Year	**Level 5**	49.9sec	0.7456	0.8797	0.9087	0.9372	0.7448	0.8797	0.9086	0.9372	0.8556	0.8969	0.9185	0.9736	0.0058	0.8559	0.8970	0.9188	0.2129	0.0119	0.0070	0.0141
before	**Level 6**	1.7min	0.8030	0.9210	0.9414	0.9616	0.8026	0.9211	0.9414	0.9616	0.9061	0.9327	0.9486	0.9845	0.0022	0.9064	0.9328	0.9489	0.2192	0.0075	0.0046	0.0093
	Level 7	3.3min	0.8463	0.9485	0.9622	0.9766	0.8464	0.9485	0.9622	0.9767	0.9384	0.9566	0.9689	0.9920	0.0012	0.9386	0.9570	0.9690	0.2191	0.0053	0.0032	0.0059
	Level 8	6.7min	0.8735	0.9638	0.9743	0.9845	0.8723	0.9638	0.9743	0.9845	0.9566	0.9703	0.9792	0.9956	0.0007	0.9569	0.9703	0.9792	0.2154	0.0041	0.0027	0.0041
	Level 9	13.3min	0.8784	0.9681	0.9782	0.9872	0.8780	0.9681	0.9782	0.9872	0.9620	0.9742	0.9818	0.9971	0.0005	0.9621	0.9744	0.9820	0.2170	0.0037	0.0021	0.0039

Table A.26: EDH5 Other Results Table

EDH5 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.1sec	1.5457	1.6822	1.9426	2.7899	1.5451	1.6830	1.9440	2.7792	1.5948	1.7986	2.1631	5.0000	1.4627	1.6394	1.8606	2.1854	0.0546	0.0655	0.1254	1.2417
	Level 2	32.2sec	1.3330	1.5370	1.7057	4.9491	1.3339	1.5369	1.7049	5.0515	1.4224	1.6289	1.8117	17.0000	1.2050	1.4697	1.6293	1.8416	0.0798	0.0830	0.0693	6.6837
	Level 3	1.1min	1.2313	1.3633	1.4919	14.0606	1.2312	1.3630	1.4914	14.4781	1.3120	1.3893	1.5494	65.0000	1.1388	1.3331	1.4519	1.6267	0.0641	0.0208	0.0450	28.2435
30	**Level 4**	2.1min	1.1479	1.2577	1.3482	22.8594	1.1478	1.2569	1.3484	22.4443	1.1829	1.2860	1.4282	105.5611	1.0875	1.2200	1.2961	1.4478	0.0387	0.0276	0.0543	46.4640
days	**Level 5**	4.3min	1.1074	1.1893	1.2702	17.0376	1.1078	1.1894	1.2699	17.3048	1.1476	1.2066	1.3251	80.5632	1.0665	1.1537	1.2302	1.3639	0.0299	0.0211	0.0362	35.3627
before	**Level 6**	8.6min	1.0751	1.1321	1.1970	45.5481	1.0750	1.1320	1.1966	46.9629	1.0862	1.1563	1.2292	229.3679	1.0587	1.1074	1.1595	1.2414	0.0120	0.0193	0.0259	101.9676
	Level 7	17.2min	1.0521	1.0941	1.1403	39.7120	1.0519	1.0943	1.1406	37.6734	1.0643	1.1140	1.1574	183.3503	1.0433	1.0724	1.1222	1.1696	0.0082	0.0194	0.0151	81.4359
	Level 8	34.4min	1.0377	1.0735	1.1028	21.4551	1.0377	1.0738	1.1028	21.7847	1.0491	1.0945	1.1135	104.2171	1.0307	1.0502	1.0947	1.1386	0.0073	0.0183	0.0080	46.0812
	Level 9	68.7min	1.0344	1.0674	1.0926	15.7241	1.0342	1.0675	1.0925	14.8861	1.0426	1.0833	1.0971	69.8114	1.0252	1.0471	1.0844	1.1221	0.0062	0.0141	0.0051	30.7042
	Level 1	9.9sec	1.5286	1.6384	1.7828	2.4539	1.5288	1.6383	1.7829	2.4567	1.5935	1.6678	1.8678	5.0000	1.4120	1.5948	1.6963	1.9013	0.0551	0.0284	0.0643	0.9122
	Level 2	19.7sec	1.3150	1.4269	1.5947	3.5182	1.3148	1.4272	1.5942	3.4996	1.3653	1.4744	1.6901	17.0000	1.1999	1.3855	1.4852	1.7092	0.0642	0.0334	0.0668	4.7526
	Level 3	39.5sec	1.2016	1.3202	1.4043	8.3072	1.2016	1.3204	1.4042	8.1015	1.2457	1.3649	1.4610	65.0000	1.1061	1.2615	1.3714	1.4645	0.0486	0.0386	0.0325	19.9938
60	**Level 4**	1.3min	1.1400	1.2198	1.2948	12.1251	1.1400	1.2195	1.2946	11.9804	1.1772	1.2550	1.3443	105.5611	1.0663	1.1780	1.2616	1.3506	0.0399	0.0291	0.0250	32.8815
days	**Level 5**	2.6min	1.0973	1.1613	1.2208	9.2070	1.0973	1.1610	1.2207	9.3432	1.1221	1.1926	1.2600	80.5632	1.0407	1.1333	1.1936	1.2607	0.0288	0.0237	0.0232	25.0245
before	**Level 6**	5.3min	1.0693	1.1093	1.1593	23.6827	1.0695	1.1090	1.1592	24.1141	1.0857	1.1355	1.1899	229.3679	1.0282	1.0862	1.1358	1.2019	0.0208	0.0174	0.0220	72.1189
	Level 7	10.5min	1.0480	1.0749	1.1099	18.3163	1.0482	1.0749	1.1100	19.4269	1.0621	1.0893	1.1288	183.3503	1.0221	1.0643	1.0967	1.1343	0.0145	0.0089	0.0110	57.5969
	Level 8	21.1min	1.0347	1.0566	1.0795	11.2929	1.0348	1.0566	1.0797	11.4583	1.0480	1.0638	1.0949	104.2171	1.0161	1.0487	1.0666	1.0994	0.0111	0.0066	0.0120	32.5922
	Level 9	42.1min	1.0313	1.0508	1.0703	8.0988	1.0313	1.0509	1.0703	8.0027	1.0426	1.0575	1.0878	69.8114	1.0138	1.0427	1.0579	1.0908	0.0103	0.0055	0.0117	21.7174
	Level 1	5.9sec	1.5007	1.6088	1.7188	2.2559	1.5009	1.6091	1.7186	2.2597	1.5473	1.6625	1.7962	5.0000	1.4120	1.5602	1.6650	1.7986	0.0434	0.0336	0.0412	0.7866
	Level 2	11.8sec	1.2813	1.3964	1.5165	2.8938	1.2813	1.3962	1.5166	2.8919	1.3500	1.4371	1.6261	17.0000	1.1999	1.3577	1.4454	1.6289	0.0549	0.0244	0.0592	3.9131
	Level 3	23.6sec	1.1744	1.2795	1.3661	5.5482	1.1744	1.2799	1.3660	5.8861	1.2335	1.3342	1.3973	65.0000	1.1061	1.2345	1.3367	1.4040	0.0426	0.0337	0.0192	16.3554
3	**Level 4**	47.3sec	1.1179	1.1957	1.2675	8.5754	1.1177	1.1957	1.2676	8.4275	1.1678	1.2286	1.2961	105.5611	1.0663	1.1737	1.2314	1.3002	0.0373	0.0201	0.0190	26.8719
months	**Level 5**	1.6min	1.0807	1.1394	1.1996	6.6342	1.0806	1.1396	1.1996	6.6443	1.1181	1.1633	1.2254	80.5632	1.0382	1.1192	1.1762	1.2302	0.0282	0.0148	0.0138	20.4495
before	**Level 6**	3.2min	1.0556	1.0963	1.1400	15.9845	1.0557	1.0963	1.1400	16.4701	1.0837	1.1125	1.1603	229.3679	1.0239	1.0838	1.1182	1.1701	0.0206	0.0104	0.0125	58.8965
	Level 7	6.3min	1.0376	1.0676	1.0976	13.5189	1.0376	1.0676	1.0976	13.3248	1.0560	1.0764	1.1140	183.3503	1.0159	1.0590	1.0771	1.1163	0.0140	0.0062	0.0105	47.0362
	Level 8	12.6min	1.0266	1.0498	1.0703	8.0579	1.0267	1.0498	1.0703	8.0028	1.0400	1.0604	1.0818	104.2171	1.0117	1.0403	1.0622	1.0861	0.0101	0.0054	0.0061	26.6169
	Level 9	25.2min	1.0236	1.0438	1.0618	5.6269	1.0234	1.0438	1.0618	5.6957	1.0348	1.0505	1.0726	69.8114	1.0107	1.0355	1.0562	1.0753	0.0093	0.0049	0.0047	17.7371
	Level 1	5.7sec	1.4534	1.5320	1.6116	1.8842	1.4535	1.5320	1.6115	1.8826	1.4990	1.5704	1.6630	5.0000	1.3468	1.4998	1.5725	1.6633	0.0385	0.0193	0.0282	0.4436
	Level 2	11.4sec	1.2190	1.2997	1.3731	1.8420	1.2189	1.2998	1.3731	1.8397	1.2581	1.3387	1.4167	17.0000	1.1250	1.2582	1.3414	1.4168	0.0307	0.0233	0.0235	1.9693
	Level 3	22.8sec	1.1163	1.1761	1.2384	2.4412	1.1162	1.1760	1.2384	2.4448	1.1478	1.2063	1.2832	65.0000	1.0546	1.1488	1.2066	1.2851	0.0225	0.0166	0.0219	8.0769
1	**Level 4**	45.6sec	1.0667	1.1104	1.1613	2.9090	1.0667	1.1104	1.1614	2.9866	1.0917	1.1309	1.1969	105.5611	1.0214	1.0918	1.1324	1.2007	0.0180	0.0113	0.0184	13.2413
Year	**Level 5**	1.5min	1.0408	1.0748	1.1132	2.5019	1.0408	1.0748	1.1132	2.5027	1.0595	1.0912	1.1424	80.5632	1.0099	1.0599	1.0914	1.1427	0.0135	0.0085	0.0138	10.0768
before	**Level 6**	3min	1.0270	1.0524	1.0791	5.0076	1.0270	1.0524	1.0791	4.8385	1.0412	1.0623	1.0966	229.3679	1.0055	1.0420	1.0628	1.0967	0.0104	0.0061	0.0101	28.9828
	Level 7	6.1min	1.0187	1.0370	1.0558	4.1372	1.0187	1.0370	1.0559	4.0492	1.0294	1.0443	1.0694	183.3503	1.0029	1.0298	1.0445	1.0696	0.0077	0.0045	0.0075	23.1446
	Level 8	12.2min	1.0138	1.0275	1.0417	2.5663	1.0139	1.0275	1.0417	2.7457	1.0222	1.0327	1.0502	104.2171	1.0018	1.0227	1.0330	1.0503	0.0056	0.0033	0.0051	13.0982
	Level 9	24.3min	1.0124	1.0248	1.0377	2.2069	1.0125	1.0248	1.0377	2.1858	1.0197	1.0309	1.0457	69.8114	1.0013	1.0199	1.0311	1.0467	0.0050	0.0031	0.0039	8.7293

Table A.26: EDH5 Other Results Table –Continued

EDH5 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.1sec	1.5325	1.6709	1.9136	2.7885	1.5326	1.6708	1.9142	2.7850	1.5771	1.7018	2.1124	5.0000	1.4626	1.6469	1.8434	2.1623	0.0484	0.0276	0.1129	1.2397
	Level 2	32.2sec	1.3312	1.5251	1.6816	4.9385	1.3320	1.5259	1.6821	4.9971	1.4309	1.5862	1.7953	17.0000	1.2205	1.4501	1.6245	1.8509	0.0752	0.0632	0.0673	6.7114
	Level 3	1.1min	1.2262	1.3703	1.4770	14.4076	1.2261	1.3701	1.4772	14.4287	1.3135	1.4144	1.5282	65.0000	1.1484	1.3145	1.4299	1.5545	0.0588	0.0376	0.0378	28.2712
30	**Level 4**	2.1min	1.1475	1.2670	1.3373	37.8494	1.1484	1.2673	1.3377	37.1416	1.1903	1.2920	1.3557	179.2636	1.0899	1.2360	1.2997	1.4002	0.0366	0.0226	0.0226	79.4488
days	**Level 5**	4.3min	1.1145	1.1941	1.2662	85.3060	1.1143	1.1942	1.2660	82.7070	1.1411	1.2108	1.2973	407.7026	1.0790	1.1714	1.2303	1.3098	0.0241	0.0169	0.0246	181.6781
before	**Level 6**	8.6min	1.0739	1.1330	1.1913	108.1240	1.0739	1.1331	1.1913	105.3160	1.0893	1.1491	1.2177	521.1270	1.0553	1.1105	1.1497	1.2513	0.0131	0.0143	0.0251	232.4454
	Level 7	17.2min	1.0497	1.0948	1.1381	65.5881	1.0497	1.0948	1.1385	65.6535	1.0596	1.1107	1.1489	323.2526	1.0415	1.0779	1.1137	1.1746	0.0072	0.0138	0.0150	144.0023
	Level 8	34.4min	1.0357	1.0728	1.1029	48.9059	1.0357	1.0725	1.1028	50.8959	1.0440	1.0847	1.1152	249.7564	1.0278	1.0578	1.0921	1.1156	0.0069	0.0124	0.0099	111.1664
	Level 9	68.7min	1.0318	1.0692	1.0884	37.7104	1.0318	1.0691	1.0884	37.3127	1.0404	1.0821	1.0920	181.9137	1.0203	1.0523	1.0843	1.1129	0.0077	0.0110	0.0028	80.8345
	Level 1	9.9sec	1.5257	1.6283	1.7516	2.4346	1.5254	1.6288	1.7517	2.4384	1.5690	1.6664	1.8487	5.0000	1.4156	1.5771	1.6826	1.8682	0.0519	0.0324	0.0666	0.9180
	Level 2	19.7sec	1.3127	1.4223	1.5831	3.4177	1.3117	1.4221	1.5832	3.4331	1.3672	1.4718	1.6606	17.0000	1.2025	1.3728	1.5166	1.6865	0.0576	0.0316	0.0477	4.7730
	Level 3	39.5sec	1.1992	1.3231	1.4075	8.1069	1.1994	1.3230	1.4071	8.0574	1.2449	1.3781	1.4538	65.0000	1.1068	1.2640	1.3795	1.4790	0.0433	0.0427	0.0220	20.0090
60	**Level 4**	1.3min	1.1388	1.2256	1.3033	19.6985	1.1391	1.2253	1.3030	19.3061	1.1782	1.2695	1.3469	179.2636	1.0693	1.1847	1.2715	1.3510	0.0365	0.0293	0.0252	56.2037
days	**Level 5**	2.6min	1.1028	1.1600	1.2279	39.0990	1.1029	1.1600	1.2275	42.0241	1.1310	1.1923	1.2641	407.7026	1.0423	1.1320	1.1951	1.2673	0.0296	0.0212	0.0258	128.4864
before	**Level 6**	5.3min	1.0681	1.1120	1.1595	52.8661	1.0682	1.1120	1.1593	53.2832	1.0893	1.1344	1.1981	521.1270	1.0288	1.0916	1.1355	1.2122	0.0201	0.0155	0.0265	164.3836
	Level 7	10.5min	1.0468	1.0783	1.1141	33.2216	1.0468	1.0782	1.1141	33.4137	1.0630	1.0873	1.1486	323.2526	1.0204	1.0649	1.0915	1.1489	0.0142	0.0080	0.0217	101.8390
	Level 8	21.1min	1.0335	1.0585	1.0839	26.5327	1.0337	1.0585	1.0841	26.0110	1.0440	1.0654	1.1047	249.7564	1.0145	1.0496	1.0660	1.1075	0.0108	0.0051	0.0138	78.6161
	Level 9	42.1min	1.0300	1.0522	1.0754	19.2099	1.0298	1.0523	1.0756	19.2100	1.0404	1.0600	1.0879	181.9137	1.0126	1.0449	1.0622	1.0880	0.0103	0.0050	0.0091	57.1683
	Level 1	5.9sec	1.5024	1.6025	1.7029	2.2463	1.5019	1.6030	1.7031	2.2464	1.5511	1.6546	1.7879	5.0000	1.4156	1.5598	1.6602	1.8057	0.0438	0.0334	0.0375	0.7891
	Level 2	11.8sec	1.2823	1.3940	1.5087	2.8077	1.2819	1.3940	1.5084	2.8416	1.3456	1.4363	1.5862	17.0000	1.2025	1.3496	1.4450	1.6245	0.0505	0.0273	0.0535	3.9237
	Level 3	23.6sec	1.1748	1.2774	1.3731	5.7666	1.1752	1.2769	1.3733	5.8513	1.2268	1.3145	1.4143	65.0000	1.1068	1.2296	1.3318	1.4144	0.0412	0.0297	0.0266	16.3647
3	**Level 4**	47.3sec	1.1185	1.1974	1.2728	12.0423	1.1179	1.1971	1.2724	13.3114	1.1603	1.2341	1.3009	179.2636	1.0670	1.1753	1.2360	1.3014	0.0347	0.0185	0.0184	45.9096
months	**Level 5**	1.6min	1.0823	1.1443	1.2002	28.2973	1.0824	1.1440	1.2003	28.4336	1.1163	1.1714	1.2303	407.7026	1.0396	1.1244	1.1715	1.2371	0.0273	0.0148	0.0172	104.9217
before	**Level 6**	3.2min	1.0545	1.0984	1.1391	36.6113	1.0548	1.0983	1.1392	35.9177	1.0816	1.1138	1.1565	521.1270	1.0248	1.0824	1.1184	1.1694	0.0196	0.0102	0.0097	134.2291
	Level 7	6.3min	1.0369	1.0690	1.0971	21.9875	1.0369	1.0690	1.0972	22.6534	1.0544	1.0833	1.1137	323.2526	1.0166	1.0562	1.0841	1.1165	0.0136	0.0075	0.0093	83.1583
	Level 8	12.6min	1.0260	1.0505	1.0717	16.7774	1.0261	1.0505	1.0717	17.7058	1.0412	1.0581	1.0847	249.7564	1.0119	1.0420	1.0603	1.0849	0.0100	0.0059	0.0076	64.1949
	Level 9	25.2min	1.0226	1.0442	1.0640	13.0834	1.0227	1.0441	1.0640	13.1678	1.0353	1.0519	1.0755	181.9137	1.0105	1.0359	1.0523	1.0809	0.0085	0.0057	0.0069	46.6822
	Level 1	5.7sec	1.4543	1.5325	1.6106	1.8720	1.4543	1.5325	1.6106	1.8715	1.5016	1.5628	1.6664	5.0000	1.3561	1.5018	1.5630	1.6676	0.0382	0.0193	0.0310	0.4410
	Level 2	11.4sec	1.2181	1.3001	1.3746	1.8395	1.2183	1.3001	1.3744	1.8315	1.2615	1.3402	1.4184	17.0000	1.1295	1.2632	1.3409	1.4264	0.0306	0.0226	0.0224	1.9674
	Level 3	22.8sec	1.1156	1.1756	1.2390	2.4307	1.1157	1.1755	1.2390	2.4543	1.1484	1.1985	1.2789	65.0000	1.0577	1.1486	1.1996	1.2881	0.0238	0.0153	0.0225	8.0760
1	**Level 4**	45.6sec	1.0664	1.1103	1.1635	4.2794	1.0664	1.1103	1.1634	4.2033	1.0916	1.1338	1.1983	179.2636	1.0229	1.0918	1.1347	1.1984	0.0185	0.0120	0.0191	22.5989
Year	**Level 5**	1.5min	1.0406	1.0753	1.1144	7.9125	1.0406	1.0753	1.1145	7.8448	1.0604	1.0921	1.1396	407.7026	1.0100	1.0610	1.0927	1.1411	0.0136	0.0092	0.0147	51.6172
before	**Level 6**	3min	1.0270	1.0521	1.0798	9.4708	1.0269	1.0521	1.0798	9.6758	1.0412	1.0640	1.0974	521.1270	1.0053	1.0414	1.0641	1.0975	0.0104	0.0063	0.0102	66.0271
	Level 7	6.1min	1.0187	1.0367	1.0562	6.5283	1.0186	1.0367	1.0562	6.5442	1.0295	1.0448	1.0707	323.2526	1.0028	1.0297	1.0455	1.0714	0.0075	0.0045	0.0072	40.9233
	Level 8	12.2min	1.0139	1.0276	1.0419	5.5407	1.0139	1.0276	1.0419	5.4581	1.0216	1.0328	1.0524	249.7564	1.0018	1.0219	1.0329	1.0525	0.0057	0.0032	0.0051	31.6636
	Level 9	24.3min	1.0126	1.0251	1.0380	4.3180	1.0126	1.0251	1.0380	4.2857	1.0196	1.0312	1.0452	181.9137	1.0014	1.0197	1.0313	1.0454	0.0051	0.0030	0.0040	23.0421

Table A.26: EDH5 Other Results Table –Continued

EDH5	Bid Ask	Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.1sec	1.5368	1.6731	1.9281	2.7624	1.5366	1.6738	1.9278	2.7710	1.5837	1.7422	2.1406	5.0000	1.4585	1.6446	1.8564	2.1617	0.0522	0.0402	0.1202	1.2467
	Level 2	32.2sec	1.3291	1.5311	1.6830	4.9588	1.3288	1.5303	1.6817	4.9933	1.4245	1.6253	1.8014	17.0000	1.2070	1.4642	1.6283	1.8151	0.0787	0.0746	0.0700	6.7145
	Level 3	1.1min	1.2229	1.3555	1.4786	14.8474	1.2234	1.3558	1.4790	14.4075	1.3127	1.3928	1.5163	65.0000	1.1394	1.3153	1.4328	1.5313	0.0620	0.0277	0.0353	28.2830
30	**Level 4**	2.1min	1.1414	1.2448	1.3219	27.0802	1.1415	1.2450	1.3226	27.5209	1.1855	1.2700	1.3512	131.2842	1.0858	1.2177	1.2826	1.3890	0.0362	0.0228	0.0307	58.0057
days	**Level 5**	4.3min	1.1015	1.1707	1.2296	23.7597	1.1012	1.1709	1.2296	22.8197	1.1339	1.1925	1.2386	108.4426	1.0579	1.1444	1.2193	1.2958	0.0276	0.0239	0.0085	47.8648
before	**Level 6**	8.6min	1.0628	1.1118	1.1506	47.3559	1.0628	1.1118	1.1509	47.4937	1.0788	1.1243	1.1873	232.2612	1.0375	1.0898	1.1285	1.2038	0.0153	0.0136	0.0239	103.2883
	Level 7	17.2min	1.0378	1.0754	1.1024	32.9543	1.0381	1.0755	1.1022	32.1498	1.0432	1.0865	1.1217	155.9730	1.0238	1.0546	1.0892	1.1346	0.0083	0.0133	0.0136	69.2193
	Level 8	34.4min	1.0247	1.0529	1.0726	21.0334	1.0247	1.0530	1.0726	20.2676	1.0299	1.0614	1.0821	96.8596	1.0132	1.0363	1.0658	1.0880	0.0067	0.0101	0.0073	42.8162
	Level 9	68.7min	1.0197	1.0437	1.0569	11.5412	1.0197	1.0438	1.0569	11.2964	1.0244	1.0534	1.0607	52.1251	1.0163	1.0318	1.0539	1.0660	0.0036	0.0087	0.0030	22.8239
	Level 1	9.9sec	1.5260	1.6332	1.7618	2.4388	1.5250	1.6335	1.7622	2.4421	1.5795	1.6744	1.8613	5.0000	1.4136	1.5837	1.6774	1.8818	0.0529	0.0325	0.0688	0.9175
	Level 2	19.7sec	1.3094	1.4197	1.5840	3.4226	1.3100	1.4195	1.5833	3.4456	1.3601	1.4705	1.6714	17.0000	1.2007	1.3673	1.4968	1.6731	0.0606	0.0363	0.0583	4.7698
	Level 3	39.5sec	1.1954	1.3121	1.3961	8.2075	1.1949	1.3122	1.3961	8.0458	1.2356	1.3578	1.4553	65.0000	1.1057	1.2470	1.3597	1.4816	0.0439	0.0405	0.0297	20.0131
60	**Level 4**	1.3min	1.1313	1.2106	1.2809	14.3812	1.1308	1.2101	1.2806	14.4860	1.1689	1.2393	1.3363	131.2842	1.0666	1.1695	1.2442	1.3443	0.0333	0.0260	0.0255	41.0390
days	**Level 5**	2.6min	1.0890	1.1415	1.2033	11.6990	1.0888	1.1412	1.2035	12.0628	1.1133	1.1752	1.2243	108.4426	1.0393	1.1172	1.1757	1.2300	0.0251	0.0176	0.0179	33.8646
before	**Level 6**	5.3min	1.0566	1.0921	1.1291	24.8805	1.0566	1.0919	1.1294	24.3498	1.0690	1.1100	1.1597	232.2612	1.0257	1.0738	1.1137	1.1627	0.0164	0.0134	0.0146	73.0527
	Level 7	10.5min	1.0354	1.0581	1.0846	16.3754	1.0356	1.0581	1.0846	16.6392	1.0437	1.0702	1.0975	155.9730	1.0177	1.0438	1.0707	1.1009	0.0105	0.0088	0.0087	48.9569
	Level 8	21.1min	1.0236	1.0385	1.0577	10.8402	1.0234	1.0385	1.0576	10.6773	1.0310	1.0477	1.0680	96.8596	1.0119	1.0311	1.0500	1.0683	0.0076	0.0055	0.0062	30.2814
	Level 9	42.1min	1.0188	1.0307	1.0461	6.3805	1.0188	1.0307	1.0460	6.1817	1.0244	1.0363	1.0539	52.1251	1.0094	1.0250	1.0388	1.0546	0.0057	0.0039	0.0059	16.1429
	Level 1	5.9sec	1.5004	1.6036	1.7084	2.2591	1.5003	1.6035	1.7084	2.2488	1.5488	1.6538	1.7843	5.0000	1.4136	1.5547	1.6684	1.7911	0.0435	0.0327	0.0354	0.7890
	Level 2	11.8sec	1.2795	1.3907	1.5080	2.8844	1.2787	1.3907	1.5086	2.8504	1.3408	1.4387	1.6072	17.0000	1.2007	1.3551	1.4399	1.6253	0.0513	0.0265	0.0558	3.9224
	Level 3	23.6sec	1.1711	1.2717	1.3603	5.5885	1.1711	1.2713	1.3605	5.8417	1.2284	1.3183	1.3946	65.0000	1.1057	1.2286	1.3273	1.3967	0.0405	0.0329	0.0228	16.3673
3	**Level 4**	47.3sec	1.1117	1.1867	1.2537	9.6839	1.1120	1.1866	1.2537	10.0907	1.1542	1.2217	1.2826	131.2842	1.0642	1.1546	1.2262	1.2880	0.0327	0.0196	0.0170	33.5276
months	**Level 5**	1.6min	1.0746	1.1274	1.1794	8.3486	1.0745	1.1275	1.1795	8.4493	1.1025	1.1456	1.2132	108.4426	1.0360	1.1057	1.1505	1.2176	0.0250	0.0142	0.0181	27.6626
before	**Level 6**	3.2min	1.0473	1.0820	1.1168	17.2166	1.0472	1.0820	1.1168	16.6158	1.0663	1.0973	1.1338	232.2612	1.0210	1.0673	1.0992	1.1380	0.0165	0.0101	0.0104	59.6566
	Level 7	6.3min	1.0297	1.0520	1.0763	11.6631	1.0296	1.0519	1.0764	11.4573	1.0431	1.0616	1.0892	155.9730	1.0131	1.0432	1.0629	1.0897	0.0107	0.0064	0.0088	39.9791
	Level 8	12.6min	1.0191	1.0347	1.0510	7.0834	1.0192	1.0347	1.0510	7.4729	1.0280	1.0419	1.0592	96.8596	1.0089	1.0288	1.0420	1.0604	0.0071	0.0042	0.0060	24.7281
	Level 9	25.2min	1.0152	1.0269	1.0395	4.3561	1.0151	1.0269	1.0395	4.4717	1.0220	1.0318	1.0457	52.1251	1.0074	1.0229	1.0336	1.0491	0.0053	0.0029	0.0042	13.1829
	Level 1	5.7sec	1.4530	1.5309	1.6081	1.8728	1.4530	1.5310	1.6082	1.8728	1.4990	1.5661	1.6602	5.0000	1.3506	1.5000	1.5661	1.6652	0.0385	0.0185	0.0291	0.4424
	Level 2	11.4sec	1.2169	1.2975	1.3693	1.8180	1.2168	1.2974	1.3692	1.8222	1.2585	1.3350	1.4108	17.0000	1.1249	1.2588	1.3363	1.4137	0.0306	0.0232	0.0220	1.9693
	Level 3	22.8sec	1.1130	1.1703	1.2306	2.4404	1.1130	1.1703	1.2306	2.4272	1.1428	1.1967	1.2765	65.0000	1.0539	1.1443	1.1972	1.2770	0.0226	0.0145	0.0213	8.0787
1	**Level 4**	45.6sec	1.0618	1.1024	1.1518	3.2976	1.0619	1.1024	1.1518	3.3774	1.0865	1.1222	1.1855	131.2842	1.0202	1.0867	1.1231	1.1878	0.0169	0.0107	0.0177	16.5109
Year	**Level 5**	1.5min	1.0346	1.0651	1.1010	2.9144	1.0345	1.0652	1.1011	2.9245	1.0496	1.0822	1.1264	108.4426	1.0077	1.0504	1.0825	1.1265	0.0114	0.0091	0.0126	13.6208
before	**Level 6**	3min	1.0202	1.0417	1.0657	5.0247	1.0201	1.0416	1.0657	4.8572	1.0308	1.0537	1.0811	232.2612	1.0031	1.0309	1.0539	1.0813	0.0080	0.0062	0.0079	29.3539
	Level 7	6.1min	1.0123	1.0266	1.0419	3.6407	1.0123	1.0266	1.0419	3.5807	1.0194	1.0340	1.0518	155.9730	1.0015	1.0196	1.0342	1.0521	0.0055	0.0043	0.0051	19.6712
	Level 8	12.2min	1.0081	1.0177	1.0278	2.5639	1.0081	1.0177	1.0278	2.5996	1.0129	1.0225	1.0340	96.8596	0.9893	1.0131	1.0229	1.0341	0.0044	0.0028	0.0034	12.1673
	Level 9	24.3min	1.0062	1.0139	1.0217	1.8676	1.0062	1.0139	1.0217	1.8661	1.0104	1.0176	1.0263	52.1251	0.9707	1.0105	1.0176	1.0265	0.0054	0.0020	0.0026	6.4876

Table A.26: EDH5 Other Results Table –Continued

EDH5 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.1sec	0.3985	0.5231	0.5988	0.6530	0.3988	0.5238	0.5986	0.6530	0.4625	0.5425	0.6072	0.6837	0.2000	0.4734	0.5876	0.6341	0.1118	0.0288	0.0098	0.0210
	Level 2	32.2sec	0.4126	0.5954	0.6562	0.7532	0.4145	0.5952	0.6563	0.7527	0.5403	0.6156	0.6896	0.8193	0.0588	0.5570	0.6304	0.6989	0.2019	0.0229	0.0274	0.0433
	Level 3	1.1min	0.4529	0.6771	0.7302	0.8174	0.4586	0.6773	0.7303	0.8171	0.6433	0.6993	0.7607	0.8708	0.0154	0.6544	0.7070	0.7613	0.2582	0.0173	0.0203	0.0389
30	**Level 4**	2.1min	0.5079	0.7478	0.7889	0.8713	0.5049	0.7477	0.7893	0.8715	0.7142	0.7694	0.8090	0.9175	0.0056	0.7376	0.7740	0.8401	0.2892	0.0128	0.0142	0.0284
days	**Level 5**	4.3min	0.5559	0.7905	0.8378	0.8976	0.5541	0.7902	0.8375	0.8977	0.7635	0.8128	0.8537	0.9268	0.0025	0.7709	0.8259	0.8763	0.3152	0.0154	0.0119	0.0196
before	**Level 6**	8.6min	0.5913	0.8399	0.8827	0.9313	0.5914	0.8397	0.8827	0.9313	0.7992	0.8698	0.9005	0.9476	0.0019	0.8212	0.8703	0.9180	0.3350	0.0180	0.0112	0.0114
	Level 7	17.2min	0.6421	0.8785	0.9134	0.9527	0.6419	0.8785	0.9135	0.9527	0.8514	0.8979	0.9277	0.9601	0.0031	0.8704	0.9003	0.9438	0.3613	0.0117	0.0115	0.0065
	Level 8	34.4min	0.6865	0.9066	0.9326	0.9655	0.6808	0.9068	0.9325	0.9655	0.8964	0.9156	0.9454	0.9729	0.0040	0.8967	0.9219	0.9579	0.3817	0.0081	0.0108	0.0065
	Level 9	68.7min	0.6936	0.9188	0.9356	0.9693	0.6911	0.9188	0.9354	0.9692	0.8985	0.9222	0.9503	0.9801	0.0055	0.9158	0.9241	0.9612	0.3857	0.0023	0.0096	0.0072
	Level 1	9.9sec	0.4401	0.5714	0.6143	0.6565	0.4409	0.5716	0.6142	0.6563	0.5353	0.5943	0.6341	0.7064	0.2000	0.5409	0.6001	0.6373	0.0935	0.0215	0.0123	0.0232
	Level 2	19.7sec	0.4798	0.6322	0.7035	0.7637	0.4799	0.6322	0.7035	0.7638	0.5929	0.6594	0.7284	0.8316	0.0588	0.6022	0.6794	0.7314	0.1596	0.0189	0.0156	0.0351
	Level 3	39.5sec	0.5312	0.7109	0.7562	0.8344	0.5312	0.7108	0.7566	0.8348	0.6761	0.7249	0.7911	0.9035	0.0154	0.6879	0.7256	0.8033	0.1972	0.0110	0.0244	0.0314
60	**Level 4**	1.3min	0.5914	0.7677	0.8164	0.8787	0.5957	0.7677	0.8165	0.8787	0.7402	0.7865	0.8441	0.9352	0.0056	0.7424	0.7877	0.8488	0.2205	0.0147	0.0195	0.0289
days	**Level 5**	2.6min	0.6555	0.8146	0.8622	0.9074	0.6512	0.8150	0.8623	0.9073	0.7891	0.8367	0.8834	0.9594	0.0025	0.7911	0.8387	0.8842	0.2360	0.0170	0.0157	0.0249
before	**Level 6**	5.3min	0.6993	0.8628	0.8995	0.9363	0.6963	0.8630	0.8994	0.9364	0.8249	0.8807	0.9161	0.9720	0.0019	0.8347	0.8815	0.9180	0.2505	0.0194	0.0125	0.0179
	Level 7	10.5min	0.7518	0.8979	0.9274	0.9555	0.7474	0.8979	0.9275	0.9555	0.8704	0.9161	0.9390	0.9800	0.0031	0.8706	0.9197	0.9407	0.2661	0.0173	0.0069	0.0131
	Level 8	21.1min	0.7897	0.9226	0.9449	0.9674	0.7848	0.9226	0.9448	0.9675	0.9029	0.9381	0.9528	0.9857	0.0040	0.9052	0.9386	0.9579	0.2777	0.0117	0.0046	0.0102
	Level 9	42.1min	0.7953	0.9297	0.9504	0.9712	0.7976	0.9298	0.9503	0.9712	0.9191	0.9415	0.9570	0.9876	0.0055	0.9192	0.9434	0.9612	0.2813	0.0079	0.0045	0.0097
	Level 1	5.9sec	0.4738	0.5873	0.6239	0.6667	0.4732	0.5874	0.6241	0.6664	0.5538	0.6023	0.6411	0.7064	0.2000	0.5593	0.6044	0.6447	0.0895	0.0127	0.0129	0.0199
	Level 2	11.8sec	0.5206	0.6637	0.7176	0.7811	0.5211	0.6637	0.7176	0.7812	0.6156	0.6920	0.7410	0.8316	0.0588	0.6304	0.6962	0.7431	0.1417	0.0234	0.0141	0.0311
	Level 3	23.6sec	0.5875	0.7284	0.7834	0.8517	0.5858	0.7284	0.7835	0.8519	0.7070	0.7509	0.8133	0.9035	0.0154	0.7071	0.7607	0.8151	0.1772	0.0142	0.0183	0.0303
3	**Level 4**	47.3sec	0.6491	0.7861	0.8355	0.8954	0.6493	0.7861	0.8355	0.8954	0.7684	0.8090	0.8508	0.9372	0.0056	0.7687	0.8103	0.8619	0.1935	0.0114	0.0128	0.0281
months	**Level 5**	1.6min	0.7029	0.8332	0.8741	0.9242	0.7003	0.8333	0.8743	0.9245	0.8083	0.8536	0.8893	0.9619	0.0025	0.8128	0.8537	0.8958	0.2025	0.0120	0.0112	0.0235
before	**Level 6**	3.2min	0.7452	0.8778	0.9107	0.9485	0.7451	0.8778	0.9105	0.9484	0.8551	0.8942	0.9239	0.9758	0.0019	0.8647	0.8979	0.9246	0.2132	0.0075	0.0084	0.0177
	Level 7	6.3min	0.7936	0.9116	0.9355	0.9644	0.7925	0.9115	0.9355	0.9646	0.8956	0.9225	0.9468	0.9837	0.0031	0.8979	0.9231	0.9484	0.2234	0.0078	0.0066	0.0127
	Level 8	12.6min	0.8262	0.9331	0.9520	0.9746	0.8275	0.9331	0.9519	0.9746	0.9218	0.9431	0.9597	0.9882	0.0040	0.9219	0.9451	0.9604	0.2313	0.0066	0.0053	0.0095
	Level 9	25.2min	0.8402	0.9399	0.9578	0.9779	0.8393	0.9399	0.9578	0.9778	0.9251	0.9503	0.9653	0.9896	0.0055	0.9298	0.9506	0.9659	0.2337	0.0061	0.0052	0.0081
	Level 1	5.7sec	0.5483	0.6211	0.6527	0.6881	0.5482	0.6211	0.6526	0.6881	0.5997	0.6398	0.6659	0.7374	0.2000	0.6001	0.6399	0.6659	0.0649	0.0119	0.0082	0.0184
	Level 2	11.4sec	0.6299	0.7278	0.7694	0.8213	0.6299	0.7278	0.7694	0.8213	0.7011	0.7458	0.7916	0.8854	0.0588	0.7050	0.7461	0.7927	0.0969	0.0118	0.0133	0.0210
	Level 3	22.8sec	0.6987	0.8073	0.8508	0.8967	0.6988	0.8074	0.8508	0.8967	0.7763	0.8336	0.8706	0.9454	0.0154	0.7819	0.8344	0.8708	0.1152	0.0146	0.0111	0.0194
1	**Level 4**	45.6sec	0.7545	0.8598	0.9007	0.9380	0.7543	0.8598	0.9007	0.9380	0.8344	0.8813	0.9160	0.9776	0.0056	0.8345	0.8820	0.9161	0.1282	0.0141	0.0097	0.0164
Year	**Level 5**	1.5min	0.7977	0.8974	0.9299	0.9611	0.7985	0.8974	0.9300	0.9612	0.8763	0.9152	0.9425	0.9901	0.0025	0.8775	0.9157	0.9430	0.1407	0.0118	0.0080	0.0127
before	**Level 6**	3min	0.8392	0.9262	0.9505	0.9739	0.8393	0.9262	0.9505	0.9739	0.9111	0.9398	0.9602	0.9947	0.0019	0.9113	0.9399	0.9605	0.1523	0.0088	0.0057	0.0099
	Level 7	6.1min	0.8713	0.9468	0.9646	0.9817	0.8722	0.9468	0.9646	0.9817	0.9333	0.9565	0.9712	0.9972	0.0031	0.9339	0.9571	0.9713	0.1593	0.0065	0.0041	0.0073
	Level 8	12.2min	0.8939	0.9598	0.9731	0.9863	0.8942	0.9598	0.9731	0.9863	0.9501	0.9682	0.9786	0.9982	0.0040	0.9502	0.9682	0.9788	0.1634	0.0047	0.0030	0.0056
	Level 9	24.3min	0.8986	0.9635	0.9755	0.9876	0.8992	0.9634	0.9755	0.9876	0.9565	0.9697	0.9807	0.9986	0.0055	0.9567	0.9698	0.9808	0.1637	0.0037	0.0028	0.0050

Table A.27: EDH6 Other Results Table

EDH6 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	1.5350	1.6923	1.8269	2.3137	1.5348	1.6920	1.8272	2.3111	1.6002	1.7571	1.8877	3.0682	1.4579	1.6133	1.7893	1.9643	0.0642	0.0553	0.0428	0.4585
	Level 2	42.4sec	1.3284	1.5090	1.5753	2.1653	1.3283	1.5096	1.5753	2.1713	1.3643	1.5534	1.5953	3.2789	1.2608	1.4205	1.5613	1.7264	0.0416	0.0522	0.0123	0.6422
	Level 3	1.4min	1.2189	1.3594	1.4317	1.9080	1.2182	1.3592	1.4311	1.9032	1.2430	1.3822	1.4679	2.9422	1.1744	1.3397	1.3876	1.4847	0.0275	0.0165	0.0331	0.5990
30	**Level 4**	2.8min	1.1423	1.2556	1.3083	1.7431	1.1423	1.2545	1.3081	1.7494	1.1708	1.2769	1.3423	2.7056	1.1101	1.2151	1.2818	1.3713	0.0232	0.0257	0.0221	0.5452
days	**Level 5**	5.7min	1.0954	1.1721	1.2361	1.5861	1.0955	1.1718	1.2365	1.5800	1.1335	1.2056	1.2583	2.3319	1.0741	1.1363	1.2154	1.2604	0.0240	0.0272	0.0203	0.4319
before	**Level 6**	11.3min	1.0703	1.1297	1.1800	1.4362	1.0702	1.1297	1.1804	1.4328	1.0930	1.1539	1.1972	2.0299	1.0517	1.1025	1.1568	1.2029	0.0170	0.0225	0.0156	0.3424
	Level 7	22.6min	1.0540	1.0996	1.1312	1.3400	1.0543	1.0995	1.1312	1.3428	1.0729	1.1142	1.1360	1.8134	1.0424	1.0819	1.1241	1.1465	0.0129	0.0144	0.0053	0.2775
	Level 8	45.3min	1.0443	1.0861	1.1019	1.3009	1.0444	1.0862	1.1019	1.3045	1.0599	1.0957	1.1054	1.7354	1.0326	1.0710	1.0959	1.1059	0.0104	0.0105	0.0040	0.2625
	Level 9	90.5min	1.0433	1.0817	1.0987	1.3396	1.0433	1.0815	1.0987	1.3392	1.0580	1.0912	1.1047	1.7823	1.0279	1.0708	1.0918	1.1089	0.0108	0.0084	0.0051	0.2816
	Level 1	9.4sec	1.5121	1.6720	1.7729	2.0915	1.5113	1.6709	1.7730	2.0949	1.5839	1.7307	1.8133	3.0682	1.4481	1.6002	1.7416	1.8334	0.0507	0.0460	0.0258	0.3820
	Level 2	18.7sec	1.3021	1.4760	1.5533	1.9287	1.3027	1.4749	1.5537	1.9277	1.3595	1.5305	1.5739	3.2789	1.1960	1.3643	1.5340	1.5805	0.0516	0.0565	0.0171	0.5135
	Level 3	37.4sec	1.2027	1.3332	1.3925	1.7194	1.2035	1.3335	1.3926	1.7204	1.2520	1.3687	1.4393	2.9422	1.0977	1.2879	1.3748	1.4535	0.0456	0.0291	0.0199	0.4491
60	**Level 4**	1.2min	1.1340	1.2264	1.2823	1.6158	1.1343	1.2264	1.2821	1.6146	1.1791	1.2584	1.3064	2.7056	1.0699	1.1843	1.2648	1.3103	0.0326	0.0215	0.0140	0.4288
days	**Level 5**	2.5min	1.0907	1.1542	1.2136	1.5612	1.0909	1.1541	1.2137	1.5624	1.1286	1.1743	1.2340	2.6854	1.0547	1.1335	1.1905	1.2444	0.0243	0.0155	0.0142	0.5138
before	**Level 6**	5min	1.0644	1.1116	1.1559	1.5719	1.0647	1.1116	1.1561	1.5828	1.0850	1.1369	1.1783	3.8415	1.0398	1.0877	1.1395	1.1890	0.0164	0.0164	0.0136	0.8336
	Level 7	10min	1.0452	1.0805	1.1136	1.6707	1.0454	1.0804	1.1134	1.6658	1.0577	1.0990	1.1335	5.3204	1.0272	1.0607	1.1003	1.1355	0.0106	0.0127	0.0124	1.3008
	Level 8	20min	1.0331	1.0609	1.0906	1.6033	1.0332	1.0608	1.0908	1.6281	1.0457	1.0714	1.1023	5.2686	1.0183	1.0463	1.0786	1.1053	0.0087	0.0091	0.0092	1.2943
	Level 9	39.9min	1.0296	1.0544	1.0851	1.5004	1.0296	1.0542	1.0851	1.5010	1.0419	1.0632	1.0996	3.8576	1.0136	1.0426	1.0706	1.1018	0.0090	0.0070	0.0107	0.8565
	Level 1	5.7sec	1.5177	1.6209	1.7278	2.0046	1.5178	1.6211	1.7278	2.0037	1.5847	1.6659	1.7893	3.0682	1.4481	1.5850	1.6813	1.7912	0.0499	0.0256	0.0322	0.3345
	Level 2	11.4sec	1.3052	1.3995	1.5089	1.8129	1.3054	1.3993	1.5088	1.8074	1.3568	1.4545	1.5392	3.2789	1.1960	1.3586	1.4614	1.5534	0.0409	0.0355	0.0273	0.4478
	Level 3	22.8sec	1.1970	1.2635	1.3602	1.6144	1.1970	1.2637	1.3601	1.6146	1.2194	1.3191	1.3852	2.9422	1.0977	1.2225	1.3397	1.3876	0.0315	0.0308	0.0174	0.3922
3	**Level 4**	45.7sec	1.1276	1.1834	1.2545	1.5138	1.1278	1.1834	1.2544	1.5086	1.1553	1.2166	1.2818	2.7056	1.0699	1.1554	1.2186	1.2894	0.0215	0.0223	0.0216	0.3772
months	**Level 5**	1.5min	1.0855	1.1280	1.1802	1.4535	1.0857	1.1281	1.1803	1.4497	1.1041	1.1487	1.2056	2.6854	1.0547	1.1099	1.1494	1.2154	0.0150	0.0133	0.0183	0.4438
before	**Level 6**	3min	1.0592	1.0878	1.1282	1.4410	1.0591	1.0877	1.1282	1.4431	1.0739	1.1037	1.1515	3.8415	1.0398	1.0741	1.1043	1.1523	0.0113	0.0102	0.0148	0.6990
	Level 7	6.1min	1.0405	1.0603	1.0905	1.4769	1.0404	1.0602	1.0906	1.4846	1.0500	1.0754	1.1061	5.3204	1.0272	1.0501	1.0791	1.1122	0.0074	0.0081	0.0096	1.0762
	Level 8	12.2min	1.0290	1.0441	1.0696	1.4441	1.0290	1.0441	1.0696	1.4512	1.0358	1.0550	1.0919	5.2686	1.0183	1.0362	1.0565	1.0927	0.0057	0.0063	0.0101	1.0696
	Level 9	24.4min	1.0246	1.0396	1.0623	1.3586	1.0246	1.0396	1.0623	1.3650	1.0320	1.0463	1.0837	3.8576	1.0136	1.0329	1.0474	1.0868	0.0052	0.0049	0.0099	0.7150
	Level 1	3sec	1.4681	1.5250	1.5864	1.7904	1.4683	1.5252	1.5863	1.7914	1.5007	1.5521	1.6305	3.0682	1.3956	1.5008	1.5525	1.6316	0.0243	0.0149	0.0236	0.2134
	Level 2	5.9sec	1.2427	1.3004	1.3541	1.5673	1.2427	1.3004	1.3541	1.5673	1.2715	1.3251	1.3997	3.2789	1.1626	1.2734	1.3253	1.4011	0.0259	0.0155	0.0211	0.2656
	Level 3	11.8sec	1.1393	1.1890	1.2287	1.4016	1.1395	1.1889	1.2288	1.4014	1.1707	1.2063	1.2624	2.9422	1.0747	1.1711	1.2073	1.2633	0.0253	0.0108	0.0150	0.2310
1	**Level 4**	23.7sec	1.0861	1.1285	1.1594	1.3008	1.0862	1.1285	1.1595	1.3008	1.1112	1.1425	1.1798	2.7056	1.0380	1.1154	1.1426	1.1812	0.0208	0.0081	0.0113	0.2201
Year	**Level 5**	47.4sec	1.0563	1.0892	1.1141	1.2352	1.0562	1.0892	1.1140	1.2345	1.0773	1.0988	1.1321	2.6854	1.0200	1.0775	1.0997	1.1324	0.0166	0.0067	0.0100	0.2470
before	**Level 6**	1.6min	1.0376	1.0617	1.0795	1.1963	1.0376	1.0617	1.0795	1.1961	1.0527	1.0691	1.0927	3.8415	1.0113	1.0528	1.0693	1.0928	0.0123	0.0046	0.0066	0.3637
	Level 7	3.2min	1.0256	1.0424	1.0547	1.1797	1.0255	1.0424	1.0547	1.1802	1.0364	1.0481	1.0638	5.3204	1.0075	1.0365	1.0482	1.0645	0.0088	0.0031	0.0048	0.5441
	Level 8	6.3min	1.0182	1.0303	1.0393	1.1583	1.0182	1.0303	1.0393	1.1558	1.0267	1.0338	1.0457	5.2686	1.0052	1.0267	1.0338	1.0461	0.0066	0.0022	0.0037	0.5394
	Level 9	12.6min	1.0151	1.0257	1.0335	1.1305	1.0151	1.0257	1.0335	1.1297	1.0223	1.0287	1.0395	3.8576	1.0042	1.0223	1.0287	1.0401	0.0056	0.0019	0.0031	0.3680

Table A.27: EDH6 Other Results Table –Continued

EDH6 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	1.5329	1.6983	1.8591	2.4511	1.5318	1.6976	1.8581	2.4509	1.5929	1.7701	1.9429	3.5225	1.4612	1.6331	1.7971	1.9701	0.0530	0.0522	0.0609	0.6382
	Level 2	42.4sec	1.3227	1.5044	1.5798	2.3402	1.3229	1.5040	1.5801	2.3421	1.3675	1.5493	1.6311	3.9245	1.2725	1.3971	1.5550	1.7259	0.0345	0.0633	0.0305	0.9058
	Level 3	1.4min	1.2145	1.3571	1.4152	2.0460	1.2148	1.3574	1.4159	2.0711	1.2595	1.3790	1.4413	3.6535	1.1723	1.3349	1.3945	1.4651	0.0314	0.0168	0.0173	0.8997
30	**Level 4**	2.8min	1.1385	1.2585	1.3143	1.8867	1.1383	1.2585	1.3144	1.8844	1.1605	1.2855	1.3269	3.4202	1.1039	1.2235	1.2958	1.3292	0.0233	0.0236	0.0140	0.8712
days	**Level 5**	5.7min	1.0920	1.1725	1.2298	1.6958	1.0921	1.1727	1.2297	1.6873	1.1122	1.2000	1.2492	2.7976	1.0696	1.1399	1.2115	1.2538	0.0174	0.0237	0.0141	0.6341
before	**Level 6**	11.3min	1.0706	1.1286	1.1694	1.4901	1.0705	1.1284	1.1693	1.4966	1.0838	1.1514	1.1780	2.3115	1.0541	1.0980	1.1610	1.1821	0.0145	0.0218	0.0076	0.4653
	Level 7	22.6min	1.0569	1.1015	1.1271	1.3937	1.0568	1.1014	1.1271	1.3900	1.0713	1.1227	1.1300	2.0384	1.0448	1.0724	1.1237	1.1396	0.0112	0.0195	0.0028	0.3718
	Level 8	45.2min	1.0459	1.0871	1.1017	1.3442	1.0459	1.0873	1.1017	1.3481	1.0616	1.0970	1.1065	1.9401	1.0316	1.0647	1.0979	1.1081	0.0113	0.0131	0.0036	0.3438
	Level 9	90.5min	1.0475	1.0801	1.1018	1.4088	1.0477	1.0802	1.1019	1.4138	1.0612	1.0910	1.1142	2.0505	1.0302	1.0755	1.0926	1.1201	0.0115	0.0062	0.0085	0.3841
	Level 1	9.4sec	1.5056	1.6636	1.7759	2.1676	1.5061	1.6632	1.7759	2.1713	1.5781	1.7145	1.8252	3.5225	1.4393	1.5929	1.7296	1.8253	0.0469	0.0401	0.0362	0.5183
	Level 2	18.7sec	1.2962	1.4586	1.5508	2.0234	1.2961	1.4588	1.5508	2.0196	1.3525	1.5164	1.5845	3.9245	1.1910	1.3675	1.5194	1.5856	0.0471	0.0519	0.0192	0.7036
	Level 3	37.4sec	1.2013	1.3271	1.3854	1.7844	1.2006	1.3270	1.3854	1.7809	1.2595	1.3565	1.4091	3.6535	1.0951	1.2843	1.3641	1.4127	0.0475	0.0258	0.0155	0.6784
60	**Level 4**	1.2min	1.1328	1.2261	1.2810	1.6260	1.1324	1.2258	1.2811	1.6197	1.1854	1.2501	1.3029	3.4202	1.0693	1.1855	1.2592	1.3221	0.0340	0.0192	0.0158	0.6453
days	**Level 5**	2.5min	1.0890	1.1538	1.2043	1.4689	1.0890	1.1539	1.2040	1.4704	1.1280	1.1784	1.2266	2.7976	1.0543	1.1314	1.1817	1.2367	0.0234	0.0170	0.0169	0.4807
before	**Level 6**	5min	1.0652	1.1076	1.1465	1.3395	1.0648	1.1076	1.1465	1.3451	1.0845	1.1316	1.1640	2.3115	1.0372	1.0851	1.1334	1.1672	0.0174	0.0159	0.0107	0.3495
	Level 7	10min	1.0467	1.0774	1.1087	1.2620	1.0465	1.0773	1.1087	1.2689	1.0591	1.0959	1.1244	2.0384	1.0257	1.0629	1.0963	1.1286	0.0118	0.0124	0.0125	0.2794
	Level 8	20min	1.0335	1.0581	1.0879	1.2300	1.0334	1.0581	1.0878	1.2322	1.0438	1.0702	1.0986	1.9401	1.0176	1.0447	1.0702	1.1018	0.0087	0.0075	0.0111	0.2600
	Level 9	39.9min	1.0292	1.0533	1.0801	1.2597	1.0294	1.0534	1.0799	1.2620	1.0442	1.0612	1.0959	2.0505	1.0142	1.0475	1.0643	1.1011	0.0085	0.0052	0.0113	0.3020
	Level 1	5.7sec	1.5124	1.6166	1.7216	2.0549	1.5126	1.6166	1.7213	2.0537	1.5786	1.6516	1.7971	3.5225	1.4393	1.5929	1.6642	1.8022	0.0471	0.0197	0.0386	0.4498
	Level 2	11.4sec	1.2962	1.3947	1.4998	1.8615	1.2966	1.3946	1.4999	1.8676	1.3356	1.4466	1.5428	3.9245	1.1910	1.3464	1.4576	1.5493	0.0380	0.0314	0.0291	0.6064
	Level 3	22.8sec	1.1887	1.2659	1.3524	1.6516	1.1888	1.2658	1.3523	1.6536	1.2172	1.3195	1.3919	3.6535	1.0951	1.2203	1.3216	1.3931	0.0308	0.0340	0.0211	0.5750
3	**Level 4**	45.7sec	1.1223	1.1829	1.2521	1.5124	1.1225	1.1830	1.2519	1.5117	1.1492	1.2187	1.2887	3.4202	1.0693	1.1518	1.2204	1.2916	0.0218	0.0248	0.0216	0.5410
months	**Level 5**	1.5min	1.0828	1.1260	1.1773	1.3902	1.0828	1.1260	1.1773	1.3859	1.1058	1.1502	1.2003	2.7976	1.0543	1.1074	1.1540	1.2103	0.0155	0.0151	0.0152	0.4049
before	**Level 6**	3min	1.0577	1.0874	1.1263	1.2813	1.0578	1.0875	1.1262	1.2814	1.0750	1.1022	1.1413	2.3115	1.0372	1.0756	1.1052	1.1450	0.0116	0.0086	0.0112	0.2954
	Level 7	6.1min	1.0400	1.0611	1.0887	1.2208	1.0401	1.0613	1.0887	1.2184	1.0493	1.0713	1.1009	2.0384	1.0257	1.0514	1.0724	1.1012	0.0078	0.0067	0.0088	0.2360
	Level 8	12.2min	1.0283	1.0449	1.0668	1.1838	1.0282	1.0448	1.0668	1.1868	1.0336	1.0533	1.0874	1.9401	1.0176	1.0366	1.0561	1.0928	0.0051	0.0057	0.0091	0.2188
	Level 9	24.4min	1.0246	1.0397	1.0598	1.2030	1.0246	1.0397	1.0597	1.2039	1.0303	1.0482	1.0766	2.0505	1.0142	1.0303	1.0497	1.0787	0.0046	0.0065	0.0091	0.2567
	Level 1	3sec	1.4687	1.5252	1.5854	1.8000	1.4688	1.5253	1.5853	1.8013	1.5020	1.5493	1.6291	3.5225	1.3948	1.5020	1.5496	1.6300	0.0251	0.0142	0.0239	0.2699
	Level 2	5.9sec	1.2422	1.3002	1.3540	1.5781	1.2424	1.3002	1.3540	1.5794	1.2701	1.3209	1.4004	3.9245	1.1620	1.2713	1.3221	1.4024	0.0262	0.0153	0.0229	0.3425
	Level 3	11.8sec	1.1393	1.1878	1.2288	1.4086	1.1393	1.1878	1.2288	1.4107	1.1702	1.2047	1.2636	3.6535	1.0720	1.1705	1.2057	1.2637	0.0257	0.0105	0.0171	0.3140
1	**Level 4**	23.7sec	1.0858	1.1278	1.1596	1.2998	1.0859	1.1278	1.1596	1.3009	1.1129	1.1415	1.1842	3.4202	1.0379	1.1139	1.1437	1.1845	0.0208	0.0078	0.0114	0.2886
Year	**Level 5**	47.4sec	1.0562	1.0889	1.1139	1.2196	1.0562	1.0889	1.1139	1.2185	1.0776	1.0996	1.1315	2.7976	1.0199	1.0779	1.0997	1.1318	0.0166	0.0066	0.0096	0.2178
before	**Level 6**	1.6min	1.0377	1.0615	1.0803	1.1555	1.0377	1.0615	1.0803	1.1566	1.0532	1.0700	1.0939	2.3115	1.0111	1.0534	1.0701	1.0940	0.0123	0.0045	0.0064	0.1595
	Level 7	3.2min	1.0256	1.0427	1.0556	1.1148	1.0256	1.0427	1.0556	1.1150	1.0365	1.0484	1.0650	2.0384	1.0074	1.0366	1.0484	1.0651	0.0086	0.0031	0.0051	0.1282
	Level 8	6.3min	1.0183	1.0305	1.0401	1.0921	1.0183	1.0305	1.0400	1.0917	1.0261	1.0339	1.0473	1.9401	1.0054	1.0268	1.0339	1.0476	0.0061	0.0022	0.0039	0.1185
	Level 9	12.6min	1.0155	1.0257	1.0342	1.0935	1.0155	1.0257	1.0342	1.0927	1.0221	1.0299	1.0415	2.0505	1.0047	1.0221	1.0299	1.0421	0.0054	0.0022	0.0033	0.1394

Table A.27: EDH6 Other Results Table –Continued

EDH6 Bid Ask		Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	1.5299	1.6919	1.8413	2.3952	1.5311	1.6916	1.8402	2.3869	1.5941	1.7598	1.9134	3.3522	1.4583	1.6219	1.7929	1.9674	0.0577	0.0525	0.0518	0.5732
	Level 2	42.4sec	1.3181	1.5022	1.5693	2.2569	1.3184	1.5021	1.5691	2.2554	1.3542	1.5512	1.5969	3.6862	1.2623	1.4064	1.5514	1.7239	0.0339	0.0559	0.0182	0.8185
	Level 3	1.4min	1.2060	1.3480	1.4129	1.9579	1.2060	1.3480	1.4127	1.9574	1.2400	1.3709	1.4406	3.2954	1.1681	1.3352	1.3886	1.4509	0.0258	0.0149	0.0186	0.7610
30	**Level 4**	2.8min	1.1299	1.2411	1.2950	1.7668	1.1294	1.2410	1.2948	1.7603	1.1498	1.2600	1.3038	2.9529	1.1001	1.2143	1.2805	1.3125	0.0187	0.0216	0.0105	0.6774
days	**Level 5**	5.7min	1.0811	1.1548	1.2053	1.5510	1.0810	1.1549	1.2055	1.5509	1.0940	1.1832	1.2273	2.3404	1.0629	1.1316	1.1899	1.2496	0.0129	0.0218	0.0146	0.4489
before	**Level 6**	11.3min	1.0563	1.1096	1.1441	1.3588	1.0565	1.1098	1.1440	1.3563	1.0650	1.1342	1.1622	1.8621	1.0439	1.0864	1.1357	1.1767	0.0100	0.0227	0.0106	0.2868
	Level 7	22.6min	1.0399	1.0757	1.1017	1.2496	1.0399	1.0757	1.1018	1.2485	1.0465	1.0911	1.1094	1.6158	1.0332	1.0617	1.0942	1.1099	0.0060	0.0126	0.0065	0.2103
	Level 8	45.2min	1.0287	1.0563	1.0705	1.2003	1.0287	1.0564	1.0705	1.2040	1.0366	1.0642	1.0748	1.5252	1.0222	1.0462	1.0662	1.0762	0.0060	0.0078	0.0038	0.1877
	Level 9	90.5min	1.0261	1.0492	1.0573	1.2122	1.0262	1.0491	1.0572	1.2131	1.0356	1.0530	1.0622	1.5312	1.0178	1.0383	1.0532	1.0627	0.0067	0.0062	0.0045	0.1956
	Level 1	9.4sec	1.5065	1.6617	1.7719	2.1397	1.5069	1.6616	1.7721	2.1350	1.5795	1.7092	1.8186	3.3522	1.4405	1.5941	1.7296	1.8261	0.0487	0.0398	0.0316	0.4659
	Level 2	18.7sec	1.2945	1.4549	1.5453	1.9686	1.2951	1.4550	1.5454	1.9700	1.3542	1.5144	1.5771	3.6862	1.1868	1.3547	1.5207	1.5820	0.0487	0.0596	0.0193	0.6350
	Level 3	37.4sec	1.1953	1.3186	1.3784	1.7158	1.1955	1.3179	1.3784	1.7206	1.2511	1.3546	1.4084	3.2954	1.0890	1.2746	1.3551	1.4118	0.0456	0.0296	0.0167	0.5709
60	**Level 4**	1.2min	1.1264	1.2132	1.2662	1.5492	1.1262	1.2133	1.2662	1.5493	1.1788	1.2361	1.2868	2.9529	1.0654	1.1806	1.2485	1.3009	0.0311	0.0171	0.0142	0.5049
days	**Level 5**	2.5min	1.0816	1.1422	1.1883	1.3974	1.0817	1.1421	1.1884	1.3914	1.1216	1.1655	1.2102	2.3404	1.0521	1.1238	1.1705	1.2126	0.0203	0.0129	0.0134	0.3435
before	**Level 6**	5min	1.0556	1.0945	1.1318	1.2658	1.0556	1.0944	1.1318	1.2627	1.0755	1.1161	1.1387	1.8621	1.0366	1.0793	1.1185	1.1396	0.0127	0.0118	0.0065	0.2164
	Level 7	10min	1.0377	1.0595	1.0855	1.1879	1.0376	1.0595	1.0856	1.1861	1.0465	1.0729	1.0974	1.6158	1.0241	1.0481	1.0745	1.1007	0.0082	0.0091	0.0076	0.1560
	Level 8	20min	1.0225	1.0413	1.0597	1.1485	1.0225	1.0414	1.0597	1.1454	1.0292	1.0494	1.0683	1.5252	1.0083	1.0307	1.0504	1.0690	0.0070	0.0069	0.0060	0.1403
	Level 9	39.9min	1.0191	1.0337	1.0488	1.1398	1.0191	1.0337	1.0488	1.1415	1.0235	1.0383	1.0541	1.5312	1.0115	1.0251	1.0397	1.0546	0.0042	0.0046	0.0056	0.1510
	Level 1	5.7sec	1.5139	1.6173	1.7190	2.0270	1.5135	1.6173	1.7191	2.0294	1.5805	1.6551	1.7929	3.3522	1.4405	1.5871	1.6605	1.7999	0.0485	0.0231	0.0383	0.4044
	Level 2	11.4sec	1.2969	1.3892	1.4973	1.8309	1.2966	1.3893	1.4972	1.8333	1.3349	1.4439	1.5373	3.6862	1.1868	1.3515	1.4507	1.5512	0.0385	0.0298	0.0287	0.5470
	Level 3	22.8sec	1.1881	1.2546	1.3461	1.6122	1.1879	1.2545	1.3461	1.6109	1.2125	1.2982	1.3734	3.2954	1.0890	1.2151	1.3164	1.3820	0.0311	0.0296	0.0186	0.4852
3	**Level 4**	45.7sec	1.1189	1.1723	1.2379	1.4637	1.1192	1.1723	1.2381	1.4605	1.1434	1.2056	1.2633	2.9529	1.0654	1.1436	1.2127	1.2781	0.0209	0.0229	0.0188	0.4252
months	**Level 5**	1.5min	1.0774	1.1153	1.1621	1.3285	1.0773	1.1155	1.1622	1.3270	1.0928	1.1397	1.1886	2.3404	1.0521	1.0940	1.1405	1.1899	0.0131	0.0156	0.0157	0.2911
before	**Level 6**	3min	1.0509	1.0749	1.1098	1.2197	1.0509	1.0747	1.1098	1.2204	1.0609	1.0864	1.1336	1.8621	1.0366	1.0620	1.0896	1.1342	0.0087	0.0093	0.0139	0.1842
	Level 7	6.1min	1.0322	1.0476	1.0693	1.1531	1.0322	1.0476	1.0693	1.1544	1.0391	1.0541	1.0815	1.6158	1.0241	1.0397	1.0590	1.0863	0.0050	0.0044	0.0076	0.1334
	Level 8	12.2min	1.0199	1.0312	1.0477	1.1184	1.0199	1.0312	1.0477	1.1183	1.0251	1.0366	1.0575	1.5252	1.0083	1.0256	1.0367	1.0586	0.0043	0.0038	0.0057	0.1193
	Level 9	24.4min	1.0159	1.0246	1.0382	1.1109	1.0159	1.0246	1.0382	1.1120	1.0197	1.0293	1.0498	1.5312	1.0115	1.0202	1.0311	1.0514	0.0028	0.0032	0.0047	0.1285
	Level 1	3sec	1.4676	1.5242	1.5847	1.7939	1.4676	1.5243	1.5846	1.7945	1.5010	1.5495	1.6298	3.3522	1.3949	1.5020	1.5502	1.6316	0.0244	0.0143	0.0234	0.2468
	Level 2	5.9sec	1.2414	1.2978	1.3509	1.5653	1.2413	1.2979	1.3509	1.5678	1.2687	1.3213	1.3973	3.6862	1.1618	1.2693	1.3216	1.3977	0.0259	0.0150	0.0219	0.3122
	Level 3	11.8sec	1.1375	1.1850	1.2235	1.3925	1.1374	1.1851	1.2235	1.3936	1.1680	1.2018	1.2587	3.2954	1.0726	1.1681	1.2018	1.2592	0.0249	0.0105	0.0163	0.2696
1	**Level 4**	23.7sec	1.0831	1.1234	1.1526	1.2789	1.0833	1.1234	1.1526	1.2797	1.1083	1.1361	1.1763	2.9529	1.0376	1.1088	1.1366	1.1763	0.0195	0.0079	0.0111	0.2316
Year	**Level 5**	47.4sec	1.0529	1.0828	1.1054	1.1929	1.0530	1.0828	1.1054	1.1939	1.0725	1.0928	1.1238	2.3404	1.0193	1.0725	1.0928	1.1241	0.0151	0.0061	0.0095	0.1606
before	**Level 6**	1.6min	1.0341	1.0548	1.0703	1.1304	1.0341	1.0548	1.0703	1.1306	1.0477	1.0605	1.0827	1.8621	1.0104	1.0478	1.0609	1.0828	0.0108	0.0038	0.0062	0.1033
	Level 7	3.2min	1.0219	1.0354	1.0460	1.0871	1.0219	1.0354	1.0460	1.0875	1.0311	1.0391	1.0534	1.6158	1.0066	1.0312	1.0397	1.0536	0.0072	0.0024	0.0038	0.0752
	Level 8	6.3min	1.0141	1.0233	1.0305	1.0624	1.0142	1.0233	1.0305	1.0623	1.0206	1.0263	1.0354	1.5252	1.0043	1.0206	1.0265	1.0357	0.0048	0.0017	0.0026	0.0658
	Level 9	12.6min	1.0108	1.0178	1.0234	1.0540	1.0108	1.0178	1.0234	1.0539	1.0155	1.0202	1.0270	1.5312	1.0032	1.0156	1.0204	1.0273	0.0036	0.0014	0.0020	0.0702

Table A.27: EDH6 Other Results Table –Continued

EDH6 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	0.4271	0.5387	0.5893	0.6533	0.4268	0.5386	0.5895	0.6535	0.5076	0.5565	0.6123	0.6844	0.2839	0.5147	0.5649	0.6278	0.0911	0.0174	0.0181	0.0228
	Level 2	42.4sec	0.4651	0.6330	0.6660	0.7565	0.4659	0.6331	0.6659	0.7563	0.5794	0.6431	0.7158	0.7859	0.2548	0.6131	0.6455	0.7313	0.1281	0.0120	0.0293	0.0198
	Level 3	1.4min	0.5399	0.7064	0.7367	0.8236	0.5369	0.7064	0.7368	0.8236	0.6826	0.7171	0.7491	0.8530	0.2737	0.6938	0.7252	0.7939	0.1587	0.0086	0.0091	0.0213
30	**Level 4**	2.8min	0.6011	0.7609	0.7953	0.8790	0.5968	0.7609	0.7948	0.8788	0.7524	0.7717	0.8173	0.9058	0.2924	0.7536	0.7779	0.8617	0.1826	0.0082	0.0150	0.0182
days	**Level 5**	5.7min	0.6461	0.8132	0.8529	0.9156	0.6438	0.8133	0.8530	0.9159	0.7976	0.8255	0.8772	0.9349	0.3574	0.8005	0.8333	0.8991	0.1732	0.0093	0.0174	0.0146
before	**Level 6**	11.3min	0.7110	0.8552	0.8867	0.9342	0.7087	0.8552	0.8865	0.9342	0.8460	0.8613	0.9107	0.9487	0.4326	0.8489	0.8685	0.9227	0.1645	0.0056	0.0172	0.0127
	Level 7	22.6min	0.7498	0.8872	0.9083	0.9462	0.7526	0.8872	0.9081	0.9463	0.8775	0.8899	0.9325	0.9572	0.4906	0.8850	0.8907	0.9334	0.1566	0.0022	0.0162	0.0101
	Level 8	45.2min	0.7713	0.9077	0.9198	0.9562	0.7737	0.9077	0.9199	0.9562	0.9025	0.9108	0.9392	0.9694	0.5154	0.9038	0.9116	0.9420	0.1582	0.0029	0.0112	0.0103
	Level 9	90.5min	0.7436	0.9074	0.9257	0.9548	0.7434	0.9075	0.9258	0.9546	0.8928	0.9152	0.9298	0.9706	0.4877	0.8975	0.9166	0.9423	0.1687	0.0070	0.0053	0.0105
	Level 1	9.4sec	0.4777	0.5653	0.6036	0.6644	0.4778	0.5653	0.6036	0.6645	0.5479	0.5833	0.6278	0.6948	0.2839	0.5479	0.5860	0.6337	0.0815	0.0125	0.0140	0.0206
	Level 2	18.7sec	0.5277	0.6465	0.6891	0.7721	0.5300	0.6464	0.6893	0.7725	0.6307	0.6594	0.7313	0.8396	0.2548	0.6311	0.6612	0.7394	0.1151	0.0088	0.0244	0.0292
	Level 3	37.4sec	0.6070	0.7236	0.7556	0.8340	0.6055	0.7234	0.7557	0.8341	0.7079	0.7372	0.7786	0.9131	0.2737	0.7097	0.7377	0.7939	0.1326	0.0090	0.0144	0.0343
60	**Level 4**	1.2min	0.6664	0.7826	0.8179	0.8835	0.6679	0.7826	0.8177	0.8838	0.7564	0.8000	0.8435	0.9352	0.2924	0.7675	0.8047	0.8436	0.1440	0.0110	0.0124	0.0268
days	**Level 5**	2.5min	0.7202	0.8324	0.8689	0.9186	0.7208	0.8325	0.8688	0.9187	0.8086	0.8486	0.8838	0.9485	0.3574	0.8153	0.8545	0.8865	0.1414	0.0124	0.0118	0.0198
before	**Level 6**	5min	0.7733	0.8734	0.9051	0.9393	0.7734	0.8734	0.9051	0.9394	0.8568	0.8837	0.9215	0.9642	0.4326	0.8591	0.8900	0.9221	0.1300	0.0085	0.0117	0.0154
	Level 7	10min	0.8113	0.9032	0.9300	0.9557	0.8121	0.9031	0.9302	0.9557	0.8861	0.9125	0.9408	0.9749	0.4906	0.8893	0.9156	0.9442	0.1225	0.0101	0.0096	0.0109
	Level 8	20min	0.8348	0.9207	0.9463	0.9677	0.8349	0.9209	0.9463	0.9677	0.9076	0.9344	0.9572	0.9827	0.5154	0.9103	0.9392	0.9580	0.1240	0.0101	0.0059	0.0082
	Level 9	39.9min	0.8211	0.9277	0.9500	0.9716	0.8221	0.9277	0.9501	0.9715	0.9082	0.9423	0.9546	0.9860	0.4877	0.9125	0.9430	0.9577	0.1398	0.0105	0.0043	0.0081
	Level 1	5.7sec	0.5018	0.5828	0.6196	0.6617	0.5018	0.5828	0.6196	0.6617	0.5549	0.6055	0.6278	0.6948	0.2839	0.5565	0.6069	0.6335	0.0742	0.0140	0.0068	0.0205
	Level 2	11.4sec	0.5674	0.6687	0.7192	0.7721	0.5665	0.6686	0.7193	0.7719	0.6455	0.6913	0.7427	0.8396	0.2548	0.6482	0.6934	0.7487	0.1067	0.0140	0.0150	0.0237
	Level 3	22.8sec	0.6435	0.7408	0.7927	0.8417	0.6420	0.7409	0.7929	0.8417	0.7178	0.7579	0.8195	0.9131	0.2737	0.7184	0.7683	0.8215	0.1190	0.0120	0.0199	0.0230
3	**Level 4**	45.7sec	0.7030	0.8006	0.8473	0.8913	0.7025	0.8004	0.8474	0.8912	0.7743	0.8206	0.8682	0.9352	0.2924	0.7760	0.8222	0.8702	0.1261	0.0143	0.0168	0.0177
months	**Level 5**	1.5min	0.7538	0.8508	0.8894	0.9239	0.7545	0.8509	0.8896	0.9237	0.8263	0.8694	0.9030	0.9485	0.3574	0.8331	0.8716	0.9043	0.1236	0.0117	0.0111	0.0133
before	**Level 6**	3min	0.8044	0.8893	0.9205	0.9453	0.8045	0.8893	0.9205	0.9455	0.8734	0.9073	0.9297	0.9642	0.4326	0.8762	0.9087	0.9303	0.1138	0.0099	0.0067	0.0104
	Level 7	6.1min	0.8404	0.9195	0.9430	0.9614	0.8397	0.9196	0.9429	0.9615	0.9081	0.9334	0.9512	0.9749	0.4906	0.9084	0.9345	0.9530	0.1063	0.0081	0.0056	0.0072
	Level 8	12.2min	0.8597	0.9382	0.9577	0.9726	0.8607	0.9382	0.9577	0.9726	0.9151	0.9494	0.9647	0.9827	0.5154	0.9197	0.9496	0.9675	0.1063	0.0082	0.0049	0.0048
	Level 9	24.4min	0.8549	0.9445	0.9623	0.9760	0.8546	0.9444	0.9624	0.9760	0.9270	0.9541	0.9706	0.9860	0.4877	0.9288	0.9546	0.9706	0.1218	0.0082	0.0058	0.0044
	Level 1	3sec	0.5629	0.6312	0.6558	0.6810	0.5630	0.6312	0.6558	0.6810	0.6135	0.6454	0.6658	0.7170	0.2839	0.6138	0.6455	0.6658	0.0551	0.0096	0.0060	0.0118
	Level 2	5.9sec	0.6481	0.7390	0.7694	0.8053	0.6483	0.7390	0.7694	0.8053	0.7130	0.7571	0.7866	0.8606	0.2548	0.7141	0.7572	0.7873	0.0757	0.0126	0.0090	0.0175
	Level 3	11.8sec	0.7256	0.8143	0.8421	0.8782	0.7253	0.8142	0.8421	0.8782	0.7913	0.8301	0.8543	0.9329	0.2737	0.7914	0.8305	0.8546	0.0802	0.0113	0.0073	0.0203
1	**Level 4**	23.7sec	0.7850	0.8626	0.8869	0.9212	0.7853	0.8626	0.8869	0.9213	0.8443	0.8761	0.8977	0.9635	0.2924	0.8444	0.8763	0.8986	0.0808	0.0085	0.0060	0.0179
Year	**Level 5**	47.4sec	0.8332	0.8980	0.9186	0.9472	0.8337	0.8980	0.9186	0.9471	0.8835	0.9094	0.9278	0.9804	0.3574	0.8838	0.9095	0.9280	0.0769	0.0078	0.0055	0.0150
before	**Level 6**	1.6min	0.8738	0.9258	0.9423	0.9638	0.8737	0.9258	0.9422	0.9638	0.9141	0.9345	0.9493	0.9890	0.4326	0.9142	0.9354	0.9495	0.0689	0.0056	0.0039	0.0115
	Level 7	3.2min	0.9037	0.9474	0.9591	0.9751	0.9039	0.9474	0.9591	0.9751	0.9389	0.9539	0.9647	0.9926	0.4906	0.9390	0.9539	0.9647	0.0637	0.0046	0.0028	0.0082
	Level 8	6.3min	0.9227	0.9616	0.9705	0.9821	0.9226	0.9616	0.9705	0.9821	0.9546	0.9672	0.9739	0.9947	0.5154	0.9549	0.9673	0.9746	0.0627	0.0036	0.0021	0.0059
	Level 9	12.6min	0.9239	0.9670	0.9750	0.9848	0.9240	0.9670	0.9750	0.9848	0.9596	0.9710	0.9783	0.9953	0.4877	0.9601	0.9711	0.9784	0.0720	0.0031	0.0021	0.0052

Table A.28: EDH7 Other Results Table

EDH7 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	17.9sec	1.5212	1.5875	1.6557	2.0985	1.5212	1.5874	1.6559	2.0971	1.5680	1.6094	1.7168	2.4686	1.4926	1.5746	1.6152	1.9155	0.0310	0.0166	0.0447	0.2513
	Level 2	35.7sec	1.2635	1.3886	1.4709	2.6437	1.2635	1.3893	1.4709	2.6311	1.2848	1.4398	1.4949	4.6999	1.2368	1.3245	1.4491	1.7987	0.0227	0.0480	0.0215	1.3892
	Level 3	1.2min	1.1426	1.2691	1.3565	3.0594	1.1432	1.2692	1.3572	3.0354	1.1880	1.2959	1.4188	6.8124	1.1104	1.2373	1.3086	1.6077	0.0285	0.0282	0.0513	2.5278
30	**Level 4**	2.4min	1.0883	1.1741	1.2636	2.9560	1.0887	1.1736	1.2619	2.9978	1.1275	1.1983	1.3742	7.3224	1.0437	1.1436	1.2130	1.4025	0.0351	0.0244	0.0661	2.8873
days	**Level 5**	4.8min	1.0565	1.1095	1.1687	2.2767	1.0571	1.1096	1.1691	2.3023	1.1023	1.1161	1.2320	4.7501	1.0319	1.1056	1.1327	1.2786	0.0309	0.0047	0.0391	1.6426
before	**Level 6**	9.5min	1.0364	1.0754	1.1326	1.9002	1.0363	1.0754	1.1325	1.8876	1.0613	1.0783	1.2009	2.9597	1.0158	1.0682	1.1016	1.2065	0.0192	0.0048	0.0402	0.8327
	Level 7	19.1min	1.0245	1.0538	1.1071	1.7531	1.0244	1.0538	1.1060	1.7633	1.0431	1.0624	1.1541	2.4500	1.0084	1.0460	1.0851	1.1549	0.0146	0.0067	0.0276	0.7011
	Level 8	38.1min	1.0183	1.0430	1.0922	1.7094	1.0181	1.0430	1.0922	1.7054	1.0291	1.0557	1.1159	2.2811	1.0114	1.0308	1.0807	1.1401	0.0088	0.0112	0.0140	0.6311
	Level 9	76.2min	1.0206	1.0421	1.1011	2.1104	1.0207	1.0423	1.1010	2.0975	1.0311	1.0599	1.1196	3.5179	1.0146	1.0315	1.0822	1.1327	0.0075	0.0135	0.0142	1.1060
	Level 1	8sec	1.5114	1.5880	1.6531	2.1339	1.5114	1.5879	1.6530	2.1382	1.5493	1.6152	1.7168	2.7750	1.4889	1.5680	1.6216	1.8104	0.0229	0.0182	0.0359	0.3488
	Level 2	16sec	1.2667	1.3771	1.4763	2.5817	1.2668	1.3772	1.4763	2.5763	1.2848	1.4398	1.4998	4.6999	1.2368	1.3245	1.4491	1.6184	0.0201	0.0391	0.0207	1.1536
	Level 3	32sec	1.1550	1.2671	1.3709	2.6803	1.1548	1.2677	1.3712	2.6936	1.1880	1.3086	1.4624	6.8124	1.1104	1.2333	1.3194	1.5387	0.0306	0.0300	0.0571	1.9342
60	**Level 4**	1.1min	1.0998	1.1803	1.2828	2.8487	1.1001	1.1800	1.2835	2.8589	1.1429	1.2130	1.3605	7.3224	1.0437	1.1436	1.2188	1.3742	0.0356	0.0249	0.0566	2.4127
days	**Level 5**	2.1min	1.0646	1.1195	1.1875	2.5667	1.0644	1.1194	1.1878	2.6265	1.1023	1.1420	1.2478	6.5614	1.0319	1.1056	1.1427	1.2572	0.0289	0.0139	0.0407	2.1402
before	**Level 6**	4.3min	1.0384	1.0816	1.1343	2.2324	1.0382	1.0816	1.1344	2.2506	1.0613	1.0990	1.1894	5.7482	1.0158	1.0682	1.1016	1.2009	0.0162	0.0097	0.0314	1.6800
	Level 7	8.5min	1.0245	1.0549	1.1001	1.9813	1.0246	1.0549	1.0999	1.9785	1.0431	1.0649	1.1341	4.4651	1.0084	1.0460	1.0851	1.1541	0.0119	0.0073	0.0168	1.2359
	Level 8	17.1min	1.0181	1.0413	1.0844	1.9517	1.0181	1.0412	1.0844	1.9221	1.0291	1.0557	1.1009	4.3998	1.0114	1.0308	1.0647	1.1159	0.0078	0.0087	0.0114	1.2124
	Level 9	34.2min	1.0186	1.0388	1.0881	2.2784	1.0186	1.0389	1.0882	2.2575	1.0311	1.0599	1.1008	5.1843	1.0088	1.0315	1.0692	1.1085	0.0076	0.0105	0.0111	1.5787
	Level 1	5.4sec	1.5116	1.6060	1.6962	2.0847	1.5117	1.6057	1.6959	2.0832	1.5680	1.6369	1.7822	2.7750	1.4400	1.5746	1.6446	1.8104	0.0375	0.0234	0.0461	0.2936
	Level 2	10.8sec	1.2816	1.3956	1.5007	2.2965	1.2815	1.3954	1.5003	2.2836	1.3371	1.4471	1.6184	4.6999	1.2368	1.3430	1.4491	1.6416	0.0331	0.0347	0.0503	0.9869
	Level 3	21.5sec	1.1645	1.2700	1.3689	2.2883	1.1646	1.2700	1.3694	2.3144	1.2229	1.3194	1.4624	6.8124	1.1104	1.2333	1.3200	1.5005	0.0357	0.0307	0.0453	1.5925
3	**Level 4**	43sec	1.1023	1.1926	1.2764	2.3672	1.1020	1.1925	1.2763	2.3686	1.1436	1.2172	1.3686	7.3224	1.0437	1.1580	1.2188	1.3742	0.0326	0.0206	0.0551	1.9907
months	**Level 5**	1.4min	1.0671	1.1327	1.2031	2.1752	1.0667	1.1328	1.2030	2.1815	1.1056	1.1587	1.2572	6.5614	1.0319	1.1069	1.1604	1.2721	0.0275	0.0176	0.0358	1.7702
before	**Level 6**	2.9min	1.0418	1.0922	1.1460	1.9084	1.0418	1.0922	1.1460	1.9059	1.0682	1.1142	1.1894	5.7482	1.0158	1.0774	1.1193	1.2009	0.0184	0.0123	0.0260	1.3871
	Level 7	5.7min	1.0275	1.0645	1.1020	1.7094	1.0277	1.0645	1.1019	1.7072	1.0467	1.0851	1.1341	4.4651	1.0084	1.0512	1.0851	1.1541	0.0138	0.0122	0.0169	1.0291
	Level 8	11.5min	1.0201	1.0493	1.0826	1.6495	1.0201	1.0492	1.0825	1.6522	1.0332	1.0636	1.1009	4.3998	1.0091	1.0370	1.0647	1.1159	0.0096	0.0092	0.0113	1.0113
	Level 9	22.9min	1.0199	1.0454	1.0846	1.8783	1.0200	1.0456	1.0845	1.8612	1.0320	1.0600	1.1008	5.1843	1.0081	1.0327	1.0629	1.1062	0.0096	0.0105	0.0126	1.3410
	Level 1	2.7sec	1.4799	1.5376	1.5973	1.8040	1.4799	1.5376	1.5973	1.8038	1.5134	1.5616	1.6400	2.7750	1.3769	1.5135	1.5621	1.6410	0.0292	0.0137	0.0242	0.2122
	Level 2	5.3sec	1.2436	1.3051	1.3631	1.6745	1.2436	1.3050	1.3630	1.6741	1.2758	1.3323	1.4130	4.6999	1.1558	1.2762	1.3331	1.4135	0.0248	0.0175	0.0238	0.5318
	Level 3	10.7sec	1.1332	1.1871	1.2446	1.5550	1.1332	1.1871	1.2447	1.5616	1.1627	1.2159	1.2767	6.8124	1.0782	1.1636	1.2173	1.2776	0.0204	0.0152	0.0164	0.7807
1	**Level 4**	21.4sec	1.0816	1.1275	1.1740	1.5117	1.0817	1.1274	1.1741	1.5143	1.1070	1.1476	1.2011	7.3224	1.0385	1.1086	1.1481	1.2041	0.0180	0.0122	0.0154	0.9986
Year	**Level 5**	42.7sec	1.0540	1.0897	1.1247	1.5024	1.0540	1.0897	1.1248	1.5067	1.0758	1.1080	1.1483	9.0302	1.0212	1.0760	1.1081	1.1483	0.0153	0.0105	0.0117	1.2983
before	**Level 6**	1.4min	1.0355	1.0624	1.0890	1.5240	1.0356	1.0624	1.0890	1.5477	1.0508	1.0769	1.1044	16.9959	1.0105	1.0511	1.0772	1.1046	0.0108	0.0078	0.0081	2.1469
	Level 7	2.8min	1.0238	1.0428	1.0626	1.7567	1.0238	1.0428	1.0626	1.7490	1.0342	1.0529	1.0763	32.9508	1.0057	1.0343	1.0537	1.0770	0.0076	0.0053	0.0063	4.1611
	Level 8	5.7min	1.0168	1.0307	1.0454	2.2520	1.0168	1.0307	1.0454	2.2620	1.0240	1.0374	1.0558	64.8639	1.0040	1.0240	1.0377	1.0565	0.0054	0.0039	0.0048	8.3043
	Level 9	11.4min	1.0143	1.0266	1.0390	3.3304	1.0143	1.0267	1.0390	3.3807	1.0201	1.0319	1.0479	128.7017	1.0039	1.0202	1.0320	1.0488	0.0044	0.0035	0.0045	16.6090

Table A.28: EDH7 Other Results Table –Continued

EDH7 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	17.9sec	1.5177	1.5843	1.6402	2.1948	1.5175	1.5844	1.6406	2.1945	1.5530	1.6054	1.6783	2.7570	1.4957	1.5668	1.6092	1.9741	0.0248	0.0171	0.0305	0.3757
	Level 2	35.7sec	1.2692	1.3782	1.4636	2.5195	1.2686	1.3778	1.4650	2.5208	1.3157	1.3912	1.5425	4.4614	1.2379	1.3543	1.4220	1.5459	0.0322	0.0172	0.0494	1.3221
	Level 3	1.2min	1.1491	1.2424	1.3412	2.8678	1.1499	1.2416	1.3416	2.8856	1.1960	1.2846	1.3786	6.4738	1.1092	1.2210	1.3161	1.4239	0.0340	0.0294	0.0303	2.4059
30	**Level 4**	2.4min	1.0879	1.1515	1.2357	2.7835	1.0876	1.1514	1.2354	2.7490	1.1302	1.1668	1.2666	6.5765	1.0417	1.1433	1.2149	1.2784	0.0368	0.0107	0.0227	2.5600
days	**Level 5**	4.8min	1.0503	1.0993	1.1497	2.0223	1.0501	1.0992	1.1501	2.0112	1.0795	1.1058	1.2012	4.0555	1.0295	1.0871	1.1250	1.2081	0.0231	0.0084	0.0305	1.3692
before	**Level 6**	9.5min	1.0337	1.0679	1.1060	1.5976	1.0335	1.0678	1.1060	1.6104	1.0484	1.0779	1.1346	2.7942	1.0167	1.0621	1.0782	1.1524	0.0148	0.0070	0.0250	0.7915
	Level 7	19.1min	1.0254	1.0499	1.0940	1.4323	1.0259	1.0500	1.0939	1.4400	1.0444	1.0577	1.1099	2.2987	1.0102	1.0467	1.0722	1.1157	0.0144	0.0052	0.0184	0.5732
	Level 8	38.1min	1.0197	1.0407	1.0876	1.3588	1.0197	1.0407	1.0876	1.3707	1.0302	1.0491	1.1005	2.0936	1.0112	1.0313	1.0731	1.1067	0.0080	0.0076	0.0136	0.4822
	Level 9	76.2min	1.0206	1.0421	1.0944	1.3803	1.0207	1.0419	1.0943	1.3729	1.0271	1.0543	1.1162	2.0936	1.0118	1.0329	1.0733	1.1274	0.0069	0.0090	0.0167	0.4805
	Level 1	8sec	1.5148	1.5812	1.6454	2.2017	1.5149	1.5813	1.6450	2.1999	1.5482	1.6092	1.6783	2.7770	1.4957	1.5530	1.6203	1.8370	0.0195	0.0210	0.0232	0.3927
	Level 2	16sec	1.2707	1.3747	1.4705	2.5094	1.2706	1.3746	1.4703	2.5047	1.3157	1.3996	1.5425	4.4614	1.2379	1.3403	1.4220	1.5459	0.0269	0.0214	0.0466	1.1167
	Level 3	32sec	1.1610	1.2512	1.3526	2.5976	1.1611	1.2516	1.3524	2.6188	1.1960	1.3106	1.4239	6.4738	1.1092	1.2210	1.3161	1.4581	0.0337	0.0337	0.0401	1.8290
60	**Level 4**	1.1min	1.0989	1.1689	1.2575	2.6406	1.0983	1.1686	1.2572	2.6123	1.1365	1.2149	1.3240	6.5765	1.0417	1.1433	1.2156	1.3483	0.0358	0.0275	0.0365	2.0544
days	**Level 5**	2.1min	1.0584	1.1112	1.1757	2.3282	1.0579	1.1112	1.1758	2.3642	1.0854	1.1294	1.2205	5.8768	1.0295	1.0871	1.1419	1.2250	0.0235	0.0161	0.0332	1.8559
before	**Level 6**	4.3min	1.0348	1.0729	1.1190	1.8858	1.0349	1.0730	1.1188	1.8804	1.0484	1.0816	1.1422	4.3067	1.0167	1.0621	1.0985	1.1524	0.0124	0.0081	0.0163	1.2224
	Level 7	8.5min	1.0259	1.0529	1.0905	1.6432	1.0260	1.0530	1.0908	1.6539	1.0444	1.0632	1.1099	3.5565	1.0102	1.0464	1.0722	1.1157	0.0121	0.0074	0.0169	0.9431
	Level 8	17.1min	1.0199	1.0396	1.0731	1.6164	1.0199	1.0397	1.0734	1.6087	1.0302	1.0491	1.0918	3.5787	1.0112	1.0313	1.0519	1.0992	0.0066	0.0058	0.0157	0.9419
	Level 9	34.2min	1.0195	1.0346	1.0695	1.6382	1.0194	1.0347	1.0695	1.6507	1.0271	1.0415	1.0974	3.8455	1.0118	1.0274	1.0486	1.1017	0.0061	0.0049	0.0168	1.0332
	Level 1	5.4sec	1.5114	1.6020	1.6925	2.1284	1.5112	1.6018	1.6923	2.1267	1.5629	1.6462	1.7807	2.7770	1.4378	1.5668	1.6513	1.8370	0.0354	0.0258	0.0435	0.3315
	Level 2	10.8sec	1.2844	1.3895	1.4883	2.2524	1.2844	1.3896	1.4882	2.2478	1.3403	1.4220	1.5459	4.4614	1.2379	1.3543	1.4262	1.6185	0.0371	0.0204	0.0441	0.9418
	Level 3	21.5sec	1.1678	1.2623	1.3576	2.2622	1.1677	1.2622	1.3571	2.2672	1.2210	1.3161	1.4239	6.4738	1.1092	1.2240	1.3200	1.4581	0.0359	0.0327	0.0351	1.5037
3	**Level 4**	43sec	1.1011	1.1842	1.2607	2.2041	1.1013	1.1840	1.2607	2.2206	1.1433	1.2195	1.3483	6.5765	1.0417	1.1454	1.2200	1.3773	0.0332	0.0282	0.0402	1.6836
months	**Level 5**	1.4min	1.0623	1.1258	1.1962	2.0348	1.0623	1.1256	1.1961	2.0347	1.0916	1.1518	1.2593	5.8768	1.0295	1.1001	1.1639	1.2688	0.0235	0.0172	0.0280	1.5099
before	**Level 6**	2.9min	1.0396	1.0880	1.1363	1.6972	1.0397	1.0880	1.1362	1.6844	1.0646	1.1132	1.1806	4.3067	1.0167	1.0668	1.1187	1.1809	0.0167	0.0136	0.0173	0.9858
	Level 7	5.7min	1.0289	1.0626	1.0973	1.4941	1.0287	1.0626	1.0973	1.5045	1.0467	1.0759	1.1190	3.5565	1.0102	1.0475	1.0766	1.1252	0.0140	0.0095	0.0137	0.7599
	Level 8	11.5min	1.0209	1.0468	1.0752	1.4577	1.0211	1.0468	1.0755	1.4525	1.0355	1.0546	1.0930	3.5787	1.0087	1.0383	1.0564	1.0992	0.0091	0.0061	0.0130	0.7615
	Level 9	22.9min	1.0195	1.0409	1.0693	1.4758	1.0195	1.0409	1.0695	1.4707	1.0304	1.0486	1.0974	3.8455	1.0080	1.0329	1.0530	1.1017	0.0079	0.0051	0.0135	0.8386
	Level 1	2.7sec	1.4801	1.5373	1.5947	1.8008	1.4801	1.5374	1.5948	1.8010	1.5149	1.5599	1.6388	2.7770	1.3779	1.5163	1.5601	1.6405	0.0299	0.0120	0.0235	0.2302
	Level 2	5.3sec	1.2436	1.3048	1.3608	1.6465	1.2436	1.3046	1.3608	1.6420	1.2751	1.3301	1.4034	4.4614	1.1577	1.2767	1.3302	1.4037	0.0245	0.0168	0.0222	0.4951
	Level 3	10.7sec	1.1332	1.1861	1.2427	1.5223	1.1334	1.1861	1.2427	1.5226	1.1619	1.2141	1.2698	6.4738	1.0793	1.1631	1.2147	1.2750	0.0210	0.0148	0.0165	0.7222
1	**Level 4**	21.4sec	1.0806	1.1265	1.1721	1.4345	1.0808	1.1265	1.1721	1.4340	1.1062	1.1465	1.2015	6.5765	1.0385	1.1073	1.1472	1.2037	0.0179	0.0116	0.0160	0.7966
Year	**Level 5**	42.7sec	1.0533	1.0889	1.1238	1.3471	1.0534	1.0888	1.1238	1.3445	1.0749	1.1063	1.1451	5.8768	1.0211	1.0760	1.1070	1.1454	0.0150	0.0095	0.0118	0.7107
before	**Level 6**	1.4min	1.0353	1.0620	1.0879	1.2361	1.0353	1.0620	1.0879	1.2358	1.0499	1.0765	1.1041	4.3067	1.0098	1.0505	1.0767	1.1042	0.0107	0.0071	0.0084	0.4636
	Level 7	2.8min	1.0239	1.0430	1.0618	1.1708	1.0239	1.0429	1.0618	1.1700	1.0343	1.0524	1.0747	3.5565	1.0055	1.0352	1.0524	1.0753	0.0077	0.0049	0.0063	0.3547
	Level 8	5.7min	1.0170	1.0307	1.0444	1.1397	1.0170	1.0307	1.0445	1.1400	1.0242	1.0373	1.0536	3.5787	1.0036	1.0245	1.0374	1.0538	0.0053	0.0037	0.0048	0.3505
	Level 9	11.4min	1.0144	1.0261	1.0380	1.1377	1.0144	1.0262	1.0380	1.1366	1.0208	1.0313	1.0462	3.8455	1.0031	1.0209	1.0316	1.0465	0.0045	0.0032	0.0043	0.3839

Table A.28: EDH7 Other Results Table –Continued

EDH7 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	17.9sec	1.5197	1.5850	1.6370	2.1214	1.5193	1.5849	1.6367	2.1274	1.5615	1.5908	1.6831	2.5457	1.4936	1.5747	1.6013	1.9416	0.0284	0.0072	0.0294	0.2809
	Level 2	35.7sec	1.2619	1.3706	1.4574	2.5790	1.2619	1.3712	1.4571	2.5601	1.2842	1.3943	1.5030	4.5453	1.2356	1.3181	1.4306	1.6516	0.0225	0.0359	0.0282	1.3418
	Level 3	1.2min	1.1405	1.2402	1.3285	2.9343	1.1406	1.2400	1.3284	2.9060	1.1884	1.2819	1.4211	6.4961	1.1096	1.2163	1.2950	1.4689	0.0290	0.0299	0.0530	2.4065
30	**Level 4**	2.4min	1.0838	1.1455	1.2158	2.7397	1.0840	1.1456	1.2156	2.7190	1.1190	1.1730	1.2546	6.4807	1.0424	1.1292	1.1848	1.2656	0.0320	0.0209	0.0259	2.5160
days	**Level 5**	4.8min	1.0483	1.0942	1.1299	1.9091	1.0484	1.0939	1.1298	1.9226	1.0721	1.1034	1.1470	3.8132	1.0303	1.0827	1.1064	1.1631	0.0211	0.0086	0.0193	1.2660
before	**Level 6**	9.5min	1.0301	1.0571	1.0886	1.5318	1.0302	1.0570	1.0885	1.5202	1.0437	1.0639	1.1032	2.5362	1.0159	1.0487	1.0765	1.1111	0.0132	0.0074	0.0096	0.6796
	Level 7	19.1min	1.0202	1.0405	1.0686	1.3339	1.0203	1.0405	1.0687	1.3318	1.0342	1.0433	1.0766	1.9703	1.0085	1.0348	1.0490	1.0787	0.0110	0.0040	0.0115	0.4266
	Level 8	38.1min	1.0144	1.0275	1.0585	1.2688	1.0144	1.0275	1.0586	1.2621	1.0224	1.0318	1.0668	1.7762	1.0068	1.0259	1.0415	1.0729	0.0066	0.0029	0.0100	0.3431
	Level 9	76.2min	1.0131	1.0251	1.0549	1.2323	1.0131	1.0251	1.0547	1.2323	1.0176	1.0303	1.0664	1.6468	1.0074	1.0194	1.0304	1.0728	0.0047	0.0057	0.0140	0.2769
	Level 1	8sec	1.5127	1.5823	1.6423	2.1645	1.5129	1.5822	1.6421	2.1565	1.5487	1.6013	1.6831	2.7741	1.4936	1.5615	1.6225	1.8109	0.0206	0.0133	0.0198	0.3571
	Level 2	16sec	1.2654	1.3686	1.4614	2.5296	1.2657	1.3687	1.4616	2.5289	1.2842	1.3943	1.5030	4.5453	1.2356	1.3181	1.4306	1.6145	0.0201	0.0290	0.0266	1.1248
	Level 3	32sec	1.1536	1.2488	1.3464	2.5985	1.1536	1.2487	1.3475	2.6109	1.1884	1.2950	1.4512	6.4961	1.1096	1.2163	1.3008	1.4689	0.0325	0.0300	0.0620	1.8376
60	**Level 4**	1.1min	1.0950	1.1620	1.2420	2.6396	1.0946	1.1618	1.2423	2.6241	1.1292	1.1957	1.3197	6.4807	1.0424	1.1293	1.2021	1.3311	0.0321	0.0242	0.0410	2.0839
days	**Level 5**	2.1min	1.0566	1.1033	1.1527	2.3289	1.0564	1.1033	1.1527	2.3235	1.0827	1.1241	1.1930	5.9848	1.0303	1.0881	1.1401	1.2297	0.0222	0.0122	0.0195	1.8692
before	**Level 6**	4.3min	1.0326	1.0659	1.0976	1.8649	1.0326	1.0659	1.0977	1.8702	1.0437	1.0797	1.1111	4.6560	1.0159	1.0487	1.0858	1.1417	0.0117	0.0123	0.0104	1.3288
	Level 7	8.5min	1.0208	1.0430	1.0709	1.6125	1.0209	1.0431	1.0709	1.5998	1.0342	1.0490	1.0787	3.6711	1.0085	1.0348	1.0613	1.0831	0.0091	0.0046	0.0072	0.9681
	Level 8	17.1min	1.0145	1.0290	1.0517	1.4948	1.0146	1.0290	1.0518	1.4928	1.0224	1.0355	1.0633	3.2664	1.0068	1.0259	1.0386	1.0668	0.0057	0.0037	0.0105	0.8240
	Level 9	34.2min	1.0123	1.0225	1.0422	1.4789	1.0124	1.0226	1.0421	1.4898	1.0176	1.0297	1.0589	3.3743	1.0059	1.0194	1.0303	1.0592	0.0049	0.0035	0.0143	0.8575
	Level 1	5.4sec	1.5113	1.6028	1.6874	2.0971	1.5112	1.6024	1.6875	2.0956	1.5638	1.6364	1.7749	2.7741	1.4385	1.5726	1.6446	1.8109	0.0363	0.0237	0.0458	0.3017
	Level 2	10.8sec	1.2800	1.3855	1.4870	2.2611	1.2800	1.3858	1.4878	2.2525	1.3385	1.4306	1.6145	4.5453	1.2356	1.3386	1.4354	1.6387	0.0333	0.0252	0.0521	0.9582
	Level 3	21.5sec	1.1630	1.2551	1.3520	2.2660	1.1626	1.2549	1.3516	2.2550	1.2172	1.3008	1.4512	6.4961	1.1096	1.2209	1.3010	1.4689	0.0355	0.0289	0.0487	1.5115
3	**Level 4**	43sec	1.0968	1.1747	1.2462	2.1974	1.0970	1.1749	1.2462	2.2138	1.1293	1.2021	1.3311	6.4807	1.0424	1.1392	1.2100	1.3539	0.0290	0.0201	0.0404	1.7135
months	**Level 5**	1.4min	1.0602	1.1176	1.1736	2.0113	1.0599	1.1177	1.1742	1.9838	1.0881	1.1411	1.2433	5.9848	1.0303	1.0933	1.1419	1.2434	0.0217	0.0174	0.0339	1.5240
before	**Level 6**	2.9min	1.0356	1.0770	1.1162	1.6594	1.0356	1.0769	1.1163	1.6570	1.0530	1.0888	1.1554	4.6560	1.0159	1.0600	1.0967	1.1620	0.0135	0.0103	0.0188	1.0711
	Level 7	5.7min	1.0235	1.0501	1.0763	1.4550	1.0236	1.0500	1.0763	1.4539	1.0412	1.0618	1.0959	3.6711	1.0085	1.0426	1.0649	1.0999	0.0109	0.0075	0.0083	0.7765
	Level 8	11.5min	1.0159	1.0342	1.0549	1.3569	1.0160	1.0342	1.0549	1.3623	1.0261	1.0415	1.0682	3.2664	1.0068	1.0263	1.0423	1.0682	0.0072	0.0054	0.0090	0.6636
	Level 9	22.9min	1.0129	1.0264	1.0449	1.3431	1.0129	1.0264	1.0450	1.3487	1.0202	1.0310	1.0589	3.3743	1.0055	1.0209	1.0311	1.0592	0.0056	0.0039	0.0100	0.6926
	Level 1	2.7sec	1.4791	1.5360	1.5941	1.7940	1.4791	1.5361	1.5940	1.7935	1.5121	1.5599	1.6365	2.7741	1.3772	1.5134	1.5601	1.6400	0.0294	0.0126	0.0235	0.2149
	Level 2	5.3sec	1.2422	1.3018	1.3581	1.6399	1.2421	1.3019	1.3581	1.6398	1.2729	1.3262	1.4010	4.5453	1.1566	1.2731	1.3263	1.4013	0.0241	0.0170	0.0225	0.5023
	Level 3	10.7sec	1.1309	1.1826	1.2370	1.5134	1.1308	1.1825	1.2371	1.5135	1.1592	1.2112	1.2624	6.4961	1.0784	1.1612	1.2113	1.2669	0.0196	0.0147	0.0150	0.7244
1	**Level 4**	21.4sec	1.0785	1.1210	1.1640	1.4247	1.0785	1.1211	1.1639	1.4209	1.1034	1.1392	1.1907	6.4807	1.0379	1.1036	1.1411	1.1916	0.0168	0.0105	0.0140	0.8089
Year	**Level 5**	42.7sec	1.0505	1.0823	1.1131	1.3164	1.0505	1.0823	1.1132	1.3206	1.0699	1.0965	1.1333	5.9848	1.0205	1.0704	1.0968	1.1356	0.0138	0.0082	0.0107	0.7098
before	**Level 6**	1.4min	1.0320	1.0547	1.0769	1.2165	1.0320	1.0547	1.0769	1.2153	1.0444	1.0663	1.0906	4.6560	1.0092	1.0446	1.0667	1.0915	0.0094	0.0060	0.0070	0.4936
	Level 7	2.8min	1.0202	1.0359	1.0503	1.1451	1.0202	1.0359	1.0502	1.1453	1.0284	1.0429	1.0594	3.6711	1.0046	1.0292	1.0432	1.0599	0.0062	0.0041	0.0048	0.3554
	Level 8	5.7min	1.0131	1.0234	1.0330	1.1092	1.0131	1.0234	1.0330	1.1082	1.0186	1.0279	1.0392	3.2664	1.0029	1.0186	1.0282	1.0392	0.0040	0.0027	0.0033	0.3017
	Level 9	11.4min	1.0097	1.0175	1.0245	1.0950	1.0097	1.0175	1.0246	1.0960	1.0144	1.0207	1.0299	3.3743	1.0023	1.0144	1.0207	1.0299	0.0030	0.0019	0.0027	0.3125

Table A.28: EDH7 Other Results Table –Continued

EDH7 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	17.9sec	0.4887	0.6133	0.6340	0.6630	0.4907	0.6132	0.6337	0.6629	0.5958	0.6214	0.6439	0.6686	0.3627	0.5996	0.6229	0.6527	0.0832	0.0094	0.0082	0.0075
	Level 2	35.7sec	0.4979	0.6917	0.7323	0.7959	0.5016	0.6919	0.7327	0.7958	0.6483	0.7032	0.7601	0.8078	0.2241	0.6753	0.7188	0.7791	0.1756	0.0130	0.0172	0.0135
	Level 3	1.2min	0.5401	0.7505	0.8115	0.8788	0.5390	0.7507	0.8118	0.8788	0.7254	0.7598	0.8362	0.9016	0.1545	0.7296	0.7785	0.8533	0.2337	0.0142	0.0212	0.0198
30	**Level 4**	2.4min	0.6054	0.8146	0.8717	0.9286	0.6032	0.8147	0.8718	0.9292	0.7895	0.8231	0.8848	0.9600	0.1521	0.7995	0.8570	0.8938	0.2674	0.0110	0.0100	0.0278
days	**Level 5**	4.8min	0.6760	0.8793	0.9130	0.9590	0.6712	0.8793	0.9131	0.9592	0.8325	0.8889	0.9264	0.9714	0.2466	0.8682	0.9043	0.9345	0.2473	0.0095	0.0096	0.0169
before	**Level 6**	9.5min	0.7408	0.9099	0.9399	0.9713	0.7425	0.9104	0.9400	0.9712	0.8814	0.9274	0.9539	0.9836	0.3579	0.8912	0.9277	0.9544	0.2191	0.0183	0.0094	0.0132
	Level 7	19.1min	0.7915	0.9177	0.9534	0.9791	0.7876	0.9177	0.9534	0.9793	0.9010	0.9327	0.9575	0.9899	0.4350	0.9018	0.9454	0.9658	0.1986	0.0156	0.0046	0.0110
	Level 8	38.1min	0.8098	0.9223	0.9628	0.9832	0.8085	0.9223	0.9629	0.9832	0.9087	0.9319	0.9707	0.9889	0.4776	0.9098	0.9532	0.9747	0.1856	0.0113	0.0075	0.0060
	Level 9	76.2min	0.8025	0.9184	0.9626	0.9814	0.8044	0.9185	0.9626	0.9814	0.8959	0.9317	0.9736	0.9883	0.4776	0.9077	0.9485	0.9747	0.1828	0.0111	0.0094	0.0066
	Level 1	8sec	0.4663	0.6082	0.6324	0.6601	0.4658	0.6080	0.6325	0.6602	0.5444	0.6172	0.6439	0.6686	0.3601	0.5958	0.6214	0.6459	0.0734	0.0086	0.0084	0.0084
	Level 2	16sec	0.4595	0.6808	0.7276	0.7878	0.4588	0.6807	0.7277	0.7874	0.6469	0.7032	0.7461	0.8078	0.2241	0.6483	0.7145	0.7601	0.1614	0.0213	0.0114	0.0166
	Level 3	32sec	0.4897	0.7399	0.7994	0.8618	0.4928	0.7400	0.7995	0.8619	0.6858	0.7598	0.8190	0.9016	0.1545	0.7023	0.7630	0.8362	0.1974	0.0215	0.0211	0.0253
60	**Level 4**	1.1min	0.5359	0.7960	0.8562	0.9110	0.5442	0.7960	0.8561	0.9113	0.7417	0.8227	0.8747	0.9600	0.1521	0.7553	0.8231	0.8799	0.2491	0.0227	0.0198	0.0301
days	**Level 5**	2.1min	0.5996	0.8510	0.9002	0.9457	0.6022	0.8511	0.9001	0.9457	0.8163	0.8757	0.9199	0.9714	0.1702	0.8194	0.8854	0.9213	0.2745	0.0239	0.0131	0.0211
before	**Level 6**	4.3min	0.6727	0.8939	0.9321	0.9665	0.6744	0.8940	0.9320	0.9664	0.8678	0.9103	0.9415	0.9836	0.2322	0.8755	0.9245	0.9539	0.2634	0.0130	0.0071	0.0117
	Level 7	8.5min	0.7251	0.9171	0.9497	0.9750	0.7268	0.9170	0.9497	0.9748	0.8963	0.9327	0.9556	0.9899	0.2812	0.9010	0.9406	0.9575	0.2564	0.0142	0.0067	0.0115
	Level 8	17.1min	0.7463	0.9319	0.9619	0.9805	0.7474	0.9318	0.9619	0.9806	0.9098	0.9506	0.9696	0.9889	0.2794	0.9159	0.9532	0.9707	0.2588	0.0137	0.0053	0.0063
	Level 9	34.2min	0.7440	0.9355	0.9664	0.9809	0.7414	0.9352	0.9665	0.9810	0.9077	0.9537	0.9733	0.9883	0.2600	0.9113	0.9601	0.9736	0.2623	0.0146	0.0046	0.0059
	Level 1	5.4sec	0.4849	0.5941	0.6258	0.6640	0.4860	0.5939	0.6257	0.6641	0.5616	0.6056	0.6398	0.6955	0.3601	0.5679	0.6075	0.6439	0.0645	0.0121	0.0106	0.0147
	Level 2	10.8sec	0.5088	0.6748	0.7221	0.7820	0.5083	0.6748	0.7220	0.7822	0.6469	0.7012	0.7461	0.8078	0.2241	0.6474	0.7032	0.7483	0.1386	0.0191	0.0126	0.0207
	Level 3	21.5sec	0.5499	0.7406	0.7948	0.8611	0.5504	0.7405	0.7949	0.8606	0.7023	0.7576	0.8190	0.9016	0.1545	0.7059	0.7598	0.8198	0.1688	0.0159	0.0208	0.0246
3	**Level 4**	43sec	0.6011	0.7984	0.8474	0.9118	0.5979	0.7987	0.8475	0.9119	0.7417	0.8197	0.8747	0.9600	0.1521	0.7553	0.8200	0.8799	0.1994	0.0190	0.0210	0.0267
months	**Level 5**	1.4min	0.6465	0.8403	0.8910	0.9442	0.6471	0.8403	0.8909	0.9441	0.7941	0.8592	0.9161	0.9714	0.1702	0.8163	0.8682	0.9199	0.2137	0.0144	0.0152	0.0202
before	**Level 6**	2.9min	0.7120	0.8833	0.9210	0.9641	0.7129	0.8833	0.9209	0.9641	0.8470	0.8939	0.9393	0.9836	0.2322	0.8678	0.8983	0.9415	0.2028	0.0083	0.0123	0.0143
	Level 7	5.7min	0.7690	0.9132	0.9424	0.9737	0.7669	0.9131	0.9423	0.9738	0.8937	0.9288	0.9554	0.9899	0.2812	0.8963	0.9294	0.9556	0.1978	0.0103	0.0090	0.0127
	Level 8	11.5min	0.7959	0.9313	0.9563	0.9806	0.7952	0.9313	0.9562	0.9807	0.9149	0.9466	0.9658	0.9914	0.2794	0.9159	0.9482	0.9696	0.2016	0.0107	0.0061	0.0080
	Level 9	22.9min	0.7953	0.9375	0.9615	0.9819	0.7970	0.9373	0.9616	0.9819	0.9113	0.9497	0.9705	0.9921	0.2600	0.9233	0.9537	0.9733	0.2064	0.0094	0.0053	0.0072
	Level 1	2.7sec	0.5620	0.6274	0.6507	0.6759	0.5621	0.6274	0.6507	0.6759	0.6096	0.6411	0.6595	0.7258	0.3601	0.6102	0.6411	0.6601	0.0557	0.0093	0.0050	0.0141
	Level 2	5.3sec	0.6351	0.7353	0.7669	0.8044	0.6354	0.7353	0.7669	0.8044	0.7124	0.7518	0.7832	0.8638	0.2241	0.7126	0.7519	0.7842	0.0946	0.0120	0.0098	0.0162
	Level 3	10.7sec	0.7040	0.8052	0.8437	0.8825	0.7028	0.8052	0.8436	0.8826	0.7843	0.8236	0.8598	0.9265	0.1545	0.7875	0.8238	0.8607	0.1100	0.0108	0.0103	0.0165
1	**Level 4**	21.4sec	0.7584	0.8537	0.8881	0.9255	0.7587	0.8537	0.8880	0.9255	0.8308	0.8722	0.9031	0.9630	0.1521	0.8323	0.8731	0.9040	0.1216	0.0117	0.0090	0.0155
Year	**Level 5**	42.7sec	0.8050	0.8903	0.9187	0.9495	0.8045	0.8902	0.9187	0.9495	0.8731	0.9039	0.9294	0.9793	0.1702	0.8733	0.9043	0.9303	0.1245	0.0094	0.0078	0.0137
before	**Level 6**	1.4min	0.8489	0.9195	0.9418	0.9661	0.8490	0.9195	0.9419	0.9660	0.9056	0.9289	0.9519	0.9903	0.2322	0.9057	0.9296	0.9525	0.1133	0.0071	0.0062	0.0101
	Level 7	2.8min	0.8850	0.9420	0.9590	0.9767	0.8851	0.9420	0.9590	0.9767	0.9300	0.9502	0.9660	0.9945	0.2812	0.9305	0.9513	0.9668	0.1057	0.0056	0.0044	0.0074
	Level 8	5.7min	0.9084	0.9575	0.9703	0.9834	0.9078	0.9575	0.9703	0.9833	0.9489	0.9640	0.9761	0.9964	0.2794	0.9491	0.9643	0.9764	0.1053	0.0044	0.0035	0.0052
	Level 9	11.4min	0.9145	0.9635	0.9746	0.9858	0.9143	0.9635	0.9746	0.9858	0.9555	0.9697	0.9795	0.9969	0.2600	0.9558	0.9697	0.9796	0.1083	0.0040	0.0030	0.0044

Table A.29: EDH8 Other Results Table

EDH8 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	9.1sec	1.5134	1.5994	1.6982	1.9013	1.5135	1.5990	1.6982	1.9002	1.5509	1.6215	1.7369	2.0190	1.4832	1.5585	1.6464	1.8285	0.0303	0.0243	0.0357	0.0736
	Level 2	18.1sec	1.2638	1.3426	1.4436	1.5948	1.2638	1.3429	1.4441	1.5963	1.2955	1.3594	1.4938	1.7313	1.2455	1.3020	1.3985	1.5025	0.0201	0.0218	0.0371	0.0963
	Level 3	36.2sec	1.1440	1.1934	1.2526	1.3498	1.1440	1.1928	1.2525	1.3492	1.1598	1.2290	1.2831	1.4735	1.1282	1.1729	1.2291	1.2872	0.0121	0.0225	0.0229	0.0745
30	**Level 4**	1.2min	1.0807	1.1090	1.1477	1.2050	1.0806	1.1088	1.1473	1.2056	1.0919	1.1256	1.1549	1.2939	1.0700	1.0938	1.1275	1.1567	0.0081	0.0111	0.0114	0.0538
days	**Level 5**	2.4min	1.0463	1.0648	1.0828	1.1265	1.0464	1.0647	1.0829	1.1262	1.0529	1.0757	1.0888	1.1805	1.0405	1.0545	1.0769	1.0981	0.0049	0.0086	0.0051	0.0337
before	**Level 6**	4.8min	1.0279	1.0386	1.0498	1.0835	1.0279	1.0387	1.0498	1.0837	1.0329	1.0444	1.0549	1.1173	1.0254	1.0346	1.0461	1.0660	0.0031	0.0037	0.0035	0.0217
	Level 7	9.7min	1.0198	1.0266	1.0348	1.0622	1.0199	1.0266	1.0348	1.0621	1.0216	1.0298	1.0409	1.0871	1.0183	1.0242	1.0313	1.0453	0.0014	0.0025	0.0038	0.0160
	Level 8	19.3min	1.0174	1.0230	1.0302	1.0561	1.0174	1.0230	1.0304	1.0564	1.0181	1.0266	1.0392	1.0853	1.0166	1.0190	1.0267	1.0403	0.0005	0.0032	0.0052	0.0170
	Level 9	38.6min	1.0190	1.0256	1.0358	1.0660	1.0190	1.0256	1.0359	1.0662	1.0196	1.0299	1.0452	1.1101	1.0183	1.0202	1.0311	1.0480	0.0006	0.0034	0.0055	0.0250
	Level 1	4.3sec	1.4703	1.5350	1.5891	1.7836	1.4703	1.5348	1.5891	1.7840	1.5057	1.5587	1.6215	2.0190	1.3812	1.5094	1.5592	1.6318	0.0381	0.0194	0.0234	0.1242
	Level 2	8.6sec	1.2262	1.2717	1.3301	1.5066	1.2261	1.2717	1.3301	1.5056	1.2537	1.2871	1.3586	1.7313	1.1623	1.2601	1.2955	1.3594	0.0295	0.0079	0.0222	0.1114
	Level 3	17.2sec	1.1125	1.1431	1.1823	1.2944	1.1125	1.1431	1.1823	1.2943	1.1300	1.1598	1.2062	1.4735	1.0789	1.1340	1.1623	1.2290	0.0171	0.0084	0.0154	0.0724
60	**Level 4**	34.5sec	1.0585	1.0802	1.1071	1.1723	1.0584	1.0802	1.1071	1.1721	1.0700	1.0901	1.1256	1.2939	1.0406	1.0705	1.0919	1.1275	0.0101	0.0057	0.0114	0.0476
days	**Level 5**	1.1min	1.0321	1.0479	1.0657	1.1030	1.0322	1.0479	1.0657	1.1031	1.0405	1.0545	1.0769	1.1805	1.0219	1.0414	1.0560	1.0802	0.0069	0.0042	0.0083	0.0308
before	**Level 6**	2.3min	1.0196	1.0310	1.0410	1.0674	1.0196	1.0310	1.0410	1.0676	1.0256	1.0351	1.0474	1.1173	1.0115	1.0260	1.0355	1.0491	0.0052	0.0034	0.0040	0.0209
	Level 7	4.6min	1.0133	1.0218	1.0294	1.0503	1.0133	1.0218	1.0294	1.0503	1.0188	1.0243	1.0341	1.0871	1.0068	1.0188	1.0254	1.0354	0.0042	0.0019	0.0030	0.0154
	Level 8	9.2min	1.0103	1.0176	1.0248	1.0465	1.0103	1.0176	1.0248	1.0466	1.0157	1.0190	1.0285	1.0853	1.0050	1.0162	1.0199	1.0288	0.0037	0.0009	0.0026	0.0170
	Level 9	18.4min	1.0098	1.0178	1.0266	1.0571	1.0097	1.0178	1.0266	1.0570	1.0148	1.0202	1.0311	1.1147	1.0048	1.0152	1.0218	1.0324	0.0036	0.0017	0.0034	0.0292
	Level 1	3.1sec	1.4566	1.5246	1.5903	1.7594	1.4565	1.5245	1.5903	1.7593	1.4971	1.5585	1.6234	2.0190	1.3812	1.5003	1.5587	1.6249	0.0346	0.0203	0.0233	0.1181
	Level 2	6.2sec	1.2206	1.2689	1.3288	1.4872	1.2206	1.2689	1.3286	1.4891	1.2525	1.2791	1.3586	1.7313	1.1623	1.2530	1.2871	1.3594	0.0272	0.0085	0.0216	0.1025
	Level 3	12.4sec	1.1094	1.1444	1.1910	1.2920	1.1093	1.1444	1.1909	1.2925	1.1300	1.1623	1.2233	1.4735	1.0789	1.1340	1.1664	1.2242	0.0171	0.0090	0.0186	0.0790
3	**Level 4**	24.8sec	1.0572	1.0810	1.1130	1.1769	1.0571	1.0810	1.1129	1.1773	1.0705	1.0916	1.1286	1.3229	1.0406	1.0709	1.0919	1.1357	0.0107	0.0061	0.0121	0.0576
months	**Level 5**	49.6sec	1.0317	1.0493	1.0699	1.1093	1.0318	1.0493	1.0699	1.1093	1.0414	1.0576	1.0802	1.2285	1.0219	1.0437	1.0576	1.0813	0.0073	0.0045	0.0084	0.0422
before	**Level 6**	1.7min	1.0196	1.0321	1.0444	1.0731	1.0196	1.0321	1.0444	1.0729	1.0260	1.0368	1.0513	1.1517	1.0115	1.0265	1.0380	1.0549	0.0054	0.0030	0.0044	0.0276
	Level 7	3.3min	1.0134	1.0225	1.0315	1.0529	1.0134	1.0225	1.0316	1.0527	1.0188	1.0256	1.0376	1.1060	1.0068	1.0197	1.0260	1.0393	0.0042	0.0019	0.0034	0.0197
	Level 8	6.6min	1.0104	1.0178	1.0255	1.0463	1.0104	1.0178	1.0254	1.0464	1.0161	1.0207	1.0297	1.0853	1.0050	1.0162	1.0210	1.0303	0.0037	0.0013	0.0026	0.0186
	Level 9	13.2min	1.0097	1.0177	1.0258	1.0538	1.0097	1.0177	1.0257	1.0535	1.0152	1.0198	1.0299	1.1147	1.0048	1.0153	1.0202	1.0310	0.0036	0.0017	0.0032	0.0280
	Level 1	1.7sec	1.4697	1.5256	1.5706	1.6847	1.4698	1.5256	1.5707	1.6846	1.5078	1.5453	1.6009	2.0190	1.3812	1.5079	1.5454	1.6010	0.0301	0.0115	0.0168	0.0919
	Level 2	3.3sec	1.2310	1.2756	1.3201	1.4251	1.2308	1.2756	1.3200	1.4250	1.2567	1.2939	1.3447	1.7313	1.1623	1.2592	1.2944	1.3450	0.0221	0.0097	0.0144	0.0797
	Level 3	6.6sec	1.1174	1.1484	1.1848	1.2648	1.1174	1.1484	1.1848	1.2646	1.1361	1.1641	1.2077	1.4735	1.0776	1.1363	1.1647	1.2091	0.0152	0.0079	0.0134	0.0577
1	**Level 4**	13.2sec	1.0631	1.0864	1.1146	1.1770	1.0632	1.0864	1.1145	1.1771	1.0765	1.0992	1.1334	1.3229	1.0406	1.0765	1.1003	1.1352	0.0102	0.0071	0.0095	0.0428
Year	**Level 5**	26.4sec	1.0366	1.0560	1.0770	1.1230	1.0366	1.0560	1.0770	1.1230	1.0474	1.0657	1.0888	1.2285	1.0219	1.0475	1.0664	1.0893	0.0077	0.0055	0.0068	0.0321
before	**Level 6**	52.9sec	1.0234	1.0383	1.0531	1.0861	1.0234	1.0384	1.0531	1.0860	1.0316	1.0446	1.0618	1.1517	1.0104	1.0316	1.0450	1.0620	0.0062	0.0040	0.0049	0.0221
	Level 7	1.8min	1.0161	1.0269	1.0374	1.0604	1.0161	1.0269	1.0374	1.0604	1.0217	1.0318	1.0427	1.1060	1.0064	1.0218	1.0318	1.0428	0.0047	0.0030	0.0034	0.0158
	Level 8	3.5min	1.0120	1.0201	1.0279	1.0458	1.0120	1.0201	1.0279	1.0458	1.0163	1.0240	1.0322	1.0853	1.0043	1.0163	1.0240	1.0322	0.0035	0.0024	0.0024	0.0125
	Level 9	7.1min	1.0106	1.0182	1.0252	1.0431	1.0106	1.0182	1.0252	1.0432	1.0147	1.0210	1.0301	1.1147	1.0035	1.0147	1.0210	1.0302	0.0031	0.0019	0.0026	0.0167

Table A.29: EDH8 Other Results Table –Continued

EDH8 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	9.1sec	1.5135	1.6003	1.7013	1.8948	1.5129	1.6007	1.7009	1.8949	1.5460	1.6249	1.7315	2.0163	1.4869	1.5606	1.6666	1.8182	0.0271	0.0259	0.0287	0.0809
	Level 2	18.1sec	1.2612	1.3447	1.4414	1.5812	1.2616	1.3448	1.4411	1.5812	1.2947	1.3687	1.4857	1.7271	1.2490	1.2956	1.3956	1.4910	0.0198	0.0266	0.0338	0.0963
	Level 3	36.2sec	1.1399	1.1927	1.2501	1.3442	1.1399	1.1927	1.2503	1.3436	1.1560	1.2226	1.2759	1.4788	1.1272	1.1734	1.2269	1.2882	0.0105	0.0187	0.0206	0.0779
30	**Level 4**	1.2min	1.0793	1.1068	1.1479	1.2039	1.0792	1.1067	1.1478	1.2039	1.0910	1.1221	1.1551	1.3053	1.0721	1.0952	1.1347	1.1581	0.0085	0.0105	0.0081	0.0589
days	**Level 5**	2.4min	1.0442	1.0633	1.0817	1.1279	1.0443	1.0633	1.0816	1.1270	1.0511	1.0770	1.0858	1.1909	1.0421	1.0552	1.0783	1.0991	0.0039	0.0078	0.0036	0.0381
before	**Level 6**	4.8min	1.0269	1.0371	1.0486	1.0863	1.0270	1.0372	1.0486	1.0857	1.0294	1.0404	1.0527	1.1286	1.0244	1.0318	1.0447	1.0595	0.0024	0.0035	0.0036	0.0270
	Level 7	9.7min	1.0192	1.0256	1.0334	1.0644	1.0192	1.0256	1.0334	1.0644	1.0220	1.0281	1.0378	1.0985	1.0163	1.0221	1.0296	1.0414	0.0023	0.0023	0.0034	0.0212
	Level 8	19.3min	1.0159	1.0220	1.0290	1.0572	1.0159	1.0219	1.0290	1.0575	1.0171	1.0249	1.0362	1.0923	1.0137	1.0178	1.0264	1.0372	0.0013	0.0029	0.0042	0.0207
	Level 9	38.6min	1.0182	1.0248	1.0344	1.0657	1.0182	1.0248	1.0342	1.0656	1.0194	1.0271	1.0441	1.1122	1.0150	1.0212	1.0294	1.0443	0.0018	0.0026	0.0058	0.0270
	Level 1	4.3sec	1.4682	1.5348	1.5897	1.7817	1.4688	1.5350	1.5897	1.7826	1.5054	1.5606	1.6249	2.0163	1.3775	1.5089	1.5608	1.6303	0.0394	0.0195	0.0246	0.1221
	Level 2	8.6sec	1.2260	1.2699	1.3287	1.4974	1.2258	1.2700	1.3292	1.4982	1.2590	1.2803	1.3625	1.7271	1.1593	1.2601	1.2947	1.3687	0.0304	0.0064	0.0246	0.1045
	Level 3	17.2sec	1.1128	1.1408	1.1843	1.2899	1.1126	1.1408	1.1844	1.2902	1.1310	1.1560	1.2104	1.4788	1.0721	1.1326	1.1605	1.2226	0.0191	0.0066	0.0152	0.0727
60	**Level 4**	34.4sec	1.0583	1.0793	1.1073	1.1711	1.0584	1.0794	1.1073	1.1720	1.0721	1.0883	1.1297	1.3053	1.0348	1.0724	1.0910	1.1335	0.0121	0.0058	0.0129	0.0486
days	**Level 5**	1.1min	1.0318	1.0466	1.0651	1.1034	1.0318	1.0466	1.0651	1.1037	1.0409	1.0552	1.0783	1.1909	1.0185	1.0421	1.0568	1.0792	0.0076	0.0043	0.0089	0.0330
before	**Level 6**	2.3min	1.0192	1.0294	1.0400	1.0684	1.0192	1.0294	1.0400	1.0687	1.0244	1.0323	1.0461	1.1286	1.0109	1.0245	1.0338	1.0472	0.0050	0.0024	0.0036	0.0240
	Level 7	4.6min	1.0130	1.0210	1.0277	1.0510	1.0130	1.0209	1.0277	1.0506	1.0163	1.0234	1.0318	1.0985	1.0065	1.0176	1.0241	1.0332	0.0035	0.0017	0.0025	0.0192
	Level 8	9.2min	1.0103	1.0166	1.0232	1.0435	1.0103	1.0166	1.0233	1.0435	1.0140	1.0189	1.0266	1.0923	1.0053	1.0149	1.0190	1.0266	0.0030	0.0012	0.0027	0.0190
	Level 9	18.4min	1.0099	1.0172	1.0248	1.0481	1.0099	1.0172	1.0248	1.0486	1.0141	1.0194	1.0294	1.1122	1.0056	1.0145	1.0212	1.0306	0.0031	0.0019	0.0028	0.0238
	Level 1	3.1sec	1.4555	1.5243	1.5912	1.7570	1.4557	1.5240	1.5910	1.7584	1.4919	1.5522	1.6241	2.0163	1.3775	1.4928	1.5606	1.6249	0.0345	0.0207	0.0208	0.1165
	Level 2	6.2sec	1.2203	1.2684	1.3277	1.4811	1.2206	1.2684	1.3277	1.4821	1.2533	1.2803	1.3625	1.7271	1.1593	1.2543	1.2820	1.3687	0.0281	0.0077	0.0244	0.0966
	Level 3	12.4sec	1.1090	1.1423	1.1908	1.2881	1.1091	1.1424	1.1908	1.2876	1.1310	1.1605	1.2223	1.4788	1.0721	1.1326	1.1630	1.2224	0.0184	0.0077	0.0168	0.0760
3	**Level 4**	24.8sec	1.0569	1.0799	1.1129	1.1758	1.0572	1.0799	1.1130	1.1749	1.0721	1.0901	1.1331	1.3113	1.0348	1.0724	1.0910	1.1335	0.0118	0.0059	0.0134	0.0573
months	**Level 5**	49.6sec	1.0318	1.0482	1.0681	1.1098	1.0318	1.0482	1.0681	1.1097	1.0421	1.0571	1.0792	1.2351	1.0185	1.0422	1.0573	1.0796	0.0075	0.0050	0.0080	0.0448
before	**Level 6**	1.7min	1.0198	1.0309	1.0431	1.0740	1.0197	1.0309	1.0431	1.0739	1.0257	1.0365	1.0502	1.1612	1.0109	1.0270	1.0387	1.0523	0.0051	0.0025	0.0036	0.0314
	Level 7	3.3min	1.0137	1.0223	1.0307	1.0532	1.0136	1.0223	1.0306	1.0531	1.0192	1.0253	1.0358	1.1057	1.0065	1.0192	1.0266	1.0362	0.0038	0.0017	0.0025	0.0218
	Level 8	6.6min	1.0108	1.0176	1.0249	1.0452	1.0108	1.0176	1.0249	1.0452	1.0156	1.0219	1.0279	1.0923	1.0053	1.0157	1.0221	1.0291	0.0033	0.0016	0.0021	0.0184
	Level 9	13.2min	1.0103	1.0180	1.0253	1.0505	1.0103	1.0180	1.0252	1.0509	1.0145	1.0209	1.0294	1.1122	1.0056	1.0146	1.0212	1.0294	0.0032	0.0020	0.0025	0.0255
	Level 1	1.7sec	1.4695	1.5250	1.5725	1.7007	1.4696	1.5251	1.5724	1.6999	1.5082	1.5457	1.6013	2.6584	1.3775	1.5087	1.5458	1.6019	0.0301	0.0121	0.0177	0.1536
	Level 2	3.3sec	1.2310	1.2747	1.3215	1.4691	1.2309	1.2747	1.3214	1.4683	1.2595	1.2928	1.3472	4.1568	1.1593	1.2601	1.2932	1.3504	0.0226	0.0090	0.0159	0.3528
	Level 3	6.6sec	1.1174	1.1482	1.1859	1.3606	1.1173	1.1481	1.1859	1.3605	1.1360	1.1634	1.2079	7.3108	1.0721	1.1363	1.1654	1.2104	0.0155	0.0078	0.0130	0.7638
1	**Level 4**	13.2sec	1.0633	1.0868	1.1155	1.3734	1.0632	1.0868	1.1155	1.3740	1.0763	1.1001	1.1335	13.6327	1.0348	1.0765	1.1003	1.1347	0.0107	0.0073	0.0096	1.5699
Year	**Level 5**	26.4sec	1.0365	1.0563	1.0777	1.5132	1.0365	1.0563	1.0777	1.5229	1.0474	1.0666	1.0902	26.2911	1.0185	1.0474	1.0668	1.0903	0.0078	0.0056	0.0072	3.1710
before	**Level 6**	52.9sec	1.0235	1.0385	1.0541	1.9215	1.0235	1.0385	1.0541	1.8895	1.0313	1.0450	1.0635	51.5918	1.0099	1.0314	1.0451	1.0636	0.0061	0.0042	0.0055	6.3629
	Level 7	1.8min	1.0163	1.0270	1.0378	2.6975	1.0163	1.0270	1.0378	2.6702	1.0219	1.0323	1.0450	102.1753	1.0060	1.0219	1.0323	1.0455	0.0047	0.0031	0.0036	12.7387
	Level 8	3.5min	1.0121	1.0200	1.0281	4.2953	1.0121	1.0200	1.0281	4.2668	1.0162	1.0238	1.0333	203.3449	1.0040	1.0163	1.0238	1.0335	0.0036	0.0024	0.0027	25.4861
	Level 9	7.1min	1.0106	1.0181	1.0251	7.3712	1.0106	1.0181	1.0251	7.4863	1.0144	1.0211	1.0294	405.6864	1.0032	1.0145	1.0212	1.0294	0.0032	0.0020	0.0025	50.9777

Table A.29: EDH8 Other Results Table –Continued

EDH8	Bid Ask	Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	9.1sec	1.5126	1.5981	1.6955	1.8965	1.5124	1.5987	1.6956	1.8966	1.5476	1.6220	1.7271	2.0169	1.4848	1.5588	1.6547	1.8230	0.0286	0.0249	0.0311	0.0768
	Level 2	18.1sec	1.2615	1.3413	1.4365	1.5842	1.2614	1.3411	1.4369	1.5850	1.2944	1.3614	1.4814	1.7249	1.2459	1.2974	1.3947	1.4904	0.0203	0.0239	0.0349	0.0963
	Level 3	36.2sec	1.1400	1.1890	1.2453	1.3386	1.1399	1.1890	1.2449	1.3382	1.1566	1.2235	1.2766	1.4666	1.1251	1.1723	1.2244	1.2830	0.0115	0.0204	0.0230	0.0760
30	**Level 4**	1.2min	1.0764	1.1033	1.1390	1.1931	1.0766	1.1030	1.1393	1.1931	1.0891	1.1126	1.1514	1.2835	1.0676	1.0893	1.1260	1.1521	0.0081	0.0090	0.0103	0.0527
days	**Level 5**	2.4min	1.0409	1.0584	1.0748	1.1080	1.0410	1.0585	1.0748	1.1086	1.0480	1.0672	1.0789	1.1649	1.0367	1.0515	1.0695	1.0811	0.0045	0.0066	0.0038	0.0332
before	**Level 6**	4.8min	1.0221	1.0317	1.0398	1.0644	1.0222	1.0318	1.0398	1.0648	1.0265	1.0353	1.0426	1.0975	1.0195	1.0280	1.0384	1.0514	0.0028	0.0030	0.0017	0.0198
	Level 7	9.7min	1.0131	1.0189	1.0232	1.0419	1.0131	1.0189	1.0232	1.0417	1.0147	1.0204	1.0262	1.0605	1.0112	1.0182	1.0213	1.0289	0.0015	0.0009	0.0019	0.0123
	Level 8	19.3min	1.0095	1.0134	1.0168	1.0316	1.0095	1.0134	1.0168	1.0317	1.0108	1.0152	1.0213	1.0471	1.0082	1.0112	1.0152	1.0215	0.0010	0.0015	0.0026	0.0096
	Level 9	38.6min	1.0090	1.0127	1.0178	1.0319	1.0090	1.0127	1.0178	1.0318	1.0099	1.0145	1.0227	1.0508	1.0080	1.0106	1.0157	1.0229	0.0007	0.0015	0.0029	0.0109
	Level 1	4.3sec	1.4690	1.5340	1.5883	1.7818	1.4691	1.5340	1.5884	1.7810	1.5065	1.5588	1.6220	2.0169	1.3791	1.5075	1.5597	1.6302	0.0387	0.0197	0.0236	0.1239
	Level 2	8.6sec	1.2251	1.2689	1.3268	1.4956	1.2250	1.2689	1.3273	1.4973	1.2569	1.2765	1.3591	1.7249	1.1602	1.2585	1.2944	1.3614	0.0298	0.0061	0.0229	0.1082
	Level 3	17.2sec	1.1109	1.1398	1.1787	1.2861	1.1111	1.1397	1.1785	1.2854	1.1287	1.1566	1.2038	1.4666	1.0743	1.1323	1.1592	1.2235	0.0178	0.0072	0.0146	0.0715
60	**Level 4**	34.5sec	1.0562	1.0761	1.1011	1.1628	1.0564	1.0761	1.1012	1.1623	1.0676	1.0851	1.1126	1.2835	1.0361	1.0689	1.0891	1.1232	0.0109	0.0049	0.0088	0.0452
days	**Level 5**	1.1min	1.0293	1.0430	1.0588	1.0905	1.0293	1.0430	1.0587	1.0903	1.0368	1.0509	1.0674	1.1649	1.0185	1.0383	1.0515	1.0695	0.0064	0.0040	0.0064	0.0275
before	**Level 6**	2.3min	1.0163	1.0250	1.0340	1.0529	1.0164	1.0250	1.0341	1.0527	1.0202	1.0285	1.0386	1.0975	1.0100	1.0205	1.0296	1.0387	0.0040	0.0026	0.0031	0.0174
	Level 7	4.6min	1.0099	1.0158	1.0205	1.0339	1.0099	1.0158	1.0205	1.0339	1.0126	1.0182	1.0234	1.0605	1.0052	1.0128	1.0182	1.0236	0.0026	0.0019	0.0018	0.0113
	Level 8	9.2min	1.0067	1.0109	1.0145	1.0250	1.0067	1.0109	1.0145	1.0251	1.0093	1.0121	1.0161	1.0471	1.0032	1.0093	1.0123	1.0167	0.0020	0.0010	0.0013	0.0092
	Level 9	18.4min	1.0054	1.0093	1.0132	1.0244	1.0055	1.0093	1.0132	1.0244	1.0082	1.0104	1.0145	1.0508	1.0024	1.0084	1.0106	1.0157	0.0021	0.0006	0.0013	0.0101
	Level 1	3.1sec	1.4556	1.5236	1.5893	1.7562	1.4555	1.5235	1.5893	1.7568	1.4911	1.5545	1.6205	2.0169	1.3791	1.4931	1.5588	1.6220	0.0344	0.0206	0.0212	0.1178
	Level 2	6.2sec	1.2195	1.2672	1.3249	1.4812	1.2196	1.2671	1.3250	1.4813	1.2496	1.2763	1.3591	1.7249	1.1602	1.2500	1.2765	1.3614	0.0273	0.0079	0.0230	0.0995
	Level 3	12.4sec	1.1077	1.1412	1.1857	1.2830	1.1078	1.1411	1.1856	1.2824	1.1287	1.1592	1.2163	1.4666	1.0743	1.1323	1.1598	1.2169	0.0174	0.0081	0.0174	0.0759
3	**Level 4**	24.8sec	1.0551	1.0766	1.1065	1.1650	1.0552	1.0766	1.1065	1.1654	1.0689	1.0851	1.1237	1.2926	1.0361	1.0691	1.0891	1.1248	0.0108	0.0052	0.0107	0.0532
months	**Level 5**	49.6sec	1.0290	1.0443	1.0611	1.0954	1.0291	1.0443	1.0611	1.0955	1.0383	1.0524	1.0695	1.1976	1.0185	1.0386	1.0525	1.0716	0.0065	0.0046	0.0062	0.0367
before	**Level 6**	1.7min	1.0163	1.0262	1.0361	1.0570	1.0163	1.0262	1.0361	1.0574	1.0205	1.0302	1.0403	1.1212	1.0100	1.0220	1.0317	1.0407	0.0039	0.0025	0.0026	0.0227
	Level 7	3.3min	1.0100	1.0166	1.0221	1.0364	1.0100	1.0166	1.0220	1.0366	1.0132	1.0184	1.0257	1.0733	1.0052	1.0132	1.0187	1.0262	0.0026	0.0016	0.0019	0.0137
	Level 8	6.6min	1.0068	1.0114	1.0153	1.0262	1.0068	1.0114	1.0153	1.0262	1.0093	1.0124	1.0169	1.0488	1.0032	1.0095	1.0133	1.0172	0.0020	0.0009	0.0013	0.0100
	Level 9	13.2min	1.0055	1.0095	1.0131	1.0241	1.0055	1.0095	1.0131	1.0240	1.0084	1.0104	1.0145	1.0508	1.0024	1.0086	1.0106	1.0147	0.0021	0.0006	0.0012	0.0098
	Level 1	1.7sec	1.4683	1.5240	1.5700	1.6822	1.4683	1.5240	1.5699	1.6822	1.5068	1.5452	1.5994	2.0169	1.3791	1.5074	1.5454	1.6001	0.0295	0.0119	0.0171	0.0924
	Level 2	3.3sec	1.2280	1.2729	1.3178	1.4209	1.2280	1.2729	1.3179	1.4206	1.2569	1.2910	1.3418	1.7249	1.1541	1.2569	1.2915	1.3422	0.0237	0.0092	0.0150	0.0785
	Level 3	6.6sec	1.1142	1.1451	1.1809	1.2579	1.1143	1.1451	1.1810	1.2577	1.1336	1.1598	1.2027	1.4666	1.0550	1.1337	1.1599	1.2035	0.0167	0.0075	0.0132	0.0558
1	**Level 4**	13.2sec	1.0598	1.0824	1.1090	1.1676	1.0598	1.0823	1.1090	1.1674	1.0730	1.0944	1.1260	1.2926	1.0070	1.0731	1.0946	1.1264	0.0119	0.0064	0.0090	0.0394
Year	**Level 5**	26.4sec	1.0333	1.0509	1.0699	1.1121	1.0333	1.0509	1.0699	1.1121	1.0427	1.0598	1.0811	1.1976	1.0185	1.0429	1.0598	1.0820	0.0067	0.0048	0.0066	0.0279
before	**Level 6**	52.9sec	1.0199	1.0328	1.0454	1.0746	1.0199	1.0328	1.0454	1.0745	1.0270	1.0384	1.0538	1.1245	1.0095	1.0272	1.0384	1.0542	0.0049	0.0033	0.0049	0.0181
	Level 7	1.8min	1.0124	1.0207	1.0293	1.0487	1.0124	1.0207	1.0293	1.0488	1.0175	1.0240	1.0353	1.0776	1.0052	1.0175	1.0241	1.0354	0.0034	0.0021	0.0033	0.0116
	Level 8	3.5min	1.0080	1.0134	1.0192	1.0333	1.0080	1.0134	1.0192	1.0333	1.0111	1.0155	1.0233	1.1139	1.0032	1.0112	1.0160	1.0234	0.0023	0.0013	0.0022	0.0127
	Level 9	7.1min	1.0059	1.0101	1.0146	1.0274	1.0059	1.0101	1.0146	1.0275	1.0083	1.0122	1.0178	1.2148	1.0007	1.0084	1.0122	1.0178	0.0020	0.0010	0.0016	0.0248

Table A.29: EDH8 Other Results Table –Continued

EDH8 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	9.1sec	0.5286	0.5927	0.6267	0.6612	0.5285	0.5926	0.6268	0.6612	0.5500	0.6154	0.6408	0.6725	0.4960	0.5775	0.6157	0.6468	0.0221	0.0143	0.0102	0.0118
	Level 2	18.1sec	0.6345	0.7003	0.7463	0.7928	0.6342	0.7003	0.7465	0.7928	0.6707	0.7306	0.7718	0.8007	0.5790	0.6731	0.7339	0.7724	0.0376	0.0208	0.0152	0.0122
	Level 3	36.2sec	0.7468	0.8032	0.8426	0.8774	0.7461	0.8030	0.8427	0.8774	0.7763	0.8179	0.8522	0.8872	0.6762	0.7838	0.8309	0.8651	0.0406	0.0139	0.0092	0.0080
30	**Level 4**	1.2min	0.8321	0.8746	0.9063	0.9265	0.8321	0.8746	0.9062	0.9267	0.8635	0.8912	0.9131	0.9327	0.7661	0.8657	0.8978	0.9166	0.0387	0.0099	0.0067	0.0073
days	**Level 5**	2.4min	0.8884	0.9252	0.9429	0.9576	0.8881	0.9252	0.9429	0.9576	0.9099	0.9285	0.9477	0.9596	0.8397	0.9210	0.9373	0.9514	0.0290	0.0032	0.0039	0.0035
before	**Level 6**	4.8min	0.9207	0.9549	0.9647	0.9737	0.9215	0.9549	0.9648	0.9737	0.9438	0.9612	0.9692	0.9762	0.8860	0.9500	0.9621	0.9714	0.0225	0.0043	0.0032	0.0023
	Level 7	9.7min	0.9399	0.9685	0.9755	0.9811	0.9398	0.9685	0.9755	0.9811	0.9602	0.9727	0.9784	0.9839	0.9103	0.9636	0.9728	0.9784	0.0185	0.0035	0.0021	0.0023
	Level 8	19.3min	0.9458	0.9725	0.9791	0.9843	0.9459	0.9725	0.9791	0.9843	0.9641	0.9757	0.9825	0.9865	0.9155	0.9651	0.9759	0.9832	0.0182	0.0039	0.0027	0.0013
	Level 9	38.6min	0.9385	0.9682	0.9762	0.9822	0.9389	0.9681	0.9763	0.9821	0.9576	0.9736	0.9792	0.9852	0.8991	0.9577	0.9738	0.9810	0.0231	0.0055	0.0025	0.0018
	Level 1	4.3sec	0.5625	0.6302	0.6527	0.6811	0.5633	0.6302	0.6526	0.6813	0.6134	0.6408	0.6628	0.7260	0.4960	0.6154	0.6443	0.6643	0.0374	0.0099	0.0079	0.0189
	Level 2	8.6sec	0.6705	0.7548	0.7880	0.8160	0.6703	0.7552	0.7880	0.8162	0.7306	0.7811	0.7936	0.8626	0.5790	0.7339	0.7826	0.7943	0.0444	0.0158	0.0036	0.0207
	Level 3	17.2sec	0.7767	0.8464	0.8778	0.8991	0.7771	0.8463	0.8778	0.8990	0.8179	0.8651	0.8829	0.9327	0.6762	0.8262	0.8724	0.8841	0.0405	0.0120	0.0035	0.0156
60	**Level 4**	34.5sec	0.8543	0.9044	0.9272	0.9450	0.8545	0.9046	0.9273	0.9450	0.8822	0.9189	0.9325	0.9664	0.7661	0.8852	0.9195	0.9327	0.0329	0.0110	0.0045	0.0109
days	**Level 5**	1.1min	0.9066	0.9398	0.9562	0.9693	0.9068	0.9397	0.9563	0.9692	0.9266	0.9477	0.9596	0.9818	0.8397	0.9274	0.9514	0.9607	0.0257	0.0078	0.0031	0.0072
before	**Level 6**	2.3min	0.9358	0.9622	0.9717	0.9811	0.9361	0.9622	0.9718	0.9812	0.9549	0.9687	0.9761	0.9892	0.8860	0.9559	0.9690	0.9762	0.0204	0.0038	0.0022	0.0049
	Level 7	4.6min	0.9520	0.9733	0.9797	0.9872	0.9521	0.9734	0.9797	0.9872	0.9679	0.9771	0.9827	0.9935	0.9103	0.9692	0.9779	0.9839	0.0170	0.0026	0.0015	0.0034
	Level 8	9.2min	0.9586	0.9776	0.9839	0.9897	0.9586	0.9777	0.9839	0.9898	0.9741	0.9814	0.9854	0.9947	0.9155	0.9741	0.9825	0.9861	0.0170	0.0027	0.0009	0.0030
	Level 9	18.4min	0.9542	0.9763	0.9833	0.9901	0.9541	0.9763	0.9833	0.9902	0.9703	0.9810	0.9857	0.9944	0.8991	0.9714	0.9811	0.9861	0.0208	0.0030	0.0018	0.0030
	Level 1	3.1sec	0.5737	0.6295	0.6571	0.6884	0.5738	0.6295	0.6571	0.6885	0.6157	0.6408	0.6703	0.7260	0.4960	0.6195	0.6443	0.6709	0.0368	0.0078	0.0093	0.0165
	Level 2	6.2sec	0.6807	0.7547	0.7890	0.8211	0.6808	0.7547	0.7890	0.8212	0.7339	0.7800	0.7979	0.8626	0.5790	0.7364	0.7811	0.8002	0.0426	0.0134	0.0052	0.0189
	Level 3	12.4sec	0.7817	0.8414	0.8760	0.9031	0.7814	0.8414	0.8760	0.9030	0.8181	0.8598	0.8841	0.9327	0.6762	0.8223	0.8617	0.8842	0.0424	0.0106	0.0061	0.0148
3	**Level 4**	24.8sec	0.8554	0.8996	0.9264	0.9469	0.8547	0.8997	0.9264	0.9469	0.8826	0.9166	0.9327	0.9664	0.7626	0.8848	0.9174	0.9330	0.0380	0.0103	0.0051	0.0103
months	**Level 5**	49.6sec	0.9040	0.9370	0.9543	0.9700	0.9040	0.9370	0.9544	0.9699	0.9266	0.9458	0.9596	0.9818	0.8096	0.9274	0.9460	0.9607	0.0333	0.0068	0.0046	0.0068
before	**Level 6**	1.7min	0.9331	0.9592	0.9704	0.9810	0.9331	0.9592	0.9704	0.9810	0.9522	0.9627	0.9750	0.9892	0.8611	0.9542	0.9648	0.9761	0.0255	0.0029	0.0026	0.0048
	Level 7	3.3min	0.9508	0.9706	0.9784	0.9870	0.9509	0.9706	0.9784	0.9870	0.9654	0.9741	0.9812	0.9935	0.9044	0.9668	0.9753	0.9827	0.0188	0.0021	0.0017	0.0035
	Level 8	6.6min	0.9579	0.9759	0.9828	0.9897	0.9580	0.9759	0.9828	0.9897	0.9728	0.9784	0.9847	0.9947	0.9155	0.9733	0.9785	0.9854	0.0164	0.0019	0.0016	0.0031
	Level 9	13.2min	0.9532	0.9757	0.9825	0.9901	0.9533	0.9756	0.9825	0.9901	0.9715	0.9792	0.9857	0.9944	0.8991	0.9725	0.9795	0.9857	0.0222	0.0022	0.0021	0.0031
	Level 1	1.7sec	0.5922	0.6362	0.6558	0.6810	0.5923	0.6362	0.6558	0.6810	0.6245	0.6469	0.6631	0.7260	0.3762	0.6250	0.6470	0.6631	0.0406	0.0071	0.0052	0.0141
	Level 2	3.3sec	0.6972	0.7571	0.7847	0.8129	0.6971	0.7571	0.7847	0.8130	0.7423	0.7733	0.7940	0.8626	0.2406	0.7425	0.7735	0.7943	0.0680	0.0090	0.0056	0.0152
	Level 3	6.6sec	0.7818	0.8436	0.8712	0.8954	0.7826	0.8436	0.8712	0.8954	0.8279	0.8581	0.8803	0.9327	0.1368	0.8283	0.8596	0.8805	0.0884	0.0091	0.0060	0.0126
1	**Level 4**	13.2sec	0.8391	0.8967	0.9203	0.9408	0.8395	0.8968	0.9203	0.9408	0.8822	0.9089	0.9291	0.9664	0.0734	0.8826	0.9090	0.9292	0.1014	0.0076	0.0062	0.0095
Year	**Level 5**	26.4sec	0.8787	0.9281	0.9468	0.9650	0.8779	0.9281	0.9468	0.9650	0.9173	0.9374	0.9548	0.9818	0.0380	0.9175	0.9375	0.9548	0.1094	0.0061	0.0051	0.0072
before	**Level 6**	52.9sec	0.9056	0.9488	0.9630	0.9772	0.9059	0.9488	0.9630	0.9772	0.9403	0.9568	0.9697	0.9902	0.0194	0.9405	0.9569	0.9698	0.1141	0.0049	0.0040	0.0058
	Level 7	1.8min	0.9241	0.9637	0.9738	0.9841	0.9249	0.9637	0.9738	0.9841	0.9569	0.9687	0.9786	0.9940	0.0098	0.9580	0.9687	0.9787	0.1178	0.0032	0.0030	0.0045
	Level 8	3.5min	0.9338	0.9727	0.9804	0.9882	0.9340	0.9727	0.9804	0.9882	0.9678	0.9767	0.9840	0.9960	0.0049	0.9679	0.9767	0.9841	0.1224	0.0025	0.0023	0.0035
	Level 9	7.1min	0.9308	0.9756	0.9823	0.9895	0.9304	0.9756	0.9823	0.9895	0.9715	0.9793	0.9858	0.9969	0.0025	0.9716	0.9793	0.9858	0.1311	0.0023	0.0020	0.0031

Table A.30: EDH9 Other Results Table

EDH9 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	3.5sec	1.4823	1.5697	1.6435	1.8192	1.4825	1.5698	1.6435	1.8196	1.5442	1.5811	1.6637	2.0915	1.4432	1.5523	1.6197	1.6725	0.0348	0.0108	0.0188	0.1875
	Level 2	7.1sec	1.2503	1.3301	1.3704	1.5506	1.2500	1.3302	1.3705	1.5516	1.2881	1.3413	1.3973	1.7662	1.1901	1.3170	1.3493	1.3988	0.0374	0.0121	0.0179	0.1872
	Level 3	14.1sec	1.1396	1.1886	1.2226	1.3222	1.1391	1.1885	1.2225	1.3225	1.1795	1.2036	1.2351	1.4588	1.0824	1.1818	1.2100	1.2431	0.0338	0.0089	0.0120	0.1039
30	**Level 4**	28.2sec	1.0774	1.1059	1.1346	1.2052	1.0781	1.1059	1.1347	1.2050	1.0965	1.1164	1.1556	1.2611	1.0398	1.1019	1.1191	1.1608	0.0210	0.0060	0.0145	0.0430
days	**Level 5**	56.5sec	1.0442	1.0640	1.0818	1.1360	1.0438	1.0639	1.0818	1.1361	1.0528	1.0697	1.0879	1.2374	1.0206	1.0595	1.0697	1.0957	0.0125	0.0039	0.0071	0.0578
before	**Level 6**	1.9min	1.0263	1.0408	1.0513	1.0842	1.0263	1.0407	1.0514	1.0839	1.0324	1.0446	1.0595	1.1306	1.0118	1.0365	1.0450	1.0655	0.0078	0.0039	0.0058	0.0265
	Level 7	3.8min	1.0172	1.0267	1.0363	1.0504	1.0172	1.0267	1.0363	1.0506	1.0214	1.0291	1.0443	1.0603	1.0076	1.0232	1.0308	1.0446	0.0050	0.0030	0.0053	0.0061
	Level 8	7.5min	1.0130	1.0196	1.0277	1.0360	1.0130	1.0196	1.0276	1.0360	1.0160	1.0224	1.0317	1.0382	1.0057	1.0165	1.0238	1.0319	0.0037	0.0024	0.0035	0.0025
	Level 9	15.1min	1.0123	1.0189	1.0255	1.0353	1.0123	1.0190	1.0255	1.0352	1.0145	1.0224	1.0283	1.0395	1.0056	1.0168	1.0229	1.0314	0.0034	0.0022	0.0024	0.0034
	Level 1	1.9sec	1.4746	1.5549	1.6025	1.7229	1.4744	1.5550	1.6025	1.7242	1.4979	1.5756	1.6258	2.0915	1.4396	1.5297	1.5811	1.6272	0.0199	0.0183	0.0160	0.1501
	Level 2	3.8sec	1.2391	1.3123	1.3559	1.4627	1.2396	1.3123	1.3559	1.4632	1.2730	1.3346	1.3712	1.7662	1.1901	1.2812	1.3404	1.3775	0.0233	0.0220	0.0113	0.1460
	Level 3	7.6sec	1.1280	1.1747	1.2063	1.2756	1.1280	1.1746	1.2064	1.2760	1.1559	1.1852	1.2208	1.4588	1.0824	1.1600	1.1865	1.2312	0.0193	0.0096	0.0110	0.0796
60	**Level 4**	15.1sec	1.0701	1.1011	1.1203	1.1750	1.0702	1.1011	1.1204	1.1747	1.0861	1.1053	1.1307	1.2611	1.0398	1.0957	1.1061	1.1315	0.0135	0.0040	0.0077	0.0409
days	**Level 5**	30.3sec	1.0411	1.0611	1.0768	1.1129	1.0410	1.0612	1.0768	1.1129	1.0524	1.0680	1.0833	1.2374	1.0206	1.0528	1.0697	1.0846	0.0092	0.0048	0.0047	0.0435
before	**Level 6**	1min	1.0253	1.0393	1.0493	1.0717	1.0253	1.0392	1.0493	1.0717	1.0317	1.0446	1.0540	1.1306	1.0118	1.0324	1.0450	1.0544	0.0059	0.0043	0.0031	0.0210
	Level 7	2min	1.0169	1.0262	1.0337	1.0465	1.0169	1.0263	1.0337	1.0466	1.0208	1.0308	1.0379	1.0603	1.0076	1.0214	1.0310	1.0398	0.0038	0.0033	0.0024	0.0059
	Level 8	4min	1.0125	1.0193	1.0248	1.0335	1.0125	1.0193	1.0248	1.0336	1.0151	1.0225	1.0291	1.0382	1.0057	1.0160	1.0225	1.0293	0.0027	0.0026	0.0021	0.0031
	Level 9	8.1min	1.0113	1.0175	1.0226	1.0311	1.0113	1.0175	1.0226	1.0311	1.0139	1.0195	1.0253	1.0395	1.0056	1.0142	1.0196	1.0265	0.0025	0.0020	0.0018	0.0046
	Level 1	1.4sec	1.4710	1.5496	1.6051	1.8429	1.4711	1.5497	1.6052	1.8470	1.5016	1.5756	1.6272	3.5697	1.3964	1.5023	1.5811	1.6275	0.0276	0.0239	0.0152	0.4940
	Level 2	2.8sec	1.2379	1.3024	1.3556	1.6786	1.2380	1.3026	1.3558	1.6677	1.2618	1.3343	1.3775	4.3486	1.1901	1.2640	1.3346	1.3777	0.0188	0.0252	0.0143	0.7534
	Level 3	5.5sec	1.1228	1.1699	1.2062	1.4558	1.1230	1.1700	1.2061	1.4615	1.1389	1.1865	1.2312	3.8432	1.0824	1.1439	1.1872	1.2329	0.0174	0.0135	0.0126	0.6631
3	**Level 4**	11sec	1.0672	1.0986	1.1210	1.3001	1.0674	1.0986	1.1210	1.3063	1.0851	1.1058	1.1315	3.0084	1.0335	1.0861	1.1061	1.1412	0.0143	0.0064	0.0077	0.4724
months	**Level 5**	22.1sec	1.0389	1.0602	1.0764	1.2090	1.0389	1.0602	1.0764	1.2038	1.0524	1.0655	1.0846	2.4150	1.0156	1.0528	1.0680	1.0866	0.0102	0.0043	0.0053	0.3372
before	**Level 6**	44.1sec	1.0237	1.0388	1.0490	1.1457	1.0237	1.0388	1.0490	1.1437	1.0317	1.0439	1.0544	2.1064	1.0072	1.0324	1.0446	1.0562	0.0069	0.0035	0.0034	0.2670
	Level 7	1.5min	1.0156	1.0259	1.0337	1.1017	1.0156	1.0259	1.0337	1.1029	1.0208	1.0299	1.0398	1.8527	1.0036	1.0214	1.0306	1.0403	0.0048	0.0025	0.0028	0.2076
	Level 8	2.9min	1.0115	1.0190	1.0249	1.0798	1.0115	1.0190	1.0249	1.0802	1.0151	1.0224	1.0291	1.6995	1.0023	1.0160	1.0224	1.0293	0.0036	0.0020	0.0023	0.1715
	Level 9	5.9min	1.0103	1.0171	1.0227	1.0776	1.0103	1.0171	1.0227	1.0788	1.0139	1.0195	1.0265	1.7185	1.0020	1.0142	1.0195	1.0270	0.0033	0.0017	0.0023	0.1771
	Level 1	1sec	1.4663	1.5200	1.5697	1.7392	1.4663	1.5202	1.5697	1.7412	1.4955	1.5434	1.5973	4.5820	1.3964	1.4967	1.5442	1.5993	0.0233	0.0136	0.0158	0.4408
	Level 2	2.1sec	1.2275	1.2719	1.3104	1.5194	1.2274	1.2720	1.3103	1.5172	1.2524	1.2886	1.3340	4.8025	1.1692	1.2531	1.2892	1.3343	0.0188	0.0104	0.0139	0.5735
	Level 3	4.1sec	1.1124	1.1443	1.1696	1.3406	1.1124	1.1443	1.1696	1.3387	1.1299	1.1563	1.1865	4.1070	1.0804	1.1308	1.1574	1.1865	0.0129	0.0076	0.0089	0.4956
1	**Level 4**	8.3sec	1.0573	1.0793	1.0971	1.2124	1.0573	1.0793	1.0971	1.2103	1.0699	1.0883	1.1067	3.0084	1.0335	1.0700	1.0890	1.1081	0.0088	0.0054	0.0055	0.3161
Year	**Level 5**	16.5sec	1.0312	1.0470	1.0600	1.1308	1.0312	1.0470	1.0600	1.1315	1.0402	1.0528	1.0696	2.4150	1.0156	1.0407	1.0528	1.0697	0.0057	0.0036	0.0043	0.1970
before	**Level 6**	33sec	1.0188	1.0300	1.0398	1.0873	1.0188	1.0300	1.0398	1.0877	1.0257	1.0348	1.0450	2.1064	1.0072	1.0257	1.0350	1.0452	0.0040	0.0025	0.0030	0.1428
	Level 7	1.1min	1.0126	1.0205	1.0275	1.0624	1.0126	1.0205	1.0275	1.0629	1.0176	1.0237	1.0316	1.8527	1.0036	1.0177	1.0239	1.0318	0.0029	0.0019	0.0022	0.1088
	Level 8	2.2min	1.0093	1.0151	1.0201	1.0521	1.0093	1.0151	1.0201	1.0524	1.0128	1.0176	1.0231	1.6995	1.0023	1.0129	1.0177	1.0231	0.0022	0.0014	0.0016	0.1009
	Level 9	4.4min	1.0082	1.0133	1.0175	1.0587	1.0082	1.0133	1.0175	1.0580	1.0113	1.0154	1.0199	1.8654	1.0020	1.0114	1.0155	1.0200	0.0019	0.0012	0.0013	0.1406

Table A.30: EDH9 Other Results Table –Continued

EDH9 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	3.5sec	1.4849	1.5746	1.6438	1.8275	1.4848	1.5747	1.6443	1.8262	1.5451	1.5915	1.6721	2.0744	1.4378	1.5574	1.6148	1.6755	0.0368	0.0130	0.0248	0.1865
	Level 2	7.1sec	1.2530	1.3306	1.3698	1.5655	1.2539	1.3306	1.3696	1.5628	1.2971	1.3499	1.3898	1.8456	1.1933	1.3113	1.3529	1.4012	0.0388	0.0160	0.0142	0.2076
	Level 3	14.1sec	1.1420	1.1907	1.2188	1.3371	1.1418	1.1906	1.2190	1.3354	1.1801	1.1986	1.2455	1.5140	1.0841	1.1801	1.2009	1.2480	0.0350	0.0068	0.0178	0.1200
30	**Level 4**	28.2sec	1.0812	1.1072	1.1348	1.2144	1.0809	1.1072	1.1350	1.2147	1.1004	1.1171	1.1569	1.2781	1.0406	1.1026	1.1219	1.1595	0.0216	0.0059	0.0151	0.0542
days	**Level 5**	56.5sec	1.0483	1.0647	1.0854	1.1389	1.0481	1.0647	1.0851	1.1398	1.0575	1.0698	1.0938	1.2463	1.0210	1.0601	1.0713	1.0975	0.0138	0.0043	0.0095	0.0614
before	**Level 6**	1.9min	1.0292	1.0427	1.0552	1.0838	1.0293	1.0427	1.0552	1.0838	1.0361	1.0456	1.0616	1.1290	1.0121	1.0371	1.0505	1.0629	0.0089	0.0033	0.0039	0.0265
	Level 7	3.8min	1.0190	1.0287	1.0384	1.0585	1.0189	1.0288	1.0385	1.0585	1.0226	1.0307	1.0451	1.0773	1.0081	1.0244	1.0319	1.0474	0.0055	0.0026	0.0049	0.0113
	Level 8	7.5min	1.0137	1.0219	1.0284	1.0598	1.0137	1.0218	1.0284	1.0590	1.0167	1.0243	1.0318	1.1350	1.0062	1.0179	1.0257	1.0357	0.0038	0.0027	0.0024	0.0428
	Level 9	15.1min	1.0127	1.0203	1.0262	1.0839	1.0128	1.0203	1.0262	1.0837	1.0162	1.0238	1.0300	1.2569	1.0061	1.0165	1.0248	1.0333	0.0035	0.0032	0.0019	0.0974
	Level 1	1.9sec	1.4752	1.5557	1.6008	1.7289	1.4751	1.5557	1.6009	1.7284	1.5055	1.5771	1.6194	2.0744	1.4378	1.5307	1.5806	1.6223	0.0215	0.0166	0.0143	0.1514
	Level 2	3.8sec	1.2412	1.3130	1.3562	1.4614	1.2410	1.3132	1.3563	1.4627	1.2752	1.3382	1.3661	1.8456	1.1933	1.2827	1.3410	1.3720	0.0247	0.0208	0.0073	0.1626
	Level 3	7.6sec	1.1281	1.1776	1.2033	1.2760	1.1280	1.1776	1.2033	1.2765	1.1581	1.1900	1.2184	1.5140	1.0841	1.1613	1.1905	1.2196	0.0188	0.0101	0.0083	0.0948
60	**Level 4**	15.1sec	1.0715	1.1021	1.1205	1.1746	1.0714	1.1021	1.1205	1.1749	1.0836	1.1052	1.1279	1.2781	1.0406	1.0974	1.1080	1.1317	0.0132	0.0026	0.0068	0.0518
days	**Level 5**	30.3sec	1.0432	1.0621	1.0765	1.1146	1.0433	1.0620	1.0766	1.1145	1.0545	1.0686	1.0848	1.2463	1.0210	1.0553	1.0698	1.0901	0.0100	0.0047	0.0050	0.0458
before	**Level 6**	1min	1.0275	1.0405	1.0510	1.0720	1.0275	1.0404	1.0510	1.0719	1.0343	1.0456	1.0545	1.1290	1.0121	1.0350	1.0461	1.0555	0.0061	0.0042	0.0025	0.0207
	Level 7	2min	1.0185	1.0281	1.0347	1.0501	1.0185	1.0281	1.0347	1.0502	1.0226	1.0312	1.0398	1.0773	1.0081	1.0235	1.0319	1.0411	0.0040	0.0031	0.0023	0.0108
	Level 8	4min	1.0135	1.0209	1.0258	1.0451	1.0135	1.0209	1.0258	1.0452	1.0167	1.0240	1.0287	1.1350	1.0062	1.0172	1.0241	1.0298	0.0028	0.0026	0.0016	0.0304
	Level 9	8.1min	1.0120	1.0185	1.0233	1.0587	1.0120	1.0185	1.0233	1.0579	1.0145	1.0208	1.0257	1.2569	1.0061	1.0151	1.0212	1.0265	0.0025	0.0020	0.0017	0.0681
	Level 1	1.4sec	1.4717	1.5506	1.6021	1.8558	1.4713	1.5506	1.6021	1.8557	1.5055	1.5771	1.6194	3.5944	1.4012	1.5108	1.5806	1.6223	0.0275	0.0209	0.0127	0.4991
	Level 2	2.8sec	1.2400	1.3014	1.3551	1.6683	1.2398	1.3016	1.3551	1.6759	1.2656	1.3331	1.3720	4.4461	1.1933	1.2672	1.3345	1.3749	0.0191	0.0235	0.0107	0.7801
	Level 3	5.5sec	1.1230	1.1710	1.2025	1.5084	1.1230	1.1709	1.2025	1.5055	1.1367	1.1860	1.2196	4.4915	1.0841	1.1443	1.1892	1.2202	0.0153	0.0129	0.0097	0.8305
3	**Level 4**	11sec	1.0683	1.0996	1.1199	1.3418	1.0683	1.0996	1.1200	1.3540	1.0827	1.1064	1.1317	3.7452	1.0374	1.0836	1.1080	1.1342	0.0138	0.0061	0.0072	0.6630
months	**Level 5**	22.1sec	1.0407	1.0616	1.0764	1.2494	1.0406	1.0616	1.0763	1.2493	1.0543	1.0682	1.0901	3.0987	1.0173	1.0545	1.0686	1.0911	0.0107	0.0043	0.0063	0.5131
before	**Level 6**	44.1sec	1.0255	1.0401	1.0503	1.3662	1.0255	1.0401	1.0503	1.3647	1.0343	1.0446	1.0555	5.4254	1.0079	1.0350	1.0448	1.0575	0.0073	0.0035	0.0033	1.1235
	Level 7	1.5min	1.0170	1.0274	1.0344	1.2339	1.0170	1.0274	1.0344	1.2262	1.0226	1.0307	1.0398	3.6654	1.0038	1.0235	1.0311	1.0408	0.0052	0.0024	0.0026	0.6749
	Level 8	2.9min	1.0123	1.0202	1.0255	1.1369	1.0123	1.0202	1.0255	1.1370	1.0167	1.0231	1.0287	2.4292	1.0023	1.0172	1.0235	1.0291	0.0038	0.0021	0.0016	0.3584
	Level 9	5.9min	1.0109	1.0179	1.0229	1.1278	1.0109	1.0179	1.0229	1.1310	1.0145	1.0207	1.0252	2.2135	1.0019	1.0151	1.0208	1.0257	0.0035	0.0018	0.0015	0.3051
	Level 1	1sec	1.4665	1.5207	1.5700	1.7335	1.4666	1.5207	1.5700	1.7368	1.4994	1.5438	1.5989	4.2350	1.3961	1.5001	1.5451	1.5999	0.0233	0.0132	0.0164	0.4084
	Level 2	2.1sec	1.2281	1.2719	1.3099	1.5074	1.2281	1.2720	1.3100	1.5102	1.2534	1.2905	1.3345	4.4461	1.1788	1.2552	1.2906	1.3362	0.0188	0.0100	0.0133	0.5383
	Level 3	4.1sec	1.1135	1.1435	1.1696	1.3403	1.1135	1.1435	1.1696	1.3437	1.1307	1.1564	1.1860	4.4915	1.0841	1.1312	1.1577	1.1879	0.0127	0.0076	0.0085	0.5285
1	**Level 4**	8.3sec	1.0580	1.0795	1.0972	1.2201	1.0580	1.0795	1.0972	1.2207	1.0696	1.0879	1.1067	3.7452	1.0374	1.0697	1.0881	1.1071	0.0085	0.0053	0.0058	0.3868
Year	**Level 5**	16.5sec	1.0315	1.0473	1.0602	1.1441	1.0315	1.0473	1.0603	1.1434	1.0391	1.0541	1.0686	3.0987	1.0173	1.0393	1.0543	1.0696	0.0055	0.0037	0.0042	0.2735
before	**Level 6**	33sec	1.0191	1.0302	1.0401	1.1362	1.0190	1.0302	1.0401	1.1412	1.0257	1.0349	1.0456	5.4254	1.0079	1.0260	1.0349	1.0461	0.0041	0.0025	0.0033	0.5483
	Level 7	1.1min	1.0127	1.0206	1.0277	1.0898	1.0127	1.0206	1.0277	1.0915	1.0174	1.0240	1.0314	3.6654	1.0038	1.0176	1.0242	1.0319	0.0030	0.0019	0.0021	0.3295
	Level 8	2.2min	1.0094	1.0151	1.0203	1.0620	1.0094	1.0151	1.0203	1.0624	1.0128	1.0177	1.0235	2.4292	1.0023	1.0129	1.0177	1.0235	0.0023	0.0015	0.0017	0.1778
	Level 9	4.4min	1.0082	1.0133	1.0177	1.0615	1.0082	1.0133	1.0177	1.0621	1.0111	1.0156	1.0205	2.2135	1.0019	1.0111	1.0156	1.0205	0.0020	0.0014	0.0014	0.1597

Table A.30: EDH9 Other Results Table –Continued

EDH9	Bid Ask	Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	3.5sec	1.4832	1.5692	1.6429	1.8227	1.4831	1.5690	1.6431	1.8208	1.5478	1.5786	1.6656	2.0800	1.4394	1.5481	1.6157	1.6706	0.0371	0.0125	0.0222	0.1866
	Level 2	7.1sec	1.2496	1.3275	1.3663	1.5526	1.2497	1.3274	1.3660	1.5528	1.2904	1.3395	1.3912	1.7998	1.1911	1.3108	1.3442	1.3946	0.0374	0.0130	0.0175	0.1961
	Level 3	14.1sec	1.1367	1.1849	1.2154	1.3189	1.1365	1.1850	1.2154	1.3204	1.1759	1.1954	1.2337	1.4780	1.0823	1.1772	1.1996	1.2351	0.0325	0.0067	0.0147	0.1128
30	**Level 4**	28.2sec	1.0748	1.1000	1.1250	1.1984	1.0750	1.1000	1.1250	1.1991	1.0929	1.1103	1.1439	1.2655	1.0388	1.0960	1.1109	1.1494	0.0200	0.0060	0.0124	0.0513
days	**Level 5**	56.5sec	1.0402	1.0562	1.0726	1.1244	1.0402	1.0563	1.0726	1.1246	1.0495	1.0626	1.0793	1.2368	1.0192	1.0513	1.0640	1.0805	0.0113	0.0041	0.0063	0.0640
before	**Level 6**	1.9min	1.0218	1.0318	1.0411	1.0711	1.0219	1.0318	1.0412	1.0711	1.0269	1.0349	1.0457	1.1244	1.0101	1.0283	1.0369	1.0509	0.0063	0.0026	0.0038	0.0302
	Level 7	3.8min	1.0125	1.0184	1.0253	1.0384	1.0125	1.0184	1.0254	1.0383	1.0150	1.0206	1.0303	1.0538	1.0058	1.0168	1.0215	1.0310	0.0034	0.0016	0.0036	0.0091
	Level 8	7.5min	1.0078	1.0118	1.0163	1.0232	1.0079	1.0118	1.0164	1.0232	1.0093	1.0138	1.0192	1.0253	1.0038	1.0104	1.0139	1.0218	0.0021	0.0015	0.0022	0.0014
	Level 9	15.1min	1.0063	1.0095	1.0130	1.0179	1.0062	1.0095	1.0130	1.0179	1.0076	1.0114	1.0149	1.0189	1.0032	1.0079	1.0115	1.0174	0.0015	0.0016	0.0014	0.0006
	Level 1	1.9sec	1.4735	1.5544	1.5996	1.7259	1.4736	1.5542	1.5994	1.7249	1.4979	1.5747	1.6205	2.0800	1.4387	1.5291	1.5774	1.6238	0.0204	0.0173	0.0158	0.1502
	Level 2	3.8sec	1.2377	1.3105	1.3521	1.4586	1.2378	1.3103	1.3521	1.4586	1.2708	1.3349	1.3646	1.7998	1.1911	1.2811	1.3357	1.3729	0.0227	0.0208	0.0097	0.1534
	Level 3	7.6sec	1.1255	1.1710	1.1992	1.2688	1.1255	1.1710	1.1992	1.2681	1.1550	1.1839	1.2136	1.4780	1.0823	1.1566	1.1851	1.2142	0.0186	0.0112	0.0087	0.0873
60	**Level 4**	15.1sec	1.0672	1.0959	1.1123	1.1629	1.0671	1.0959	1.1124	1.1631	1.0790	1.0999	1.1195	1.2655	1.0388	1.0904	1.1003	1.1249	0.0121	0.0031	0.0067	0.0476
days	**Level 5**	30.3sec	1.0375	1.0546	1.0677	1.1013	1.0375	1.0546	1.0678	1.1008	1.0479	1.0614	1.0730	1.2368	1.0192	1.0494	1.0626	1.0757	0.0082	0.0039	0.0036	0.0466
before	**Level 6**	1min	1.0216	1.0318	1.0405	1.0592	1.0215	1.0317	1.0405	1.0593	1.0269	1.0364	1.0448	1.1244	1.0101	1.0269	1.0369	1.0449	0.0048	0.0030	0.0025	0.0225
	Level 7	2min	1.0128	1.0191	1.0252	1.0343	1.0128	1.0191	1.0252	1.0344	1.0150	1.0225	1.0282	1.0538	1.0058	1.0168	1.0229	1.0290	0.0027	0.0019	0.0015	0.0071
	Level 8	4min	1.0083	1.0124	1.0162	1.0215	1.0083	1.0124	1.0162	1.0215	1.0094	1.0147	1.0178	1.0253	1.0038	1.0104	1.0148	1.0189	0.0017	0.0014	0.0009	0.0022
	Level 9	8.1min	1.0064	1.0098	1.0125	1.0166	1.0064	1.0098	1.0125	1.0166	1.0076	1.0115	1.0140	1.0189	1.0032	1.0079	1.0115	1.0144	0.0012	0.0014	0.0009	0.0016
	Level 1	1.4sec	1.4698	1.5495	1.6016	1.8485	1.4702	1.5492	1.6017	1.8486	1.5011	1.5747	1.6205	3.5668	1.3985	1.5063	1.5774	1.6238	0.0273	0.0222	0.0146	0.4931
	Level 2	2.8sec	1.2373	1.2990	1.3520	1.6647	1.2373	1.2992	1.3519	1.6613	1.2632	1.3312	1.3729	4.3089	1.1911	1.2647	1.3315	1.3739	0.0184	0.0240	0.0128	0.7454
	Level 3	5.5sec	1.1206	1.1660	1.1982	1.4641	1.1207	1.1661	1.1982	1.4599	1.1352	1.1837	1.2142	3.9270	1.0823	1.1418	1.1839	1.2189	0.0156	0.0132	0.0101	0.6872
3	**Level 4**	11sec	1.0649	1.0936	1.1130	1.2905	1.0648	1.0936	1.1129	1.2944	1.0789	1.0999	1.1249	3.0165	1.0349	1.0790	1.1003	1.1251	0.0130	0.0058	0.0068	0.4782
months	**Level 5**	22.1sec	1.0359	1.0542	1.0676	1.1792	1.0358	1.0542	1.0676	1.1783	1.0479	1.0593	1.0757	2.2268	1.0159	1.0485	1.0614	1.0763	0.0089	0.0033	0.0042	0.2927
before	**Level 6**	44.1sec	1.0203	1.0321	1.0403	1.1098	1.0204	1.0321	1.0403	1.1092	1.0269	1.0359	1.0449	1.7797	1.0070	1.0269	1.0364	1.0457	0.0056	0.0026	0.0027	0.1865
	Level 7	1.5min	1.0121	1.0195	1.0251	1.0675	1.0121	1.0195	1.0251	1.0669	1.0150	1.0218	1.0290	1.4969	1.0031	1.0168	1.0225	1.0292	0.0035	0.0017	0.0018	0.1192
	Level 8	2.9min	1.0077	1.0127	1.0160	1.0418	1.0077	1.0127	1.0160	1.0414	1.0095	1.0146	1.0178	1.3013	1.0017	1.0104	1.0147	1.0189	0.0023	0.0013	0.0009	0.0720
	Level 9	5.9min	1.0059	1.0098	1.0123	1.0334	1.0059	1.0098	1.0123	1.0330	1.0076	1.0114	1.0140	1.2469	1.0012	1.0079	1.0115	1.0144	0.0018	0.0012	0.0008	0.0593
	Level 1	1sec	1.4657	1.5194	1.5687	1.7356	1.4657	1.5194	1.5687	1.7370	1.4976	1.5411	1.5959	4.4222	1.3972	1.4978	1.5445	1.5970	0.0232	0.0133	0.0158	0.4248
	Level 2	2.1sec	1.2265	1.2698	1.3076	1.5091	1.2265	1.2698	1.3076	1.5081	1.2510	1.2873	1.3316	4.5638	1.1723	1.2514	1.2877	1.3319	0.0187	0.0101	0.0133	0.5484
	Level 3	4.1sec	1.1110	1.1407	1.1652	1.3286	1.1110	1.1407	1.1652	1.3302	1.1274	1.1526	1.1814	3.9353	1.0823	1.1284	1.1528	1.1817	0.0123	0.0073	0.0086	0.4890
1	**Level 4**	8.3sec	1.0549	1.0749	1.0912	1.1981	1.0549	1.0749	1.0912	1.1992	1.0667	1.0823	1.0999	3.0165	1.0349	1.0667	1.0826	1.0999	0.0078	0.0048	0.0053	0.3131
Year	**Level 5**	16.5sec	1.0283	1.0415	1.0526	1.1173	1.0282	1.0415	1.0526	1.1164	1.0353	1.0463	1.0597	2.2268	1.0159	1.0355	1.0464	1.0599	0.0047	0.0031	0.0039	0.1750
before	**Level 6**	33sec	1.0156	1.0241	1.0316	1.0690	1.0156	1.0241	1.0316	1.0692	1.0207	1.0270	1.0364	1.7797	1.0070	1.0207	1.0271	1.0369	0.0031	0.0019	0.0026	0.1045
	Level 7	1.1min	1.0091	1.0146	1.0195	1.0415	1.0091	1.0146	1.0195	1.0415	1.0125	1.0167	1.0225	1.4969	1.0031	1.0125	1.0167	1.0225	0.0020	0.0011	0.0017	0.0635
	Level 8	2.2min	1.0057	1.0093	1.0124	1.0256	1.0057	1.0093	1.0124	1.0256	1.0079	1.0106	1.0147	1.3013	1.0017	1.0079	1.0107	1.0147	0.0013	0.0008	0.0011	0.0378
	Level 9	4.4min	1.0041	1.0067	1.0090	1.0189	1.0041	1.0067	1.0090	1.0190	1.0055	1.0077	1.0109	1.2469	1.0012	1.0056	1.0077	1.0109	0.0010	0.0006	0.0009	0.0303

Table A.30: EDH9 Other Results Table –Continued

EDH9 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	3.5sec	0.5594	0.6105	0.6369	0.6789	0.5597	0.6103	0.6371	0.6791	0.5980	0.6193	0.6472	0.6955	0.4821	0.6009	0.6283	0.6642	0.0519	0.0086	0.0068	0.0114
	Level 2	7.1sec	0.6598	0.7324	0.7546	0.8035	0.6603	0.7323	0.7548	0.8036	0.7195	0.7392	0.7710	0.8380	0.5418	0.7242	0.7408	0.7796	0.0783	0.0061	0.0113	0.0237
	Level 3	14.1sec	0.7621	0.8241	0.8412	0.8826	0.7617	0.8240	0.8412	0.8823	0.8029	0.8327	0.8474	0.9224	0.6605	0.8106	0.8343	0.8503	0.0609	0.0092	0.0053	0.0260
30	**Level 4**	28.2sec	0.8312	0.8844	0.9040	0.9289	0.8312	0.8846	0.9041	0.9288	0.8644	0.8914	0.9087	0.9610	0.7824	0.8704	0.8952	0.9103	0.0365	0.0092	0.0049	0.0190
days	**Level 5**	56.5sec	0.8855	0.9231	0.9404	0.9559	0.8851	0.9231	0.9403	0.9560	0.9143	0.9335	0.9456	0.9795	0.8024	0.9147	0.9347	0.9476	0.0424	0.0081	0.0043	0.0135
before	**Level 6**	1.9min	0.9267	0.9489	0.9601	0.9728	0.9262	0.9489	0.9601	0.9729	0.9419	0.9519	0.9652	0.9880	0.8857	0.9456	0.9564	0.9669	0.0212	0.0022	0.0037	0.0088
	Level 7	3.8min	0.9469	0.9643	0.9730	0.9821	0.9468	0.9642	0.9730	0.9822	0.9568	0.9691	0.9779	0.9919	0.9283	0.9605	0.9702	0.9782	0.0102	0.0037	0.0032	0.0056
	Level 8	7.5min	0.9496	0.9730	0.9795	0.9871	0.9494	0.9730	0.9795	0.9871	0.9692	0.9749	0.9836	0.9938	0.8811	0.9707	0.9763	0.9848	0.0339	0.0018	0.0031	0.0038
	Level 9	15.1min	0.9349	0.9752	0.9807	0.9880	0.9353	0.9752	0.9807	0.9880	0.9709	0.9758	0.9841	0.9939	0.7956	0.9742	0.9767	0.9858	0.0691	0.0006	0.0032	0.0034
	Level 1	1.9sec	0.5819	0.6248	0.6428	0.6781	0.5821	0.6247	0.6429	0.6781	0.6164	0.6327	0.6533	0.6955	0.4821	0.6175	0.6341	0.6642	0.0451	0.0056	0.0069	0.0100
	Level 2	3.8sec	0.6900	0.7373	0.7616	0.8064	0.6903	0.7373	0.7617	0.8061	0.7289	0.7457	0.7796	0.8380	0.5418	0.7320	0.7473	0.7842	0.0652	0.0040	0.0121	0.0161
	Level 3	7.6sec	0.7877	0.8311	0.8492	0.8869	0.7869	0.8311	0.8492	0.8867	0.8199	0.8400	0.8611	0.9224	0.6605	0.8208	0.8403	0.8635	0.0520	0.0057	0.0073	0.0150
60	**Level 4**	15.1sec	0.8523	0.8924	0.9074	0.9333	0.8526	0.8925	0.9074	0.9335	0.8836	0.9025	0.9112	0.9610	0.7824	0.8866	0.9049	0.9229	0.0358	0.0054	0.0022	0.0117
days	**Level 5**	30.3sec	0.8990	0.9289	0.9416	0.9586	0.8985	0.9288	0.9416	0.9585	0.9174	0.9347	0.9476	0.9795	0.8024	0.9218	0.9358	0.9483	0.0338	0.0043	0.0042	0.0092
before	**Level 6**	1min	0.9333	0.9515	0.9612	0.9733	0.9333	0.9515	0.9612	0.9733	0.9474	0.9560	0.9662	0.9880	0.8857	0.9483	0.9564	0.9669	0.0173	0.0023	0.0039	0.0058
	Level 7	2min	0.9524	0.9665	0.9727	0.9818	0.9523	0.9665	0.9727	0.9818	0.9605	0.9691	0.9770	0.9919	0.9283	0.9617	0.9698	0.9779	0.0096	0.0022	0.0029	0.0039
	Level 8	4min	0.9570	0.9748	0.9795	0.9867	0.9575	0.9748	0.9795	0.9867	0.9711	0.9765	0.9831	0.9938	0.8811	0.9721	0.9766	0.9836	0.0260	0.0015	0.0025	0.0028
	Level 9	8.1min	0.9482	0.9772	0.9818	0.9881	0.9483	0.9772	0.9818	0.9881	0.9742	0.9792	0.9851	0.9939	0.7956	0.9749	0.9797	0.9857	0.0529	0.0016	0.0019	0.0024
	Level 1	1.4sec	0.5599	0.6248	0.6457	0.6799	0.5604	0.6248	0.6457	0.6799	0.6164	0.6341	0.6619	0.7137	0.2782	0.6175	0.6344	0.6642	0.0878	0.0054	0.0085	0.0130
	Level 2	2.8sec	0.6512	0.7387	0.7696	0.8069	0.6519	0.7388	0.7697	0.8068	0.7273	0.7501	0.7891	0.8380	0.2249	0.7289	0.7504	0.7901	0.1320	0.0064	0.0134	0.0125
	Level 3	5.5sec	0.7399	0.8323	0.8549	0.8905	0.7401	0.8324	0.8549	0.8906	0.8195	0.8432	0.8739	0.9224	0.2226	0.8199	0.8437	0.8797	0.1509	0.0071	0.0094	0.0124
3	**Level 4**	11sec	0.8101	0.8937	0.9098	0.9363	0.8077	0.8936	0.9098	0.9362	0.8817	0.9038	0.9229	0.9639	0.2670	0.8836	0.9049	0.9236	0.1528	0.0062	0.0051	0.0123
months	**Level 5**	22.1sec	0.8570	0.9296	0.9424	0.9611	0.8579	0.9295	0.9424	0.9611	0.9165	0.9362	0.9483	0.9830	0.3227	0.9174	0.9374	0.9485	0.1509	0.0055	0.0036	0.0100
before	**Level 6**	44.1sec	0.8809	0.9525	0.9618	0.9751	0.8811	0.9525	0.9617	0.9752	0.9456	0.9573	0.9662	0.9922	0.1843	0.9474	0.9574	0.9669	0.1934	0.0032	0.0032	0.0070
	Level 7	1.5min	0.9060	0.9669	0.9735	0.9834	0.9056	0.9669	0.9735	0.9833	0.9608	0.9702	0.9770	0.9962	0.2728	0.9617	0.9708	0.9779	0.1753	0.0025	0.0022	0.0051
	Level 8	2.9min	0.9216	0.9753	0.9804	0.9878	0.9214	0.9753	0.9804	0.9879	0.9717	0.9775	0.9831	0.9977	0.4117	0.9721	0.9776	0.9836	0.1428	0.0015	0.0019	0.0038
	Level 9	5.9min	0.9183	0.9777	0.9826	0.9892	0.9182	0.9777	0.9826	0.9892	0.9749	0.9797	0.9851	0.9981	0.4518	0.9754	0.9799	0.9857	0.1368	0.0015	0.0016	0.0034
	Level 1	1sec	0.5917	0.6373	0.6578	0.6823	0.5914	0.6372	0.6578	0.6822	0.6254	0.6472	0.6669	0.7163	0.2361	0.6259	0.6478	0.6671	0.0664	0.0065	0.0058	0.0110
	Level 2	2.1sec	0.6963	0.7637	0.7864	0.8147	0.6965	0.7637	0.7864	0.8147	0.7494	0.7749	0.7978	0.8483	0.2249	0.7500	0.7749	0.7981	0.0994	0.0076	0.0063	0.0125
	Level 3	4.1sec	0.7878	0.8553	0.8747	0.8983	0.7877	0.8552	0.8747	0.8984	0.8432	0.8638	0.8844	0.9224	0.2226	0.8436	0.8648	0.8847	0.1147	0.0061	0.0059	0.0102
1	**Level 4**	8.3sec	0.8526	0.9116	0.9265	0.9454	0.8527	0.9116	0.9265	0.9454	0.9036	0.9190	0.9349	0.9639	0.2670	0.9038	0.9192	0.9349	0.1083	0.0047	0.0046	0.0076
Year	**Level 5**	16.5sec	0.8966	0.9433	0.9550	0.9696	0.8967	0.9433	0.9550	0.9696	0.9358	0.9485	0.9624	0.9830	0.3227	0.9362	0.9487	0.9625	0.0946	0.0037	0.0035	0.0052
before	**Level 6**	33sec	0.9238	0.9615	0.9708	0.9814	0.9234	0.9616	0.9708	0.9814	0.9564	0.9663	0.9750	0.9922	0.1843	0.9564	0.9663	0.9750	0.1035	0.0030	0.0024	0.0039
	Level 7	1.1min	0.9420	0.9731	0.9798	0.9875	0.9428	0.9731	0.9798	0.9875	0.9695	0.9764	0.9829	0.9962	0.2728	0.9698	0.9765	0.9829	0.0903	0.0020	0.0019	0.0029
	Level 8	2.2min	0.9538	0.9801	0.9851	0.9908	0.9538	0.9801	0.9851	0.9908	0.9770	0.9826	0.9874	0.9977	0.4117	0.9773	0.9826	0.9874	0.0751	0.0016	0.0015	0.0022
	Level 9	4.4min	0.9536	0.9827	0.9869	0.9919	0.9534	0.9827	0.9869	0.9919	0.9799	0.9847	0.9890	0.9981	0.4518	0.9799	0.9847	0.9892	0.0787	0.0013	0.0014	0.0019

Table A.31: EDM0 Other Results Table

EDM0 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.2sec	1.5286	1.5897	1.7003	2.3732	1.5292	1.5901	1.7011	2.3825	1.5562	1.6256	1.7581	3.3956	1.4455	1.5613	1.6683	1.8181	0.0470	0.0227	0.0370	0.7248
	Level 2	26.3sec	1.2850	1.3506	1.4294	2.1508	1.2849	1.3508	1.4293	2.1533	1.2972	1.3849	1.4732	3.0343	1.2645	1.3250	1.3885	1.4766	0.0128	0.0220	0.0342	0.7701
	Level 3	52.6sec	1.1505	1.1921	1.2731	1.9847	1.1505	1.1923	1.2727	1.9899	1.1633	1.2348	1.2948	2.9559	1.1331	1.1656	1.2402	1.2962	0.0134	0.0252	0.0282	0.7088
30	**Level 4**	1.8min	1.0739	1.1041	1.1705	1.7543	1.0739	1.1040	1.1707	1.7535	1.0792	1.1206	1.2023	2.8139	1.0653	1.0877	1.1532	1.2222	0.0052	0.0126	0.0210	0.6649
days	**Level 5**	3.5min	1.0371	1.0573	1.1155	1.5546	1.0370	1.0572	1.1153	1.5497	1.0419	1.0676	1.1519	2.4978	1.0303	1.0466	1.0795	1.1527	0.0043	0.0082	0.0279	0.5556
before	**Level 6**	7min	1.0206	1.0337	1.0750	1.4233	1.0206	1.0336	1.0747	1.4265	1.0256	1.0460	1.1009	2.2509	1.0163	1.0265	1.0464	1.1089	0.0033	0.0070	0.0207	0.4745
	Level 7	14min	1.0130	1.0221	1.0494	1.3494	1.0131	1.0221	1.0497	1.3454	1.0173	1.0303	1.0770	2.1053	1.0106	1.0177	1.0311	1.0835	0.0025	0.0044	0.0176	0.4304
	Level 8	28.1min	1.0094	1.0159	1.0354	1.2750	1.0094	1.0159	1.0357	1.2792	1.0128	1.0208	1.0637	1.9437	1.0075	1.0134	1.0210	1.0660	0.0023	0.0027	0.0172	0.3744
	Level 9	56.1min	1.0081	1.0135	1.0305	1.2470	1.0080	1.0135	1.0307	1.2518	1.0107	1.0166	1.0606	1.8719	1.0061	1.0115	1.0178	1.0630	0.0024	0.0018	0.0176	0.3483
	Level 1	5.3sec	1.4787	1.5770	1.6900	2.3086	1.4789	1.5769	1.6902	2.3047	1.5460	1.6148	1.7581	3.3956	1.4348	1.5477	1.6256	1.7994	0.0401	0.0213	0.0418	0.5846
	Level 2	10.7sec	1.2558	1.3428	1.4271	1.9934	1.2558	1.3428	1.4274	1.9978	1.2922	1.3864	1.4732	3.0343	1.1932	1.2972	1.3885	1.4766	0.0360	0.0277	0.0260	0.5403
	Level 3	21.4sec	1.1370	1.1985	1.2911	1.7497	1.1372	1.1984	1.2913	1.7500	1.1633	1.2402	1.3370	2.9559	1.0913	1.1656	1.2435	1.3526	0.0229	0.0229	0.0300	0.5099
60	**Level 4**	42.8sec	1.0720	1.1196	1.1915	1.5597	1.0722	1.1192	1.1915	1.5590	1.0877	1.1532	1.2222	2.8139	1.0479	1.0973	1.1574	1.2788	0.0099	0.0205	0.0239	0.4623
days	**Level 5**	1.4min	1.0401	1.0713	1.1290	1.4068	1.0402	1.0714	1.1292	1.4101	1.0490	1.0937	1.1537	2.4978	1.0301	1.0509	1.1042	1.2035	0.0064	0.0142	0.0198	0.3784
before	**Level 6**	2.9min	1.0240	1.0436	1.0835	1.2971	1.0240	1.0437	1.0836	1.2945	1.0305	1.0632	1.1089	2.2509	1.0163	1.0311	1.0687	1.1316	0.0046	0.0099	0.0143	0.3261
	Level 7	5.7min	1.0156	1.0280	1.0550	1.2171	1.0155	1.0280	1.0550	1.2188	1.0200	1.0405	1.0770	2.1053	1.0106	1.0212	1.0418	1.0835	0.0032	0.0065	0.0123	0.2982
	Level 8	11.4min	1.0110	1.0190	1.0382	1.1647	1.0110	1.0190	1.0382	1.1657	1.0136	1.0263	1.0625	1.9437	1.0075	1.0143	1.0273	1.0637	0.0023	0.0041	0.0112	0.2606
	Level 9	22.8min	1.0092	1.0157	1.0300	1.1442	1.0092	1.0157	1.0299	1.1453	1.0113	1.0213	1.0461	1.8719	1.0061	1.0115	1.0215	1.0488	0.0020	0.0031	0.0086	0.2428
	Level 1	3.2sec	1.4880	1.5877	1.7100	2.1816	1.4877	1.5879	1.7097	2.1811	1.5477	1.6464	1.7994	3.3956	1.4348	1.5507	1.6472	1.8021	0.0396	0.0297	0.0411	0.5142
	Level 2	6.4sec	1.2639	1.3580	1.4527	1.9393	1.2639	1.3581	1.4526	1.9326	1.3107	1.3984	1.5111	3.0343	1.1932	1.3171	1.4025	1.5721	0.0338	0.0283	0.0302	0.4576
	Level 3	12.7sec	1.1489	1.2118	1.3026	1.6993	1.1486	1.2119	1.3024	1.6981	1.1795	1.2533	1.3526	2.9559	1.0913	1.1812	1.2588	1.3585	0.0258	0.0241	0.0257	0.4320
3	**Level 4**	25.5sec	1.0816	1.1359	1.1978	1.5241	1.0816	1.1358	1.1978	1.5276	1.1126	1.1543	1.2332	2.8139	1.0479	1.1133	1.1574	1.2788	0.0169	0.0151	0.0256	0.3917
months	**Level 5**	50.9sec	1.0460	1.0865	1.1338	1.3878	1.0461	1.0865	1.1339	1.3887	1.0666	1.1046	1.1785	2.4978	1.0301	1.0676	1.1056	1.2035	0.0110	0.0123	0.0215	0.3146
before	**Level 6**	1.7min	1.0276	1.0564	1.0884	1.2766	1.0276	1.0563	1.0883	1.2782	1.0441	1.0698	1.1276	2.2509	1.0163	1.0445	1.0713	1.1316	0.0072	0.0088	0.0158	0.2693
	Level 7	3.4min	1.0176	1.0366	1.0581	1.1963	1.0176	1.0366	1.0583	1.2001	1.0234	1.0486	1.0835	2.1053	1.0106	1.0280	1.0487	1.0923	0.0041	0.0059	0.0113	0.2464
	Level 8	6.8min	1.0123	1.0247	1.0405	1.1430	1.0123	1.0246	1.0405	1.1459	1.0160	1.0312	1.0625	1.9437	1.0075	1.0189	1.0330	1.0634	0.0028	0.0038	0.0097	0.2158
	Level 9	13.6min	1.0104	1.0201	1.0325	1.1258	1.0104	1.0201	1.0325	1.1253	1.0142	1.0245	1.0478	1.8719	1.0061	1.0157	1.0254	1.0478	0.0025	0.0031	0.0074	0.2013
	Level 1	1.6sec	1.4781	1.5478	1.6079	1.8470	1.4781	1.5478	1.6079	1.8463	1.5201	1.5777	1.6484	3.3956	1.3968	1.5205	1.5788	1.6533	0.0293	0.0161	0.0200	0.3258
	Level 2	3.2sec	1.2494	1.3141	1.3798	1.6053	1.2494	1.3140	1.3798	1.6059	1.2860	1.3407	1.4254	3.0343	1.1436	1.2877	1.3426	1.4296	0.0309	0.0153	0.0242	0.3006
	Level 3	6.4sec	1.1403	1.1948	1.2460	1.4426	1.1402	1.1948	1.2460	1.4412	1.1697	1.2191	1.2927	2.9559	1.0615	1.1708	1.2198	1.2944	0.0235	0.0147	0.0218	0.2649
1	**Level 4**	12.8sec	1.0835	1.1285	1.1670	1.3251	1.0834	1.1285	1.1670	1.3255	1.1074	1.1474	1.2035	2.8139	1.0323	1.1104	1.1480	1.2044	0.0170	0.0111	0.0163	0.2297
Year	**Level 5**	25.6sec	1.0523	1.0861	1.1168	1.2363	1.0522	1.0861	1.1169	1.2352	1.0706	1.0997	1.1426	2.4978	1.0184	1.0714	1.1000	1.1430	0.0134	0.0084	0.0121	0.1816
before	**Level 6**	51.2sec	1.0335	1.0574	1.0800	1.1660	1.0335	1.0574	1.0799	1.1658	1.0464	1.0673	1.0963	2.2509	1.0112	1.0465	1.0673	1.0964	0.0098	0.0058	0.0081	0.1496
	Level 7	1.7min	1.0220	1.0379	1.0537	1.1154	1.0220	1.0379	1.0538	1.1158	1.0311	1.0452	1.0662	2.1053	1.0068	1.0311	1.0459	1.0663	0.0067	0.0039	0.0056	0.1314
	Level 8	3.4min	1.0154	1.0262	1.0374	1.0833	1.0154	1.0262	1.0375	1.0838	1.0216	1.0311	1.0473	1.9437	1.0047	1.0219	1.0312	1.0475	0.0047	0.0027	0.0043	0.1123
	Level 9	6.8min	1.0129	1.0218	1.0312	1.0718	1.0129	1.0218	1.0312	1.0715	1.0180	1.0256	1.0393	1.8719	1.0040	1.0182	1.0256	1.0395	0.0038	0.0022	0.0039	0.1043

Table A.31: EDM0 Other Results Table –Continued

EDM0 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.4sec	1.5224	1.5899	1.6991	2.2458	1.5212	1.5900	1.6988	2.2442	1.5549	1.6257	1.7511	2.7986	1.4308	1.5563	1.6524	1.8370	0.0512	0.0239	0.0413	0.4997
	Level 2	26.8sec	1.2781	1.3492	1.4223	2.0413	1.2783	1.3492	1.4223	2.0289	1.2943	1.3767	1.4505	2.9125	1.2564	1.3280	1.3892	1.4768	0.0143	0.0189	0.0275	0.6136
	Level 3	53.6sec	1.1480	1.1889	1.2496	1.8538	1.1477	1.1889	1.2497	1.8508	1.1629	1.2248	1.2775	2.4125	1.1287	1.1665	1.2268	1.2864	0.0155	0.0234	0.0205	0.4970
30	**Level 4**	1.8min	1.0727	1.1015	1.1565	1.6473	1.0726	1.1014	1.1567	1.6452	1.0779	1.1179	1.1987	2.3674	1.0620	1.0817	1.1331	1.2013	0.0063	0.0139	0.0260	0.4900
days	**Level 5**	3.6min	1.0364	1.0554	1.0999	1.4657	1.0365	1.0554	1.1003	1.4678	1.0411	1.0642	1.1359	2.1231	1.0299	1.0423	1.0676	1.1471	0.0043	0.0084	0.0253	0.4003
before	**Level 6**	7.1min	1.0200	1.0320	1.0666	1.3586	1.0200	1.0321	1.0665	1.3625	1.0247	1.0409	1.0834	1.9328	1.0158	1.0250	1.0426	1.1033	0.0032	0.0056	0.0160	0.3377
	Level 7	14.3min	1.0130	1.0217	1.0469	1.2903	1.0130	1.0217	1.0468	1.2869	1.0168	1.0284	1.0673	1.8003	1.0105	1.0177	1.0296	1.0788	0.0024	0.0038	0.0138	0.2944
	Level 8	28.6min	1.0103	1.0174	1.0381	1.2440	1.0103	1.0173	1.0382	1.2440	1.0145	1.0221	1.0633	1.7424	1.0082	1.0146	1.0236	1.0674	0.0026	0.0028	0.0156	0.2822
	Level 9	57.1min	1.0106	1.0183	1.0412	1.2749	1.0106	1.0183	1.0413	1.2702	1.0154	1.0203	1.0782	1.8740	1.0082	1.0163	1.0260	1.0820	0.0030	0.0018	0.0226	0.3405
	Level 1	5.4sec	1.4711	1.5722	1.7003	2.1155	1.4709	1.5720	1.7013	2.1198	1.5335	1.6257	1.7873	2.7986	1.4308	1.5393	1.6361	1.8025	0.0323	0.0280	0.0565	0.3884
	Level 2	10.9sec	1.2502	1.3379	1.4233	1.8513	1.2500	1.3381	1.4236	1.8527	1.2863	1.3892	1.4569	2.9125	1.1955	1.2893	1.3906	1.4768	0.0312	0.0313	0.0268	0.4388
	Level 3	21.7sec	1.1336	1.1933	1.2636	1.6267	1.1335	1.1935	1.2638	1.6373	1.1629	1.2268	1.2910	2.4125	1.0906	1.1665	1.2400	1.3106	0.0244	0.0211	0.0178	0.3853
60	**Level 4**	43.5sec	1.0685	1.1125	1.1726	1.4581	1.0686	1.1126	1.1725	1.4540	1.0817	1.1408	1.1996	2.3674	1.0460	1.0960	1.1431	1.2013	0.0103	0.0163	0.0221	0.3650
days	**Level 5**	1.4min	1.0377	1.0669	1.1104	1.3190	1.0377	1.0668	1.1107	1.3208	1.0432	1.0905	1.1359	2.1231	1.0281	1.0509	1.0911	1.1371	0.0049	0.0117	0.0152	0.2918
before	**Level 6**	2.9min	1.0225	1.0407	1.0746	1.2392	1.0225	1.0407	1.0746	1.2400	1.0279	1.0546	1.0946	1.9328	1.0158	1.0299	1.0611	1.0994	0.0038	0.0079	0.0102	0.2450
	Level 7	5.8min	1.0148	1.0270	1.0521	1.1846	1.0148	1.0269	1.0520	1.1839	1.0190	1.0380	1.0673	1.8003	1.0105	1.0210	1.0412	1.0784	0.0029	0.0058	0.0090	0.2112
	Level 8	11.6min	1.0115	1.0203	1.0400	1.1519	1.0115	1.0202	1.0400	1.1504	1.0146	1.0277	1.0605	1.7424	1.0082	1.0147	1.0299	1.0614	0.0026	0.0043	0.0099	0.1998
	Level 9	23.2min	1.0113	1.0201	1.0381	1.1648	1.0113	1.0201	1.0382	1.1627	1.0155	1.0260	1.0551	1.8740	1.0082	1.0155	1.0262	1.0583	0.0026	0.0036	0.0112	0.2388
	Level 1	3.2sec	1.4824	1.5802	1.7135	2.0346	1.4823	1.5800	1.7142	2.0358	1.5393	1.6361	1.7873	2.7986	1.4308	1.5405	1.6490	1.8025	0.0348	0.0300	0.0487	0.3426
	Level 2	6.5sec	1.2571	1.3502	1.4474	1.7920	1.2571	1.3503	1.4474	1.7899	1.2926	1.3906	1.5056	2.9125	1.1955	1.2943	1.3928	1.5073	0.0298	0.0259	0.0341	0.3703
	Level 3	12.9sec	1.1443	1.2084	1.2766	1.5972	1.1444	1.2082	1.2766	1.5916	1.1729	1.2427	1.3106	2.4125	1.0906	1.1751	1.2491	1.3269	0.0261	0.0242	0.0169	0.3228
3	**Level 4**	25.9sec	1.0775	1.1295	1.1828	1.4350	1.0776	1.1296	1.1828	1.4311	1.0987	1.1499	1.2067	2.3674	1.0460	1.0988	1.1554	1.2069	0.0161	0.0156	0.0174	0.3021
months	**Level 5**	51.8sec	1.0441	1.0816	1.1231	1.3136	1.0440	1.0816	1.1232	1.3137	1.0635	1.1015	1.1471	2.1231	1.0281	1.0636	1.1021	1.1519	0.0108	0.0131	0.0144	0.2395
before	**Level 6**	1.7min	1.0260	1.0531	1.0860	1.2355	1.0261	1.0531	1.0859	1.2358	1.0409	1.0673	1.1047	1.9328	1.0158	1.0416	1.0685	1.1095	0.0067	0.0096	0.0129	0.2022
	Level 7	3.5min	1.0170	1.0355	1.0609	1.1774	1.0170	1.0355	1.0610	1.1765	1.0224	1.0461	1.0788	1.8003	1.0105	1.0259	1.0465	1.0806	0.0041	0.0067	0.0108	0.1745
	Level 8	6.9min	1.0131	1.0259	1.0467	1.1412	1.0130	1.0259	1.0468	1.1414	1.0174	1.0334	1.0617	1.7424	1.0082	1.0180	1.0348	1.0633	0.0033	0.0048	0.0091	0.1651
	Level 9	13.8min	1.0129	1.0242	1.0440	1.1443	1.0130	1.0242	1.0441	1.1465	1.0177	1.0308	1.0614	1.8740	1.0082	1.0187	1.0319	1.0619	0.0034	0.0038	0.0094	0.1974
	Level 1	1.6sec	1.4775	1.5465	1.6071	1.8095	1.4772	1.5465	1.6071	1.8111	1.5169	1.5725	1.6524	2.7986	1.3950	1.5177	1.5729	1.6546	0.0293	0.0155	0.0217	0.2254
	Level 2	3.3sec	1.2493	1.3147	1.3738	1.5747	1.2494	1.3147	1.3739	1.5757	1.2857	1.3403	1.4169	2.9125	1.1439	1.2863	1.3421	1.4195	0.0303	0.0168	0.0221	0.2379
	Level 3	6.5sec	1.1405	1.1937	1.2409	1.4223	1.1405	1.1937	1.2410	1.4222	1.1687	1.2142	1.2789	2.4125	1.0611	1.1692	1.2144	1.2797	0.0237	0.0139	0.0181	0.2341
1	**Level 4**	13.1sec	1.0829	1.1270	1.1642	1.3199	1.0829	1.1269	1.1642	1.3198	1.1073	1.1422	1.1925	3.0684	1.0319	1.1074	1.1431	1.1944	0.0167	0.0099	0.0142	0.2826
Year	**Level 5**	26.1sec	1.0522	1.0848	1.1152	1.2399	1.0523	1.0848	1.1152	1.2409	1.0684	1.0970	1.1342	3.3019	1.0185	1.0686	1.0973	1.1348	0.0129	0.0083	0.0106	0.2952
before	**Level 6**	52.3sec	1.0337	1.0569	1.0794	1.2249	1.0337	1.0569	1.0795	1.2226	1.0464	1.0659	1.0975	5.7411	1.0112	1.0464	1.0660	1.0977	0.0096	0.0060	0.0084	0.5848
	Level 7	1.7min	1.0222	1.0380	1.0548	1.2917	1.0222	1.0380	1.0547	1.2909	1.0316	1.0443	1.0667	12.6319	1.0071	1.0319	1.0448	1.0670	0.0066	0.0039	0.0065	1.4433
	Level 8	3.5min	1.0159	1.0267	1.0395	1.4696	1.0159	1.0267	1.0395	1.4511	1.0224	1.0321	1.0486	24.2454	1.0049	1.0224	1.0322	1.0487	0.0046	0.0028	0.0049	2.8960
	Level 9	7min	1.0139	1.0229	1.0341	1.8004	1.0139	1.0229	1.0341	1.8163	1.0191	1.0281	1.0419	47.4795	1.0042	1.0191	1.0285	1.0423	0.0040	0.0025	0.0040	5.7997

Table A.31: EDM0 Other Results Table –Continued

EDM0	Bid Ask	Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.3sec	1.5245	1.5889	1.6990	2.3080	1.5238	1.5891	1.6987	2.3070	1.5547	1.6255	1.7539	3.0664	1.4340	1.5577	1.6594	1.8252	0.0505	0.0232	0.0386	0.5995
	Level 2	26.5sec	1.2781	1.3478	1.4237	2.0783	1.2783	1.3474	1.4237	2.0719	1.2953	1.3739	1.4594	2.9613	1.2596	1.3263	1.3880	1.4754	0.0135	0.0177	0.0293	0.6689
	Level 3	53.1sec	1.1475	1.1872	1.2533	1.8796	1.1472	1.1873	1.2531	1.8781	1.1621	1.2191	1.2800	2.4870	1.1298	1.1652	1.2245	1.2822	0.0139	0.0212	0.0238	0.5483
30	**Level 4**	1.8min	1.0719	1.0990	1.1501	1.6387	1.0718	1.0989	1.1496	1.6404	1.0773	1.1150	1.1864	2.3914	1.0622	1.0812	1.1367	1.2019	0.0058	0.0134	0.0212	0.4996
days	**Level 5**	3.5min	1.0347	1.0517	1.0927	1.4431	1.0347	1.0517	1.0924	1.4411	1.0383	1.0597	1.1274	2.1040	1.0280	1.0406	1.0670	1.1330	0.0041	0.0072	0.0228	0.3965
before	**Level 6**	7.1min	1.0176	1.0275	1.0560	1.3108	1.0175	1.0275	1.0559	1.3143	1.0211	1.0345	1.0713	1.8604	1.0134	1.0212	1.0362	1.0807	0.0028	0.0046	0.0148	0.3175
	Level 7	14.2min	1.0095	1.0158	1.0331	1.2167	1.0095	1.0157	1.0329	1.2191	1.0118	1.0205	1.0476	1.6529	1.0073	1.0125	1.0207	1.0533	0.0016	0.0027	0.0102	0.2466
	Level 8	28.3min	1.0055	1.0095	1.0196	1.1463	1.0055	1.0095	1.0198	1.1474	1.0069	1.0121	1.0317	1.4731	1.0042	1.0082	1.0124	1.0332	0.0010	0.0014	0.0076	0.1838
	Level 9	56.6min	1.0037	1.0066	1.0136	1.1089	1.0037	1.0066	1.0135	1.1074	1.0052	1.0076	1.0242	1.3532	1.0029	1.0057	1.0089	1.0252	0.0009	0.0007	0.0066	0.1384
	Level 1	5.4sec	1.4710	1.5721	1.6900	2.2013	1.4712	1.5720	1.6905	2.2064	1.5394	1.6061	1.7630	3.0664	1.4340	1.5410	1.6255	1.7652	0.0348	0.0242	0.0483	0.4542
	Level 2	10.8sec	1.2471	1.3364	1.4183	1.8986	1.2469	1.3362	1.4182	1.9033	1.2806	1.3880	1.4594	2.9613	1.1916	1.2843	1.3898	1.4754	0.0307	0.0312	0.0243	0.4676
	Level 3	21.6sec	1.1328	1.1897	1.2608	1.6574	1.1325	1.1899	1.2608	1.6561	1.1621	1.2245	1.2852	2.4870	1.0882	1.1652	1.2260	1.2947	0.0242	0.0196	0.0216	0.4143
60	**Level 4**	43.1sec	1.0674	1.1070	1.1642	1.4522	1.0674	1.1070	1.1642	1.4516	1.0812	1.1331	1.1963	2.3914	1.0434	1.0931	1.1367	1.2019	0.0103	0.0128	0.0225	0.3675
days	**Level 5**	1.4min	1.0354	1.0601	1.1005	1.3024	1.0354	1.0602	1.1003	1.3003	1.0406	1.0711	1.1274	2.1040	1.0251	1.0468	1.0834	1.1317	0.0048	0.0073	0.0150	0.2862
before	**Level 6**	2.9min	1.0194	1.0340	1.0580	1.1999	1.0194	1.0341	1.0579	1.1997	1.0236	1.0415	1.0713	1.8604	1.0134	1.0246	1.0432	1.0807	0.0031	0.0058	0.0098	0.2290
	Level 7	5.7min	1.0110	1.0193	1.0325	1.1315	1.0110	1.0193	1.0325	1.1319	1.0140	1.0240	1.0400	1.6529	1.0073	1.0144	1.0253	1.0476	0.0020	0.0034	0.0052	0.1771
	Level 8	11.5min	1.0063	1.0112	1.0188	1.0858	1.0064	1.0112	1.0187	1.0855	1.0084	1.0139	1.0241	1.4731	1.0042	1.0086	1.0144	1.0307	0.0013	0.0021	0.0035	0.1305
	Level 9	23min	1.0039	1.0074	1.0122	1.0610	1.0039	1.0074	1.0122	1.0610	1.0053	1.0089	1.0177	1.3532	1.0026	1.0057	1.0090	1.0188	0.0010	0.0011	0.0033	0.0982
	Level 1	3.2sec	1.4799	1.5795	1.7034	2.0938	1.4796	1.5797	1.7034	2.0950	1.5394	1.6290	1.7652	3.0664	1.4340	1.5410	1.6349	1.7854	0.0356	0.0274	0.0421	0.4082
	Level 2	6.4sec	1.2542	1.3474	1.4351	1.8199	1.2539	1.3477	1.4349	1.8210	1.2953	1.3898	1.4754	2.9613	1.1916	1.2956	1.3938	1.5373	0.0296	0.0277	0.0256	0.4020
	Level 3	12.8sec	1.1413	1.1990	1.2668	1.5906	1.1415	1.1994	1.2669	1.5887	1.1694	1.2363	1.2947	2.4870	1.0882	1.1732	1.2374	1.3201	0.0247	0.0214	0.0180	0.3538
3	**Level 4**	25.7sec	1.0755	1.1180	1.1678	1.4099	1.0753	1.1181	1.1679	1.4072	1.0963	1.1367	1.1963	2.3914	1.0434	1.0964	1.1375	1.2019	0.0149	0.0116	0.0198	0.3108
months	**Level 5**	51.4sec	1.0403	1.0703	1.1054	1.2777	1.0403	1.0703	1.1053	1.2774	1.0572	1.0834	1.1274	2.1040	1.0251	1.0597	1.0835	1.1317	0.0089	0.0077	0.0149	0.2374
before	**Level 6**	1.7min	1.0221	1.0405	1.0629	1.1871	1.0221	1.0405	1.0631	1.1864	1.0306	1.0491	1.0807	1.8604	1.0134	1.0345	1.0504	1.0813	0.0050	0.0038	0.0091	0.1893
	Level 7	3.4min	1.0125	1.0228	1.0360	1.1199	1.0125	1.0228	1.0360	1.1188	1.0180	1.0276	1.0475	1.6529	1.0073	1.0186	1.0277	1.0476	0.0030	0.0025	0.0053	0.1470
	Level 8	6.8min	1.0072	1.0134	1.0210	1.0750	1.0072	1.0134	1.0210	1.0745	1.0098	1.0159	1.0293	1.4731	1.0042	1.0104	1.0165	1.0307	0.0017	0.0016	0.0037	0.1085
	Level 9	13.7min	1.0047	1.0087	1.0140	1.0524	1.0047	1.0087	1.0140	1.0525	1.0071	1.0104	1.0188	1.3532	1.0026	1.0072	1.0104	1.0198	0.0015	0.0010	0.0029	0.0816
	Level 1	1.6sec	1.4750	1.5423	1.6007	1.8153	1.4750	1.5423	1.6007	1.8159	1.5167	1.5716	1.6359	3.0664	1.3953	1.5177	1.5721	1.6376	0.0286	0.0151	0.0177	0.2676
	Level 2	3.2sec	1.2456	1.3066	1.3642	1.5594	1.2456	1.3066	1.3644	1.5590	1.2779	1.3344	1.4036	2.9613	1.1426	1.2786	1.3344	1.4037	0.0296	0.0153	0.0214	0.2584
	Level 3	6.5sec	1.1351	1.1838	1.2261	1.3839	1.1352	1.1839	1.2261	1.3838	1.1610	1.2038	1.2563	2.4870	1.0597	1.1613	1.2042	1.2578	0.0221	0.0125	0.0158	0.2171
1	**Level 4**	12.9sec	1.0773	1.1153	1.1454	1.2639	1.0773	1.1153	1.1455	1.2623	1.0964	1.1290	1.1695	2.3914	1.0302	1.0976	1.1296	1.1709	0.0151	0.0083	0.0124	0.1772
Year	**Level 5**	25.9sec	1.0457	1.0726	1.0955	1.1742	1.0458	1.0726	1.0955	1.1742	1.0602	1.0818	1.1130	2.1040	1.0165	1.0606	1.0818	1.1143	0.0112	0.0062	0.0094	0.1327
before	**Level 6**	51.7sec	1.0273	1.0445	1.0598	1.1128	1.0273	1.0445	1.0599	1.1133	1.0368	1.0504	1.0709	1.8604	1.0092	1.0375	1.0504	1.0712	0.0076	0.0040	0.0063	0.1029
	Level 7	1.7min	1.0161	1.0265	1.0364	1.0709	1.0162	1.0265	1.0364	1.0709	1.0221	1.0303	1.0441	1.6529	1.0056	1.0222	1.0307	1.0441	0.0048	0.0024	0.0039	0.0776
	Level 8	3.4min	1.0098	1.0161	1.0223	1.0448	1.0098	1.0161	1.0223	1.0446	1.0137	1.0186	1.0269	1.4731	1.0035	1.0137	1.0187	1.0269	0.0030	0.0014	0.0025	0.0561
	Level 9	6.9min	1.0067	1.0111	1.0155	1.0308	1.0067	1.0111	1.0155	1.0307	1.0093	1.0128	1.0186	1.3532	1.0026	1.0094	1.0128	1.0188	0.0022	0.0010	0.0017	0.0420

Table A.31: EDM0 Other Results Table –Continued

EDM0 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.3sec	0.4641	0.5934	0.6319	0.6582	0.4627	0.5933	0.6318	0.6580	0.5444	0.6151	0.6426	0.6989	0.3573	0.5711	0.6256	0.6431	0.0959	0.0166	0.0074	0.0231
	Level 2	26.5sec	0.5261	0.7070	0.7444	0.7824	0.5270	0.7072	0.7443	0.7824	0.6771	0.7264	0.7530	0.7959	0.3433	0.6894	0.7347	0.7726	0.1428	0.0154	0.0082	0.0088
	Level 3	53.1sec	0.5721	0.8031	0.8463	0.8715	0.5733	0.8030	0.8464	0.8714	0.7774	0.8165	0.8572	0.8860	0.4145	0.7828	0.8295	0.8599	0.1554	0.0134	0.0123	0.0119
30	**Level 4**	1.8min	0.6459	0.8702	0.9107	0.9323	0.6483	0.8698	0.9108	0.9324	0.8324	0.8945	0.9245	0.9417	0.4224	0.8342	0.8952	0.9278	0.1721	0.0209	0.0104	0.0055
days	**Level 5**	3.5min	0.7194	0.9148	0.9488	0.9649	0.7165	0.9143	0.9491	0.9648	0.8718	0.9397	0.9594	0.9710	0.4710	0.8803	0.9402	0.9605	0.1635	0.0224	0.0073	0.0040
before	**Level 6**	7.1min	0.7671	0.9413	0.9705	0.9804	0.7644	0.9417	0.9706	0.9804	0.9063	0.9607	0.9756	0.9844	0.5174	0.9230	0.9665	0.9759	0.1553	0.0157	0.0037	0.0030
	Level 7	14.2min	0.8053	0.9583	0.9801	0.9872	0.8038	0.9582	0.9801	0.9872	0.9269	0.9724	0.9826	0.9897	0.5555	0.9370	0.9781	0.9835	0.1468	0.0132	0.0021	0.0023
	Level 8	28.3min	0.8370	0.9655	0.9839	0.9898	0.8306	0.9659	0.9839	0.9898	0.9369	0.9783	0.9856	0.9919	0.5739	0.9405	0.9824	0.9857	0.1477	0.0142	0.0015	0.0025
	Level 9	56.6min	0.8252	0.9637	0.9824	0.9895	0.8226	0.9640	0.9824	0.9895	0.9242	0.9802	0.9840	0.9919	0.5336	0.9274	0.9802	0.9848	0.1651	0.0200	0.0016	0.0029
	Level 1	5.4sec	0.4833	0.5908	0.6385	0.6802	0.4845	0.5908	0.6384	0.6802	0.5548	0.6151	0.6497	0.6989	0.3573	0.5595	0.6256	0.6521	0.0768	0.0200	0.0092	0.0148
	Level 2	10.8sec	0.5626	0.7042	0.7505	0.8006	0.5617	0.7042	0.7505	0.8004	0.6771	0.7198	0.7756	0.8364	0.3433	0.6864	0.7264	0.7775	0.1035	0.0136	0.0157	0.0203
	Level 3	21.6sec	0.6386	0.7934	0.8406	0.8826	0.6365	0.7936	0.8404	0.8826	0.7630	0.8151	0.8572	0.9169	0.4145	0.7746	0.8165	0.8599	0.1215	0.0128	0.0133	0.0192
60	**Level 4**	43.1sec	0.7177	0.8551	0.9009	0.9357	0.7174	0.8553	0.9012	0.9359	0.8324	0.8766	0.9124	0.9561	0.4224	0.8336	0.8825	0.9245	0.1320	0.0169	0.0114	0.0091
days	**Level 5**	1.4min	0.7825	0.9021	0.9395	0.9637	0.7815	0.9020	0.9395	0.9637	0.8795	0.9170	0.9515	0.9726	0.4710	0.8803	0.9267	0.9586	0.1230	0.0127	0.0080	0.0046
before	**Level 6**	2.9min	0.8302	0.9320	0.9623	0.9780	0.8272	0.9322	0.9623	0.9780	0.9096	0.9482	0.9709	0.9844	0.5174	0.9136	0.9522	0.9729	0.1168	0.0099	0.0062	0.0036
	Level 7	5.7min	0.8619	0.9517	0.9749	0.9854	0.8622	0.9518	0.9749	0.9854	0.9273	0.9634	0.9795	0.9897	0.5555	0.9370	0.9681	0.9813	0.1091	0.0086	0.0044	0.0028
	Level 8	11.5min	0.8871	0.9628	0.9809	0.9886	0.8862	0.9627	0.9809	0.9887	0.9422	0.9730	0.9855	0.9919	0.5739	0.9430	0.9758	0.9856	0.1077	0.0092	0.0036	0.0025
	Level 9	23min	0.8816	0.9644	0.9809	0.9889	0.8822	0.9644	0.9809	0.9889	0.9449	0.9747	0.9848	0.9919	0.5336	0.9477	0.9759	0.9848	0.1192	0.0104	0.0031	0.0025
	Level 1	3.2sec	0.5014	0.5853	0.6344	0.6750	0.5019	0.5854	0.6345	0.6750	0.5548	0.6112	0.6492	0.6989	0.3573	0.5595	0.6151	0.6497	0.0683	0.0174	0.0109	0.0158
	Level 2	6.4sec	0.5756	0.6929	0.7422	0.7957	0.5752	0.6929	0.7422	0.7959	0.6635	0.7191	0.7726	0.8364	0.3433	0.6642	0.7198	0.7737	0.0864	0.0172	0.0135	0.0192
	Level 3	12.8sec	0.6467	0.7847	0.8294	0.8740	0.6472	0.7847	0.8294	0.8742	0.7537	0.8047	0.8510	0.9169	0.4145	0.7630	0.8057	0.8526	0.1007	0.0113	0.0159	0.0203
3	**Level 4**	25.7sec	0.7200	0.8469	0.8863	0.9282	0.7199	0.8470	0.8864	0.9282	0.8285	0.8696	0.9101	0.9561	0.4224	0.8287	0.8697	0.9101	0.1088	0.0134	0.0119	0.0139
months	**Level 5**	51.4sec	0.7786	0.8916	0.9257	0.9581	0.7782	0.8915	0.9258	0.9580	0.8682	0.9079	0.9402	0.9726	0.4710	0.8718	0.9119	0.9403	0.1007	0.0118	0.0107	0.0099
before	**Level 6**	1.7min	0.8215	0.9220	0.9504	0.9748	0.8238	0.9219	0.9505	0.9746	0.9013	0.9369	0.9600	0.9844	0.5174	0.9052	0.9372	0.9607	0.0971	0.0112	0.0082	0.0063
	Level 7	3.4min	0.8637	0.9435	0.9663	0.9833	0.8625	0.9434	0.9663	0.9833	0.9254	0.9560	0.9748	0.9897	0.5555	0.9269	0.9570	0.9781	0.0907	0.0098	0.0059	0.0039
	Level 8	6.8min	0.8890	0.9561	0.9752	0.9871	0.8882	0.9561	0.9752	0.9871	0.9405	0.9677	0.9824	0.9919	0.5739	0.9418	0.9680	0.9829	0.0894	0.0085	0.0043	0.0032
	Level 9	13.7min	0.8878	0.9585	0.9767	0.9872	0.8881	0.9586	0.9767	0.9872	0.9417	0.9701	0.9816	0.9919	0.5336	0.9422	0.9708	0.9826	0.0988	0.0089	0.0034	0.0033
	Level 1	1.6sec	0.5591	0.6227	0.6469	0.6775	0.5592	0.6226	0.6469	0.6775	0.6052	0.6358	0.6592	0.7168	0.3573	0.6064	0.6359	0.6595	0.0521	0.0082	0.0066	0.0136
	Level 2	3.2sec	0.6455	0.7284	0.7611	0.8011	0.6455	0.7284	0.7610	0.8012	0.7058	0.7451	0.7778	0.8742	0.3433	0.7071	0.7461	0.7783	0.0683	0.0114	0.0099	0.0200
	Level 3	6.5sec	0.7169	0.8063	0.8380	0.8777	0.7172	0.8064	0.8381	0.8776	0.7819	0.8235	0.8557	0.9424	0.4145	0.7828	0.8236	0.8557	0.0821	0.0114	0.0099	0.0186
1	**Level 4**	12.9sec	0.7768	0.8594	0.8878	0.9239	0.7771	0.8594	0.8877	0.9239	0.8386	0.8748	0.9031	0.9690	0.3259	0.8397	0.8755	0.9043	0.0906	0.0102	0.0080	0.0143
Year	**Level 5**	25.9sec	0.8278	0.8971	0.9222	0.9507	0.8273	0.8970	0.9221	0.9507	0.8817	0.9113	0.9360	0.9818	0.3029	0.8819	0.9116	0.9366	0.0917	0.0084	0.0072	0.0117
before	**Level 6**	51.7sec	0.8637	0.9267	0.9463	0.9676	0.8644	0.9267	0.9463	0.9676	0.9112	0.9381	0.9557	0.9890	0.1742	0.9125	0.9381	0.9558	0.1049	0.0069	0.0055	0.0090
	Level 7	1.7min	0.8926	0.9483	0.9635	0.9784	0.8925	0.9483	0.9635	0.9784	0.9374	0.9571	0.9694	0.9930	0.0792	0.9381	0.9575	0.9694	0.1154	0.0057	0.0036	0.0063
	Level 8	3.4min	0.9098	0.9621	0.9740	0.9845	0.9094	0.9621	0.9740	0.9845	0.9536	0.9688	0.9781	0.9951	0.0412	0.9541	0.9689	0.9782	0.1217	0.0044	0.0027	0.0045
	Level 9	6.9min	0.9103	0.9671	0.9777	0.9863	0.9100	0.9671	0.9777	0.9864	0.9598	0.9723	0.9812	0.9958	0.0211	0.9598	0.9727	0.9812	0.1297	0.0036	0.0025	0.0038

Table A.32: EDM1 Other Results Table

EDM1 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	15.8sec	1.5379	1.8575	2.7277	4.2030	1.5351	1.8578	2.7255	4.2128	1.7331	2.0415	3.5087	4.9523	1.4239	1.7381	2.2471	3.5681	0.1227	0.1231	0.4815	0.6491
	Level 2	31.6sec	1.2845	1.5973	2.2579	6.6929	1.2824	1.5975	2.2538	6.6431	1.4364	1.7362	2.4906	16.2349	1.1535	1.4627	1.9122	2.7532	0.1144	0.0942	0.2423	5.5867
	Level 3	1.1min	1.1694	1.4556	1.8176	15.8716	1.1691	1.4579	1.8164	16.1570	1.2621	1.6706	1.9827	61.4296	1.0689	1.3300	1.6843	1.9998	0.0820	0.1347	0.1333	25.6552
30	**Level 4**	2.1min	1.1197	1.3270	1.5859	26.2338	1.1188	1.3264	1.5856	25.9339	1.1781	1.4357	1.7271	101.2208	1.0359	1.2012	1.4834	1.8160	0.0573	0.0957	0.0978	42.9729
days	**Level 5**	4.2min	1.0840	1.2330	1.4168	19.7080	1.0840	1.2328	1.4167	19.5771	1.1413	1.2932	1.5187	53.1995	1.0219	1.1614	1.3480	1.6490	0.0457	0.0562	0.0627	24.7518
before	**Level 6**	8.4min	1.0694	1.1864	1.3182	18.7636	1.0689	1.1845	1.3190	18.9268	1.1050	1.2459	1.4098	60.2570	1.0223	1.1085	1.2542	1.4481	0.0340	0.0603	0.0748	26.0323
	Level 7	16.8min	1.0508	1.1177	1.2677	16.2435	1.0504	1.1174	1.2665	16.0922	1.0710	1.1694	1.3683	57.1892	1.0186	1.0719	1.1863	1.3905	0.0219	0.0378	0.0828	24.1325
	Level 8	33.7min	1.0355	1.0769	1.2095	10.2252	1.0353	1.0767	1.2097	10.2352	1.0503	1.1121	1.2916	34.5844	1.0148	1.0564	1.1464	1.3466	0.0138	0.0206	0.0704	14.3927
	Level 9	67.3min	1.0278	1.0618	1.1846	8.4528	1.0279	1.0616	1.1840	8.7652	1.0404	1.0835	1.2588	32.0009	1.0137	1.0529	1.1299	1.2783	0.0108	0.0115	0.0625	13.2810
	Level 1	6.7sec	1.5169	1.7312	1.9867	3.5417	1.5165	1.7309	1.9867	3.5391	1.5987	1.8079	2.3785	4.9523	1.4239	1.6098	1.8149	2.4717	0.0541	0.0614	0.1976	0.8739
	Level 2	13.5sec	1.2836	1.5133	1.7135	4.4676	1.2834	1.5135	1.7147	4.5063	1.3661	1.5978	2.0167	16.2349	1.1535	1.3791	1.6189	2.0960	0.0697	0.0721	0.1384	4.3539
	Level 3	27sec	1.1694	1.3718	1.5831	8.9609	1.1695	1.3712	1.5821	9.0380	1.2444	1.4984	1.6843	61.4296	1.0689	1.2621	1.5048	1.7106	0.0572	0.0706	0.0682	18.6777
60	**Level 4**	54sec	1.1138	1.2538	1.4390	13.9732	1.1142	1.2533	1.4381	13.8160	1.1898	1.3629	1.5421	101.2208	1.0359	1.1911	1.3739	1.5800	0.0503	0.0595	0.0561	31.3674
days	**Level 5**	1.8min	1.0780	1.1847	1.3123	10.5415	1.0782	1.1845	1.3125	10.5683	1.1311	1.2353	1.4070	53.1995	1.0219	1.1413	1.2440	1.4154	0.0393	0.0355	0.0560	19.0387
before	**Level 6**	3.6min	1.0561	1.1289	1.2272	10.1430	1.0568	1.1286	1.2271	10.1987	1.0997	1.1633	1.2765	60.2570	1.0173	1.1050	1.1634	1.3608	0.0312	0.0192	0.0366	19.6428
	Level 7	7.2min	1.0374	1.0806	1.1603	8.8926	1.0377	1.0807	1.1604	8.7218	1.0687	1.0999	1.2213	57.1892	1.0112	1.0704	1.1147	1.2215	0.0217	0.0119	0.0369	17.8661
	Level 8	14.4min	1.0245	1.0545	1.1074	5.7489	1.0245	1.0544	1.1077	5.7456	1.0385	1.0650	1.1571	34.5844	1.0093	1.0447	1.0746	1.1732	0.0122	0.0079	0.0286	10.6988
	Level 9	28.8min	1.0186	1.0460	1.0850	4.9532	1.0186	1.0459	1.0852	4.9878	1.0288	1.0566	1.1367	32.0009	1.0053	1.0334	1.0569	1.1496	0.0081	0.0084	0.0286	9.7082
	Level 1	3.9sec	1.5343	1.6966	1.8357	3.0858	1.5348	1.6964	1.8370	3.0907	1.6101	1.7436	2.0415	4.9523	1.4239	1.6427	1.7707	2.0722	0.0553	0.0363	0.0700	0.9624
	Level 2	7.8sec	1.3009	1.4453	1.6245	3.6822	1.3007	1.4454	1.6242	3.6449	1.3791	1.5185	1.8276	16.2349	1.1535	1.3837	1.5217	1.8406	0.0663	0.0379	0.0768	3.7118
	Level 3	15.6sec	1.1792	1.3037	1.4850	6.4881	1.1796	1.3036	1.4847	6.5762	1.2444	1.3441	1.6125	61.4296	1.0689	1.2621	1.3508	1.6210	0.0536	0.0277	0.0873	15.4029
3	**Level 4**	31.1sec	1.1180	1.2120	1.3545	9.4372	1.1179	1.2118	1.3540	9.7098	1.1781	1.2757	1.4357	101.2208	1.0359	1.1850	1.2774	1.4431	0.0405	0.0274	0.0604	25.8582
months	**Level 5**	1min	1.0796	1.1486	1.2489	7.7279	1.0798	1.1489	1.2485	7.5064	1.1249	1.1864	1.3238	53.1995	1.0219	1.1295	1.1976	1.3374	0.0306	0.0192	0.0401	15.9094
before	**Level 6**	2.1min	1.0529	1.1046	1.1734	7.2918	1.0527	1.1046	1.1735	7.2215	1.0861	1.1211	1.2329	60.2570	1.0173	1.0874	1.1245	1.2459	0.0211	0.0125	0.0387	16.3412
	Level 7	4.2min	1.0331	1.0666	1.1122	6.1660	1.0331	1.0666	1.1122	6.2140	1.0538	1.0792	1.1565	57.1892	1.0112	1.0555	1.0797	1.1694	0.0140	0.0067	0.0251	14.7877
	Level 8	8.3min	1.0220	1.0434	1.0752	4.2212	1.0220	1.0434	1.0753	4.2085	1.0345	1.0519	1.1083	34.5844	1.0093	1.0362	1.0540	1.1121	0.0088	0.0050	0.0174	8.8683
	Level 9	16.6min	1.0170	1.0341	1.0599	3.7295	1.0170	1.0342	1.0599	3.6952	1.0255	1.0451	1.0835	32.0009	1.0053	1.0262	1.0468	1.0878	0.0063	0.0058	0.0110	8.0106
	Level 1	2.2sec	1.5068	1.5876	1.6740	2.1232	1.5067	1.5875	1.6740	2.1231	1.5482	1.6264	1.7227	4.9523	1.4239	1.5513	1.6273	1.7239	0.0317	0.0243	0.0267	0.7116
	Level 2	4.4sec	1.2832	1.3705	1.4446	2.0804	1.2832	1.3704	1.4448	2.0881	1.3278	1.4100	1.4856	16.2349	1.1535	1.3289	1.4108	1.4871	0.0342	0.0236	0.0226	1.9548
	Level 3	8.9sec	1.1732	1.2423	1.3067	2.7103	1.1733	1.2421	1.3067	2.6565	1.2096	1.2739	1.3435	61.4296	1.0689	1.2100	1.2742	1.3436	0.0303	0.0207	0.0215	7.5832
1	**Level 4**	17.7sec	1.1106	1.1627	1.2167	3.3571	1.1106	1.1626	1.2166	3.2953	1.1388	1.1908	1.2545	101.2208	1.0359	1.1392	1.1909	1.2569	0.0225	0.0156	0.0186	12.7038
Year	**Level 5**	35.4sec	1.0724	1.1120	1.1499	2.7031	1.0724	1.1120	1.1499	2.7028	1.0936	1.1290	1.1737	53.1995	1.0219	1.0937	1.1292	1.1803	0.0170	0.0105	0.0139	7.9639
before	**Level 6**	1.2min	1.0469	1.0754	1.1035	2.5139	1.0468	1.0754	1.1035	2.5809	1.0616	1.0895	1.1245	60.2570	1.0173	1.0622	1.0902	1.1247	0.0114	0.0077	0.0107	8.1264
	Level 7	2.4min	1.0298	1.0491	1.0683	2.3214	1.0298	1.0491	1.0684	2.3041	1.0408	1.0582	1.0825	57.1892	1.0112	1.0410	1.0583	1.0838	0.0076	0.0051	0.0064	7.3040
	Level 8	4.7min	1.0198	1.0330	1.0462	1.8051	1.0198	1.0330	1.0462	1.8089	1.0269	1.0385	1.0555	34.5844	1.0084	1.0275	1.0397	1.0557	0.0050	0.0033	0.0045	4.3895
	Level 9	9.4min	1.0159	1.0261	1.0370	1.6784	1.0159	1.0261	1.0370	1.6787	1.0214	1.0308	1.0447	32.0009	1.0053	1.0215	1.0310	1.0451	0.0039	0.0025	0.0041	3.9401

Table A.32: EDM1 Other Results Table –Continued

EDM1 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.2sec	1.4945	1.8158	2.7794	4.3277	1.4929	1.8161	2.7859	4.3230	1.5960	1.8904	3.7269	5.0000	1.4192	1.6889	2.3181	3.7415	0.0668	0.0704	0.5542	0.5615
	Level 2	32.5sec	1.2671	1.5617	2.3256	7.0143	1.2665	1.5621	2.3239	6.8391	1.3722	1.6352	2.6387	17.0000	1.1488	1.4803	1.9801	3.2150	0.0895	0.0622	0.2856	5.8548
	Level 3	1.1min	1.1585	1.4307	1.8362	17.0701	1.1595	1.4299	1.8394	16.8854	1.2358	1.5951	2.1418	65.0000	1.0631	1.3514	1.6392	2.1472	0.0730	0.0913	0.2192	27.2203
30	**Level 4**	2.2min	1.1129	1.2976	1.5573	25.6992	1.1136	1.2985	1.5563	26.3294	1.1657	1.4665	1.6874	103.3478	1.0321	1.2108	1.4799	1.9055	0.0533	0.0903	0.0878	43.9238
days	**Level 5**	4.3min	1.0829	1.2043	1.3954	19.0715	1.0834	1.2056	1.3949	19.3782	1.1262	1.2994	1.5237	52.9259	1.0211	1.1394	1.3138	1.6084	0.0425	0.0586	0.0992	24.7727
before	**Level 6**	8.7min	1.0614	1.1489	1.2947	18.6099	1.0615	1.1497	1.2957	18.3194	1.0944	1.1869	1.4250	60.0979	1.0154	1.0958	1.1968	1.4359	0.0329	0.0400	0.0925	25.8620
	Level 7	17.3min	1.0438	1.1124	1.2666	14.6781	1.0437	1.1130	1.2649	15.0747	1.0634	1.1511	1.3942	56.5456	1.0147	1.0707	1.1532	1.4083	0.0215	0.0318	0.1021	23.8436
	Level 8	34.7min	1.0369	1.0845	1.2482	8.4855	1.0369	1.0847	1.2485	8.9487	1.0532	1.1136	1.3187	32.0022	1.0137	1.0689	1.1567	1.3415	0.0170	0.0200	0.0749	13.2200
	Level 9	69.3min	1.0402	1.0968	1.2716	6.3859	1.0402	1.0967	1.2708	6.3709	1.0554	1.1579	1.3491	21.6681	1.0159	1.0565	1.2078	1.3568	0.0162	0.0406	0.0642	8.7628
	Level 1	7sec	1.4954	1.6706	1.9875	3.6226	1.4959	1.6711	1.9874	3.6223	1.5458	1.7794	2.4487	5.0000	1.4192	1.5960	1.8050	2.5044	0.0395	0.0667	0.2250	0.8869
	Level 2	13.9sec	1.2692	1.4614	1.7099	4.6497	1.2696	1.4618	1.7098	4.6482	1.3569	1.5222	2.0065	17.0000	1.1488	1.3579	1.5483	2.0652	0.0600	0.0589	0.1679	4.5379
	Level 3	27.9sec	1.1625	1.3410	1.5261	9.6810	1.1620	1.3413	1.5262	9.4289	1.2358	1.3905	1.6789	65.0000	1.0631	1.2694	1.4250	1.6999	0.0535	0.0438	0.0954	19.7767
60	**Level 4**	55.7sec	1.1042	1.2309	1.3809	13.6473	1.1041	1.2305	1.3816	13.9934	1.1657	1.2811	1.4819	103.3478	1.0321	1.1876	1.2871	1.5089	0.0414	0.0310	0.0864	32.0401
days	**Level 5**	1.9min	1.0706	1.1595	1.2715	10.2117	1.0703	1.1601	1.2720	10.4381	1.1183	1.2087	1.3314	52.9259	1.0211	1.1202	1.2115	1.3326	0.0329	0.0344	0.0495	19.0148
before	**Level 6**	3.7min	1.0457	1.1139	1.1983	9.6792	1.0455	1.1138	1.1986	9.8712	1.0803	1.1558	1.2816	60.0979	1.0154	1.0916	1.1561	1.2938	0.0215	0.0236	0.0373	19.4055
	Level 7	7.4min	1.0301	1.0793	1.1507	8.2867	1.0301	1.0792	1.1504	8.2263	1.0523	1.1061	1.1962	56.5456	1.0081	1.0630	1.1088	1.2866	0.0143	0.0153	0.0254	17.4583
	Level 8	14.9min	1.0242	1.0595	1.1217	5.0522	1.0243	1.0595	1.1214	5.1389	1.0400	1.0706	1.1789	32.0022	1.0044	1.0465	1.0804	1.2280	0.0116	0.0090	0.0313	9.6854
	Level 9	29.7min	1.0255	1.0557	1.1316	3.8157	1.0253	1.0557	1.1310	3.8591	1.0421	1.0693	1.2078	21.6681	1.0029	1.0440	1.0695	1.2114	0.0133	0.0075	0.0447	6.4146
	Level 1	4.1sec	1.5205	1.6504	1.8243	3.1917	1.5202	1.6499	1.8238	3.1774	1.5960	1.7110	1.9292	5.0000	1.4192	1.6012	1.7139	2.0813	0.0522	0.0336	0.0650	0.9671
	Level 2	8.1sec	1.2868	1.4345	1.5817	3.7802	1.2879	1.4342	1.5819	3.7547	1.3579	1.4954	1.8273	17.0000	1.1488	1.3722	1.4966	1.8762	0.0575	0.0382	0.0860	3.8666
	Level 3	16.2sec	1.1741	1.2950	1.4300	6.9464	1.1739	1.2950	1.4294	6.8343	1.2358	1.3514	1.5790	65.0000	1.0631	1.2506	1.3549	1.5951	0.0484	0.0308	0.0637	16.3052
3	**Level 4**	32.5sec	1.1131	1.1999	1.2991	9.5658	1.1130	1.2002	1.2988	9.8251	1.1621	1.2394	1.4039	103.3478	1.0321	1.1657	1.2409	1.4665	0.0387	0.0263	0.0473	26.4040
months	**Level 5**	1.1min	1.0742	1.1300	1.2190	7.4096	1.0742	1.1298	1.2193	7.4042	1.1122	1.1658	1.2994	52.9259	1.0211	1.1128	1.1735	1.3138	0.0286	0.0167	0.0346	15.8795
before	**Level 6**	2.2min	1.0467	1.0896	1.1537	7.0324	1.0469	1.0894	1.1537	6.9934	1.0730	1.1076	1.1968	60.0979	1.0154	1.0747	1.1093	1.2008	0.0180	0.0114	0.0262	16.1192
	Level 7	4.3min	1.0295	1.0616	1.1096	5.8028	1.0295	1.0616	1.1098	5.8762	1.0484	1.0752	1.1532	56.5456	1.0081	1.0523	1.0765	1.1587	0.0112	0.0068	0.0247	14.4143
	Level 8	8.7min	1.0221	1.0454	1.0814	3.7687	1.0220	1.0454	1.0812	3.8090	1.0388	1.0547	1.1217	32.0022	1.0044	1.0393	1.0567	1.1336	0.0086	0.0052	0.0199	8.0059
	Level 9	17.3min	1.0208	1.0428	1.0787	3.0424	1.0209	1.0428	1.0788	2.9614	1.0351	1.0518	1.1313	21.6681	1.0029	1.0358	1.0542	1.1355	0.0090	0.0053	0.0248	5.3084
	Level 1	2.2sec	1.5042	1.5843	1.6632	2.1397	1.5043	1.5843	1.6633	2.1424	1.5458	1.6279	1.7087	5.0000	1.4192	1.5464	1.6280	1.7109	0.0316	0.0245	0.0228	0.7426
	Level 2	4.5sec	1.2786	1.3654	1.4405	2.1078	1.2786	1.3654	1.4406	2.1055	1.3229	1.4027	1.4880	17.0000	1.1488	1.3229	1.4053	1.4954	0.0317	0.0229	0.0246	2.0432
	Level 3	9sec	1.1700	1.2341	1.2961	2.7033	1.1701	1.2341	1.2961	2.7000	1.2042	1.2642	1.3333	65.0000	1.0631	1.2050	1.2644	1.3336	0.0294	0.0183	0.0228	8.0249
1	**Level 4**	18sec	1.1065	1.1535	1.2032	3.2818	1.1065	1.1534	1.2031	3.2992	1.1325	1.1732	1.2369	103.3478	1.0321	1.1330	1.1735	1.2376	0.0217	0.0123	0.0187	12.9681
Year	**Level 5**	35.9sec	1.0679	1.1033	1.1353	2.6553	1.0679	1.1032	1.1353	2.6628	1.0879	1.1159	1.1636	52.9259	1.0211	1.0884	1.1160	1.1651	0.0154	0.0088	0.0131	7.9390
before	**Level 6**	1.2min	1.0438	1.0690	1.0930	2.4993	1.0439	1.0690	1.0930	2.5177	1.0585	1.0796	1.1104	60.0979	1.0154	1.0587	1.0802	1.1112	0.0107	0.0068	0.0084	7.9981
	Level 7	2.4min	1.0286	1.0471	1.0646	2.2387	1.0286	1.0471	1.0646	2.2229	1.0384	1.0559	1.0784	56.5456	1.0081	1.0384	1.0560	1.0791	0.0069	0.0054	0.0064	7.0938
	Level 8	4.8min	1.0205	1.0345	1.0477	1.7316	1.0205	1.0345	1.0477	1.7181	1.0279	1.0401	1.0578	32.0022	1.0044	1.0285	1.0402	1.0581	0.0048	0.0038	0.0053	3.9501
	Level 9	9.6min	1.0181	1.0309	1.0434	1.5187	1.0181	1.0309	1.0434	1.5160	1.0248	1.0361	1.0544	21.6681	1.0029	1.0249	1.0361	1.0547	0.0044	0.0034	0.0050	2.6291

Table A.32: EDM1 Other Results Table –Continued

EDM1	Bid Ask Covariance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16sec	1.5001	1.8249	2.7400	4.2960	1.5008	1.8260	2.7409	4.2988	1.6118	1.9428	3.6453	5.0000	1.4211	1.6841	2.2606	3.7611	0.0733	0.0969	0.5344	0.5919
	Level 2	32sec	1.2696	1.5541	2.2266	6.8977	1.2686	1.5540	2.2243	6.8276	1.3680	1.6467	2.4848	17.0000	1.1505	1.4465	1.8459	3.0917	0.0948	0.0767	0.2622	5.8723
	Level 3	1.1min	1.1575	1.4007	1.7612	16.2366	1.1571	1.3997	1.7580	16.8610	1.2319	1.5601	1.9906	65.0000	1.0640	1.3134	1.5879	2.0862	0.0722	0.0922	0.1887	27.2368
30	**Level 4**	2.1min	1.1070	1.2611	1.4963	25.4695	1.1071	1.2600	1.4954	26.6053	1.1550	1.3952	1.5762	105.0907	1.0303	1.1762	1.4508	1.6751	0.0500	0.0760	0.0527	44.7385
days	**Level 5**	4.3min	1.0717	1.1691	1.3138	19.7153	1.0715	1.1689	1.3132	19.4732	1.1122	1.2531	1.4443	53.6762	1.0170	1.1126	1.2700	1.4570	0.0366	0.0491	0.0751	25.0769
before	**Level 6**	8.5min	1.0485	1.1208	1.1996	17.8683	1.0485	1.1199	1.2001	18.2860	1.0718	1.1499	1.2380	60.0979	1.0138	1.0842	1.1520	1.3170	0.0245	0.0300	0.0319	25.8801
	Level 7	17.1min	1.0311	1.0755	1.1514	14.3807	1.0311	1.0755	1.1514	14.8221	1.0458	1.1052	1.2361	56.5456	1.0104	1.0473	1.1073	1.2454	0.0144	0.0210	0.0510	23.9181
	Level 8	34.2min	1.0188	1.0434	1.0999	8.3366	1.0188	1.0434	1.1002	8.4564	1.0272	1.0649	1.1491	32.0022	1.0074	1.0276	1.0755	1.1655	0.0078	0.0126	0.0298	13.3594
	Level 9	68.3min	1.0128	1.0282	1.0773	5.6416	1.0128	1.0284	1.0773	5.6395	1.0173	1.0438	1.0973	21.6681	1.0068	1.0226	1.0557	1.1243	0.0045	0.0080	0.0163	8.9958
	Level 1	6.9sec	1.5006	1.6863	1.9735	3.5936	1.5000	1.6863	1.9760	3.5897	1.5574	1.7947	2.4580	5.0000	1.4211	1.6118	1.7970	2.4735	0.0411	0.0618	0.2222	0.8992
	Level 2	13.7sec	1.2723	1.4564	1.6709	4.5902	1.2719	1.4561	1.6726	4.5964	1.3575	1.5301	2.0109	17.0000	1.1505	1.3608	1.5781	2.0687	0.0637	0.0604	0.1420	4.5687
	Level 3	27.4sec	1.1594	1.3246	1.4922	8.9773	1.1594	1.3245	1.4912	9.3683	1.2287	1.3869	1.5879	65.0000	1.0640	1.2319	1.4008	1.6012	0.0516	0.0445	0.0638	19.8018
60	**Level 4**	54.8sec	1.0997	1.2086	1.3417	13.8713	1.0997	1.2081	1.3414	14.0920	1.1550	1.2549	1.4571	105.0907	1.0303	1.1726	1.2579	1.4729	0.0384	0.0302	0.0773	32.6123
days	**Level 5**	1.8min	1.0639	1.1311	1.2182	10.7077	1.0637	1.1314	1.2179	10.4518	1.1061	1.1665	1.2727	53.6762	1.0170	1.1122	1.1669	1.3068	0.0275	0.0174	0.0430	19.2334
before	**Level 6**	3.7min	1.0394	1.0854	1.1475	9.5515	1.0394	1.0854	1.1471	9.8047	1.0712	1.1113	1.2040	60.0979	1.0138	1.0718	1.1140	1.2152	0.0188	0.0115	0.0297	19.4323
	Level 7	7.3min	1.0222	1.0504	1.0948	8.1854	1.0222	1.0504	1.0948	8.0267	1.0385	1.0623	1.1465	56.5456	1.0081	1.0425	1.0670	1.1506	0.0103	0.0074	0.0243	17.4805
	Level 8	14.6min	1.0129	1.0282	1.0566	4.7658	1.0129	1.0282	1.0565	4.8004	1.0201	1.0372	1.0823	32.0022	1.0044	1.0202	1.0400	1.0894	0.0055	0.0052	0.0175	9.7044
	Level 9	29.2min	1.0083	1.0174	1.0370	3.3488	1.0082	1.0175	1.0370	3.3703	1.0118	1.0226	1.0666	21.6681	1.0029	1.0124	1.0236	1.0787	0.0032	0.0041	0.0159	6.4567
	Level 1	4sec	1.5236	1.6632	1.8135	3.1422	1.5239	1.6633	1.8135	3.1383	1.6118	1.7133	1.9428	5.0000	1.4211	1.6148	1.7199	2.0622	0.0536	0.0331	0.0604	0.9812
	Level 2	8sec	1.2885	1.4242	1.5679	3.7216	1.2888	1.4243	1.5682	3.6973	1.3608	1.4719	1.6532	17.0000	1.1505	1.3680	1.4744	1.8232	0.0605	0.0353	0.0600	3.8926
	Level 3	15.9sec	1.1695	1.2811	1.4120	7.0675	1.1693	1.2808	1.4120	6.7657	1.2287	1.3170	1.5157	65.0000	1.0640	1.2319	1.3242	1.5315	0.0485	0.0264	0.0638	16.3275
3	**Level 4**	31.8sec	1.1070	1.1838	1.2687	10.0633	1.1070	1.1837	1.2687	9.8685	1.1504	1.2115	1.3344	105.0907	1.0303	1.1550	1.2186	1.3952	0.0367	0.0179	0.0371	26.8690
months	**Level 5**	1.1min	1.0678	1.1156	1.1752	7.4628	1.0678	1.1156	1.1754	7.3932	1.0972	1.1292	1.2309	53.6762	1.0170	1.1061	1.1307	1.2531	0.0241	0.0074	0.0294	16.0579
before	**Level 6**	2.1min	1.0413	1.0731	1.1148	6.7262	1.0410	1.0731	1.1146	6.9297	1.0658	1.0855	1.1473	60.0979	1.0138	1.0663	1.0877	1.1499	0.0152	0.0057	0.0217	16.1389
	Level 7	4.2min	1.0226	1.0426	1.0684	5.7817	1.0226	1.0426	1.0684	5.7245	1.0357	1.0488	1.0898	56.5456	1.0081	1.0364	1.0499	1.1052	0.0082	0.0035	0.0130	14.4150
	Level 8	8.5min	1.0130	1.0236	1.0390	3.6808	1.0129	1.0236	1.0391	3.5582	1.0190	1.0272	1.0505	32.0022	1.0044	1.0193	1.0276	1.0649	0.0043	0.0029	0.0067	7.9905
	Level 9	17min	1.0080	1.0143	1.0244	2.5817	1.0081	1.0143	1.0244	2.5971	1.0109	1.0173	1.0318	21.6681	1.0029	1.0115	1.0186	1.0380	0.0023	0.0021	0.0037	5.2991
	Level 1	2.2sec	1.5009	1.5792	1.6597	2.1222	1.5007	1.5792	1.6594	2.1236	1.5411	1.6178	1.7102	5.0000	1.4211	1.5424	1.6195	1.7111	0.0307	0.0247	0.0235	0.7372
	Level 2	4.5sec	1.2738	1.3565	1.4256	2.0650	1.2737	1.3564	1.4256	2.0734	1.3166	1.3902	1.4744	17.0000	1.1505	1.3185	1.3909	1.4749	0.0313	0.0216	0.0231	2.0475
	Level 3	8.9sec	1.1629	1.2220	1.2790	2.6951	1.1628	1.2221	1.2789	2.6638	1.1969	1.2505	1.3170	65.0000	1.0640	1.1972	1.2522	1.3185	0.0276	0.0163	0.0203	8.0298
1	**Level 4**	17.8sec	1.0988	1.1407	1.1840	3.2987	1.0988	1.1407	1.1840	3.2875	1.1221	1.1621	1.2120	105.0907	1.0303	1.1241	1.1623	1.2143	0.0201	0.0110	0.0158	13.1872
Year	**Level 5**	35.7sec	1.0606	1.0889	1.1168	2.6472	1.0605	1.0889	1.1168	2.6346	1.0770	1.1015	1.1341	53.6762	1.0170	1.0772	1.1022	1.1349	0.0136	0.0069	0.0094	8.0215
before	**Level 6**	1.2min	1.0358	1.0547	1.0731	2.4878	1.0357	1.0547	1.0731	2.4780	1.0460	1.0637	1.0854	60.0979	1.0129	1.0466	1.0639	1.0855	0.0081	0.0052	0.0065	8.0028
	Level 7	2.4min	1.0203	1.0320	1.0438	2.2263	1.0203	1.0320	1.0437	2.1614	1.0265	1.0376	1.0501	56.5456	1.0077	1.0265	1.0376	1.0501	0.0046	0.0032	0.0035	7.0799
	Level 8	4.8min	1.0117	1.0185	1.0257	1.6486	1.0117	1.0185	1.0256	1.6315	1.0154	1.0217	1.0299	32.0022	1.0044	1.0156	1.0217	1.0302	0.0027	0.0018	0.0021	3.9170
	Level 9	9.5min	1.0073	1.0116	1.0161	1.3925	1.0073	1.0116	1.0161	1.3945	1.0096	1.0136	1.0195	21.6681	1.0027	1.0097	1.0136	1.0195	0.0019	0.0012	0.0017	2.5865

Table A.32: EDM1 Other Results Table –Continued

EDM1 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16sec	0.2350	0.3956	0.5558	0.6700	0.2344	0.3955	0.5558	0.6709	0.2673	0.5290	0.5921	0.7046	0.2000	0.2683	0.5348	0.6266	0.0299	0.0860	0.0215	0.0294
	Level 2	32sec	0.2147	0.4637	0.6466	0.7934	0.2150	0.4650	0.6469	0.7928	0.3110	0.6115	0.6755	0.8704	0.0588	0.3790	0.6132	0.7288	0.1094	0.0872	0.0235	0.0565
	Level 3	1.1min	0.2646	0.5630	0.7172	0.8648	0.2672	0.5625	0.7165	0.8652	0.4657	0.6269	0.7400	0.9406	0.0154	0.4669	0.6838	0.8092	0.2033	0.0641	0.0240	0.0551
30	**Level 4**	2.1min	0.3038	0.6499	0.7913	0.8997	0.3055	0.6504	0.7913	0.8997	0.5248	0.6819	0.8259	0.9689	0.0097	0.5926	0.7622	0.8579	0.2572	0.0352	0.0262	0.0443
days	**Level 5**	4.3min	0.3774	0.7269	0.8434	0.9240	0.3735	0.7280	0.8434	0.9241	0.6217	0.7696	0.8777	0.9793	0.0189	0.6563	0.8145	0.8879	0.3208	0.0489	0.0290	0.0368
before	**Level 6**	8.5min	0.4251	0.7856	0.8760	0.9426	0.4214	0.7862	0.8763	0.9428	0.6964	0.8425	0.9126	0.9848	0.0166	0.7017	0.8460	0.9137	0.3605	0.0560	0.0308	0.0294
	Level 7	17.1min	0.4267	0.8076	0.9048	0.9589	0.4211	0.8070	0.9052	0.9585	0.7101	0.8687	0.9339	0.9855	0.0177	0.7173	0.8740	0.9403	0.3458	0.0649	0.0235	0.0198
	Level 8	34.2min	0.4317	0.8194	0.9271	0.9643	0.4366	0.8191	0.9270	0.9646	0.7454	0.8980	0.9356	0.9865	0.0312	0.7583	0.9043	0.9495	0.3334	0.0586	0.0134	0.0159
	Level 9	68.3min	0.4648	0.8007	0.9228	0.9614	0.4604	0.8010	0.9227	0.9615	0.7370	0.8636	0.9465	0.9844	0.0462	0.7412	0.8840	0.9475	0.3257	0.0468	0.0256	0.0151
	Level 1	6.9sec	0.2914	0.5088	0.5992	0.6690	0.2916	0.5084	0.5993	0.6689	0.3993	0.5540	0.6266	0.7046	0.2000	0.4084	0.5620	0.6469	0.0716	0.0514	0.0234	0.0179
	Level 2	13.7sec	0.3128	0.5890	0.6850	0.7895	0.3127	0.5896	0.6851	0.7893	0.4842	0.6459	0.7364	0.8704	0.0588	0.4984	0.6569	0.7370	0.1294	0.0536	0.0285	0.0383
	Level 3	27.4sec	0.3910	0.6576	0.7464	0.8620	0.3908	0.6575	0.7463	0.8623	0.5883	0.7017	0.7878	0.9406	0.0154	0.5956	0.7191	0.8092	0.1935	0.0401	0.0250	0.0403
60	**Level 4**	54.8sec	0.4550	0.7270	0.8131	0.9070	0.4571	0.7263	0.8132	0.9069	0.6627	0.7770	0.8420	0.9689	0.0097	0.6748	0.7806	0.8579	0.2379	0.0452	0.0205	0.0343
days	**Level 5**	1.8min	0.5235	0.7866	0.8630	0.9352	0.5224	0.7872	0.8627	0.9351	0.7504	0.8254	0.8927	0.9793	0.0189	0.7511	0.8274	0.8942	0.2680	0.0307	0.0254	0.0287
before	**Level 6**	3.7min	0.5645	0.8350	0.8983	0.9568	0.5640	0.8350	0.8982	0.9569	0.7729	0.8650	0.9161	0.9848	0.0166	0.7803	0.8652	0.9256	0.2861	0.0253	0.0188	0.0197
	Level 7	7.3min	0.5704	0.8695	0.9267	0.9708	0.5750	0.8697	0.9267	0.9709	0.7772	0.9019	0.9408	0.9920	0.0177	0.8360	0.9041	0.9503	0.2841	0.0192	0.0130	0.0135
	Level 8	14.6min	0.6006	0.8920	0.9439	0.9763	0.5963	0.8924	0.9439	0.9764	0.8143	0.9256	0.9555	0.9956	0.0312	0.8483	0.9340	0.9615	0.2814	0.0247	0.0080	0.0111
	Level 9	29.2min	0.6049	0.8855	0.9474	0.9754	0.6045	0.8854	0.9473	0.9754	0.8255	0.9350	0.9578	0.9971	0.0462	0.8280	0.9352	0.9596	0.2697	0.0344	0.0067	0.0127
	Level 1	4sec	0.3515	0.5509	0.6076	0.6606	0.3517	0.5510	0.6076	0.6607	0.5184	0.5835	0.6266	0.7046	0.2000	0.5185	0.5844	0.6276	0.1003	0.0184	0.0130	0.0217
	Level 2	8sec	0.3880	0.6395	0.7000	0.7809	0.3886	0.6396	0.7001	0.7808	0.5472	0.6682	0.7364	0.8704	0.0588	0.5965	0.6687	0.7366	0.1431	0.0233	0.0204	0.0355
	Level 3	15.9sec	0.4736	0.7056	0.7750	0.8558	0.4739	0.7053	0.7749	0.8562	0.6333	0.7381	0.8092	0.9406	0.0154	0.6652	0.7400	0.8143	0.1867	0.0254	0.0198	0.0356
3	**Level 4**	31.8sec	0.5352	0.7747	0.8354	0.9021	0.5402	0.7748	0.8353	0.9021	0.7123	0.8058	0.8605	0.9689	0.0097	0.7290	0.8068	0.8649	0.2154	0.0231	0.0188	0.0313
months	**Level 5**	1.1min	0.6082	0.8241	0.8861	0.9340	0.6085	0.8241	0.8861	0.9337	0.7696	0.8522	0.8991	0.9793	0.0189	0.7823	0.8578	0.9004	0.2374	0.0189	0.0130	0.0243
before	**Level 6**	2.1min	0.6571	0.8694	0.9189	0.9568	0.6574	0.8693	0.9189	0.9570	0.8355	0.9015	0.9320	0.9848	0.0166	0.8425	0.9029	0.9403	0.2544	0.0185	0.0099	0.0158
	Level 7	4.2min	0.6779	0.9040	0.9428	0.9726	0.6794	0.9038	0.9428	0.9726	0.8672	0.9289	0.9539	0.9920	0.0177	0.8687	0.9300	0.9592	0.2604	0.0183	0.0065	0.0098
	Level 8	8.5min	0.6982	0.9274	0.9570	0.9795	0.7004	0.9274	0.9570	0.9796	0.8915	0.9463	0.9627	0.9956	0.0312	0.8980	0.9481	0.9679	0.2585	0.0147	0.0049	0.0073
	Level 9	17min	0.7015	0.9302	0.9594	0.9804	0.7012	0.9303	0.9594	0.9805	0.8840	0.9485	0.9661	0.9971	0.0462	0.8955	0.9508	0.9662	0.2459	0.0181	0.0050	0.0081
	Level 1	2.2sec	0.5004	0.6013	0.6313	0.6651	0.5007	0.6013	0.6313	0.6651	0.5845	0.6142	0.6466	0.7046	0.2000	0.5852	0.6143	0.6469	0.1032	0.0082	0.0098	0.0142
	Level 2	4.5sec	0.5691	0.6943	0.7326	0.7826	0.5684	0.6944	0.7326	0.7826	0.6687	0.7116	0.7559	0.8704	0.0588	0.6720	0.7129	0.7559	0.1289	0.0118	0.0123	0.0201
	Level 3	8.9sec	0.6442	0.7718	0.8103	0.8553	0.6436	0.7718	0.8105	0.8552	0.7499	0.7909	0.8299	0.9406	0.0154	0.7500	0.7910	0.8304	0.1373	0.0135	0.0120	0.0222
1	**Level 4**	17.8sec	0.7124	0.8314	0.8671	0.9039	0.7132	0.8314	0.8671	0.9041	0.8080	0.8521	0.8826	0.9689	0.0097	0.8085	0.8524	0.8830	0.1479	0.0129	0.0093	0.0181
Year	**Level 5**	35.7sec	0.7715	0.8809	0.9065	0.9366	0.7729	0.8809	0.9065	0.9366	0.8583	0.8961	0.9188	0.9793	0.0189	0.8594	0.8961	0.9192	0.1520	0.0101	0.0073	0.0138
before	**Level 6**	1.2min	0.8185	0.9150	0.9355	0.9581	0.8189	0.9150	0.9355	0.9580	0.8999	0.9257	0.9446	0.9848	0.0166	0.9006	0.9262	0.9447	0.1570	0.0070	0.0060	0.0099
	Level 7	2.4min	0.8489	0.9394	0.9550	0.9722	0.8498	0.9394	0.9550	0.9722	0.9267	0.9470	0.9630	0.9920	0.0177	0.9273	0.9471	0.9631	0.1620	0.0056	0.0049	0.0065
	Level 8	4.8min	0.8712	0.9545	0.9666	0.9800	0.8716	0.9545	0.9666	0.9799	0.9451	0.9613	0.9723	0.9956	0.0312	0.9454	0.9615	0.9728	0.1612	0.0048	0.0036	0.0047
	Level 9	9.5min	0.8743	0.9584	0.9700	0.9822	0.8749	0.9584	0.9701	0.9822	0.9482	0.9652	0.9757	0.9971	0.0462	0.9484	0.9652	0.9758	0.1575	0.0046	0.0032	0.0043

Table A.33: EDM2 Other Results Table

EDM2 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	20.1sec	1.5544	1.7085	1.9875	3.7821	1.5532	1.7085	1.9852	3.8127	1.6483	1.8262	2.1783	5.0000	1.3829	1.6485	1.8349	2.2187	0.1213	0.0716	0.1446	1.3780
	Level 2	40.1sec	1.3099	1.5264	1.9097	6.3996	1.3102	1.5279	1.9121	6.5396	1.3702	1.6902	2.1418	17.0000	1.2604	1.3901	1.7418	2.2972	0.0472	0.1374	0.1714	7.0550
	Level 3	1.3min	1.2432	1.3407	1.7491	18.3884	1.2424	1.3405	1.7471	17.9975	1.2721	1.4807	1.8360	65.0000	1.1940	1.2764	1.6612	1.8746	0.0341	0.0849	0.0743	31.3369
30	**Level 4**	2.7min	1.1715	1.2306	1.5963	64.8732	1.1726	1.2319	1.5981	65.7655	1.2004	1.3085	1.6802	257.0000	1.1218	1.2089	1.4704	1.8478	0.0347	0.0429	0.0896	127.4898
days	**Level 5**	5.3min	1.1146	1.1588	1.4715	130.0800	1.1145	1.1593	1.4697	129.5685	1.1296	1.2143	1.6316	513.0000	1.0820	1.1366	1.2997	1.6609	0.0220	0.0317	0.1515	255.6210
before	**Level 6**	10.7min	1.0721	1.1156	1.3313	246.6734	1.0723	1.1155	1.3311	257.4183	1.0815	1.1638	1.4700	1025.0000	1.0521	1.0919	1.2019	1.4734	0.0137	0.0289	0.1325	511.7211
	Level 7	21.4min	1.0467	1.0885	1.2272	502.5585	1.0465	1.0884	1.2262	513.3079	1.0615	1.1209	1.3335	2049.0000	1.0309	1.0660	1.1385	1.3553	0.0129	0.0220	0.0913	1023.7948
	Level 8	42.8min	1.0326	1.0703	1.1653	1037.5121	1.0326	1.0701	1.1655	1025.2252	1.0440	1.0971	1.2467	4097.0000	1.0238	1.0480	1.0973	1.2483	0.0090	0.0219	0.0700	2047.8498
	Level 9	85.5min	1.0258	1.0559	1.1474	2141.3557	1.0258	1.0557	1.1475	2049.1985	1.0309	1.0824	1.1934	8193.0000	1.0224	1.0378	1.1130	1.2425	0.0037	0.0190	0.0364	4095.8677
	Level 1	8.7sec	1.5375	1.6711	1.7859	2.7690	1.5388	1.6709	1.7851	2.7591	1.6311	1.7104	1.8527	5.0000	1.3829	1.6483	1.7145	1.9291	0.0759	0.0219	0.0566	1.2123
	Level 2	17.3sec	1.3168	1.4342	1.6023	3.8292	1.3163	1.4342	1.6018	3.8317	1.3870	1.4627	1.7180	17.0000	1.2604	1.3901	1.4732	1.7418	0.0467	0.0226	0.0930	4.6957
	Level 3	34.7sec	1.2239	1.2837	1.4379	8.5509	1.2241	1.2837	1.4367	8.3697	1.2582	1.3068	1.5803	65.0000	1.1609	1.2654	1.3584	1.6612	0.0347	0.0147	0.0767	19.9019
60	**Level 4**	1.2min	1.1486	1.2026	1.3116	27.8080	1.1487	1.2028	1.3115	27.3205	1.1772	1.2264	1.4212	257.0000	1.1153	1.1783	1.2409	1.4704	0.0254	0.0160	0.0638	80.7015
days	**Level 5**	2.3min	1.0977	1.1316	1.2132	53.1774	1.0974	1.1315	1.2133	52.7154	1.1158	1.1488	1.2845	513.0000	1.0705	1.1211	1.1563	1.2997	0.0161	0.0091	0.0417	161.7276
before	**Level 6**	4.6min	1.0607	1.0872	1.1477	105.0926	1.0606	1.0874	1.1477	103.7620	1.0745	1.1052	1.1861	1025.0000	1.0389	1.0755	1.1178	1.2019	0.0118	0.0108	0.0257	323.6901
	Level 7	9.2min	1.0374	1.0587	1.1061	200.5239	1.0374	1.0588	1.1060	206.0546	1.0475	1.0712	1.1385	2049.0000	1.0203	1.0489	1.0816	1.1635	0.0099	0.0089	0.0207	647.5450
	Level 8	18.5min	1.0253	1.0410	1.0792	417.3408	1.0254	1.0410	1.0793	410.7890	1.0335	1.0484	1.0973	4097.0000	1.0112	1.0347	1.0531	1.1179	0.0082	0.0054	0.0178	1295.2025
	Level 9	37min	1.0208	1.0349	1.0684	813.8130	1.0208	1.0349	1.0683	820.3668	1.0271	1.0408	1.0970	8193.0000	1.0087	1.0307	1.0421	1.1130	0.0066	0.0039	0.0193	2590.4792
	Level 1	4.8sec	1.5055	1.6375	1.7451	2.4755	1.5049	1.6374	1.7448	2.4712	1.5718	1.6698	1.8321	5.0000	1.3829	1.5930	1.6704	1.8349	0.0489	0.0228	0.0599	1.0603
	Level 2	9.7sec	1.3031	1.4156	1.5240	3.0677	1.3035	1.4154	1.5237	3.1251	1.3649	1.4452	1.6602	17.0000	1.2374	1.3702	1.4509	1.6754	0.0386	0.0254	0.0678	3.9045
	Level 3	19.3sec	1.2054	1.2734	1.3835	6.1295	1.2053	1.2735	1.3840	6.0960	1.2440	1.2993	1.4807	65.0000	1.1455	1.2453	1.3058	1.5022	0.0293	0.0180	0.0603	16.3005
3	**Level 4**	38.7sec	1.1311	1.1899	1.2850	18.8309	1.1311	1.1899	1.2846	18.6945	1.1577	1.2137	1.3932	257.0000	1.0874	1.1619	1.2163	1.4065	0.0185	0.0168	0.0574	65.9258
months	**Level 5**	1.3min	1.0832	1.1226	1.1908	34.6962	1.0832	1.1227	1.1909	35.5813	1.1042	1.1366	1.2461	513.0000	1.0633	1.1047	1.1384	1.2845	0.0127	0.0103	0.0379	132.0740
before	**Level 6**	2.6min	1.0501	1.0788	1.1288	71.5546	1.0500	1.0787	1.1289	69.5753	1.0631	1.0932	1.1839	1025.0000	1.0366	1.0650	1.0971	1.1840	0.0081	0.0085	0.0255	264.3103
	Level 7	5.2min	1.0307	1.0510	1.0886	141.4346	1.0306	1.0510	1.0885	137.7488	1.0408	1.0650	1.1209	2049.0000	1.0203	1.0412	1.0659	1.1271	0.0069	0.0080	0.0200	528.7317
	Level 8	10.3min	1.0196	1.0351	1.0622	267.6727	1.0196	1.0351	1.0622	274.2261	1.0254	1.0440	1.0881	4097.0000	1.0112	1.0274	1.0441	1.0968	0.0048	0.0047	0.0160	1057.5385
	Level 9	20.6min	1.0153	1.0285	1.0519	531.9827	1.0152	1.0285	1.0521	547.2741	1.0224	1.0364	1.0732	8193.0000	1.0087	1.0227	1.0364	1.0786	0.0041	0.0043	0.0131	2115.1264
	Level 1	3.1sec	1.4856	1.5665	1.6476	1.9869	1.4855	1.5665	1.6477	1.9813	1.5337	1.6051	1.6844	5.0000	1.3829	1.5341	1.6055	1.6875	0.0352	0.0209	0.0230	0.6475
	Level 2	6.2sec	1.2674	1.3455	1.4224	1.9496	1.2675	1.3456	1.4223	1.9612	1.3172	1.3734	1.4652	17.0000	1.1994	1.3176	1.3737	1.4697	0.0360	0.0175	0.0264	1.9599
	Level 3	12.4sec	1.1596	1.2234	1.2850	2.5352	1.1594	1.2234	1.2851	2.5189	1.1999	1.2506	1.3333	65.0000	1.0987	1.1999	1.2527	1.3335	0.0277	0.0158	0.0244	7.9393
1	**Level 4**	24.9sec	1.0980	1.1452	1.1943	5.3116	1.0979	1.1453	1.1943	5.3742	1.1234	1.1655	1.2284	257.0000	1.0513	1.1243	1.1658	1.2296	0.0185	0.0112	0.0188	31.9532
Year	**Level 5**	49.8sec	1.0622	1.0952	1.1298	9.2597	1.0623	1.0952	1.1299	9.2593	1.0805	1.1094	1.1517	513.0000	1.0293	1.0806	1.1100	1.1522	0.0127	0.0087	0.0127	63.9673
before	**Level 6**	1.7min	1.0395	1.0615	1.0853	16.7922	1.0395	1.0615	1.0854	17.1761	1.0505	1.0731	1.1033	1025.0000	1.0153	1.0512	1.0732	1.1035	0.0085	0.0062	0.0089	127.9777
	Level 7	3.3min	1.0245	1.0393	1.0547	33.1828	1.0245	1.0393	1.0547	33.1186	1.0326	1.0462	1.0670	2049.0000	1.0082	1.0326	1.0462	1.0672	0.0055	0.0038	0.0062	255.9850
	Level 8	6.6min	1.0157	1.0254	1.0357	66.4266	1.0157	1.0254	1.0357	65.0830	1.0210	1.0302	1.0440	4097.0000	1.0050	1.0212	1.0302	1.0441	0.0038	0.0026	0.0038	511.9895
	Level 9	13.3min	1.0117	1.0193	1.0272	130.2209	1.0117	1.0193	1.0273	129.0689	1.0155	1.0225	1.0326	8193.0000	1.0036	1.0156	1.0227	1.0327	0.0028	0.0021	0.0030	1023.9913

Table A.33: EDM2 Other Results Table –Continued

EDM2 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	19.6sec	1.5482	1.6824	1.9414	3.6608	1.5448	1.6824	1.9387	3.6582	1.6457	1.7099	2.0725	5.0000	1.3901	1.6563	1.7911	2.2617	0.1113	0.0247	0.1283	1.2012
	Level 2	39.3sec	1.3255	1.4397	1.7950	6.0293	1.3255	1.4405	1.7951	6.1994	1.3798	1.5431	1.8677	17.0000	1.2735	1.3832	1.6793	1.9930	0.0532	0.0639	0.0862	7.2299
	Level 3	1.3min	1.2474	1.3090	1.5554	17.0308	1.2469	1.3090	1.5553	17.1463	1.2677	1.3482	1.7122	62.4223	1.1966	1.2842	1.4718	1.7273	0.0340	0.0297	0.1071	30.1849
30	**Level 4**	2.6min	1.1763	1.2152	1.4078	59.4946	1.1756	1.2154	1.4064	59.6078	1.1973	1.2373	1.5165	232.8339	1.1258	1.2007	1.3049	1.6512	0.0337	0.0135	0.0907	115.4843
days	**Level 5**	5.2min	1.1158	1.1516	1.2821	105.0569	1.1155	1.1509	1.2814	105.2669	1.1284	1.2004	1.3933	416.0132	1.0949	1.1336	1.2068	1.4729	0.0146	0.0281	0.0802	207.1643
before	**Level 6**	10.5min	1.0746	1.1052	1.2071	155.3736	1.0747	1.1049	1.2073	158.6713	1.0809	1.1451	1.2695	629.9641	1.0630	1.0881	1.1741	1.3750	0.0084	0.0236	0.0427	314.1952
	Level 7	20.9min	1.0489	1.0831	1.1600	130.6862	1.0491	1.0832	1.1603	135.3744	1.0642	1.1080	1.2110	537.1661	1.0393	1.0654	1.1208	1.3023	0.0114	0.0206	0.0379	267.8612
	Level 8	41.9min	1.0353	1.0751	1.1560	149.2518	1.0354	1.0751	1.1559	145.6462	1.0478	1.1070	1.2110	578.4097	1.0268	1.0539	1.1204	1.2920	0.0103	0.0235	0.0388	288.5090
	Level 9	83.8min	1.0340	1.0801	1.2050	164.2957	1.0340	1.0795	1.2050	166.2736	1.0477	1.1024	1.2877	660.8968	1.0252	1.0478	1.1723	1.3416	0.0104	0.0243	0.0554	329.7488
	Level 1	8.6sec	1.5418	1.6639	1.7526	2.6891	1.5414	1.6643	1.7536	2.6890	1.6351	1.6884	1.8702	5.0000	1.3901	1.6440	1.7046	1.8763	0.0791	0.0156	0.0593	1.0916
	Level 2	17.2sec	1.3221	1.4187	1.5550	3.6521	1.3224	1.4187	1.5540	3.6030	1.3798	1.4474	1.7095	17.0000	1.2699	1.3800	1.4585	1.7351	0.0501	0.0259	0.0987	4.7369
	Level 3	34.4sec	1.2071	1.2791	1.3914	7.7910	1.2067	1.2791	1.3927	7.8695	1.2512	1.3044	1.4718	62.4223	1.1299	1.2558	1.3279	1.5124	0.0399	0.0145	0.0493	19.1696
60	**Level 4**	1.1min	1.1348	1.1934	1.2864	24.9308	1.1348	1.1933	1.2861	24.7464	1.1678	1.2115	1.3826	232.8339	1.0725	1.1719	1.2132	1.3967	0.0281	0.0125	0.0646	73.1148
days	**Level 5**	2.3min	1.0864	1.1241	1.1963	42.0406	1.0864	1.1241	1.1966	42.9131	1.1086	1.1404	1.2561	416.0132	1.0467	1.1108	1.1409	1.2724	0.0195	0.0100	0.0473	131.0941
before	**Level 6**	4.6min	1.0529	1.0795	1.1367	66.7312	1.0531	1.0796	1.1369	64.2134	1.0658	1.0917	1.1820	629.9641	1.0320	1.0662	1.0927	1.1862	0.0122	0.0091	0.0339	198.7847
	Level 7	9.2min	1.0340	1.0536	1.0999	55.5535	1.0340	1.0536	1.1001	54.8580	1.0417	1.0654	1.1372	537.1661	1.0175	1.0436	1.0679	1.1470	0.0077	0.0084	0.0234	169.4659
	Level 8	18.3min	1.0244	1.0423	1.0836	59.1217	1.0245	1.0423	1.0837	58.9495	1.0310	1.0534	1.1154	578.4097	1.0116	1.0345	1.0539	1.1204	0.0056	0.0068	0.0223	182.5197
	Level 9	36.6min	1.0228	1.0401	1.0826	64.8431	1.0229	1.0402	1.0823	67.2185	1.0282	1.0506	1.1024	660.8968	1.0116	1.0286	1.0601	1.1210	0.0058	0.0081	0.0152	208.5973
	Level 1	4.8sec	1.5047	1.6384	1.7192	2.4202	1.5047	1.6385	1.7194	2.4321	1.5817	1.6747	1.7911	5.0000	1.3901	1.6000	1.6813	1.7919	0.0494	0.0236	0.0305	0.9595
	Level 2	9.6sec	1.2985	1.3991	1.4919	3.0218	1.2982	1.3994	1.4922	2.9750	1.3564	1.4353	1.5698	17.0000	1.2419	1.3621	1.4381	1.6526	0.0344	0.0236	0.0401	3.9080
	Level 3	19.2sec	1.1897	1.2629	1.3562	5.7918	1.1896	1.2628	1.3567	5.7480	1.2321	1.2866	1.4327	62.4223	1.1299	1.2330	1.2873	1.4393	0.0288	0.0180	0.0501	15.6805
3	**Level 4**	38.5sec	1.1201	1.1785	1.2552	16.7273	1.1204	1.1785	1.2556	16.9763	1.1451	1.1966	1.3654	232.8339	1.0725	1.1510	1.1973	1.3689	0.0202	0.0143	0.0537	59.7155
months	**Level 5**	1.3min	1.0761	1.1130	1.1768	28.5985	1.0762	1.1130	1.1770	29.0681	1.0905	1.1336	1.2502	416.0132	1.0467	1.0949	1.1342	1.2561	0.0144	0.0112	0.0405	107.0453
before	**Level 6**	2.6min	1.0466	1.0718	1.1217	42.6657	1.0466	1.0719	1.1217	43.2496	1.0573	1.0897	1.1648	629.9641	1.0320	1.0576	1.0917	1.1741	0.0095	0.0101	0.0278	162.3098
	Level 7	5.1min	1.0296	1.0475	1.0869	37.2302	1.0295	1.0474	1.0869	36.9806	1.0382	1.0642	1.1121	537.1661	1.0175	1.0384	1.0654	1.1208	0.0062	0.0084	0.0179	138.3723
	Level 8	10.3min	1.0207	1.0357	1.0687	41.0276	1.0207	1.0358	1.0686	39.6808	1.0268	1.0490	1.1013	578.4097	1.0116	1.0270	1.0501	1.1070	0.0043	0.0071	0.0175	149.0349
	Level 9	20.5min	1.0181	1.0328	1.0646	48.0834	1.0181	1.0328	1.0646	45.1817	1.0243	1.0436	1.0894	660.8968	1.0116	1.0249	1.0450	1.0987	0.0044	0.0067	0.0174	170.3325
	Level 1	3.1sec	1.4826	1.5645	1.6468	1.9654	1.4828	1.5645	1.6468	1.9637	1.5297	1.6041	1.6866	5.0000	1.3901	1.5322	1.6060	1.6870	0.0344	0.0206	0.0248	0.5824
	Level 2	6.2sec	1.2643	1.3412	1.4147	1.9500	1.2640	1.3412	1.4149	1.9478	1.3115	1.3741	1.4601	17.0000	1.1871	1.3122	1.3748	1.4602	0.0342	0.0181	0.0256	1.9701
	Level 3	12.4sec	1.1558	1.2154	1.2773	2.5484	1.1559	1.2154	1.2774	2.5198	1.1921	1.2422	1.3229	62.4223	1.1011	1.1924	1.2442	1.3241	0.0262	0.0152	0.0220	7.6530
1	**Level 4**	24.7sec	1.0947	1.1377	1.1862	5.1655	1.0949	1.1377	1.1863	5.1576	1.1207	1.1585	1.2138	232.8339	1.0572	1.1216	1.1587	1.2143	0.0175	0.0113	0.0158	28.9580
Year	**Level 5**	49.4sec	1.0588	1.0898	1.1230	7.8866	1.0589	1.0897	1.1230	8.0977	1.0757	1.1038	1.1412	416.0132	1.0305	1.0773	1.1044	1.1415	0.0114	0.0075	0.0122	51.8869
before	**Level 6**	1.6min	1.0372	1.0583	1.0812	11.2834	1.0372	1.0582	1.0812	11.6054	1.0484	1.0689	1.0966	629.9641	1.0145	1.0489	1.0691	1.0966	0.0077	0.0051	0.0088	78.6717
	Level 7	3.3min	1.0241	1.0382	1.0542	10.1247	1.0241	1.0382	1.0542	10.1039	1.0323	1.0445	1.0654	537.1661	1.0079	1.0324	1.0448	1.0655	0.0054	0.0034	0.0064	67.1033
	Level 8	6.6min	1.0167	1.0267	1.0385	11.1922	1.0167	1.0267	1.0385	11.3179	1.0222	1.0319	1.0488	578.4097	1.0050	1.0222	1.0323	1.0490	0.0039	0.0026	0.0046	72.6520
	Level 9	13.2min	1.0139	1.0227	1.0332	13.3510	1.0139	1.0227	1.0332	13.0528	1.0187	1.0268	1.0425	660.8968	1.0039	1.0187	1.0271	1.0428	0.0032	0.0023	0.0044	83.3228

Table A.33: EDM2 Other Results Table –Continued

EDM2	Bid Ask	Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	19.8sec	1.5528	1.6785	1.9304	3.7296	1.5503	1.6788	1.9311	3.7295	1.6403	1.7423	2.0595	5.0000	1.3851	1.6463	1.8102	2.2175	0.1179	0.0426	0.1194	1.2893
	Level 2	39.7sec	1.3102	1.4581	1.8019	6.1752	1.3109	1.4569	1.8020	6.3132	1.3714	1.5831	1.8697	17.0000	1.2646	1.3750	1.6817	2.0576	0.0466	0.0776	0.0836	7.1726
	Level 3	1.3min	1.2289	1.3097	1.5649	17.1949	1.2287	1.3096	1.5648	17.2245	1.2581	1.3481	1.7158	62.5773	1.1908	1.2770	1.4598	1.7247	0.0298	0.0357	0.1079	30.2364
30	**Level 4**	2.6min	1.1596	1.2109	1.3835	60.3066	1.1596	1.2107	1.3822	60.7761	1.1805	1.2684	1.4273	237.6183	1.1163	1.1924	1.2853	1.6148	0.0300	0.0326	0.0653	117.8951
days	**Level 5**	5.3min	1.1004	1.1356	1.2572	108.9505	1.1010	1.1354	1.2581	108.8434	1.1126	1.1834	1.3215	430.6278	1.0787	1.1151	1.1878	1.4198	0.0156	0.0275	0.0547	214.5229
before	**Level 6**	10.6min	1.0615	1.0874	1.1793	175.2435	1.0613	1.0875	1.1798	172.5059	1.0698	1.1254	1.2558	685.8202	1.0476	1.0730	1.1348	1.2628	0.0099	0.0216	0.0526	342.2095
	Level 7	21.2min	1.0336	1.0566	1.1155	165.6484	1.0337	1.0564	1.1157	169.1746	1.0383	1.0770	1.1477	672.8991	1.0254	1.0479	1.0932	1.1938	0.0057	0.0117	0.0252	335.8163
	Level 8	42.3min	-159.1563	1.0316	1.0641	1.1445	-154.0394	1.0317	1.0639	1.1448	1.0230	1.0385	1.0846	1.1987	-619.2145	1.0240	1.0431	1.0904	310.1167	0.0054	0.0182	0.0450
	Level 9	84.7min	-428.1796	1.0217	1.0439	1.0963	-412.4674	1.0217	1.0440	1.0962	1.0134	1.0258	1.0633	1.1057	-1652.9054	1.0176	1.0271	1.0899	826.9586	0.0030	0.0172	0.0069
	Level 1	8.6sec	1.5315	1.6520	1.7590	2.7156	1.5301	1.6519	1.7590	2.7102	1.6297	1.6835	1.8511	5.0000	1.3851	1.6368	1.7033	1.8523	0.0768	0.0160	0.0527	1.1569
	Level 2	17.3sec	1.3004	1.4206	1.5461	3.6371	1.3004	1.4207	1.5468	3.6502	1.3744	1.4532	1.6637	17.0000	1.2316	1.3750	1.4537	1.6817	0.0461	0.0241	0.0881	4.7350
	Level 3	34.5sec	1.1998	1.2649	1.3672	8.0078	1.1995	1.2650	1.3671	7.9131	1.2422	1.2964	1.4371	62.5773	1.1351	1.2456	1.3004	1.4598	0.0372	0.0157	0.0460	19.2094
60	**Level 4**	1.2min	1.1274	1.1782	1.2467	24.8931	1.1276	1.1783	1.2464	25.2021	1.1591	1.1954	1.2853	237.6183	1.0745	1.1623	1.2038	1.3657	0.0233	0.0124	0.0320	74.6358
days	**Level 5**	2.3min	1.0772	1.1111	1.1632	44.6661	1.0772	1.1112	1.1635	44.3204	1.0939	1.1212	1.2191	430.6278	1.0452	1.1015	1.1220	1.2269	0.0145	0.0060	0.0324	135.7346
before	**Level 6**	4.6min	1.0454	1.0667	1.1054	68.4925	1.0455	1.0667	1.1052	69.7245	1.0577	1.0747	1.1354	685.8202	1.0282	1.0589	1.0769	1.1609	0.0103	0.0062	0.0230	216.4740
	Level 7	9.2min	1.0259	1.0384	1.0666	69.8222	1.0260	1.0384	1.0665	68.3445	1.0353	1.0479	1.0932	672.8991	1.0163	1.0356	1.0512	1.0983	0.0073	0.0036	0.0148	212.4188
	Level 8	18.4min	-58.2798	1.0225	1.0380	1.1011	-61.0088	1.0225	1.0379	1.1005	1.0190	1.0240	1.0540	1.1987	-619.2145	1.0198	1.0294	1.0559	196.1335	0.0012	0.0072	0.0468
	Level 9	36.8min	-167.6907	1.0158	1.0246	1.0683	-164.3829	1.0158	1.0246	1.0680	1.0110	1.0190	1.0321	1.1057	-1652.9054	1.0121	1.0196	1.0384	523.0135	0.0024	0.0041	0.0254
	Level 1	4.8sec	1.4963	1.6277	1.7181	2.4258	1.4961	1.6276	1.7183	2.4314	1.5734	1.6546	1.7917	5.0000	1.3851	1.5803	1.6726	1.8102	0.0452	0.0211	0.0345	1.0153
	Level 2	9.6sec	1.2872	1.3951	1.4820	2.9381	1.2875	1.3949	1.4826	2.9862	1.3339	1.4257	1.5689	17.0000	1.2316	1.3351	1.4306	1.5831	0.0317	0.0272	0.0451	3.9190
	Level 3	19.3sec	1.1856	1.2509	1.3326	5.7877	1.1854	1.2510	1.3322	5.7564	1.2230	1.2760	1.3910	62.5773	1.1351	1.2233	1.2770	1.4037	0.0264	0.0158	0.0394	15.7221
3	**Level 4**	38.6sec	1.1164	1.1648	1.2315	17.2187	1.1163	1.1646	1.2317	17.2460	1.1386	1.1805	1.2853	237.6183	1.0745	1.1399	1.1807	1.2921	0.0185	0.0140	0.0358	60.9646
months	**Level 5**	1.3min	1.0688	1.1017	1.1484	29.8780	1.0690	1.1018	1.1488	29.9636	1.0833	1.1143	1.1880	430.6278	1.0452	1.0864	1.1151	1.2191	0.0112	0.0097	0.0277	110.8405
before	**Level 6**	2.6min	1.0393	1.0612	1.0933	46.1376	1.0393	1.0612	1.0931	46.8687	1.0525	1.0730	1.1305	685.8202	1.0282	1.0527	1.0745	1.1348	0.0075	0.0070	0.0194	176.7606
	Level 7	5.1min	1.0218	1.0354	1.0569	47.9873	1.0218	1.0354	1.0570	45.9272	1.0296	1.0393	1.0776	672.8991	1.0163	1.0298	1.0459	1.0802	0.0043	0.0032	0.0106	173.4466
	Level 8	10.3min	-40.0466	1.0204	1.0330	1.0833	-40.3360	1.0204	1.0330	1.0832	1.0157	1.0234	1.0428	1.1987	-619.2145	1.0160	1.0240	1.0431	160.1419	0.0027	0.0049	0.0454
	Level 9	20.6min	-110.5763	1.0132	1.0209	1.0551	-109.2531	1.0132	1.0209	1.0550	1.0094	1.0175	1.0249	1.1057	-1652.9054	1.0095	1.0176	1.0258	427.0385	0.0025	0.0023	0.0279
	Level 1	3.1sec	1.4797	1.5595	1.6393	1.9518	1.4794	1.5595	1.6394	1.9518	1.5222	1.5980	1.6775	5.0000	1.3851	1.5255	1.6006	1.6777	0.0338	0.0198	0.0230	0.6182
	Level 2	6.2sec	1.2584	1.3335	1.4067	1.9034	1.2585	1.3335	1.4068	1.8990	1.3081	1.3649	1.4454	17.0000	1.1749	1.3104	1.3651	1.4466	0.0345	0.0170	0.0249	1.9503
	Level 3	12.4sec	1.1494	1.2072	1.2636	2.3724	1.1494	1.2072	1.2638	2.4062	1.1837	1.2304	1.3034	62.5773	1.0888	1.1839	1.2306	1.3076	0.0256	0.0145	0.0217	7.6436
1	**Level 4**	24.8sec	1.0878	1.1288	1.1714	5.0120	1.0877	1.1288	1.1715	5.0005	1.1124	1.1467	1.1982	237.6183	1.0481	1.1130	1.1467	1.1986	0.0162	0.0101	0.0153	29.5392
Year	**Level 5**	49.6sec	1.0522	1.0796	1.1087	8.0871	1.0522	1.0796	1.1088	7.9122	1.0671	1.0921	1.1227	430.6278	1.0259	1.0673	1.0924	1.1238	0.0102	0.0073	0.0095	53.6783
before	**Level 6**	1.7min	1.0308	1.0484	1.0673	11.7426	1.0309	1.0483	1.0673	11.8282	1.0402	1.0563	1.0781	685.8202	1.0139	1.0402	1.0574	1.0789	0.0063	0.0049	0.0060	85.5863
	Level 7	3.3min	1.0177	1.0288	1.0397	11.5659	1.0177	1.0288	1.0397	11.5764	1.0234	1.0331	1.0479	672.8991	1.0069	1.0236	1.0332	1.0482	0.0037	0.0028	0.0041	83.9775
	Level 8	6.6min	-8.6324	1.0165	1.0230	1.0465	-8.6809	1.0164	1.0230	1.0464	1.0134	1.0191	1.0276	1.1987	-619.2145	1.0134	1.0192	1.0278	77.5281	0.0016	0.0025	0.0303
	Level 9	13.2min	-24.5520	1.0101	1.0144	1.0295	-24.8362	1.0101	1.0144	1.0295	1.0085	1.0120	1.0176	1.1057	-1652.9054	1.0085	1.0121	1.0178	206.7389	0.0010	0.0016	0.0196

Table A.33: EDM2 Other Results Table –Continued

EDM2 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	19.8sec	0.2998	0.5310	0.5971	0.6503	0.2991	0.5310	0.5969	0.6500	0.4421	0.5848	0.6037	0.7194	0.2000	0.4825	0.5859	0.6077	0.1072	0.0424	0.0079	0.0491
	Level 2	39.7sec	0.3203	0.5756	0.7073	0.7550	0.3202	0.5761	0.7071	0.7553	0.5018	0.6481	0.7229	0.7853	0.0588	0.5354	0.6909	0.7247	0.1964	0.0468	0.0163	0.0303
	Level 3	1.3min	0.3766	0.6638	0.7700	0.8025	0.3742	0.6645	0.7699	0.8024	0.5790	0.7418	0.7787	0.8357	0.0160	0.5840	0.7499	0.7889	0.2463	0.0565	0.0135	0.0225
30	**Level 4**	2.6min	0.4146	0.7320	0.8265	0.8510	0.4089	0.7322	0.8265	0.8512	0.6056	0.8082	0.8328	0.8883	0.0043	0.6594	0.8217	0.8352	0.2769	0.0581	0.0046	0.0250
days	**Level 5**	5.3min	0.4497	0.7916	0.8784	0.8966	0.4497	0.7927	0.8783	0.8966	0.6789	0.8331	0.8822	0.9134	0.0024	0.7177	0.8725	0.8862	0.3038	0.0468	0.0045	0.0118
before	**Level 6**	10.6min	0.4809	0.8382	0.9132	0.9304	0.4836	0.8379	0.9134	0.9305	0.7272	0.8733	0.9190	0.9407	0.0016	0.7877	0.9033	0.9251	0.3298	0.0316	0.0069	0.0073
	Level 7	21.2min	0.5279	0.8705	0.9287	0.9535	0.5255	0.8705	0.9286	0.9533	0.7678	0.9025	0.9386	0.9622	0.0019	0.8258	0.9065	0.9397	0.3560	0.0300	0.0149	0.0103
	Level 8	42.3min	0.5369	0.8735	0.9373	0.9659	0.5423	0.8733	0.9373	0.9659	0.7740	0.9033	0.9489	0.9739	0.0017	0.8258	0.9159	0.9544	0.3642	0.0298	0.0153	0.0096
	Level 9	84.7min	0.5379	0.8464	0.9318	0.9673	0.5373	0.8463	0.9316	0.9672	0.7454	0.9071	0.9544	0.9755	0.0015	0.7766	0.9102	0.9545	0.3583	0.0464	0.0207	0.0097
	Level 1	8.6sec	0.4175	0.5730	0.6019	0.6502	0.4148	0.5730	0.6019	0.6504	0.5330	0.5923	0.6083	0.7194	0.2000	0.5347	0.5929	0.6116	0.1204	0.0189	0.0050	0.0343
	Level 2	17.3sec	0.4500	0.6497	0.7067	0.7571	0.4511	0.6502	0.7067	0.7572	0.5763	0.6909	0.7247	0.7874	0.0588	0.5850	0.6932	0.7247	0.1639	0.0400	0.0127	0.0286
	Level 3	34.5sec	0.5117	0.7240	0.7835	0.8298	0.5087	0.7236	0.7836	0.8295	0.6612	0.7667	0.7963	0.8850	0.0160	0.6794	0.7737	0.7992	0.1886	0.0284	0.0075	0.0279
60	**Level 4**	1.2min	0.5640	0.7837	0.8394	0.8820	0.5631	0.7839	0.8395	0.8817	0.7160	0.8255	0.8533	0.9324	0.0043	0.7233	0.8260	0.8563	0.2095	0.0392	0.0081	0.0223
days	**Level 5**	2.3min	0.6260	0.8404	0.8911	0.9209	0.6272	0.8409	0.8911	0.9208	0.7859	0.8769	0.9002	0.9553	0.0024	0.7961	0.8816	0.9021	0.2341	0.0337	0.0069	0.0167
before	**Level 6**	4.6min	0.6778	0.8834	0.9275	0.9497	0.6775	0.8838	0.9275	0.9497	0.8431	0.9160	0.9380	0.9690	0.0016	0.8461	0.9160	0.9383	0.2544	0.0273	0.0073	0.0111
	Level 7	9.2min	0.7219	0.9121	0.9504	0.9672	0.7187	0.9123	0.9504	0.9672	0.8719	0.9386	0.9582	0.9828	0.0019	0.8794	0.9397	0.9600	0.2648	0.0205	0.0070	0.0072
	Level 8	18.4min	0.7356	0.9258	0.9606	0.9761	0.7382	0.9258	0.9606	0.9761	0.8925	0.9493	0.9667	0.9885	0.0017	0.8965	0.9496	0.9699	0.2700	0.0198	0.0055	0.0054
	Level 9	36.8min	0.7250	0.9267	0.9626	0.9778	0.7236	0.9269	0.9625	0.9776	0.8920	0.9518	0.9722	0.9885	0.0015	0.9071	0.9544	0.9726	0.2633	0.0151	0.0070	0.0056
	Level 1	4.8sec	0.4523	0.5826	0.6113	0.6655	0.4519	0.5827	0.6113	0.6653	0.5581	0.5971	0.6250	0.7194	0.2000	0.5583	0.5985	0.6322	0.1141	0.0106	0.0083	0.0223
	Level 2	9.6sec	0.4915	0.6722	0.7159	0.7709	0.4952	0.6722	0.7160	0.7708	0.6051	0.6967	0.7342	0.8052	0.0588	0.6370	0.6968	0.7372	0.1474	0.0184	0.0114	0.0203
	Level 3	19.3sec	0.5591	0.7406	0.7929	0.8410	0.5609	0.7405	0.7930	0.8411	0.6948	0.7772	0.8110	0.8850	0.0160	0.6980	0.7774	0.8116	0.1699	0.0281	0.0110	0.0205
3	**Level 4**	38.6sec	0.6059	0.8002	0.8495	0.8926	0.6083	0.8002	0.8496	0.8928	0.7305	0.8357	0.8688	0.9324	0.0043	0.7324	0.8371	0.8733	0.1821	0.0335	0.0101	0.0164
months	**Level 5**	1.3min	0.6664	0.8522	0.8996	0.9294	0.6634	0.8525	0.8997	0.9294	0.7961	0.8822	0.9134	0.9553	0.0024	0.7999	0.8862	0.9170	0.2008	0.0289	0.0082	0.0126
before	**Level 6**	2.6min	0.7119	0.8938	0.9340	0.9555	0.7107	0.8936	0.9340	0.9555	0.8517	0.9177	0.9456	0.9690	0.0016	0.8585	0.9190	0.9458	0.2202	0.0222	0.0080	0.0087
	Level 7	5.1min	0.7574	0.9214	0.9558	0.9713	0.7556	0.9215	0.9558	0.9713	0.8922	0.9397	0.9630	0.9828	0.0019	0.8992	0.9414	0.9632	0.2265	0.0154	0.0067	0.0059
	Level 8	10.3min	0.7847	0.9371	0.9664	0.9798	0.7845	0.9371	0.9663	0.9798	0.9033	0.9533	0.9737	0.9885	0.0017	0.9080	0.9544	0.9739	0.2284	0.0152	0.0059	0.0042
	Level 9	20.6min	0.7843	0.9407	0.9689	0.9823	0.7832	0.9408	0.9690	0.9822	0.9102	0.9582	0.9757	0.9885	0.0015	0.9179	0.9590	0.9763	0.2285	0.0155	0.0059	0.0043
	Level 1	3.1sec	0.5334	0.6076	0.6396	0.6747	0.5330	0.6076	0.6396	0.6748	0.5928	0.6234	0.6527	0.7194	0.2000	0.5929	0.6235	0.6537	0.0846	0.0093	0.0082	0.0159
	Level 2	6.2sec	0.5998	0.7073	0.7460	0.7917	0.5999	0.7073	0.7460	0.7917	0.6848	0.7278	0.7621	0.8424	0.0588	0.6849	0.7281	0.7625	0.1128	0.0130	0.0099	0.0217
	Level 3	12.4sec	0.6716	0.7835	0.8232	0.8654	0.6719	0.7834	0.8232	0.8656	0.7552	0.8050	0.8386	0.9082	0.0160	0.7559	0.8054	0.8389	0.1288	0.0136	0.0101	0.0199
1	**Level 4**	24.8sec	0.7348	0.8434	0.8793	0.9135	0.7347	0.8434	0.8793	0.9136	0.8235	0.8632	0.8916	0.9459	0.0043	0.8239	0.8635	0.8923	0.1453	0.0114	0.0086	0.0147
Year	**Level 5**	49.6sec	0.7906	0.8909	0.9179	0.9446	0.7903	0.8909	0.9179	0.9445	0.8760	0.9060	0.9283	0.9704	0.0024	0.8763	0.9064	0.9296	0.1570	0.0098	0.0062	0.0102
before	**Level 6**	1.7min	0.8329	0.9252	0.9451	0.9642	0.8340	0.9251	0.9451	0.9642	0.9119	0.9356	0.9534	0.9857	0.0016	0.9119	0.9366	0.9538	0.1657	0.0075	0.0045	0.0072
	Level 7	3.3min	0.8685	0.9488	0.9633	0.9765	0.8686	0.9488	0.9633	0.9765	0.9386	0.9574	0.9686	0.9922	0.0019	0.9386	0.9580	0.9688	0.1675	0.0058	0.0031	0.0052
	Level 8	6.6min	0.8900	0.9631	0.9741	0.9836	0.8897	0.9630	0.9741	0.9836	0.9533	0.9691	0.9783	0.9950	0.0017	0.9535	0.9692	0.9783	0.1690	0.0043	0.0024	0.0038
	Level 9	13.2min	0.8951	0.9679	0.9779	0.9863	0.8936	0.9680	0.9779	0.9863	0.9590	0.9739	0.9816	0.9961	0.0015	0.9593	0.9739	0.9817	0.1709	0.0042	0.0022	0.0031

Table A.34: EDM3 Other Results Table

EDM3 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	22.4sec	1.6167	1.7288	1.9919	2.4978	1.6178	1.7289	1.9934	2.4988	1.7016	1.7481	2.2483	2.5587	1.5460	1.7030	1.7777	2.4154	0.0648	0.0233	0.1983	0.0745
	Level 2	44.8sec	1.4457	1.8659	2.0563	2.3084	1.4470	1.8682	2.0560	2.3098	1.5494	1.9639	2.1904	2.4907	1.3187	1.7235	1.9871	2.2002	0.1159	0.1275	0.0914	0.1578
	Level 3	1.5min	1.3282	1.5012	1.7686	1.9401	1.3265	1.5009	1.7686	1.9358	1.4399	1.5255	1.7780	2.0321	1.1556	1.4650	1.7489	1.8171	0.1286	0.0318	0.0135	0.1092
30	**Level 4**	3min	1.1695	1.3233	1.5066	1.6316	1.1698	1.3226	1.5060	1.6319	1.2203	1.3816	1.5709	1.6574	1.0971	1.2816	1.3880	1.6037	0.0576	0.0524	0.0808	0.0269
days	**Level 5**	6min	1.1058	1.1835	1.3374	1.4483	1.1061	1.1833	1.3369	1.4484	1.1589	1.1922	1.3652	1.5420	1.0751	1.1690	1.2851	1.3672	0.0385	0.0125	0.0358	0.0880
before	**Level 6**	12min	1.0573	1.1313	1.2270	1.3137	1.0573	1.1321	1.2271	1.3146	1.0796	1.1872	1.2400	1.4244	1.0375	1.0933	1.2139	1.2576	0.0173	0.0491	0.0107	0.0951
	Level 7	23.9min	1.0324	1.0828	1.1489	1.2123	1.0325	1.0827	1.1491	1.2120	1.0401	1.1231	1.1709	1.2656	1.0194	1.0445	1.1308	1.1818	0.0092	0.0394	0.0183	0.0466
	Level 8	47.8min	1.0192	1.0561	1.0996	1.1421	1.0194	1.0565	1.0998	1.1421	1.0241	1.0818	1.1116	1.1482	1.0124	1.0290	1.0875	1.1328	0.0049	0.0265	0.0105	0.0082
	Level 9	95.7min	1.0139	1.0411	1.0784	1.1129	1.0139	1.0414	1.0788	1.1129	1.0166	1.0633	1.0921	1.1354	1.0110	1.0168	1.0725	1.0985	0.0026	0.0234	0.0091	0.0197
	Level 1	10.7sec	1.5236	1.7120	2.0675	3.1661	1.5235	1.7124	2.0668	3.1766	1.5986	1.7777	2.4154	4.8904	1.4967	1.6252	1.7938	2.4973	0.0377	0.0486	0.2061	0.8981
	Level 2	21.4sec	1.2811	1.6019	2.0889	4.9440	1.2804	1.6021	2.0895	4.9366	1.3476	1.9174	2.2384	9.8448	1.2426	1.3792	1.9639	2.4907	0.0423	0.1711	0.1153	2.6031
	Level 3	42.8sec	1.1514	1.4124	1.7678	7.4700	1.1515	1.4111	1.7679	7.4855	1.2164	1.5121	1.9582	17.3748	1.1127	1.2818	1.5255	2.0321	0.0413	0.0876	0.1278	5.7139
60	**Level 4**	1.4min	1.0894	1.2428	1.5218	11.2746	1.0894	1.2421	1.5206	11.1356	1.1504	1.3527	1.6346	28.4905	1.0513	1.1549	1.3816	1.6574	0.0406	0.0730	0.0997	11.0792
days	**Level 5**	2.9min	1.0498	1.1436	1.3420	14.7956	1.0497	1.1430	1.3411	14.7183	1.0800	1.1922	1.4359	48.8337	1.0313	1.0880	1.2368	1.5420	0.0231	0.0447	0.0638	19.2607
before	**Level 6**	5.7min	1.0253	1.0845	1.2301	19.5987	1.0253	1.0840	1.2307	19.3725	1.0443	1.1405	1.2617	99.9082	1.0158	1.0468	1.1872	1.2878	0.0120	0.0347	0.0257	36.3946
	Level 7	11.4min	1.0132	1.0485	1.1554	31.4007	1.0134	1.0486	1.1557	33.2327	1.0227	1.0806	1.1887	211.7796	1.0082	1.0238	1.1231	1.1972	0.0056	0.0227	0.0258	78.8279
	Level 8	22.8min	1.0086	1.0319	1.1030	69.4454	1.0088	1.0317	1.1031	69.7025	1.0131	1.0587	1.1328	474.4118	1.0051	1.0147	1.0818	1.1449	0.0037	0.0177	0.0170	178.4695
	Level 9	45.7min	1.0076	1.0238	1.0785	63.9541	1.0076	1.0238	1.0784	65.2802	1.0110	1.0457	1.0985	446.6249	1.0031	1.0126	1.0633	1.1047	0.0028	0.0145	0.0124	168.1594
	Level 1	6.4sec	1.4999	1.6036	1.8192	2.9589	1.4998	1.6041	1.8169	2.9644	1.5321	1.6965	2.0176	4.8904	1.4545	1.5372	1.7016	2.0272	0.0197	0.0583	0.1112	0.9707
	Level 2	12.8sec	1.2660	1.3899	1.7523	3.9293	1.2666	1.3901	1.7511	3.9092	1.3259	1.5141	2.0157	9.8448	1.2037	1.3277	1.5393	2.0306	0.0359	0.0566	0.1843	2.3411
	Level 3	25.5sec	1.1439	1.2540	1.5395	5.2168	1.1438	1.2539	1.5411	5.1751	1.2034	1.3256	1.7708	17.3748	1.0758	1.2056	1.3621	1.7766	0.0376	0.0398	0.1336	5.0974
3	**Level 4**	51.1sec	1.0852	1.1683	1.3527	7.0965	1.0848	1.1681	1.3527	7.1656	1.1286	1.2114	1.5376	28.4905	1.0513	1.1387	1.2203	1.5475	0.0263	0.0251	0.1079	9.5408
months	**Level 5**	1.7min	1.0507	1.1064	1.2259	9.2995	1.0508	1.1062	1.2251	9.1588	1.0751	1.1323	1.3422	48.8337	1.0313	1.0800	1.1447	1.3548	0.0180	0.0188	0.0697	15.7973
before	**Level 6**	3.4min	1.0275	1.0647	1.1439	11.7315	1.0277	1.0649	1.1441	11.8211	1.0449	1.0838	1.2262	99.9082	1.0158	1.0468	1.0847	1.2283	0.0114	0.0122	0.0500	28.4531
	Level 7	6.8min	1.0148	1.0388	1.0893	20.1979	1.0148	1.0387	1.0894	19.8748	1.0238	1.0526	1.1377	211.7796	1.0082	1.0276	1.0549	1.1569	0.0056	0.0077	0.0326	60.5135
	Level 8	13.6min	1.0094	1.0237	1.0590	41.8675	1.0095	1.0237	1.0589	41.1231	1.0147	1.0297	1.0957	474.4118	1.0051	1.0164	1.0330	1.1034	0.0032	0.0044	0.0227	136.4585
	Level 9	27.2min	1.0079	1.0173	1.0467	38.0463	1.0079	1.0173	1.0466	38.5325	1.0120	1.0240	1.0735	446.6249	1.0031	1.0126	1.0251	1.0772	0.0025	0.0033	0.0191	128.5178
	Level 1	4.2sec	1.5018	1.6069	1.7174	2.3659	1.5017	1.6069	1.7173	2.3681	1.5460	1.6587	1.7804	5.0000	1.3928	1.5460	1.6587	1.7814	0.0334	0.0328	0.0366	0.8769
	Level 2	8.3sec	1.2792	1.3936	1.5198	3.0784	1.2791	1.3938	1.5197	3.0890	1.3348	1.4417	1.6227	17.0000	1.1875	1.3358	1.4438	1.6416	0.0362	0.0309	0.0522	3.3785
	Level 3	16.7sec	1.1591	1.2493	1.3648	5.1118	1.1588	1.2494	1.3648	5.0644	1.2050	1.2948	1.4369	65.0000	1.0758	1.2056	1.2949	1.4373	0.0313	0.0277	0.0420	12.0866
1	**Level 4**	33.4sec	1.0915	1.1592	1.2390	8.2133	1.0916	1.1592	1.2390	8.3178	1.1268	1.2021	1.2808	257.0000	1.0469	1.1286	1.2026	1.2816	0.0223	0.0192	0.0234	34.0533
Year	**Level 5**	1.1min	1.0536	1.0991	1.1486	21.4473	1.0536	1.0991	1.1487	21.0372	1.0787	1.1231	1.1838	1025.0000	1.0235	1.0800	1.1233	1.1853	0.0154	0.0119	0.0179	133.2227
before	**Level 6**	2.2min	1.0312	1.0597	1.0899	74.2866	1.0313	1.0597	1.0900	73.2226	1.0469	1.0746	1.1142	4097.0000	1.0119	1.0481	1.0752	1.1156	0.0105	0.0076	0.0109	533.0471
	Level 7	4.5min	1.0183	1.0360	1.0555	268.8152	1.0183	1.0360	1.0555	282.9498	1.0284	1.0445	1.0759	16385.0000	1.0063	1.0285	1.0449	1.0768	0.0067	0.0049	0.0074	2132.6280
	Level 8	8.9min	1.0115	1.0232	1.0372	1079.2523	1.0115	1.0232	1.0372	1120.2387	1.0176	1.0287	1.0497	65536.9999	1.0038	1.0177	1.0290	1.0498	0.0042	0.0031	0.0057	8531.1625
	Level 9	17.8min	1.0089	1.0180	1.0304	4585.2338	1.0089	1.0180	1.0305	4452.0477	1.0138	1.0230	1.0429	262144.9995	1.0029	1.0139	1.0231	1.0441	0.0031	0.0026	0.0054	34127.2410

Table A.34: EDM3 Other Results Table –Continued

EDM3 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	1.5750	1.7378	1.9788	2.4593	1.5769	1.7380	1.9765	2.4602	1.6899	1.7543	2.2363	2.5648	1.4467	1.7096	1.7901	2.4056	0.1044	0.0246	0.1976	0.0906
	Level 2	42.3sec	1.4397	1.8146	2.0232	2.3312	1.4407	1.8176	2.0229	2.3318	1.5509	1.9651	2.0541	2.5149	1.3136	1.7253	1.9973	2.1865	0.1141	0.1291	0.0259	0.1674
	Level 3	1.4min	1.3254	1.4993	1.7383	1.9477	1.3264	1.4998	1.7386	1.9505	1.4393	1.5604	1.7943	2.0719	1.1580	1.4531	1.6856	1.8108	0.1275	0.0550	0.0588	0.1315
30	**Level 4**	2.8min	1.1744	1.2999	1.5051	1.5864	1.1750	1.2996	1.5062	1.5863	1.2199	1.3340	1.5562	1.5999	1.1136	1.2822	1.3973	1.5622	0.0522	0.0298	0.0733	0.0209
days	**Level 5**	5.6min	1.1036	1.1896	1.3222	1.4140	1.1037	1.1891	1.3219	1.4145	1.1463	1.2090	1.3539	1.4923	1.0751	1.1594	1.2549	1.3663	0.0321	0.0262	0.0456	0.0680
before	**Level 6**	11.3min	1.0571	1.1309	1.2168	1.2915	1.0571	1.1300	1.2169	1.2920	1.0774	1.2097	1.2207	1.3604	1.0382	1.0802	1.2122	1.2499	0.0161	0.0698	0.0042	0.0598
	Level 7	22.6min	1.0319	1.0760	1.1453	1.2056	1.0316	1.0757	1.1451	1.2056	1.0410	1.1293	1.1571	1.2282	1.0204	1.0465	1.1345	1.1868	0.0091	0.0465	0.0110	0.0210
	Level 8	45.2min	1.0193	1.0505	1.1069	1.1397	1.0193	1.0510	1.1069	1.1397	1.0265	1.0893	1.1181	1.1591	1.0128	1.0279	1.0937	1.1254	0.0063	0.0334	0.0120	0.0174
	Level 9	90.3min	1.0139	1.0412	1.0921	1.1244	1.0139	1.0412	1.0919	1.1246	1.0186	1.0723	1.1031	1.1432	1.0103	1.0199	1.0796	1.1126	0.0037	0.0275	0.0121	0.0163
	Level 1	10sec	1.5020	1.7083	2.0504	2.9118	1.5015	1.7085	2.0533	2.9184	1.5481	1.7543	2.4056	3.9174	1.4467	1.6230	1.7901	2.4103	0.0309	0.0455	0.2105	0.4883
	Level 2	20sec	1.2786	1.5531	2.0787	4.2007	1.2786	1.5540	2.0767	4.2262	1.3489	1.7624	2.2940	6.8348	1.2367	1.3712	1.9651	2.5149	0.0433	0.1522	0.1192	1.4670
	Level 3	40.1sec	1.1481	1.3707	1.7570	6.0715	1.1484	1.3697	1.7563	6.1370	1.2035	1.4859	1.9689	12.6695	1.1039	1.2164	1.5604	2.0719	0.0399	0.1021	0.1279	3.7773
60	**Level 4**	1.3min	1.0902	1.2114	1.5034	8.6611	1.0902	1.2110	1.5026	8.7686	1.1425	1.2827	1.5966	24.3390	1.0476	1.1495	1.3340	1.5999	0.0404	0.0560	0.0975	8.1397
days	**Level 5**	2.7min	1.0515	1.1315	1.3217	11.3736	1.0516	1.1316	1.3211	11.4465	1.0833	1.1990	1.3849	47.6781	1.0313	1.0879	1.2090	1.4143	0.0237	0.0396	0.0644	16.6134
before	**Level 6**	5.3min	1.0269	1.0712	1.2199	19.5173	1.0270	1.0714	1.2201	19.1359	1.0442	1.1001	1.2499	94.3561	1.0157	1.0469	1.2097	1.2655	0.0121	0.0188	0.0138	34.4860
	Level 7	10.7min	1.0158	1.0411	1.1448	38.2278	1.0159	1.0411	1.1451	37.5275	1.0240	1.0578	1.1868	187.7123	1.0081	1.0265	1.1195	1.1979	0.0071	0.0116	0.0224	70.4552
	Level 8	21.4min	1.0092	1.0277	1.1052	73.3475	1.0092	1.0277	1.1051	73.2892	1.0131	1.0420	1.1181	374.4245	1.0044	1.0155	1.0893	1.1254	0.0038	0.0088	0.0111	141.3587
	Level 9	42.7min	1.0069	1.0221	1.0889	147.0166	1.0069	1.0223	1.0892	145.2005	1.0103	1.0391	1.1126	747.8490	1.0029	1.0117	1.0720	1.1180	0.0029	0.0096	0.0163	282.9407
	Level 1	6.3sec	1.4972	1.6047	1.8034	2.7910	1.4969	1.6056	1.8031	2.7964	1.5234	1.6899	2.0179	4.4249	1.4467	1.5378	1.6958	2.0269	0.0188	0.0530	0.1065	0.7277
	Level 2	12.5sec	1.2607	1.3720	1.7171	3.4843	1.2603	1.3720	1.7142	3.4713	1.3263	1.4736	2.0067	6.8348	1.2059	1.3325	1.4782	2.0335	0.0359	0.0369	0.1956	1.4776
	Level 3	25.1sec	1.1362	1.2412	1.4891	4.3966	1.1359	1.2412	1.4901	4.3831	1.1954	1.2987	1.6901	12.6695	1.0756	1.2006	1.3188	1.7843	0.0343	0.0352	0.1170	3.5351
3	**Level 4**	50.2sec	1.0819	1.1576	1.3142	5.7754	1.0822	1.1578	1.3145	5.7732	1.1284	1.1929	1.5319	24.3390	1.0476	1.1349	1.2168	1.5396	0.0270	0.0184	0.0940	7.0600
months	**Level 5**	1.7min	1.0504	1.1004	1.2017	7.1404	1.0502	1.1005	1.2017	7.2424	1.0743	1.1256	1.3318	47.6781	1.0313	1.0751	1.1304	1.3321	0.0183	0.0150	0.0597	13.3245
before	**Level 6**	3.3min	1.0280	1.0616	1.1316	11.5124	1.0280	1.0616	1.1317	11.6725	1.0442	1.0774	1.2122	94.3561	1.0157	1.0461	1.0802	1.2133	0.0107	0.0099	0.0509	27.0883
	Level 7	6.7min	1.0162	1.0379	1.0821	22.3779	1.0164	1.0379	1.0815	22.3722	1.0246	1.0465	1.1345	187.7123	1.0081	1.0265	1.0511	1.1373	0.0064	0.0067	0.0321	55.3027
	Level 8	13.4min	1.0097	1.0258	1.0584	44.4180	1.0097	1.0258	1.0581	43.2148	1.0155	1.0318	1.0973	374.4245	1.0044	1.0159	1.0329	1.0998	0.0038	0.0047	0.0262	110.8187
	Level 9	26.7min	1.0072	1.0214	1.0483	87.4704	1.0072	1.0214	1.0484	85.1570	1.0117	1.0294	1.0774	747.8490	1.0029	1.0138	1.0301	1.0796	0.0030	0.0050	0.0191	221.7494
	Level 1	4.2sec	1.4987	1.5913	1.7040	2.3314	1.4986	1.5915	1.7036	2.3306	1.5378	1.6327	1.7803	5.0000	1.3976	1.5410	1.6407	1.7805	0.0308	0.0279	0.0401	0.8125
	Level 2	8.5sec	1.2724	1.3765	1.4945	2.9653	1.2723	1.3763	1.4945	2.9720	1.3317	1.4228	1.5854	17.0000	1.1877	1.3325	1.4243	1.5869	0.0319	0.0268	0.0464	3.2400
	Level 3	17sec	1.1515	1.2377	1.3399	4.2076	1.1514	1.2378	1.3398	4.2096	1.2012	1.2820	1.4089	54.7843	1.0756	1.2030	1.2822	1.4095	0.0292	0.0249	0.0438	8.9235
1	**Level 4**	33.9sec	1.0863	1.1489	1.2196	4.2634	1.0864	1.1489	1.2196	4.3024	1.1232	1.1736	1.2598	53.8516	1.0473	1.1234	1.1751	1.2603	0.0212	0.0147	0.0252	9.1418
Year	**Level 5**	1.1min	1.0505	1.0938	1.1339	4.9870	1.0505	1.0938	1.1340	4.9077	1.0743	1.1113	1.1634	106.7032	1.0242	1.0745	1.1115	1.1655	0.0142	0.0101	0.0144	15.1053
before	**Level 6**	2.3min	1.0297	1.0576	1.0826	7.7104	1.0297	1.0576	1.0826	7.3867	1.0439	1.0681	1.1001	212.4065	1.0130	1.0442	1.0687	1.1007	0.0097	0.0072	0.0095	29.9836
	Level 7	4.5min	1.0178	1.0355	1.0526	13.2253	1.0178	1.0356	1.0526	13.0246	1.0274	1.0434	1.0641	423.8129	1.0081	1.0279	1.0436	1.0651	0.0064	0.0053	0.0059	60.1353
	Level 8	9.1min	1.0117	1.0246	1.0376	24.1365	1.0117	1.0246	1.0375	24.2772	1.0180	1.0311	1.0473	846.6258	1.0044	1.0181	1.0312	1.0476	0.0043	0.0040	0.0045	120.3273
	Level 9	18.1min	1.0097	1.0217	1.0349	45.1739	1.0098	1.0217	1.0349	47.0794	1.0161	1.0276	1.0480	1692.2516	1.0029	1.0162	1.0281	1.0482	0.0039	0.0035	0.0055	240.7255

Table A.34: EDM3 Other Results Table –Continued

EDM3 Bid Ask		Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.8sec	1.5848	1.7333	1.9807	2.4803	1.5842	1.7331	1.9824	2.4786	1.6944	1.7490	2.2420	2.5617	1.4724	1.7062	1.7762	2.4128	0.0958	0.0235	0.2002	0.0759
	Level 2	43.6sec	1.4412	1.8329	2.0321	2.3168	1.4418	1.8312	2.0342	2.3184	1.5498	1.9634	2.1196	2.5024	1.3127	1.7244	1.9879	2.1880	0.1150	0.1215	0.0584	0.1639
	Level 3	1.5min	1.3265	1.4928	1.7369	1.9358	1.3246	1.4943	1.7371	1.9361	1.4396	1.5343	1.7854	2.0475	1.1505	1.4582	1.6679	1.8129	0.1308	0.0382	0.0556	0.1177
30	**Level 4**	2.9min	1.1693	1.3025	1.4905	1.5739	1.1691	1.3026	1.4903	1.5738	1.2200	1.3465	1.5327	1.5808	1.0965	1.2799	1.3912	1.5679	0.0580	0.0381	0.0671	0.0065
days	**Level 5**	5.8min	1.1000	1.1828	1.2880	1.3964	1.1002	1.1820	1.2878	1.3960	1.1455	1.1951	1.3333	1.4721	1.0724	1.1581	1.2451	1.3571	0.0349	0.0207	0.0431	0.0659
before	**Level 6**	11.6min	1.0535	1.1002	1.1924	1.2614	1.0537	1.1002	1.1924	1.2614	1.0775	1.1309	1.2040	1.3351	1.0336	1.0780	1.1753	1.2054	0.0182	0.0275	0.0124	0.0667
	Level 7	23.2min	1.0272	1.0569	1.1113	1.1548	1.0273	1.0567	1.1112	1.1548	1.0374	1.0888	1.1187	1.1771	1.0149	1.0403	1.1038	1.1294	0.0093	0.0278	0.0061	0.0240
	Level 8	46.5min	1.0139	1.0297	1.0658	1.0826	1.0139	1.0298	1.0657	1.0824	1.0178	1.0488	1.0728	1.0988	1.0060	1.0183	1.0602	1.0731	0.0055	0.0166	0.0054	0.0142
	Level 9	93min	1.0068	1.0157	1.0362	1.0601	1.0067	1.0157	1.0362	1.0601	1.0106	1.0211	1.0388	1.0622	1.0000	1.0112	1.0305	1.0576	0.0046	0.0050	0.0039	0.0023
	Level 1	10.4sec	1.5055	1.7090	2.0023	2.8331	1.5053	1.7093	1.9985	2.8239	1.5470	1.7524	2.2420	3.8663	1.4724	1.6231	1.7762	2.4128	0.0236	0.0456	0.1572	0.5058
	Level 2	20.7sec	1.2783	1.5632	2.0484	3.8042	1.2790	1.5645	2.0480	3.8172	1.3482	1.8059	2.1880	6.5339	1.2394	1.3777	1.9634	2.2647	0.0423	0.1567	0.0869	1.5242
	Level 3	41.4sec	1.1482	1.3706	1.7180	5.0409	1.1485	1.3707	1.7159	5.0719	1.2052	1.4905	1.8129	11.2726	1.1078	1.2164	1.5343	1.9477	0.0396	0.1041	0.1034	3.5667
60	**Level 4**	1.4min	1.0862	1.2094	1.4791	6.4836	1.0867	1.2094	1.4793	6.3658	1.1378	1.2814	1.5679	18.3647	1.0486	1.1485	1.3465	1.5727	0.0373	0.0555	0.0888	6.4050
days	**Level 5**	2.8min	1.0479	1.1303	1.2837	6.1482	1.0480	1.1296	1.2839	6.1378	1.0730	1.1928	1.3571	23.0076	1.0313	1.0875	1.1951	1.3588	0.0206	0.0379	0.0614	7.9307
before	**Level 6**	5.5min	0.0448	1.0599	1.1644	2.0345	0.0360	1.0603	1.1642	2.0438	1.0336	1.0780	1.1983	4.7874	-5.8722	1.0435	1.0917	1.2040	2.6053	0.0152	0.0435	1.3988
	Level 7	11.1min	-6.9377	1.0306	1.0928	1.5079	-6.7212	1.0305	1.0919	1.5141	1.0149	1.0403	1.1123	2.8035	-53.1055	1.0211	1.0410	1.1187	20.4535	0.0071	0.0265	0.6549
	Level 8	22.1min	1.0045	1.0154	1.0549	1.2173	1.0044	1.0154	1.0550	1.2201	1.0072	1.0183	1.0687	1.7214	1.0000	1.0093	1.0223	1.0728	0.0022	0.0035	0.0175	0.2527
	Level 9	44.2min	1.0015	1.0059	1.0206	1.0527	1.0015	1.0059	1.0207	1.0528	1.0029	1.0091	1.0359	1.0746	1.0000	1.0029	1.0106	1.0369	0.0014	0.0028	0.0105	0.0147
	Level 1	6.3sec	1.4952	1.5933	1.7863	2.7214	1.4952	1.5936	1.7873	2.7169	1.5106	1.6944	1.9985	4.5095	1.4724	1.5234	1.6959	2.0216	0.0132	0.0588	0.0904	0.7674
	Level 2	12.7sec	1.2605	1.3649	1.6838	3.2231	1.2597	1.3650	1.6863	3.2206	1.3132	1.4004	1.9879	6.5339	1.2039	1.3247	1.4746	2.0110	0.0334	0.0230	0.1821	1.4063
	Level 3	25.3sec	1.1338	1.2377	1.4657	3.7234	1.1340	1.2381	1.4649	3.7421	1.1952	1.2991	1.6679	11.2726	1.0738	1.2018	1.3136	1.7164	0.0309	0.0352	0.0969	3.1082
3	**Level 4**	50.6sec	1.0783	1.1537	1.2946	4.3708	1.0784	1.1535	1.2947	4.3609	1.1190	1.1874	1.3912	18.3647	1.0486	1.1270	1.2114	1.5072	0.0221	0.0199	0.0693	5.3401
months	**Level 5**	1.7min	1.0480	1.0948	1.1832	4.1381	1.0479	1.0947	1.1839	4.1271	1.0724	1.1179	1.2451	23.0076	1.0313	1.0725	1.1201	1.2574	0.0165	0.0170	0.0448	6.3625
before	**Level 6**	3.4min	0.4611	1.0524	1.0996	1.6892	0.4491	1.0525	1.0998	1.6865	1.0391	1.0693	1.1600	4.7874	-5.8722	1.0430	1.0723	1.1686	1.9907	0.0093	0.0286	1.1235
	Level 7	6.7min	-3.5567	1.0288	1.0548	1.3424	-3.4981	1.0288	1.0549	1.3449	1.0211	1.0360	1.0959	2.8035	-53.1055	1.0222	1.0374	1.0971	15.6223	0.0052	0.0198	0.5269
	Level 8	13.5min	1.0053	1.0153	1.0297	1.1562	1.0053	1.0153	1.0298	1.1556	1.0093	1.0184	1.0580	1.7214	1.0000	1.0120	1.0205	1.0602	0.0023	0.0025	0.0123	0.2030
	Level 9	27min	1.0018	1.0076	1.0135	1.0439	1.0018	1.0076	1.0135	1.0437	1.0029	1.0104	1.0179	1.0746	1.0000	1.0032	1.0106	1.0211	0.0013	0.0023	0.0024	0.0163
	Level 1	4.2sec	1.4162	1.5859	1.6953	2.2407	1.4166	1.5858	1.6954	2.2472	1.5347	1.6406	1.7652	5.0000	-3.0000	1.5360	1.6416	1.7704	0.5858	0.0281	0.0385	0.7352
	Level 2	8.4sec	1.2613	1.3703	1.4808	2.6852	1.2612	1.3705	1.4806	2.6720	1.3243	1.4112	1.5668	17.0000	1.0000	1.3247	1.4121	1.5686	0.0531	0.0243	0.0473	2.7685
	Level 3	16.8sec	1.1422	1.2286	1.3225	3.6687	1.1424	1.2285	1.3223	3.6258	1.1933	1.2648	1.3956	58.9899	0.9998	1.1934	1.2661	1.3961	0.0378	0.0222	0.0384	8.5460
1	**Level 4**	33.7sec	1.0796	1.1386	1.2050	3.2361	1.0795	1.1385	1.2051	3.1975	1.1121	1.1639	1.2486	45.3458	0.9992	1.1131	1.1644	1.2487	0.0235	0.0147	0.0246	6.6620
Year	**Level 5**	1.1min	1.0446	1.0830	1.1202	2.4797	1.0446	1.0830	1.1203	2.4826	1.0642	1.1006	1.1480	23.0076	0.9991	1.0647	1.1011	1.1480	0.0143	0.0096	0.0136	4.2488
before	**Level 6**	2.2min	0.9066	1.0473	1.0677	1.6518	0.9073	1.0473	1.0677	1.6387	1.0368	1.0555	1.0830	14.5460	-5.8722	1.0370	1.0556	1.0832	0.8979	0.0054	0.0074	1.9871
	Level 7	4.5min	0.1028	1.0262	1.0374	1.3864	0.0954	1.0262	1.0375	1.3877	1.0198	1.0314	1.0454	11.2788	-53.1055	1.0199	1.0315	1.0455	7.0456	0.0034	0.0038	1.4047
	Level 8	9min	1.0064	1.0144	1.0209	1.2260	1.0065	1.0144	1.0209	1.2294	1.0104	1.0178	1.0248	8.0483	0.9968	1.0106	1.0178	1.0249	0.0027	0.0021	0.0021	0.9399
	Level 9	18min	1.0033	1.0081	1.0125	1.1373	1.0033	1.0081	1.0125	1.1388	1.0055	1.0104	1.0152	5.6989	1.0000	1.0056	1.0105	1.0154	0.0016	0.0013	0.0014	0.6256

Table A.34: EDM3 Other Results Table –Continued

EDM3 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.8sec	0.4165	0.5315	0.5797	0.6506	0.4169	0.5305	0.5795	0.6511	0.4472	0.5586	0.5917	0.6912	0.3899	0.4956	0.5700	0.6161	0.0235	0.0321	0.0105	0.0378
	Level 2	43.6sec	0.4447	0.4970	0.5752	0.7148	0.4444	0.4969	0.5752	0.7150	0.4868	0.5007	0.6448	0.7613	0.3976	0.4918	0.5089	0.6571	0.0375	0.0046	0.0557	0.0531
	Level 3	1.5min	0.5247	0.5822	0.6750	0.7806	0.5250	0.5818	0.6742	0.7810	0.5573	0.5933	0.6948	0.8635	0.4827	0.5605	0.6409	0.7095	0.0359	0.0185	0.0240	0.0776
30	**Level 4**	2.9min	0.6336	0.6733	0.7829	0.8639	0.6335	0.6727	0.7822	0.8632	0.6426	0.7157	0.8197	0.8980	0.6250	0.6495	0.7496	0.8218	0.0091	0.0373	0.0288	0.0385
days	**Level 5**	5.8min	0.7160	0.7634	0.8488	0.9175	0.7157	0.7634	0.8490	0.9180	0.7386	0.7968	0.8724	0.9302	0.6701	0.7425	0.8271	0.9008	0.0311	0.0293	0.0219	0.0153
before	**Level 6**	11.6min	0.7863	0.8226	0.8984	0.9521	0.7861	0.8226	0.8974	0.9522	0.8192	0.8250	0.9281	0.9632	0.7351	0.8195	0.8266	0.9458	0.0361	0.0028	0.0479	0.0096
	Level 7	23.2min	0.8383	0.8764	0.9393	0.9723	0.8383	0.8764	0.9382	0.9724	0.8642	0.8815	0.9606	0.9800	0.8142	0.8685	0.8855	0.9646	0.0209	0.0070	0.0354	0.0077
	Level 8	46.5min	0.8821	0.9065	0.9573	0.9833	0.8817	0.9065	0.9576	0.9834	0.8944	0.9143	0.9742	0.9873	0.8627	0.8961	0.9180	0.9781	0.0138	0.0094	0.0267	0.0048
	Level 9	93min	0.8936	0.9192	0.9663	0.9879	0.8936	0.9190	0.9661	0.9879	0.9066	0.9263	0.9817	0.9898	0.8747	0.9079	0.9326	0.9853	0.0136	0.0098	0.0230	0.0023
	Level 1	10.4sec	0.3498	0.4908	0.5855	0.6662	0.3499	0.4913	0.5857	0.6662	0.4149	0.5586	0.6161	0.6912	0.2553	0.4157	0.5700	0.6460	0.0508	0.0489	0.0160	0.0138
	Level 2	20.7sec	0.2616	0.4825	0.6486	0.7835	0.2618	0.4828	0.6488	0.7829	0.3976	0.5089	0.7293	0.8086	0.1463	0.4359	0.5674	0.7413	0.0886	0.0264	0.0634	0.0260
	Level 3	41.4sec	0.2372	0.5728	0.7330	0.8716	0.2364	0.5720	0.7337	0.8717	0.4827	0.6409	0.8221	0.9058	0.0789	0.5079	0.6730	0.8309	0.1542	0.0417	0.0562	0.0298
60	**Level 4**	1.4min	0.2737	0.6684	0.8274	0.9180	0.2733	0.6681	0.8273	0.9184	0.6250	0.7496	0.8699	0.9545	0.0411	0.6263	0.7796	0.8753	0.2456	0.0460	0.0379	0.0336
days	**Level 5**	2.8min	0.3363	0.7592	0.8843	0.9512	0.3340	0.7586	0.8846	0.9513	0.7071	0.8271	0.9192	0.9696	0.0210	0.7221	0.8341	0.9231	0.3004	0.0386	0.0305	0.0213
before	**Level 6**	5.5min	0.3981	0.8196	0.9336	0.9741	0.4015	0.8197	0.9336	0.9738	0.7902	0.8266	0.9552	0.9845	0.0106	0.8000	0.9090	0.9577	0.3409	0.0091	0.0164	0.0115
	Level 7	11.1min	0.4770	0.8732	0.9605	0.9845	0.4724	0.8735	0.9606	0.9844	0.8348	0.8933	0.9742	0.9920	0.0053	0.8426	0.9453	0.9766	0.3705	0.0168	0.0107	0.0069
	Level 8	22.1min	0.5399	0.9051	0.9733	0.9909	0.5347	0.9050	0.9732	0.9909	0.8886	0.9180	0.9848	0.9956	0.0027	0.8944	0.9597	0.9871	0.3924	0.0091	0.0083	0.0038
	Level 9	44.2min	0.5547	0.9182	0.9781	0.9931	0.5576	0.9183	0.9782	0.9931	0.8944	0.9329	0.9885	0.9971	0.0013	0.8988	0.9624	0.9898	0.3942	0.0137	0.0091	0.0029
	Level 1	6.3sec	0.3781	0.5564	0.6235	0.6680	0.3769	0.5563	0.6234	0.6682	0.4934	0.5897	0.6503	0.6912	0.2260	0.4956	0.5917	0.6564	0.0834	0.0313	0.0206	0.0086
	Level 2	12.7sec	0.3325	0.5900	0.7296	0.7943	0.3325	0.5902	0.7294	0.7940	0.4918	0.6765	0.7504	0.8293	0.1463	0.4983	0.6786	0.7540	0.1205	0.0655	0.0188	0.0222
	Level 3	25.3sec	0.3540	0.6748	0.8065	0.8812	0.3560	0.6748	0.8063	0.8811	0.5605	0.7583	0.8329	0.9297	0.0789	0.5917	0.7700	0.8365	0.1891	0.0517	0.0226	0.0264
3	**Level 4**	50.6sec	0.4190	0.7648	0.8638	0.9245	0.4234	0.7641	0.8639	0.9246	0.6495	0.8218	0.8811	0.9545	0.0411	0.6528	0.8383	0.8862	0.2596	0.0519	0.0136	0.0228
months	**Level 5**	1.7min	0.5011	0.8342	0.9087	0.9525	0.5020	0.8340	0.9088	0.9525	0.7507	0.8847	0.9302	0.9696	0.0210	0.7509	0.8884	0.9308	0.3039	0.0403	0.0124	0.0165
before	**Level 6**	3.4min	0.5770	0.8857	0.9421	0.9729	0.5748	0.8852	0.9421	0.9728	0.8242	0.9258	0.9559	0.9845	0.0106	0.8250	0.9281	0.9577	0.3305	0.0389	0.0088	0.0101
	Level 7	6.7min	0.6365	0.9253	0.9634	0.9840	0.6365	0.9253	0.9635	0.9839	0.8793	0.9513	0.9742	0.9920	0.0053	0.8815	0.9556	0.9760	0.3407	0.0270	0.0062	0.0062
	Level 8	13.5min	0.6860	0.9456	0.9749	0.9905	0.6871	0.9456	0.9749	0.9904	0.9092	0.9681	0.9844	0.9956	0.0027	0.9113	0.9691	0.9848	0.3457	0.0231	0.0045	0.0037
	Level 9	27min	0.7087	0.9543	0.9792	0.9928	0.7055	0.9541	0.9791	0.9928	0.9263	0.9707	0.9864	0.9971	0.0013	0.9282	0.9715	0.9885	0.3438	0.0173	0.0048	0.0029
	Level 1	4.2sec	0.4634	0.5873	0.6284	0.6674	0.4627	0.5873	0.6285	0.6676	0.5616	0.6095	0.6489	0.7155	0.2000	0.5617	0.6125	0.6503	0.1028	0.0137	0.0111	0.0142
	Level 2	8.4sec	0.4758	0.6697	0.7269	0.7864	0.4753	0.6697	0.7269	0.7865	0.6302	0.7021	0.7504	0.8419	0.0588	0.6307	0.7029	0.7509	0.1617	0.0208	0.0142	0.0197
	Level 3	16.8sec	0.5408	0.7471	0.8082	0.8691	0.5407	0.7472	0.8082	0.8690	0.7095	0.7799	0.8312	0.9297	0.0183	0.7098	0.7800	0.8325	0.2048	0.0244	0.0162	0.0221
1	**Level 4**	33.7sec	0.6159	0.8204	0.8705	0.9207	0.6158	0.8203	0.8705	0.9208	0.7935	0.8510	0.8901	0.9549	0.0186	0.7938	0.8521	0.8903	0.2384	0.0170	0.0111	0.0180
Year	**Level 5**	1.1min	0.6874	0.8821	0.9143	0.9520	0.6869	0.8820	0.9143	0.9521	0.8580	0.8997	0.9306	0.9764	0.0094	0.8595	0.8999	0.9308	0.2552	0.0112	0.0085	0.0129
before	**Level 6**	2.2min	0.7443	0.9237	0.9456	0.9713	0.7434	0.9238	0.9456	0.9713	0.9085	0.9357	0.9577	0.9871	0.0047	0.9090	0.9362	0.9579	0.2610	0.0081	0.0065	0.0092
	Level 7	4.5min	0.7895	0.9501	0.9657	0.9826	0.7877	0.9501	0.9657	0.9826	0.9389	0.9582	0.9729	0.9920	0.0024	0.9397	0.9584	0.9734	0.2583	0.0053	0.0049	0.0062
	Level 8	9min	0.8122	0.9638	0.9760	0.9885	0.8138	0.9638	0.9760	0.9885	0.9545	0.9698	0.9822	0.9956	0.0012	0.9548	0.9698	0.9823	0.2522	0.0042	0.0038	0.0042
	Level 9	18min	0.8140	0.9663	0.9788	0.9904	0.8135	0.9663	0.9788	0.9904	0.9541	0.9727	0.9841	0.9971	0.0006	0.9542	0.9731	0.9841	0.2512	0.0051	0.0034	0.0038

Table A.35: EDM4 Other Results Table

EDM4 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	7.6sec	1.5408	1.6969	1.8442	2.3798	1.5410	1.6974	1.8449	2.3798	1.6020	1.7512	1.8928	2.6043	1.5000	1.6431	1.7597	2.0459	0.0475	0.0444	0.0520	0.2457
	Level 2	15.2sec	1.3187	1.5036	1.7096	2.5971	1.3193	1.5035	1.7102	2.5937	1.4027	1.6294	1.8828	3.1911	1.2500	1.4240	1.6394	2.0586	0.0731	0.0958	0.1038	0.4939
	Level 3	30.3sec	1.2078	1.3375	1.5146	2.2263	1.2088	1.3376	1.5136	2.2322	1.3005	1.3799	1.7273	2.6665	1.1251	1.3057	1.3908	1.7956	0.0838	0.0344	0.1285	0.4543
30	**Level 4**	1min	1.1198	1.2256	1.3451	1.7760	1.1196	1.2259	1.3446	1.7704	1.1907	1.2626	1.4439	2.1562	1.0627	1.1995	1.2910	1.4514	0.0591	0.0293	0.0659	0.3050
days	**Level 5**	2min	1.0690	1.1338	1.2182	1.4903	1.0689	1.1341	1.2189	1.4863	1.1198	1.1505	1.2600	1.6824	1.0317	1.1220	1.1821	1.3192	0.0381	0.0123	0.0321	0.1612
before	**Level 6**	4min	1.0379	1.0774	1.1333	1.3218	1.0384	1.0774	1.1333	1.3212	1.0666	1.0802	1.1784	1.3884	1.0167	1.0743	1.0955	1.2352	0.0207	0.0024	0.0326	0.0737
	Level 7	8.1min	1.0211	1.0438	1.0786	1.2232	1.0211	1.0438	1.0786	1.2226	1.0367	1.0460	1.1197	1.2661	1.0104	1.0390	1.0463	1.1579	0.0107	0.0033	0.0294	0.0464
	Level 8	16.2min	1.0132	1.0244	1.0488	1.1867	1.0131	1.0245	1.0490	1.1875	1.0201	1.0278	1.0783	1.3561	1.0098	1.0209	1.0290	1.0876	0.0042	0.0029	0.0209	0.1193
	Level 9	32.4min	1.0101	1.0170	1.0360	1.2192	1.0102	1.0169	1.0360	1.2252	1.0139	1.0184	1.0512	1.6068	1.0073	1.0140	1.0187	1.0612	0.0027	0.0020	0.0141	0.2577
	Level 1	4.6sec	1.5359	1.6544	1.7975	2.8029	1.5360	1.6539	1.7974	2.8213	1.6020	1.7179	1.8800	5.0000	1.5000	1.6117	1.7184	1.8928	0.0442	0.0388	0.0618	1.2600
	Level 2	9.2sec	1.3004	1.4332	1.6720	5.5834	1.3010	1.4335	1.6730	5.5786	1.3738	1.5264	1.7520	17.0000	1.2500	1.3749	1.6260	1.8286	0.0517	0.0438	0.0461	6.4898
	Level 3	18.3sec	1.1614	1.3014	1.4681	15.9047	1.1613	1.3010	1.4679	15.7990	1.2025	1.3511	1.5668	65.0000	1.1251	1.2380	1.3799	1.6518	0.0349	0.0295	0.0680	27.3346
60	**Level 4**	36.7sec	1.0855	1.1902	1.3235	46.5480	1.0855	1.1900	1.3244	47.0923	1.1175	1.2362	1.4070	257.0000	1.0627	1.1220	1.2626	1.4351	0.0217	0.0292	0.0454	93.6939
days	**Level 5**	1.2min	1.0464	1.1143	1.2033	145.7788	1.0466	1.1144	1.2035	148.4018	1.0718	1.1355	1.2600	1025.0000	1.0315	1.0756	1.1505	1.2758	0.0144	0.0174	0.0400	343.3033
before	**Level 6**	2.4min	1.0267	1.0681	1.1187	509.4152	1.0267	1.0681	1.1186	518.9704	1.0468	1.0780	1.1784	4097.0000	1.0158	1.0511	1.0802	1.1805	0.0102	0.0099	0.0364	1354.6436
	Level 7	4.9min	1.0150	1.0384	1.0674	1924.8343	1.0151	1.0384	1.0677	1931.0616	1.0271	1.0443	1.1070	16385.0000	1.0081	1.0279	1.0459	1.1103	0.0059	0.0048	0.0237	5430.0091
	Level 8	9.8min	1.0096	1.0219	1.0412	7289.2055	1.0096	1.0219	1.0412	7446.9430	1.0142	1.0257	1.0600	65537.0001	1.0044	1.0161	1.0260	1.0624	0.0034	0.0025	0.0146	21789.2426
	Level 9	19.6min	1.0074	1.0160	1.0320	27448.8334	1.0074	1.0160	1.0324	29308.4617	1.0112	1.0184	1.0467	262145.0003	1.0029	1.0117	1.0187	1.0468	0.0029	0.0022	0.0116	87315.3496
	Level 1	3.2sec	1.5410	1.6658	1.8032	2.5891	1.5413	1.6658	1.8039	2.6082	1.6093	1.7353	1.8664	5.0000	1.4679	1.6117	1.7424	1.8800	0.0510	0.0429	0.0405	1.0024
	Level 2	6.5sec	1.3138	1.4522	1.6513	4.2259	1.3139	1.4527	1.6520	4.1970	1.3749	1.5608	1.7331	17.0000	1.2454	1.3786	1.5644	1.7520	0.0509	0.0563	0.0537	5.2129
	Level 3	12.9sec	1.1846	1.3051	1.4558	10.2919	1.1843	1.3053	1.4559	10.2223	1.2425	1.3571	1.5633	65.0000	1.1251	1.2490	1.3706	1.5668	0.0441	0.0273	0.0628	21.8396
3	**Level 4**	25.8sec	1.1067	1.1977	1.3073	28.8285	1.1071	1.1978	1.3076	28.9046	1.1657	1.2221	1.3879	257.0000	1.0627	1.1703	1.2231	1.4070	0.0352	0.0150	0.0458	74.4846
months	**Level 5**	51.6sec	1.0625	1.1247	1.1976	88.6679	1.0628	1.1246	1.1978	89.6081	1.0984	1.1418	1.2515	1025.0000	1.0315	1.1044	1.1505	1.2600	0.0247	0.0124	0.0337	270.0043
before	**Level 6**	1.7min	1.0363	1.0752	1.1194	306.3323	1.0363	1.0751	1.1196	311.8848	1.0578	1.0842	1.1554	4097.0000	1.0158	1.0602	1.0864	1.1784	0.0151	0.0063	0.0249	1057.1314
	Level 7	3.4min	1.0214	1.0430	1.0713	1164.4443	1.0214	1.0430	1.0713	1159.0968	1.0367	1.0485	1.0943	16385.0000	1.0081	1.0369	1.0499	1.1070	0.0097	0.0037	0.0177	4219.7529
	Level 8	6.9min	1.0131	1.0257	1.0462	4453.9565	1.0131	1.0257	1.0460	4468.6003	1.0219	1.0298	1.0600	65537.0001	1.0044	1.0222	1.0314	1.0610	0.0055	0.0029	0.0116	16898.3422
	Level 9	13.8min	1.0095	1.0193	1.0362	17898.5614	1.0094	1.0193	1.0363	17585.5029	1.0140	1.0246	1.0467	262145.0003	1.0029	1.0150	1.0266	1.0468	0.0034	0.0030	0.0075	67656.6367
	Level 1	2.3sec	1.5228	1.6139	1.7052	2.0432	1.5231	1.6140	1.7052	2.0420	1.5800	1.6482	1.7681	5.0000	1.4249	1.5812	1.6487	1.7715	0.0348	0.0181	0.0366	0.5830
	Level 2	4.6sec	1.3042	1.4016	1.4951	2.2831	1.3041	1.4015	1.4951	2.2859	1.3565	1.4389	1.5553	17.0000	1.1754	1.3588	1.4427	1.5571	0.0393	0.0241	0.0355	2.7051
	Level 3	9.2sec	1.1837	1.2668	1.3483	3.5657	1.1837	1.2666	1.3483	3.5832	1.2294	1.3057	1.4012	65.0000	1.0818	1.2297	1.3083	1.4036	0.0351	0.0242	0.0300	11.0324
1	**Level 4**	18.4sec	1.1106	1.1761	1.2410	7.7304	1.1107	1.1761	1.2411	7.9215	1.1476	1.2074	1.2893	257.0000	1.0437	1.1481	1.2075	1.2910	0.0261	0.0181	0.0264	37.3173
Year	**Level 5**	36.8sec	1.0670	1.1127	1.1576	22.0973	1.0669	1.1127	1.1577	22.2844	1.0955	1.1315	1.1854	1025.0000	1.0262	1.0958	1.1318	1.1859	0.0167	0.0113	0.0171	133.7949
before	**Level 6**	1.2min	1.0399	1.0688	1.0964	73.5731	1.0398	1.0688	1.0963	75.1386	1.0548	1.0802	1.1159	4097.0000	1.0158	1.0566	1.0805	1.1166	0.0102	0.0066	0.0107	519.7523
	Level 7	2.5min	1.0232	1.0411	1.0572	281.0208	1.0232	1.0411	1.0572	276.8093	1.0330	1.0475	1.0709	16385.0000	1.0081	1.0331	1.0476	1.0715	0.0062	0.0040	0.0067	2065.9051
	Level 8	4.9min	1.0143	1.0255	1.0355	1019.3258	1.0143	1.0255	1.0355	1064.7598	1.0204	1.0298	1.0421	65537.0001	1.0044	1.0206	1.0298	1.0423	0.0038	0.0028	0.0037	8255.8459
	Level 9	9.8min	1.0109	1.0196	1.0269	4236.5443	1.0108	1.0196	1.0269	4187.8223	1.0152	1.0231	1.0324	262145.0003	1.0029	1.0152	1.0232	1.0325	0.0029	0.0023	0.0029	33024.3680

Table A.35: EDM4 Other Results Table –Continued

EDM4 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	6.8sec	1.5387	1.6835	1.8333	2.4383	1.5387	1.6838	1.8328	2.4392	1.6035	1.7141	1.8914	2.5890	1.5000	1.6449	1.7734	2.2875	0.0470	0.0315	0.0451	0.1429
	Level 2	13.6sec	1.3141	1.4609	1.7371	2.4289	1.3146	1.4613	1.7361	2.4367	1.4030	1.5523	1.9344	3.1509	1.2500	1.4200	1.5709	2.0223	0.0709	0.0611	0.1706	0.4993
	Level 3	27.3sec	1.2053	1.2955	1.5443	2.0186	1.2047	1.2954	1.5424	2.0188	1.2855	1.3060	1.7841	2.3603	1.1250	1.2886	1.3371	1.8544	0.0777	0.0075	0.1767	0.2366
30	**Level 4**	54.5sec	1.1176	1.2023	1.3533	1.6542	1.1178	1.2023	1.3533	1.6549	1.1797	1.2233	1.4949	1.8054	1.0625	1.1846	1.2469	1.5279	0.0552	0.0159	0.1164	0.1328
days	**Level 5**	1.8min	1.0658	1.1329	1.2230	1.4629	1.0659	1.1329	1.2215	1.4639	1.1013	1.1392	1.3360	1.6116	1.0313	1.1271	1.1521	1.3649	0.0317	0.0054	0.0725	0.1155
before	**Level 6**	3.6min	1.0383	1.0756	1.1329	1.3371	1.0381	1.0757	1.1334	1.3375	1.0601	1.0819	1.2073	1.4678	1.0157	1.0718	1.0974	1.2677	0.0187	0.0044	0.0435	0.0905
	Level 7	7.3min	1.0221	1.0444	1.0797	1.2289	1.0222	1.0444	1.0799	1.2278	1.0386	1.0461	1.1172	1.2924	1.0081	1.0416	1.0495	1.1692	0.0121	0.0021	0.0262	0.0543
	Level 8	14.5min	1.0132	1.0304	1.0563	1.1723	1.0133	1.0305	1.0562	1.1729	1.0244	1.0343	1.0816	1.2288	1.0044	1.0260	1.0346	1.0977	0.0079	0.0042	0.0199	0.0590
	Level 9	29.1min	1.0099	1.0255	1.0518	1.2222	1.0099	1.0253	1.0523	1.2225	1.0165	1.0296	1.0752	1.3124	1.0029	1.0187	1.0311	1.0816	0.0058	0.0051	0.0194	0.1001
	Level 1	4.7sec	1.5262	1.6412	1.7825	2.6424	1.5256	1.6413	1.7819	2.6304	1.6026	1.7041	1.8540	5.0000	1.4647	1.6035	1.7141	1.8914	0.0438	0.0349	0.0538	0.9731
	Level 2	9.4sec	1.2890	1.4121	1.6709	4.2697	1.2892	1.4125	1.6705	4.2850	1.3391	1.4631	1.9059	17.0000	1.2500	1.3642	1.5523	1.9344	0.0375	0.0341	0.1091	4.9278
	Level 3	18.7sec	1.1602	1.2768	1.4714	9.7743	1.1608	1.2767	1.4736	10.1448	1.2016	1.3044	1.6867	65.0000	1.1250	1.2369	1.3060	1.6970	0.0339	0.0215	0.1383	20.8910
60	**Level 4**	37.4sec	1.0859	1.1750	1.3049	24.9425	1.0859	1.1748	1.3062	24.2633	1.1203	1.2020	1.4561	173.4632	1.0625	1.1265	1.2233	1.4889	0.0221	0.0238	0.0828	56.9542
days	**Level 5**	1.2min	1.0460	1.1053	1.1860	52.0593	1.0462	1.1052	1.1870	50.4909	1.0675	1.1326	1.2616	345.9263	1.0313	1.0782	1.1352	1.2696	0.0137	0.0183	0.0449	115.3625
before	**Level 6**	2.5min	1.0260	1.0606	1.1135	109.6209	1.0261	1.0606	1.1136	108.4550	1.0436	1.0739	1.1593	690.8526	1.0157	1.0443	1.0752	1.1665	0.0101	0.0089	0.0316	236.5818
	Level 7	5min	1.0146	1.0372	1.0700	207.4362	1.0147	1.0372	1.0699	210.6597	1.0243	1.0440	1.1120	1380.7053	1.0081	1.0269	1.0458	1.1135	0.0063	0.0057	0.0244	469.5693
	Level 8	10min	1.0092	1.0246	1.0470	378.4616	1.0092	1.0245	1.0469	400.2990	1.0155	1.0289	1.0702	2760.4105	1.0044	1.0158	1.0338	1.0816	0.0042	0.0048	0.0152	926.9466
	Level 9	20min	1.0077	1.0200	1.0416	679.4881	1.0077	1.0199	1.0414	720.1470	1.0132	1.0277	1.0660	5519.8211	1.0029	1.0134	1.0292	1.0702	0.0039	0.0047	0.0140	1827.2203
	Level 1	3.3sec	1.5295	1.6568	1.7928	2.4968	1.5294	1.6567	1.7928	2.5033	1.6035	1.7181	1.8540	5.0000	1.4250	1.6035	1.7188	1.8914	0.0514	0.0424	0.0417	0.7676
	Level 2	6.6sec	1.3083	1.4374	1.6392	3.4522	1.3080	1.4377	1.6385	3.4409	1.3713	1.5157	1.7692	17.0000	1.2500	1.3760	1.5523	1.8645	0.0458	0.0470	0.0522	3.8801
	Level 3	13.2sec	1.1820	1.2900	1.4531	6.7444	1.1821	1.2902	1.4540	6.8463	1.2491	1.3287	1.6136	65.0000	1.1250	1.2621	1.3371	1.6528	0.0414	0.0183	0.0900	16.3369
3	**Level 4**	26.4sec	1.1031	1.1893	1.2971	14.9342	1.1033	1.1892	1.2979	15.2143	1.1540	1.2208	1.4561	173.4632	1.0625	1.1562	1.2220	1.4588	0.0309	0.0178	0.0715	44.5556
months	**Level 5**	52.8sec	1.0600	1.1175	1.1866	30.3391	1.0598	1.1174	1.1872	30.8667	1.0951	1.1375	1.2616	345.9263	1.0313	1.0958	1.1386	1.2696	0.0223	0.0164	0.0387	90.6851
before	**Level 6**	1.8min	1.0348	1.0697	1.1170	66.4430	1.0349	1.0697	1.1170	65.5772	1.0570	1.0833	1.1593	690.8526	1.0157	1.0584	1.0880	1.1665	0.0144	0.0082	0.0250	186.9175
	Level 7	3.5min	1.0204	1.0427	1.0739	128.8683	1.0204	1.0428	1.0742	126.8601	1.0364	1.0492	1.1120	1380.7053	1.0081	1.0365	1.0495	1.1135	0.0090	0.0044	0.0197	370.5176
	Level 8	7min	1.0130	1.0288	1.0505	227.4876	1.0129	1.0288	1.0505	240.6228	1.0230	1.0342	1.0804	2760.4105	1.0044	1.0233	1.0343	1.0816	0.0060	0.0035	0.0144	729.3594
	Level 9	14.1min	1.0107	1.0242	1.0448	428.2129	1.0108	1.0242	1.0447	432.5246	1.0187	1.0296	1.0697	5519.8211	1.0029	1.0193	1.0296	1.0702	0.0052	0.0036	0.0136	1428.5663
	Level 1	2.3sec	1.5204	1.6059	1.7022	2.0325	1.5204	1.6059	1.7022	2.0380	1.5647	1.6453	1.7734	5.0000	1.4250	1.5651	1.6512	1.7772	0.0339	0.0232	0.0361	0.4811
	Level 2	4.5sec	1.2982	1.3877	1.4808	2.1741	1.2982	1.3877	1.4808	2.1782	1.3457	1.4223	1.5611	17.0000	1.1749	1.3493	1.4232	1.5646	0.0353	0.0215	0.0395	2.0565
	Level 3	9.1sec	1.1770	1.2488	1.3274	2.8815	1.1770	1.2487	1.3274	2.9197	1.2155	1.2831	1.3915	65.0000	1.0810	1.2165	1.2846	1.3933	0.0294	0.0203	0.0306	8.1497
1	**Level 4**	18.1sec	1.1048	1.1594	1.2192	4.9075	1.1047	1.1593	1.2193	4.9050	1.1319	1.1876	1.2564	173.4632	1.0429	1.1328	1.1881	1.2569	0.0215	0.0169	0.0194	22.0455
Year	**Level 5**	36.2sec	1.0623	1.1008	1.1424	8.6956	1.0623	1.1008	1.1424	8.5264	1.0814	1.1226	1.1676	345.9263	1.0256	1.0826	1.1233	1.1679	0.0142	0.0111	0.0124	44.9341
before	**Level 6**	1.2min	1.0374	1.0626	1.0892	16.3072	1.0373	1.0626	1.0892	16.7044	1.0502	1.0737	1.1071	690.8526	1.0157	1.0505	1.0739	1.1083	0.0091	0.0071	0.0088	93.0088
	Level 7	2.4min	1.0226	1.0392	1.0563	31.6396	1.0226	1.0392	1.0562	31.2208	1.0303	1.0471	1.0672	1380.7053	1.0081	1.0305	1.0471	1.0686	0.0058	0.0048	0.0064	184.1359
	Level 8	4.8min	1.0149	1.0265	1.0380	56.9392	1.0149	1.0265	1.0380	58.2545	1.0200	1.0320	1.0456	2760.4105	1.0044	1.0201	1.0320	1.0459	0.0040	0.0034	0.0044	361.5016
	Level 9	9.7min	1.0124	1.0222	1.0321	108.3728	1.0124	1.0222	1.0321	103.9982	1.0178	1.0268	1.0388	5519.8211	1.0029	1.0178	1.0268	1.0388	0.0037	0.0025	0.0035	703.6341

Table A.35: EDM4 Other Results Table –Continued

EDM4 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	7.2sec	1.5403	1.6846	1.8306	2.3905	1.5396	1.6845	1.8304	2.3873	1.6027	1.7101	1.8859	2.5219	1.5000	1.6440	1.7662	2.1483	0.0472	0.0299	0.0439	0.1640
	Level 2	14.4sec	1.3160	1.4596	1.7018	2.4547	1.3164	1.4597	1.7003	2.4583	1.4028	1.5396	1.8647	3.1132	1.2500	1.4179	1.5902	2.0216	0.0717	0.0545	0.1186	0.4634
	Level 3	28.8sec	1.2049	1.2981	1.4932	2.0309	1.2045	1.2982	1.4922	2.0274	1.2844	1.3057	1.6956	2.3514	1.1250	1.2882	1.3423	1.8244	0.0780	0.0073	0.1351	0.2473
30	**Level 4**	57.6sec	1.1148	1.1968	1.3125	1.6210	1.1143	1.1969	1.3124	1.6218	1.1728	1.2192	1.4041	1.7348	1.0624	1.1753	1.2258	1.4738	0.0517	0.0181	0.0793	0.1309
days	**Level 5**	1.9min	1.0655	1.1159	1.1883	1.3965	1.0645	1.1158	1.1884	1.3970	1.0986	1.1234	1.2578	1.5009	1.0311	1.1018	1.1279	1.3210	0.0314	0.0097	0.0487	0.0864
before	**Level 6**	3.8min	1.0351	1.0611	1.1041	1.2549	1.0351	1.0612	1.1039	1.2538	1.0528	1.0672	1.1672	1.3585	1.0154	1.0551	1.0749	1.1866	0.0167	0.0050	0.0366	0.0736
	Level 7	7.7min	1.0177	1.0306	1.0536	1.1459	1.0174	1.0306	1.0545	1.1453	1.0258	1.0322	1.0993	1.2056	1.0073	1.0280	1.0361	1.1085	0.0082	0.0019	0.0255	0.0424
	Level 8	15.4min	1.0082	1.0157	1.0290	1.0809	1.0082	1.0157	1.0291	1.0809	1.0120	1.0173	1.0563	1.1110	1.0029	1.0148	1.0193	1.0661	0.0038	0.0011	0.0154	0.0209
	Level 9	30.7min	1.0034	1.0077	1.0168	1.0540	1.0034	1.0077	1.0167	1.0539	1.0053	1.0089	1.0340	1.0721	1.0000	1.0058	1.0100	1.0413	0.0021	0.0013	0.0098	0.0153
	Level 1	4.6sec	1.5313	1.6367	1.7579	2.4590	1.5310	1.6375	1.7592	2.4599	1.6005	1.6804	1.8325	5.0000	1.4791	1.6027	1.7036	1.8491	0.0454	0.0318	0.0477	0.9891
	Level 2	9.3sec	1.2935	1.4087	1.6007	3.8299	1.2933	1.4088	1.6014	3.8279	1.3599	1.4460	1.7222	17.0000	1.2500	1.3641	1.4668	1.7846	0.0425	0.0312	0.0835	4.9561
	Level 3	18.5sec	1.1587	1.2729	1.4021	7.4972	1.1594	1.2728	1.4016	7.7075	1.2015	1.2992	1.5408	54.4764	1.1250	1.2360	1.2995	1.5905	0.0329	0.0206	0.0970	17.5399
60	**Level 4**	37.1sec	1.0835	1.1644	1.2557	14.1905	1.0837	1.1645	1.2565	13.9430	1.1058	1.1939	1.3748	113.2546	1.0624	1.1185	1.1947	1.3787	0.0195	0.0217	0.0602	37.2421
days	**Level 5**	1.2min	1.0447	1.0954	1.1461	12.7838	1.0446	1.0954	1.1464	13.0540	1.0631	1.1134	1.2083	106.7909	1.0311	1.0676	1.1168	1.2316	0.0121	0.0126	0.0326	35.1514
before	**Level 6**	2.5min	-27.7082	1.0498	1.0720	1.1971	-28.2348	1.0499	1.0721	1.1962	1.0304	1.0557	1.0941	1.3585	-262.2917	1.0369	1.0591	1.0994	87.7713	0.0062	0.0115	0.0744
	Level 7	4.9min	-11.0337	1.0257	1.0374	1.1102	-10.8323	1.0258	1.0374	1.1101	1.0157	1.0304	1.0465	1.2056	-105.5812	1.0205	1.0318	1.0493	35.5308	0.0035	0.0057	0.0447
	Level 8	9.9min	1.0050	1.0125	1.0196	1.0601	1.0050	1.0125	1.0196	1.0606	1.0089	1.0152	1.0258	1.1110	1.0000	1.0092	1.0156	1.0315	0.0028	0.0021	0.0034	0.0243
	Level 9	19.8min	1.0022	1.0063	1.0112	1.0386	1.0022	1.0063	1.0113	1.0389	1.0044	1.0080	1.0144	1.0721	1.0000	1.0053	1.0080	1.0173	0.0017	0.0009	0.0021	0.0177
	Level 1	3.3sec	1.5323	1.6512	1.7819	2.3937	1.5318	1.6511	1.7817	2.3942	1.6017	1.7101	1.8370	5.0000	1.4282	1.6027	1.7177	1.8434	0.0524	0.0398	0.0401	0.7689
	Level 2	6.5sec	1.3014	1.4263	1.6038	3.2074	1.3010	1.4266	1.6035	3.1434	1.3641	1.5037	1.6930	17.0000	1.2379	1.3702	1.5044	1.7222	0.0475	0.0467	0.0656	3.8504
	Level 3	13.1sec	1.1739	1.2791	1.4089	5.2572	1.1746	1.2791	1.4083	5.3530	1.2360	1.3057	1.5408	54.4764	1.1250	1.2503	1.3084	1.5470	0.0386	0.0185	0.0801	13.5916
3	**Level 4**	26.1sec	1.0980	1.1752	1.2565	9.3230	1.0980	1.1754	1.2564	8.9952	1.1512	1.1947	1.3452	113.2546	1.0624	1.1522	1.1954	1.3748	0.0270	0.0145	0.0528	28.8428
months	**Level 5**	52.2sec	1.0555	1.1051	1.1535	8.3429	1.0555	1.1050	1.1535	8.3782	1.0887	1.1212	1.2083	106.7909	1.0311	1.0909	1.1221	1.2157	0.0182	0.0107	0.0303	27.2252
before	**Level 6**	1.7min	-16.3318	1.0563	1.0824	1.2001	-16.5250	1.0563	1.0824	1.2005	1.0497	1.0664	1.1013	1.3585	-262.2917	1.0514	1.0672	1.1165	67.9893	0.0048	0.0113	0.0606
	Level 7	3.5min	-6.3399	1.0299	1.0428	1.1105	-6.0912	1.0299	1.0428	1.1105	1.0247	1.0343	1.0530	1.2056	-105.5812	1.0249	1.0352	1.0630	27.5231	0.0034	0.0060	0.0357
	Level 8	7min	1.0069	1.0150	1.0228	1.0586	1.0069	1.0150	1.0228	1.0587	1.0118	1.0183	1.0315	1.1110	1.0000	1.0118	1.0192	1.0316	0.0033	0.0021	0.0040	0.0208
	Level 9	13.9min	1.0031	1.0080	1.0128	1.0358	1.0031	1.0080	1.0128	1.0357	1.0058	1.0103	1.0173	1.0721	1.0000	1.0059	1.0104	1.0187	0.0019	0.0015	0.0021	0.0155
	Level 1	2.3sec	1.5130	1.6017	1.6934	1.9805	1.5131	1.6017	1.6934	1.9836	1.5653	1.6408	1.7577	5.0000	1.3845	1.5658	1.6411	1.7578	0.0360	0.0212	0.0344	0.4465
	Level 2	4.6sec	1.2901	1.3794	1.4709	2.0324	1.2901	1.3794	1.4710	2.0327	1.3341	1.4179	1.5339	17.0000	1.1740	1.3349	1.4182	1.5379	0.0335	0.0230	0.0328	1.9438
	Level 3	9.1sec	1.1704	1.2376	1.3150	2.4199	1.1704	1.2377	1.3149	2.4215	1.2059	1.2793	1.3767	54.4764	1.0798	1.2060	1.2794	1.3821	0.0285	0.0209	0.0270	6.6699
1	**Level 4**	18.3sec	1.0981	1.1478	1.2058	3.1908	1.0983	1.1479	1.2058	3.1693	1.1236	1.1749	1.2396	113.2546	1.0411	1.1237	1.1753	1.2421	0.0199	0.0159	0.0187	14.0950
Year	**Level 5**	36.5sec	1.0562	1.0896	1.1269	2.9447	1.0562	1.0896	1.1268	2.9275	1.0724	1.1041	1.1539	106.7909	1.0235	1.0727	1.1084	1.1539	0.0121	0.0091	0.0121	13.2978
before	**Level 6**	1.2min	-3.3074	1.0512	1.0718	1.1457	-3.1486	1.0511	1.0718	1.1459	1.0402	1.0608	1.0856	1.7824	-262.2917	1.0403	1.0610	1.0861	33.1756	0.0057	0.0074	0.0999
	Level 7	2.4min	-0.6991	1.0277	1.0387	1.0821	-0.6754	1.0277	1.0387	1.0820	1.0219	1.0335	1.0459	1.5189	-105.5812	1.0220	1.0337	1.0465	13.4301	0.0033	0.0038	0.0651
	Level 8	4.9min	1.0085	1.0146	1.0204	1.0448	1.0085	1.0146	1.0204	1.0448	1.0114	1.0173	1.0240	1.3433	1.0000	1.0117	1.0173	1.0242	0.0023	0.0018	0.0020	0.0425
	Level 9	9.7min	1.0045	1.0080	1.0116	1.0288	1.0045	1.0080	1.0116	1.0286	1.0063	1.0096	1.0141	1.3642	1.0000	1.0063	1.0096	1.0141	0.0016	0.0010	0.0012	0.0447

Table A.35: EDM4 Other Results Table –Continued

EDM4 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	7.2sec	0.4333	0.5501	0.6005	0.6570	0.4346	0.5502	0.6000	0.6571	0.5287	0.5639	0.6236	0.6667	0.3863	0.5394	0.5834	0.6356	0.0566	0.0109	0.0164	0.0146
	Level 2	14.4sec	0.4409	0.5965	0.6910	0.7751	0.4410	0.5962	0.6907	0.7749	0.5169	0.6366	0.7128	0.8000	0.3174	0.5247	0.6442	0.7268	0.0786	0.0492	0.0269	0.0341
	Level 3	28.8sec	0.5116	0.6802	0.7732	0.8459	0.5122	0.6787	0.7732	0.8466	0.5605	0.7479	0.7779	0.8889	0.4237	0.6050	0.7657	0.7809	0.0539	0.0592	0.0047	0.0508
30	**Level 4**	57.6sec	0.6197	0.7623	0.8348	0.9079	0.6195	0.7618	0.8350	0.9085	0.6689	0.8020	0.8477	0.9411	0.5539	0.6868	0.8175	0.8528	0.0501	0.0543	0.0119	0.0396
days	**Level 5**	1.9min	0.6978	0.8388	0.8876	0.9461	0.6987	0.8390	0.8878	0.9465	0.7485	0.8680	0.9080	0.9696	0.6205	0.8021	0.8778	0.9108	0.0535	0.0273	0.0119	0.0251
before	**Level 6**	3.8min	0.7646	0.8972	0.9322	0.9685	0.7657	0.8970	0.9324	0.9686	0.8283	0.9112	0.9433	0.9845	0.6813	0.8819	0.9243	0.9490	0.0545	0.0126	0.0069	0.0152
	Level 7	7.7min	0.8315	0.9344	0.9585	0.9824	0.8315	0.9343	0.9586	0.9823	0.8951	0.9529	0.9628	0.9920	0.7738	0.9203	0.9559	0.9727	0.0472	0.0161	0.0029	0.0088
	Level 8	15.4min	0.8680	0.9530	0.9716	0.9896	0.8683	0.9527	0.9716	0.9897	0.9245	0.9665	0.9762	0.9956	0.8138	0.9389	0.9668	0.9845	0.0493	0.0146	0.0043	0.0055
	Level 9	30.7min	0.8451	0.9551	0.9770	0.9919	0.8439	0.9557	0.9770	0.9919	0.9301	0.9699	0.9837	0.9971	0.7619	0.9381	0.9713	0.9868	0.0784	0.0153	0.0057	0.0051
	Level 1	4.6sec	0.4148	0.5640	0.6118	0.6561	0.4134	0.5642	0.6120	0.6560	0.5287	0.5868	0.6236	0.6827	0.2000	0.5394	0.5980	0.6240	0.1062	0.0179	0.0107	0.0186
	Level 2	9.3sec	0.3826	0.6092	0.7109	0.7762	0.3805	0.6090	0.7111	0.7762	0.5169	0.6835	0.7330	0.8000	0.0588	0.5247	0.6924	0.7468	0.1646	0.0435	0.0156	0.0225
	Level 3	18.5sec	0.4249	0.6923	0.7854	0.8623	0.4210	0.6921	0.7853	0.8622	0.5893	0.7667	0.8085	0.8889	0.0154	0.5929	0.7720	0.8322	0.2179	0.0645	0.0127	0.0251
60	**Level 4**	37.1sec	0.4965	0.7748	0.8535	0.9214	0.4959	0.7746	0.8537	0.9213	0.6717	0.8320	0.8877	0.9411	0.0058	0.6868	0.8339	0.8926	0.2742	0.0482	0.0171	0.0187
days	**Level 5**	1.2min	0.5596	0.8476	0.9073	0.9558	0.5580	0.8475	0.9075	0.9560	0.7877	0.8830	0.9275	0.9696	0.0029	0.7926	0.8850	0.9368	0.3163	0.0321	0.0135	0.0125
before	**Level 6**	2.5min	0.6095	0.9019	0.9441	0.9747	0.6123	0.9019	0.9442	0.9746	0.8572	0.9312	0.9576	0.9845	0.0014	0.8626	0.9330	0.9582	0.3494	0.0259	0.0072	0.0096
	Level 7	4.9min	0.6655	0.9372	0.9648	0.9854	0.6599	0.9373	0.9649	0.9856	0.8981	0.9578	0.9738	0.9920	0.0007	0.8993	0.9590	0.9762	0.3757	0.0211	0.0052	0.0061
	Level 8	9.9min	0.6905	0.9569	0.9766	0.9909	0.6874	0.9570	0.9766	0.9909	0.9245	0.9719	0.9845	0.9956	0.0004	0.9344	0.9725	0.9848	0.3915	0.0140	0.0046	0.0042
	Level 9	19.8min	0.6675	0.9617	0.9813	0.9924	0.6756	0.9617	0.9813	0.9924	0.9344	0.9730	0.9868	0.9971	0.0002	0.9381	0.9756	0.9870	0.3884	0.0127	0.0039	0.0039
	Level 1	3.3sec	0.4219	0.5596	0.6056	0.6545	0.4228	0.5596	0.6054	0.6546	0.5287	0.5820	0.6236	0.7018	0.2000	0.5394	0.5821	0.6236	0.0864	0.0140	0.0148	0.0222
	Level 2	6.5sec	0.4147	0.6141	0.6984	0.7654	0.4153	0.6139	0.6987	0.7654	0.5363	0.6597	0.7268	0.8000	0.0588	0.5652	0.6602	0.7292	0.1376	0.0221	0.0210	0.0269
	Level 3	13.1sec	0.4658	0.6933	0.7767	0.8475	0.4659	0.6941	0.7768	0.8469	0.6050	0.7526	0.7923	0.8889	0.0154	0.6197	0.7609	0.8006	0.1784	0.0431	0.0095	0.0297
3	**Level 4**	26.1sec	0.5435	0.7749	0.8425	0.9073	0.5432	0.7755	0.8426	0.9070	0.6855	0.8191	0.8649	0.9411	0.0058	0.6868	0.8280	0.8665	0.2186	0.0411	0.0116	0.0253
months	**Level 5**	52.2sec	0.6150	0.8453	0.8962	0.9440	0.6155	0.8454	0.8962	0.9440	0.7877	0.8791	0.9126	0.9696	0.0029	0.7926	0.8798	0.9131	0.2515	0.0278	0.0129	0.0198
before	**Level 6**	1.7min	0.6857	0.8972	0.9356	0.9663	0.6852	0.8974	0.9357	0.9664	0.8572	0.9231	0.9448	0.9845	0.0014	0.8626	0.9243	0.9461	0.2804	0.0204	0.0066	0.0135
	Level 7	3.5min	0.7411	0.9327	0.9594	0.9802	0.7408	0.9325	0.9594	0.9801	0.8981	0.9531	0.9648	0.9920	0.0007	0.8993	0.9536	0.9648	0.3023	0.0173	0.0039	0.0086
	Level 8	7min	0.7756	0.9531	0.9724	0.9873	0.7735	0.9530	0.9724	0.9873	0.9245	0.9669	0.9772	0.9956	0.0004	0.9256	0.9671	0.9775	0.3157	0.0131	0.0031	0.0059
	Level 9	13.9min	0.7672	0.9583	0.9767	0.9894	0.7721	0.9583	0.9767	0.9894	0.9344	0.9713	0.9811	0.9971	0.0002	0.9348	0.9716	0.9817	0.3182	0.0124	0.0033	0.0051
	Level 1	2.3sec	0.5070	0.5881	0.6230	0.6583	0.5074	0.5881	0.6231	0.6584	0.5639	0.6056	0.6391	0.7018	0.2000	0.5665	0.6078	0.6395	0.0722	0.0121	0.0092	0.0150
	Level 2	4.6sec	0.5475	0.6763	0.7212	0.7714	0.5477	0.6763	0.7211	0.7713	0.6406	0.7027	0.7431	0.8512	0.0588	0.6413	0.7031	0.7436	0.1202	0.0174	0.0114	0.0214
	Level 3	9.1sec	0.6142	0.7543	0.8013	0.8505	0.6139	0.7543	0.8014	0.8506	0.7186	0.7785	0.8227	0.9250	0.0154	0.7200	0.7794	0.8233	0.1475	0.0167	0.0132	0.0216
1	**Level 4**	18.3sec	0.6890	0.8207	0.8630	0.9058	0.6883	0.8207	0.8631	0.9059	0.7959	0.8417	0.8834	0.9589	0.0058	0.7971	0.8420	0.8839	0.1653	0.0127	0.0127	0.0178
Year	**Level 5**	36.5sec	0.7598	0.8757	0.9088	0.9417	0.7586	0.8757	0.9088	0.9418	0.8565	0.8902	0.9247	0.9751	0.0029	0.8565	0.8908	0.9250	0.1773	0.0093	0.0093	0.0127
before	**Level 6**	1.2min	0.8172	0.9184	0.9413	0.9643	0.8171	0.9184	0.9413	0.9643	0.9033	0.9312	0.9522	0.9845	0.0014	0.9048	0.9313	0.9524	0.1855	0.0072	0.0064	0.0084
	Level 7	2.4min	0.8610	0.9469	0.9625	0.9781	0.8610	0.9469	0.9624	0.9781	0.9370	0.9550	0.9705	0.9920	0.0007	0.9370	0.9551	0.9707	0.1909	0.0056	0.0045	0.0056
	Level 8	4.9min	0.8866	0.9635	0.9743	0.9855	0.8875	0.9635	0.9743	0.9854	0.9564	0.9690	0.9804	0.9956	0.0004	0.9564	0.9690	0.9806	0.1944	0.0040	0.0033	0.0039
	Level 9	9.7min	0.8928	0.9690	0.9783	0.9878	0.8921	0.9690	0.9783	0.9878	0.9627	0.9739	0.9825	0.9971	0.0002	0.9630	0.9739	0.9827	0.1984	0.0032	0.0025	0.0035

Table A.36: EDM5 Other Results Table

EDM5 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.4sec	1.4572	1.5954	1.6484	2.2317	1.4588	1.5956	1.6487	2.2409	1.5276	1.6128	1.6648	2.9395	1.4149	1.5678	1.6327	1.7570	0.0603	0.0243	0.0227	0.6198
	Level 2	28.8sec	1.2172	1.4076	1.5687	2.0445	1.2171	1.4074	1.5689	2.0540	1.2432	1.4190	1.5784	2.9651	1.2008	1.3934	1.5594	1.5913	0.0228	0.0130	0.0134	0.7890
	Level 3	57.5sec	1.1316	1.3084	1.3824	2.1152	1.1313	1.3081	1.3824	2.0969	1.1529	1.3339	1.4085	3.2681	1.1073	1.2701	1.3562	1.4620	0.0229	0.0336	0.0370	1.0155
30	**Level 4**	1.9min	1.0929	1.2175	1.2860	2.1496	1.0935	1.2169	1.2862	2.1531	1.1289	1.2464	1.3108	3.6200	1.0566	1.1842	1.2617	1.3237	0.0362	0.0312	0.0347	1.2739
days	**Level 5**	3.8min	1.0651	1.1413	1.2305	1.8446	1.0648	1.1419	1.2306	1.8205	1.0969	1.1618	1.2370	2.7968	1.0345	1.1263	1.2242	1.2725	0.0312	0.0181	0.0090	0.8476
before	**Level 6**	7.7min	1.0441	1.0939	1.1592	1.5636	1.0448	1.0939	1.1592	1.5647	1.0678	1.0986	1.1622	2.2261	1.0246	1.0915	1.1562	1.2026	0.0217	0.0041	0.0042	0.5737
	Level 7	15.3min	1.0321	1.0653	1.1012	1.4089	1.0322	1.0653	1.1012	1.4011	1.0490	1.0679	1.1021	1.8867	1.0183	1.0631	1.1003	1.1393	0.0155	0.0024	0.0013	0.4210
	Level 8	30.7min	1.0239	1.0520	1.0650	1.3020	1.0241	1.0520	1.0651	1.3092	1.0347	1.0539	1.0701	1.6962	1.0161	1.0494	1.0600	1.1031	0.0096	0.0023	0.0071	0.3354
	Level 9	61.4min	1.0228	1.0478	1.0574	1.2425	1.0226	1.0478	1.0573	1.2434	1.0298	1.0491	1.0608	1.5242	1.0188	1.0459	1.0538	1.0974	0.0062	0.0017	0.0049	0.2433
	Level 1	8.5sec	1.4732	1.5882	1.7243	2.0217	1.4735	1.5888	1.7237	2.0261	1.5276	1.6478	1.7635	2.9395	1.4149	1.5433	1.6648	1.7796	0.0407	0.0373	0.0381	0.3874
	Level 2	17sec	1.2430	1.3808	1.5047	1.8389	1.2430	1.3809	1.5044	1.8356	1.2903	1.4298	1.5594	2.9651	1.2008	1.3241	1.4453	1.5784	0.0307	0.0376	0.0426	0.4708
	Level 3	33.9sec	1.1514	1.2598	1.3517	1.7348	1.1513	1.2595	1.3519	1.7269	1.1961	1.3132	1.3936	3.2681	1.1073	1.1995	1.3202	1.4043	0.0284	0.0389	0.0272	0.6313
60	**Level 4**	1.1min	1.1017	1.1746	1.2420	1.6376	1.1014	1.1746	1.2423	1.6599	1.1343	1.2198	1.2703	3.6200	1.0566	1.1377	1.2201	1.2897	0.0278	0.0286	0.0173	0.7984
days	**Level 5**	2.3min	1.0667	1.1168	1.1653	1.4758	1.0667	1.1169	1.1655	1.4769	1.0927	1.1414	1.2015	2.7968	1.0345	1.0948	1.1488	1.2041	0.0221	0.0165	0.0171	0.5393
before	**Level 6**	4.5min	1.0443	1.0800	1.1160	1.3315	1.0440	1.0798	1.1159	1.3318	1.0649	1.0979	1.1415	2.2261	1.0246	1.0660	1.0986	1.1416	0.0150	0.0115	0.0145	0.3666
	Level 7	9min	1.0305	1.0548	1.0830	1.2316	1.0306	1.0548	1.0832	1.2311	1.0456	1.0679	1.0976	1.8867	1.0168	1.0481	1.0715	1.1003	0.0107	0.0081	0.0098	0.2688
	Level 8	18.1min	1.0225	1.0423	1.0605	1.1770	1.0224	1.0423	1.0605	1.1746	1.0332	1.0528	1.0688	1.6962	1.0118	1.0347	1.0539	1.0701	0.0075	0.0076	0.0048	0.2132
	Level 9	36.2min	1.0204	1.0400	1.0534	1.1420	1.0203	1.0399	1.0534	1.1422	1.0296	1.0491	1.0579	1.5242	1.0106	1.0298	1.0492	1.0608	0.0062	0.0080	0.0027	0.1564
	Level 1	5.8sec	1.4801	1.5585	1.7001	1.9440	1.4799	1.5587	1.7004	1.9458	1.5226	1.6062	1.7796	2.9395	1.4149	1.5229	1.6128	1.7844	0.0331	0.0278	0.0546	0.3141
	Level 2	11.5sec	1.2643	1.3569	1.4760	1.7512	1.2645	1.3568	1.4767	1.7487	1.3215	1.3934	1.5508	2.9651	1.2008	1.3221	1.4098	1.5594	0.0383	0.0277	0.0491	0.3784
	Level 3	23.1sec	1.1579	1.2432	1.3250	1.6133	1.1582	1.2431	1.3255	1.6205	1.1961	1.2733	1.3766	3.2681	1.1073	1.1995	1.2805	1.3936	0.0263	0.0249	0.0317	0.5042
3	**Level 4**	46.1sec	1.1012	1.1647	1.2333	1.5320	1.1014	1.1647	1.2332	1.5369	1.1305	1.1978	1.2617	3.6200	1.0566	1.1343	1.2044	1.2703	0.0208	0.0210	0.0185	0.6343
months	**Level 5**	1.5min	1.0661	1.1128	1.1625	1.3984	1.0662	1.1130	1.1628	1.3951	1.0923	1.1376	1.1926	2.7968	1.0345	1.0927	1.1414	1.2015	0.0172	0.0156	0.0152	0.4282
before	**Level 6**	3.1min	1.0433	1.0776	1.1140	1.2772	1.0434	1.0777	1.1139	1.2764	1.0649	1.0979	1.1316	2.2261	1.0246	1.0660	1.0986	1.1415	0.0129	0.0115	0.0104	0.2903
	Level 7	6.1min	1.0295	1.0537	1.0791	1.1899	1.0295	1.0537	1.0790	1.1906	1.0441	1.0676	1.0944	1.8867	1.0168	1.0456	1.0679	1.0976	0.0092	0.0085	0.0077	0.2125
	Level 8	12.3min	1.0214	1.0406	1.0574	1.1410	1.0213	1.0406	1.0574	1.1408	1.0317	1.0516	1.0646	1.6962	1.0118	1.0332	1.0526	1.0671	0.0062	0.0071	0.0037	0.1692
	Level 9	24.6min	1.0186	1.0369	1.0501	1.1149	1.0186	1.0369	1.0501	1.1153	1.0274	1.0465	1.0542	1.5242	1.0106	1.0294	1.0466	1.0555	0.0046	0.0072	0.0026	0.1249
	Level 1	3.9sec	1.4560	1.5253	1.5940	1.7768	1.4560	1.5252	1.5939	1.7762	1.4946	1.5598	1.6331	2.9395	1.3980	1.4988	1.5598	1.6338	0.0252	0.0163	0.0216	0.1940
	Level 2	7.8sec	1.2291	1.2992	1.3641	1.5393	1.2291	1.2993	1.3643	1.5402	1.2637	1.3278	1.3970	2.9651	1.1761	1.2657	1.3278	1.4002	0.0244	0.0198	0.0212	0.2172
	Level 3	15.6sec	1.1246	1.1850	1.2355	1.3966	1.1246	1.1850	1.2355	1.3958	1.1577	1.2110	1.2650	3.2681	1.0797	1.1580	1.2110	1.2701	0.0204	0.0152	0.0158	0.2642
1	**Level 4**	31.3sec	1.0756	1.1229	1.1659	1.3106	1.0757	1.1230	1.1659	1.3081	1.0994	1.1437	1.1977	3.6200	1.0357	1.0997	1.1444	1.1978	0.0176	0.0138	0.0157	0.3133
Year	**Level 5**	1min	1.0489	1.0835	1.1195	1.2291	1.0489	1.0835	1.1196	1.2274	1.0691	1.0990	1.1374	2.7968	1.0126	1.0691	1.1011	1.1376	0.0143	0.0092	0.0105	0.2194
before	**Level 6**	2.1min	1.0327	1.0577	1.0835	1.1696	1.0327	1.0577	1.0835	1.1694	1.0472	1.0683	1.0979	2.2261	1.0052	1.0479	1.0691	1.0986	0.0106	0.0063	0.0077	0.1777
	Level 7	4.2min	1.0222	1.0401	1.0580	1.1361	1.0222	1.0401	1.0579	1.1363	1.0316	1.0482	1.0690	2.7747	1.0028	1.0319	1.0487	1.0704	0.0074	0.0046	0.0062	0.2398
	Level 8	8.3min	1.0158	1.0289	1.0423	1.1345	1.0158	1.0289	1.0423	1.1361	1.0227	1.0355	1.0510	4.5008	1.0016	1.0228	1.0356	1.0514	0.0054	0.0035	0.0046	0.4496
	Level 9	16.7min	1.0135	1.0245	1.0365	1.1839	1.0135	1.0245	1.0365	1.1829	1.0196	1.0298	1.0444	7.9620	1.0012	1.0196	1.0299	1.0445	0.0047	0.0030	0.0041	0.8922

Table A.36: EDM5 Other Results Table –Continued

EDM5 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.4sec	1.4620	1.6067	1.6458	2.1907	1.4599	1.6067	1.6453	2.1898	1.5327	1.6279	1.6604	2.7785	1.4129	1.5736	1.6301	1.7663	0.0639	0.0291	0.0215	0.5259
	Level 2	28.8sec	1.2170	1.4034	1.5538	1.9523	1.2176	1.4033	1.5537	1.9421	1.2453	1.4256	1.5553	2.6766	1.1975	1.3801	1.5522	1.5596	0.0248	0.0228	0.0022	0.6363
	Level 3	57.5sec	1.1301	1.2724	1.3696	1.9650	1.1300	1.2721	1.3686	1.9905	1.1525	1.2892	1.4005	2.9514	1.1077	1.2477	1.3367	1.4547	0.0224	0.0217	0.0451	0.8340
30	**Level 4**	1.9min	1.0897	1.2072	1.2787	2.0313	1.0889	1.2073	1.2783	2.0516	1.1249	1.2283	1.3098	3.2875	1.0550	1.1677	1.2468	1.3296	0.0350	0.0344	0.0445	1.0754
days	**Level 5**	3.8min	1.0586	1.1382	1.2491	1.8472	1.0587	1.1389	1.2494	1.8444	1.0888	1.1635	1.2681	2.8767	1.0336	1.1123	1.2307	1.2704	0.0279	0.0257	0.0264	0.8959
before	**Level 6**	7.7min	1.0407	1.0939	1.1641	1.6004	1.0408	1.0939	1.1645	1.6018	1.0669	1.1056	1.1787	2.3510	1.0230	1.0837	1.1504	1.1988	0.0231	0.0110	0.0200	0.6495
	Level 7	15.3min	1.0285	1.0668	1.1010	1.4153	1.0283	1.0667	1.1010	1.4164	1.0476	1.0717	1.1015	1.9515	1.0164	1.0631	1.1005	1.1338	0.0168	0.0045	0.0007	0.4636
	Level 8	30.7min	1.0209	1.0502	1.0674	1.2877	1.0207	1.0502	1.0675	1.2865	1.0342	1.0514	1.0705	1.6414	1.0139	1.0480	1.0645	1.1002	0.0117	0.0019	0.0042	0.3075
	Level 9	61.3min	1.0185	1.0446	1.0574	1.2414	1.0183	1.0446	1.0574	1.2407	1.0294	1.0476	1.0594	1.5356	1.0112	1.0422	1.0554	1.0885	0.0097	0.0028	0.0029	0.2554
	Level 1	8.5sec	1.4766	1.5905	1.7172	2.0135	1.4767	1.5911	1.7174	2.0145	1.5327	1.6554	1.7691	2.7785	1.4129	1.5379	1.6604	1.7862	0.0417	0.0422	0.0423	0.3448
	Level 2	17sec	1.2441	1.3770	1.4968	1.7993	1.2436	1.3771	1.4969	1.7949	1.2886	1.4256	1.5553	2.6766	1.1975	1.3206	1.4259	1.5596	0.0300	0.0367	0.0455	0.3875
	Level 3	33.9sec	1.1500	1.2504	1.3413	1.6831	1.1503	1.2503	1.3412	1.6798	1.1899	1.2794	1.4005	2.9514	1.1077	1.2050	1.2892	1.4066	0.0285	0.0284	0.0390	0.5200
60	**Level 4**	1.1min	1.0983	1.1745	1.2391	1.6156	1.0986	1.1746	1.2390	1.6117	1.1325	1.2152	1.2568	3.2875	1.0550	1.1357	1.2257	1.2689	0.0281	0.0273	0.0137	0.6828
days	**Level 5**	2.3min	1.0653	1.1198	1.1688	1.4811	1.0656	1.1200	1.1687	1.4840	1.0919	1.1427	1.1901	2.8767	1.0336	1.0966	1.1431	1.2222	0.0228	0.0190	0.0144	0.5652
before	**Level 6**	4.5min	1.0435	1.0849	1.1206	1.3472	1.0436	1.0848	1.1205	1.3428	1.0669	1.0988	1.1431	2.3510	1.0230	1.0709	1.1005	1.1504	0.0162	0.0115	0.0156	0.4093
	Level 7	9min	1.0288	1.0600	1.0827	1.2403	1.0289	1.0599	1.0826	1.2350	1.0457	1.0696	1.0948	1.9515	1.0164	1.0476	1.0701	1.1005	0.0109	0.0078	0.0092	0.2913
	Level 8	18.1min	1.0206	1.0450	1.0589	1.1658	1.0205	1.0450	1.0589	1.1668	1.0320	1.0514	1.0645	1.6414	1.0116	1.0342	1.0545	1.0705	0.0076	0.0065	0.0039	0.1933
	Level 9	36.2min	1.0179	1.0389	1.0530	1.1424	1.0181	1.0389	1.0530	1.1431	1.0275	1.0441	1.0594	1.5356	1.0104	1.0294	1.0476	1.0681	0.0067	0.0050	0.0047	0.1593
	Level 1	5.8sec	1.4826	1.5620	1.6957	1.9360	1.4824	1.5625	1.6956	1.9363	1.5284	1.6188	1.7691	2.7785	1.4129	1.5298	1.6279	1.7862	0.0344	0.0268	0.0492	0.2829
	Level 2	11.5sec	1.2646	1.3576	1.4680	1.7275	1.2646	1.3578	1.4680	1.7257	1.3214	1.3890	1.5553	2.6766	1.1975	1.3336	1.4042	1.5566	0.0399	0.0189	0.0491	0.3110
	Level 3	23sec	1.1576	1.2426	1.3140	1.6067	1.1575	1.2424	1.3147	1.5978	1.1918	1.2687	1.3893	2.9514	1.1077	1.1934	1.2748	1.3982	0.0276	0.0246	0.0392	0.4140
3	**Level 4**	46.1sec	1.0999	1.1657	1.2329	1.5140	1.1002	1.1657	1.2330	1.5131	1.1287	1.1935	1.2568	3.2875	1.0550	1.1325	1.2096	1.2573	0.0207	0.0189	0.0162	0.5402
months	**Level 5**	1.5min	1.0667	1.1158	1.1645	1.4058	1.0665	1.1161	1.1646	1.4056	1.0890	1.1410	1.1899	2.8767	1.0336	1.0919	1.1427	1.1901	0.0183	0.0168	0.0154	0.4472
before	**Level 6**	3.1min	1.0437	1.0822	1.1157	1.2837	1.0438	1.0822	1.1157	1.2838	1.0643	1.0980	1.1388	2.3510	1.0230	1.0651	1.0988	1.1431	0.0139	0.0125	0.0132	0.3232
	Level 7	6.1min	1.0286	1.0574	1.0788	1.1890	1.0287	1.0574	1.0787	1.1914	1.0444	1.0695	1.0904	1.9515	1.0164	1.0457	1.0696	1.0948	0.0090	0.0083	0.0079	0.2301
	Level 8	12.3min	1.0208	1.0420	1.0562	1.1362	1.0208	1.0420	1.0562	1.1354	1.0320	1.0500	1.0629	1.6414	1.0116	1.0324	1.0509	1.0645	0.0062	0.0061	0.0040	0.1537
	Level 9	24.6min	1.0186	1.0358	1.0493	1.1156	1.0185	1.0358	1.0493	1.1162	1.0275	1.0430	1.0563	1.5356	1.0104	1.0289	1.0431	1.0572	0.0055	0.0052	0.0042	0.1271
	Level 1	3.9sec	1.4558	1.5263	1.5952	1.7772	1.4558	1.5263	1.5954	1.7763	1.4970	1.5542	1.6343	2.7785	1.3981	1.4991	1.5546	1.6352	0.0258	0.0158	0.0233	0.1842
	Level 2	7.8sec	1.2285	1.3000	1.3662	1.5346	1.2284	1.3000	1.3661	1.5343	1.2647	1.3310	1.3992	2.6766	1.1760	1.2670	1.3324	1.3996	0.0247	0.0214	0.0188	0.1890
	Level 3	15.6sec	1.1244	1.1855	1.2364	1.3890	1.1244	1.1855	1.2364	1.3886	1.1537	1.2074	1.2690	2.9514	1.0799	1.1571	1.2094	1.2700	0.0204	0.0152	0.0168	0.2286
1	**Level 4**	31.3sec	1.0762	1.1227	1.1650	1.3012	1.0762	1.1226	1.1649	1.3015	1.1002	1.1429	1.1967	3.2875	1.0353	1.1010	1.1440	1.1976	0.0181	0.0131	0.0148	0.2727
Year	**Level 5**	1min	1.0491	1.0841	1.1188	1.2253	1.0490	1.0841	1.1188	1.2260	1.0692	1.0996	1.1410	2.8767	1.0124	1.0699	1.1005	1.1427	0.0141	0.0091	0.0115	0.2273
before	**Level 6**	2.1min	1.0329	1.0581	1.0838	1.1576	1.0329	1.0581	1.0838	1.1583	1.0480	1.0697	1.0980	2.3510	1.0051	1.0481	1.0704	1.0982	0.0106	0.0064	0.0084	0.1621
	Level 7	4.2min	1.0221	1.0399	1.0582	1.1076	1.0221	1.0399	1.0583	1.1080	1.0319	1.0490	1.0695	1.9515	1.0027	1.0320	1.0491	1.0696	0.0073	0.0044	0.0061	0.1135
	Level 8	8.3min	1.0157	1.0285	1.0424	1.0788	1.0158	1.0285	1.0423	1.0783	1.0224	1.0346	1.0504	1.6414	1.0019	1.0225	1.0351	1.0509	0.0051	0.0034	0.0044	0.0774
	Level 9	16.7min	1.0135	1.0242	1.0358	1.0706	1.0135	1.0242	1.0358	1.0705	1.0195	1.0294	1.0422	1.5356	1.0017	1.0198	1.0294	1.0428	0.0043	0.0028	0.0039	0.0697

Table A.36: EDM5 Other Results Table –Continued

EDM5 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.4sec	1.4592	1.5968	1.6460	2.2056	1.4589	1.5957	1.6460	2.2150	1.5294	1.6160	1.6614	2.8629	1.4134	1.5582	1.6305	1.7604	0.0619	0.0326	0.0218	0.5760
	Level 2	28.8sec	1.2160	1.4028	1.5471	2.0124	1.2163	1.4031	1.5469	1.9898	1.2427	1.4202	1.5530	2.8107	1.1979	1.3840	1.5408	1.5713	0.0235	0.0182	0.0087	0.7110
	Level 3	57.5sec	1.1284	1.2864	1.3612	2.0303	1.1288	1.2865	1.3615	2.0141	1.1498	1.3027	1.3915	3.0607	1.1067	1.2551	1.3314	1.4510	0.0215	0.0272	0.0424	0.9072
30	**Level 4**	1.9min	1.0888	1.2053	1.2657	2.0414	1.0876	1.2056	1.2644	2.0553	1.1201	1.2299	1.2900	3.3546	1.0545	1.1700	1.2389	1.3157	0.0328	0.0315	0.0362	1.1288
days	**Level 5**	3.8min	1.0560	1.1303	1.2238	1.7519	1.0562	1.1301	1.2240	1.7566	1.0820	1.1509	1.2303	2.6736	1.0317	1.1092	1.2177	1.2432	0.0252	0.0209	0.0089	0.7961
before	**Level 6**	7.7min	1.0378	1.0801	1.1443	1.4926	1.0373	1.0802	1.1441	1.4957	1.0583	1.0843	1.1561	2.1012	1.0204	1.0747	1.1320	1.1665	0.0193	0.0050	0.0170	0.5251
	Level 7	15.3min	1.0242	1.0506	1.0820	1.3365	1.0242	1.0507	1.0821	1.3347	1.0391	1.0547	1.0860	1.7752	1.0130	1.0467	1.0783	1.1012	0.0134	0.0040	0.0054	0.3817
	Level 8	30.7min	1.0158	1.0357	1.0483	1.2355	1.0158	1.0357	1.0483	1.2348	1.0253	1.0376	1.0489	1.5558	1.0092	1.0336	1.0477	1.0673	0.0085	0.0020	0.0008	0.2781
	Level 9	61.3min	1.0123	1.0296	1.0367	1.1574	1.0122	1.0296	1.0367	1.1602	1.0185	1.0300	1.0380	1.3679	1.0089	1.0290	1.0354	1.0526	0.0055	0.0005	0.0018	0.1800
	Level 1	8.5sec	1.4739	1.5874	1.7187	2.0166	1.4736	1.5873	1.7188	2.0178	1.5294	1.6503	1.7604	2.8629	1.4134	1.5393	1.6614	1.7789	0.0410	0.0404	0.0394	0.3664
	Level 2	17sec	1.2403	1.3757	1.4946	1.8102	1.2406	1.3764	1.4939	1.8056	1.2884	1.4238	1.5486	2.8107	1.1979	1.3196	1.4390	1.5530	0.0300	0.0372	0.0434	0.4265
	Level 3	33.9sec	1.1464	1.2496	1.3372	1.6823	1.1463	1.2495	1.3377	1.6808	1.1884	1.2963	1.3857	3.0607	1.1067	1.1986	1.3018	1.3915	0.0270	0.0319	0.0347	0.5638
60	**Level 4**	1.1min	1.0939	1.1653	1.2303	1.5950	1.0942	1.1648	1.2303	1.6008	1.1248	1.1918	1.2536	3.3546	1.0545	1.1306	1.2096	1.2671	0.0253	0.0235	0.0140	0.7137
days	**Level 5**	2.3min	1.0600	1.1078	1.1513	1.4380	1.0603	1.1079	1.1514	1.4342	1.0821	1.1353	1.1693	2.6736	1.0317	1.0837	1.1379	1.1857	0.0201	0.0189	0.0105	0.5041
before	**Level 6**	4.5min	1.0379	1.0697	1.1016	1.2918	1.0379	1.0697	1.1016	1.2859	1.0583	1.0843	1.1134	2.1012	1.0204	1.0589	1.0900	1.1251	0.0135	0.0097	0.0085	0.3318
	Level 7	9min	1.0236	1.0441	1.0670	1.1889	1.0235	1.0441	1.0670	1.1868	1.0367	1.0547	1.0713	1.7752	1.0130	1.0372	1.0577	1.0783	0.0085	0.0062	0.0050	0.2394
	Level 8	18.1min	1.0147	1.0309	1.0446	1.1270	1.0147	1.0309	1.0446	1.1273	1.0227	1.0380	1.0477	1.5558	1.0087	1.0236	1.0406	1.0489	0.0050	0.0057	0.0027	0.1742
	Level 9	36.2min	1.0114	1.0250	1.0353	1.0910	1.0114	1.0250	1.0353	1.0908	1.0181	1.0308	1.0383	1.3679	1.0073	1.0182	1.0314	1.0389	0.0035	0.0051	0.0025	0.1125
	Level 1	5.8sec	1.4801	1.5580	1.6963	1.9369	1.4802	1.5581	1.6963	1.9384	1.5247	1.6130	1.7613	2.8629	1.4134	1.5249	1.6160	1.7789	0.0341	0.0276	0.0515	0.2988
	Level 2	11.5sec	1.2624	1.3543	1.4673	1.7291	1.2625	1.3540	1.4671	1.7285	1.3206	1.3895	1.5486	2.8107	1.1979	1.3214	1.4051	1.5506	0.0399	0.0246	0.0473	0.3423
	Level 3	23.1sec	1.1541	1.2365	1.3138	1.5878	1.1541	1.2368	1.3138	1.5879	1.1916	1.2644	1.3857	3.0607	1.1067	1.1973	1.2674	1.3866	0.0265	0.0245	0.0389	0.4497
3	**Level 4**	46.1sec	1.0965	1.1564	1.2213	1.4965	1.0963	1.1565	1.2213	1.4953	1.1201	1.1903	1.2500	3.3546	1.0545	1.1248	1.1904	1.2536	0.0191	0.0218	0.0184	0.5645
months	**Level 5**	1.5min	1.0617	1.1031	1.1508	1.3620	1.0617	1.1031	1.1508	1.3606	1.0815	1.1302	1.1731	2.6736	1.0317	1.0820	1.1353	1.1782	0.0162	0.0171	0.0113	0.3986
before	**Level 6**	3.1min	1.0383	1.0682	1.1006	1.2375	1.0381	1.0682	1.1005	1.2367	1.0516	1.0843	1.1134	2.1012	1.0204	1.0573	1.0868	1.1160	0.0111	0.0102	0.0084	0.2623
	Level 7	6.1min	1.0239	1.0432	1.0649	1.1502	1.0239	1.0432	1.0649	1.1513	1.0357	1.0543	1.0713	1.7752	1.0130	1.0367	1.0547	1.0729	0.0076	0.0066	0.0055	0.1888
	Level 8	12.3min	1.0155	1.0295	1.0429	1.1020	1.0154	1.0295	1.0429	1.1012	1.0227	1.0376	1.0474	1.5558	1.0087	1.0236	1.0379	1.0477	0.0047	0.0049	0.0030	0.1375
	Level 9	24.6min	1.0118	1.0229	1.0337	1.0732	1.0118	1.0229	1.0337	1.0735	1.0181	1.0300	1.0374	1.3679	1.0073	1.0181	1.0302	1.0380	0.0034	0.0044	0.0024	0.0890
	Level 1	3.9sec	1.4551	1.5248	1.5930	1.7742	1.4552	1.5247	1.5931	1.7743	1.4965	1.5524	1.6332	2.8629	1.3986	1.4970	1.5533	1.6353	0.0255	0.0157	0.0227	0.1886
	Level 2	7.8sec	1.2268	1.2974	1.3621	1.5312	1.2268	1.2975	1.3622	1.5318	1.2616	1.3272	1.3962	2.8107	1.1753	1.2648	1.3273	1.3965	0.0241	0.0205	0.0201	0.2010
	Level 3	15.6sec	1.1214	1.1810	1.2309	1.3812	1.1216	1.1809	1.2308	1.3822	1.1502	1.2048	1.2625	3.0607	1.0791	1.1523	1.2049	1.2644	0.0192	0.0148	0.0162	0.2398
1	**Level 4**	31.3sec	1.0724	1.1167	1.1570	1.2899	1.0724	1.1167	1.1570	1.2885	1.0949	1.1350	1.1903	3.3546	1.0353	1.0950	1.1360	1.1903	0.0168	0.0131	0.0149	0.2805
Year	**Level 5**	1min	1.0445	1.0766	1.1088	1.2040	1.0445	1.0767	1.1090	1.2041	1.0629	1.0897	1.1289	2.6736	1.0056	1.0630	1.0900	1.1302	0.0136	0.0080	0.0102	0.2013
before	**Level 6**	2.1min	1.0275	1.0504	1.0722	1.1352	1.0275	1.0504	1.0723	1.1352	1.0420	1.0605	1.0856	2.1012	0.9603	1.0421	1.0608	1.0868	0.0125	0.0053	0.0073	0.1315
	Level 7	4.2min	1.0161	1.0325	1.0465	1.0872	1.0161	1.0326	1.0465	1.0868	1.0258	1.0377	1.0562	1.7752	0.8943	1.0260	1.0382	1.0568	0.0170	0.0037	0.0053	0.0923
	Level 8	8.3min	1.0077	1.0212	1.0310	1.0572	1.0076	1.0212	1.0310	1.0574	1.0168	1.0252	1.0379	1.5558	0.7600	1.0168	1.0252	1.0379	0.0327	0.0025	0.0037	0.0665
	Level 9	16.7min	1.0008	1.0158	1.0235	1.0436	1.0002	1.0158	1.0235	1.0437	1.0128	1.0190	1.0290	1.3679	0.4866	1.0130	1.0196	1.0291	0.0675	0.0018	0.0027	0.0435

Table A.36: EDM5 Other Results Table –Continued

EDM5 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.4sec	0.4717	0.6099	0.6269	0.6853	0.4733	0.6100	0.6266	0.6858	0.5662	0.6143	0.6355	0.7078	0.3599	0.6023	0.6177	0.6525	0.1047	0.0067	0.0126	0.0294
	Level 2	28.8sec	0.5474	0.6636	0.7181	0.8214	0.5479	0.6629	0.7184	0.8215	0.6412	0.7015	0.7246	0.8351	0.3736	0.6430	0.7121	0.8030	0.1511	0.0334	0.0088	0.0166
	Level 3	57.5sec	0.5533	0.7455	0.7915	0.8850	0.5550	0.7459	0.7916	0.8852	0.6874	0.7757	0.8015	0.9028	0.3388	0.7140	0.7816	0.8677	0.1888	0.0309	0.0141	0.0176
30	**Level 4**	1.9min	0.5700	0.7931	0.8358	0.9186	0.5689	0.7932	0.8360	0.9190	0.7521	0.8141	0.8564	0.9478	0.3042	0.7635	0.8157	0.8889	0.2348	0.0264	0.0288	0.0295
days	**Level 5**	3.8min	0.6198	0.8208	0.8877	0.9448	0.6187	0.8202	0.8877	0.9450	0.7872	0.8595	0.8991	0.9674	0.3476	0.7886	0.8764	0.9185	0.2371	0.0360	0.0160	0.0247
before	**Level 6**	7.7min	0.6822	0.8744	0.9192	0.9610	0.6853	0.8741	0.9191	0.9611	0.8341	0.9045	0.9227	0.9775	0.4254	0.8484	0.9155	0.9373	0.2259	0.0284	0.0051	0.0211
	Level 7	15.3min	0.7479	0.9164	0.9397	0.9726	0.7512	0.9166	0.9397	0.9726	0.8820	0.9331	0.9406	0.9838	0.5124	0.9079	0.9388	0.9546	0.2071	0.0143	0.0013	0.0158
	Level 8	30.7min	0.8044	0.9416	0.9528	0.9797	0.8043	0.9416	0.9528	0.9798	0.9089	0.9511	0.9542	0.9863	0.6092	0.9342	0.9514	0.9669	0.1690	0.0087	0.0020	0.0111
	Level 9	61.3min	0.8286	0.9486	0.9586	0.9822	0.8269	0.9486	0.9586	0.9821	0.9187	0.9545	0.9595	0.9889	0.6512	0.9439	0.9577	0.9714	0.1522	0.0054	0.0013	0.0094
	Level 1	8.5sec	0.5068	0.5849	0.6318	0.6780	0.5069	0.5850	0.6320	0.6777	0.5598	0.6041	0.6502	0.7078	0.3599	0.5653	0.6135	0.6525	0.0710	0.0152	0.0147	0.0192
	Level 2	17sec	0.5757	0.6722	0.7296	0.8046	0.5748	0.6722	0.7297	0.8045	0.6412	0.7015	0.7572	0.8351	0.3736	0.6430	0.7024	0.7761	0.0941	0.0220	0.0181	0.0195
	Level 3	33.9sec	0.6269	0.7501	0.8026	0.8699	0.6281	0.7501	0.8025	0.8698	0.7109	0.7816	0.8299	0.9028	0.3388	0.7140	0.7819	0.8404	0.1221	0.0234	0.0182	0.0216
60	**Level 4**	1.1min	0.6794	0.8089	0.8554	0.9105	0.6782	0.8090	0.8553	0.9108	0.7881	0.8229	0.8805	0.9478	0.3042	0.7957	0.8267	0.8830	0.1577	0.0098	0.0176	0.0234
days	**Level 5**	2.3min	0.7230	0.8581	0.8953	0.9384	0.7255	0.8579	0.8953	0.9388	0.8182	0.8751	0.9119	0.9674	0.3476	0.8402	0.8764	0.9158	0.1558	0.0118	0.0145	0.0201
before	**Level 6**	4.5min	0.7862	0.8945	0.9235	0.9583	0.7839	0.8945	0.9234	0.9584	0.8693	0.9101	0.9338	0.9775	0.4254	0.8748	0.9110	0.9373	0.1474	0.0130	0.0093	0.0149
	Level 7	9min	0.8364	0.9249	0.9446	0.9719	0.8372	0.9250	0.9446	0.9720	0.9087	0.9349	0.9546	0.9838	0.5124	0.9134	0.9372	0.9563	0.1335	0.0082	0.0066	0.0102
	Level 8	18.1min	0.8723	0.9452	0.9577	0.9798	0.8727	0.9451	0.9578	0.9799	0.9342	0.9511	0.9669	0.9885	0.6092	0.9394	0.9514	0.9690	0.1084	0.0040	0.0059	0.0073
	Level 9	36.2min	0.8861	0.9506	0.9632	0.9822	0.8865	0.9506	0.9632	0.9822	0.9363	0.9577	0.9714	0.9897	0.6512	0.9439	0.9587	0.9733	0.0959	0.0048	0.0046	0.0065
	Level 1	5.8sec	0.5270	0.5921	0.6413	0.6765	0.5273	0.5922	0.6412	0.6765	0.5653	0.6143	0.6543	0.7078	0.3599	0.5662	0.6177	0.6579	0.0576	0.0161	0.0111	0.0153
	Level 2	11.5sec	0.5947	0.6847	0.7382	0.7945	0.5957	0.6849	0.7380	0.7942	0.6430	0.7121	0.7568	0.8351	0.3736	0.6443	0.7199	0.7570	0.0744	0.0202	0.0112	0.0239
	Level 3	23.1sec	0.6541	0.7644	0.8077	0.8662	0.6544	0.7644	0.8076	0.8663	0.7198	0.7844	0.8391	0.9028	0.3388	0.7242	0.7882	0.8394	0.0974	0.0196	0.0180	0.0202
3	**Level 4**	46.1sec	0.7113	0.8123	0.8602	0.9113	0.7089	0.8123	0.8601	0.9110	0.7957	0.8267	0.8860	0.9478	0.3042	0.7972	0.8379	0.8887	0.1256	0.0101	0.0154	0.0166
months	**Level 5**	1.5min	0.7544	0.8601	0.8976	0.9395	0.7548	0.8602	0.8978	0.9394	0.8404	0.8751	0.9183	0.9674	0.3476	0.8448	0.8764	0.9185	0.1245	0.0105	0.0142	0.0157
before	**Level 6**	3.1min	0.8111	0.8978	0.9253	0.9597	0.8113	0.8978	0.9253	0.9596	0.8781	0.9101	0.9396	0.9775	0.4254	0.8819	0.9108	0.9414	0.1148	0.0095	0.0111	0.0121
	Level 7	6.1min	0.8635	0.9279	0.9465	0.9733	0.8624	0.9278	0.9466	0.9733	0.9171	0.9349	0.9575	0.9838	0.5124	0.9173	0.9350	0.9620	0.1031	0.0063	0.0078	0.0077
	Level 8	12.3min	0.8941	0.9473	0.9604	0.9804	0.8951	0.9473	0.9604	0.9805	0.9408	0.9516	0.9690	0.9885	0.6092	0.9409	0.9524	0.9711	0.0845	0.0032	0.0059	0.0053
	Level 9	24.6min	0.9068	0.9535	0.9661	0.9825	0.9071	0.9535	0.9661	0.9825	0.9467	0.9587	0.9733	0.9897	0.6512	0.9475	0.9587	0.9734	0.0751	0.0034	0.0051	0.0049
	Level 1	3.9sec	0.5673	0.6271	0.6555	0.6871	0.5676	0.6272	0.6554	0.6871	0.6115	0.6434	0.6670	0.7153	0.3599	0.6119	0.6443	0.6680	0.0459	0.0093	0.0067	0.0123
	Level 2	7.8sec	0.6585	0.7325	0.7697	0.8144	0.6586	0.7325	0.7698	0.8144	0.7145	0.7513	0.7892	0.8504	0.3736	0.7147	0.7516	0.7907	0.0583	0.0103	0.0125	0.0165
	Level 3	15.6sec	0.7311	0.8093	0.8440	0.8897	0.7311	0.8092	0.8440	0.8897	0.7874	0.8282	0.8642	0.9260	0.3388	0.7880	0.8283	0.8668	0.0710	0.0112	0.0108	0.0163
1	**Level 4**	31.3sec	0.7837	0.8589	0.8911	0.9294	0.7834	0.8588	0.8912	0.9294	0.8350	0.8750	0.9082	0.9659	0.3042	0.8356	0.8752	0.9089	0.0771	0.0109	0.0103	0.0158
Year	**Level 5**	1min	0.8280	0.8942	0.9227	0.9534	0.8290	0.8942	0.9227	0.9534	0.8751	0.9094	0.9346	0.9877	0.3476	0.8764	0.9095	0.9353	0.0765	0.0093	0.0076	0.0129
before	**Level 6**	2.1min	0.8719	0.9230	0.9453	0.9683	0.8722	0.9229	0.9453	0.9683	0.9106	0.9349	0.9541	0.9949	0.4254	0.9108	0.9351	0.9542	0.0662	0.0073	0.0056	0.0100
	Level 7	4.2min	0.9083	0.9451	0.9618	0.9784	0.9081	0.9451	0.9617	0.9784	0.9349	0.9533	0.9690	0.9973	0.5124	0.9350	0.9536	0.9691	0.0556	0.0055	0.0039	0.0070
	Level 8	8.3min	0.9306	0.9595	0.9724	0.9845	0.9306	0.9595	0.9724	0.9845	0.9516	0.9666	0.9780	0.9981	0.6092	0.9520	0.9669	0.9781	0.0463	0.0041	0.0031	0.0050
	Level 9	16.7min	0.9367	0.9656	0.9764	0.9867	0.9370	0.9656	0.9764	0.9867	0.9589	0.9714	0.9806	0.9983	0.6512	0.9595	0.9716	0.9808	0.0455	0.0037	0.0026	0.0042

Table A.37: EDM6 Other Results Table

EDM6 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.9sec	1.4166	1.5641	1.6556	1.7877	1.4160	1.5640	1.6555	1.7873	1.4564	1.6092	1.6808	1.9030	1.3693	1.5074	1.6119	1.7188	0.0398	0.0495	0.0261	0.0704
	Level 2	27.8sec	1.2074	1.2908	1.3711	1.5776	1.2077	1.2907	1.3709	1.5778	1.2613	1.3172	1.4103	1.9807	1.1765	1.2666	1.3325	1.4400	0.0336	0.0221	0.0339	0.2319
	Level 3	55.5sec	1.1016	1.1530	1.2053	1.3613	1.1015	1.1529	1.2052	1.3624	1.1198	1.1748	1.2257	1.6316	1.0774	1.1264	1.1837	1.2669	0.0165	0.0203	0.0156	0.1524
30	**Level 4**	1.9min	1.0503	1.0866	1.1323	1.2457	1.0504	1.0867	1.1323	1.2454	1.0614	1.1050	1.1767	1.3646	1.0317	1.0758	1.1116	1.1904	0.0120	0.0121	0.0275	0.0694
days	**Level 5**	3.7min	1.0288	1.0523	1.0864	1.1940	1.0289	1.0523	1.0861	1.1943	1.0451	1.0615	1.1182	1.2683	1.0154	1.0487	1.0667	1.1414	0.0107	0.0052	0.0199	0.0527
before	**Level 6**	7.4min	1.0180	1.0338	1.0592	1.1409	1.0180	1.0338	1.0589	1.1410	1.0305	1.0388	1.0817	1.2044	1.0096	1.0306	1.0452	1.0895	0.0079	0.0033	0.0143	0.0466
	Level 7	14.8min	1.0125	1.0239	1.0452	1.1080	1.0126	1.0239	1.0453	1.1075	1.0216	1.0260	1.0606	1.1380	1.0071	1.0219	1.0338	1.0624	0.0057	0.0017	0.0107	0.0342
	Level 8	29.6min	1.0103	1.0196	1.0379	1.0927	1.0103	1.0196	1.0380	1.0929	1.0176	1.0218	1.0507	1.1259	1.0059	1.0178	1.0277	1.0519	0.0046	0.0016	0.0091	0.0290
	Level 9	59.2min	1.0108	1.0202	1.0394	1.1012	1.0108	1.0202	1.0395	1.1012	1.0175	1.0231	1.0534	1.1435	1.0064	1.0182	1.0277	1.0537	0.0045	0.0020	0.0101	0.0326
	Level 1	6.1sec	1.4606	1.5752	1.6317	1.7455	1.4605	1.5753	1.6318	1.7455	1.5147	1.6034	1.6586	1.9030	1.3693	1.5308	1.6092	1.6687	0.0543	0.0281	0.0205	0.0749
	Level 2	12.3sec	1.2355	1.3056	1.3897	1.5178	1.2352	1.3057	1.3897	1.5189	1.2760	1.3325	1.4208	1.9807	1.1765	1.2828	1.3384	1.4285	0.0379	0.0174	0.0254	0.1680
	Level 3	24.6sec	1.1155	1.1696	1.2344	1.3456	1.1152	1.1695	1.2345	1.3446	1.1438	1.1994	1.2677	1.6316	1.0774	1.1439	1.2036	1.2701	0.0224	0.0179	0.0252	0.1096
60	**Level 4**	49.1sec	1.0598	1.1035	1.1545	1.2339	1.0599	1.1034	1.1547	1.2338	1.0806	1.1185	1.1904	1.3646	1.0317	1.0830	1.1247	1.1943	0.0167	0.0119	0.0241	0.0500
days	**Level 5**	1.6min	1.0353	1.0685	1.1034	1.1745	1.0351	1.0685	1.1037	1.1754	1.0501	1.0853	1.1237	1.2683	1.0154	1.0513	1.0855	1.1266	0.0126	0.0110	0.0152	0.0453
before	**Level 6**	3.3min	1.0220	1.0451	1.0683	1.1268	1.0220	1.0451	1.0683	1.1271	1.0322	1.0542	1.0895	1.2044	1.0096	1.0354	1.0577	1.0905	0.0085	0.0066	0.0105	0.0390
	Level 7	6.5min	1.0155	1.0303	1.0494	1.0956	1.0156	1.0302	1.0495	1.0956	1.0232	1.0366	1.0610	1.1380	1.0071	1.0251	1.0399	1.0621	0.0063	0.0042	0.0074	0.0292
	Level 8	13.1min	1.0124	1.0229	1.0374	1.0794	1.0124	1.0230	1.0373	1.0789	1.0184	1.0292	1.0423	1.1259	1.0059	1.0191	1.0299	1.0507	0.0049	0.0034	0.0047	0.0258
	Level 9	26.2min	1.0122	1.0214	1.0347	1.0794	1.0122	1.0214	1.0347	1.0798	1.0182	1.0258	1.0428	1.1435	1.0064	1.0183	1.0263	1.0534	0.0046	0.0025	0.0055	0.0318
	Level 1	3.7sec	1.4810	1.5771	1.6291	1.7678	1.4805	1.5774	1.6291	1.7668	1.5437	1.6034	1.6586	1.9463	1.3693	1.5481	1.6072	1.6687	0.0531	0.0201	0.0198	0.0842
	Level 2	7.3sec	1.2498	1.3244	1.3836	1.5601	1.2497	1.3245	1.3833	1.5584	1.2875	1.3521	1.4145	1.9807	1.1765	1.2939	1.3655	1.4208	0.0362	0.0187	0.0167	0.1791
	Level 3	14.6sec	1.1254	1.1927	1.2439	1.3907	1.1251	1.1927	1.2437	1.3912	1.1538	1.2215	1.2685	1.6530	1.0774	1.1592	1.2233	1.2701	0.0225	0.0199	0.0164	0.1469
3	**Level 4**	29.2sec	1.0680	1.1220	1.1697	1.2732	1.0680	1.1219	1.1695	1.2737	1.0930	1.1430	1.1904	1.4934	1.0317	1.0993	1.1489	1.1943	0.0179	0.0155	0.0124	0.1029
months	**Level 5**	58.5sec	1.0411	1.0826	1.1184	1.2042	1.0410	1.0826	1.1182	1.2038	1.0615	1.0990	1.1344	1.3833	1.0154	1.0615	1.0996	1.1359	0.0134	0.0118	0.0102	0.0824
before	**Level 6**	1.9min	1.0265	1.0549	1.0808	1.1492	1.0265	1.0548	1.0809	1.1481	1.0388	1.0639	1.0947	1.2846	1.0096	1.0415	1.0650	1.0949	0.0093	0.0077	0.0098	0.0634
	Level 7	3.9min	1.0188	1.0377	1.0570	1.1098	1.0189	1.0377	1.0569	1.1102	1.0260	1.0467	1.0641	1.2028	1.0071	1.0274	1.0471	1.0662	0.0066	0.0064	0.0057	0.0461
	Level 8	7.8min	1.0148	1.0281	1.0426	1.0860	1.0148	1.0281	1.0426	1.0861	1.0217	1.0347	1.0507	1.1568	1.0059	1.0217	1.0371	1.0519	0.0052	0.0044	0.0037	0.0351
	Level 9	15.6min	1.0142	1.0255	1.0376	1.0824	1.0142	1.0255	1.0376	1.0815	1.0195	1.0317	1.0437	1.1435	1.0064	1.0199	1.0318	1.0455	0.0046	0.0034	0.0039	0.0338
	Level 1	2.3sec	1.4713	1.5367	1.5947	1.7062	1.4713	1.5367	1.5946	1.7061	1.5052	1.5642	1.6268	1.9463	1.3693	1.5064	1.5643	1.6291	0.0281	0.0176	0.0163	0.0727
	Level 2	4.6sec	1.2461	1.3007	1.3566	1.4781	1.2460	1.3008	1.3565	1.4780	1.2747	1.3247	1.3889	1.9807	1.1765	1.2751	1.3251	1.3932	0.0240	0.0151	0.0189	0.1124
	Level 3	9.2sec	1.1396	1.1858	1.2322	1.3272	1.1397	1.1858	1.2321	1.3261	1.1697	1.2082	1.2573	1.6530	1.0774	1.1698	1.2103	1.2575	0.0224	0.0112	0.0144	0.0926
1	**Level 4**	18.5sec	1.0850	1.1271	1.1629	1.2307	1.0850	1.1271	1.1629	1.2307	1.1116	1.1454	1.1850	1.4934	1.0317	1.1121	1.1461	1.1855	0.0199	0.0097	0.0104	0.0647
Year	**Level 5**	37sec	1.0549	1.0886	1.1163	1.1688	1.0549	1.0886	1.1162	1.1690	1.0766	1.1022	1.1290	1.3833	1.0154	1.0768	1.1029	1.1292	0.0162	0.0073	0.0077	0.0522
before	**Level 6**	1.2min	1.0363	1.0614	1.0810	1.1217	1.0364	1.0614	1.0810	1.1216	1.0524	1.0713	1.0911	1.2846	1.0096	1.0526	1.0715	1.0912	0.0116	0.0054	0.0060	0.0399
	Level 7	2.5min	1.0248	1.0426	1.0561	1.0866	1.0248	1.0427	1.0561	1.0865	1.0347	1.0498	1.0625	1.2028	1.0071	1.0351	1.0498	1.0626	0.0077	0.0041	0.0037	0.0298
	Level 8	4.9min	1.0180	1.0309	1.0404	1.0647	1.0180	1.0309	1.0404	1.0647	1.0253	1.0361	1.0451	1.1568	1.0059	1.0256	1.0361	1.0465	0.0054	0.0031	0.0024	0.0232
	Level 9	9.9min	1.0158	1.0264	1.0345	1.0584	1.0158	1.0264	1.0344	1.0583	1.0216	1.0307	1.0403	1.1435	1.0050	1.0216	1.0308	1.0409	0.0045	0.0026	0.0024	0.0230

Table A.37: EDM6 Other Results Table –Continued

EDM6 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.9sec	1.4175	1.5690	1.6576	1.7963	1.4166	1.5679	1.6578	1.7958	1.4546	1.6067	1.6822	1.8934	1.3713	1.5044	1.6080	1.7117	0.0390	0.0505	0.0297	0.0686
	Level 2	27.8sec	1.2068	1.2934	1.3745	1.5972	1.2068	1.2932	1.3742	1.5979	1.2596	1.3314	1.4248	1.9118	1.1759	1.2600	1.3348	1.4374	0.0333	0.0271	0.0391	0.1941
	Level 3	55.5sec	1.1015	1.1520	1.2095	1.3774	1.1010	1.1518	1.2095	1.3805	1.1203	1.1839	1.2253	1.6061	1.0753	1.1259	1.1851	1.2473	0.0174	0.0242	0.0164	0.1373
30	**Level 4**	1.9min	1.0498	1.0848	1.1380	1.2622	1.0498	1.0846	1.1376	1.2631	1.0616	1.1029	1.1945	1.3693	1.0311	1.0696	1.1108	1.1960	0.0121	0.0134	0.0343	0.0702
days	**Level 5**	3.7min	1.0280	1.0515	1.0901	1.2005	1.0280	1.0515	1.0896	1.1999	1.0418	1.0621	1.1201	1.2549	1.0156	1.0456	1.0668	1.1469	0.0096	0.0064	0.0211	0.0464
before	**Level 6**	7.4min	1.0178	1.0337	1.0606	1.1462	1.0177	1.0336	1.0608	1.1457	1.0287	1.0403	1.0814	1.1967	1.0100	1.0298	1.0468	1.1008	0.0071	0.0040	0.0141	0.0416
	Level 7	14.8min	1.0125	1.0241	1.0462	1.1097	1.0125	1.0241	1.0463	1.1094	1.0208	1.0271	1.0622	1.1470	1.0069	1.0220	1.0343	1.0717	0.0054	0.0020	0.0114	0.0334
	Level 8	29.6min	1.0103	1.0199	1.0387	1.0932	1.0103	1.0199	1.0385	1.0934	1.0180	1.0225	1.0503	1.1383	1.0055	1.0188	1.0293	1.0585	0.0049	0.0015	0.0084	0.0323
	Level 9	59.2min	1.0102	1.0207	1.0403	1.1055	1.0102	1.0207	1.0402	1.1052	1.0173	1.0264	1.0514	1.1580	1.0054	1.0177	1.0298	1.0604	0.0046	0.0033	0.0084	0.0401
	Level 1	6.1sec	1.4592	1.5740	1.6429	1.8534	1.4589	1.5741	1.6430	1.8571	1.5216	1.6067	1.6667	2.7479	1.3713	1.5320	1.6080	1.6771	0.0532	0.0302	0.0170	0.3210
	Level 2	12.3sec	1.2335	1.3107	1.3949	1.8292	1.2335	1.3110	1.3948	1.8262	1.2786	1.3351	1.4203	4.3927	1.1759	1.2834	1.3717	1.4248	0.0379	0.0212	0.0138	0.9137
	Level 3	24.6sec	1.1144	1.1738	1.2409	1.9771	1.1147	1.1736	1.2406	1.9948	1.1427	1.2107	1.2734	7.7009	1.0753	1.1442	1.2127	1.2853	0.0229	0.0232	0.0200	2.0071
60	**Level 4**	49.1sec	1.0587	1.1075	1.1648	2.5075	1.0585	1.1075	1.1649	2.5561	1.0806	1.1318	1.1960	14.3409	1.0311	1.0807	1.1332	1.2039	0.0161	0.0161	0.0246	4.1411
days	**Level 5**	1.6min	1.0342	1.0711	1.1104	3.7477	1.0340	1.0711	1.1105	3.8244	1.0496	1.0922	1.1331	27.5877	1.0156	1.0520	1.0927	1.1412	0.0118	0.0136	0.0135	8.3497
before	**Level 6**	3.3min	1.0219	1.0470	1.0740	6.6656	1.0218	1.0470	1.0741	6.4223	1.0328	1.0609	1.0985	54.0264	1.0100	1.0333	1.0625	1.0993	0.0083	0.0087	0.0124	16.7264
	Level 7	6.5min	1.0157	1.0313	1.0528	12.2436	1.0156	1.0314	1.0528	11.6931	1.0244	1.0389	1.0622	107.0277	1.0069	1.0247	1.0440	1.0717	0.0063	0.0050	0.0064	33.4972
	Level 8	13.1min	1.0127	1.0239	1.0394	22.1763	1.0127	1.0239	1.0394	22.2823	1.0189	1.0316	1.0503	213.0853	1.0055	1.0190	1.0321	1.0578	0.0053	0.0044	0.0048	67.0413
	Level 9	26.2min	1.0119	1.0229	1.0370	42.3600	1.0119	1.0228	1.0370	43.5052	1.0177	1.0283	1.0480	425.3010	1.0054	1.0190	1.0298	1.0483	0.0046	0.0035	0.0062	134.1494
	Level 1	3.7sec	1.4788	1.5756	1.6385	1.8285	1.4788	1.5755	1.6384	1.8296	1.5432	1.6067	1.6667	2.7479	1.3713	1.5469	1.6075	1.6771	0.0526	0.0231	0.0194	0.2594
	Level 2	7.3sec	1.2482	1.3301	1.3859	1.7424	1.2484	1.3301	1.3858	1.7452	1.2864	1.3603	1.4126	4.3927	1.1759	1.2908	1.3613	1.4203	0.0364	0.0217	0.0125	0.7234
	Level 3	14.6sec	1.1242	1.1982	1.2462	1.7992	1.1244	1.1983	1.2461	1.7955	1.1533	1.2277	1.2734	7.7009	1.0753	1.1602	1.2293	1.2853	0.0225	0.0223	0.0144	1.5805
3	**Level 4**	29.2sec	1.0674	1.1261	1.1738	2.1491	1.0672	1.1263	1.1740	2.0985	1.0953	1.1499	1.1960	14.3409	1.0311	1.0993	1.1578	1.1963	0.0182	0.0169	0.0124	3.2661
months	**Level 5**	58.5sec	1.0403	1.0861	1.1195	2.9108	1.0403	1.0862	1.1194	2.8567	1.0621	1.1068	1.1331	27.5877	1.0156	1.0632	1.1089	1.1384	0.0133	0.0135	0.0069	6.5954
before	**Level 6**	1.9min	1.0263	1.0571	1.0839	4.4142	1.0262	1.0570	1.0839	4.4541	1.0403	1.0663	1.0952	54.0264	1.0100	1.0416	1.0701	1.0985	0.0092	0.0082	0.0081	13.2194
	Level 7	3.9min	1.0188	1.0393	1.0585	7.7501	1.0187	1.0393	1.0585	7.7302	1.0271	1.0486	1.0717	107.0277	1.0069	1.0276	1.0503	1.0717	0.0066	0.0069	0.0062	26.4794
	Level 8	7.8min	1.0149	1.0290	1.0425	13.9260	1.0148	1.0290	1.0425	14.3370	1.0198	1.0370	1.0524	213.0853	1.0055	1.0217	1.0380	1.0544	0.0051	0.0049	0.0042	52.9996
	Level 9	15.6min	1.0140	1.0259	1.0380	28.8958	1.0140	1.0259	1.0380	27.5965	1.0194	1.0313	1.0461	425.3010	1.0054	1.0202	1.0322	1.0480	0.0046	0.0036	0.0043	106.0545
	Level 1	2.3sec	1.4709	1.5370	1.5962	1.7224	1.4708	1.5371	1.5961	1.7222	1.5064	1.5642	1.6316	2.7479	1.3713	1.5065	1.5650	1.6326	0.0271	0.0172	0.0185	0.1507
	Level 2	4.6sec	1.2456	1.3011	1.3593	1.5222	1.2458	1.3010	1.3593	1.5253	1.2746	1.3275	1.3936	4.3927	1.1759	1.2757	1.3294	1.3937	0.0237	0.0153	0.0188	0.3849
	Level 3	9.2sec	1.1394	1.1868	1.2331	1.4302	1.1393	1.1867	1.2331	1.4298	1.1671	1.2086	1.2576	7.7009	1.0753	1.1672	1.2088	1.2576	0.0221	0.0120	0.0148	0.8144
1	**Level 4**	18.5sec	1.0851	1.1272	1.1635	1.4439	1.0850	1.1274	1.1637	1.4438	1.1108	1.1442	1.1840	14.3409	1.0311	1.1108	1.1445	1.1854	0.0201	0.0102	0.0107	1.6660
Year	**Level 5**	37sec	1.0545	1.0892	1.1165	1.5986	1.0546	1.0892	1.1165	1.5960	1.0766	1.1010	1.1280	27.5877	1.0156	1.0772	1.1025	1.1285	0.0161	0.0071	0.0075	3.3554
before	**Level 6**	1.2min	1.0363	1.0620	1.0812	1.9888	1.0364	1.0620	1.0812	1.9750	1.0519	1.0701	1.0925	54.0264	1.0100	1.0525	1.0704	1.0935	0.0116	0.0053	0.0062	6.7190
	Level 7	2.5min	1.0250	1.0432	1.0560	2.7269	1.0249	1.0432	1.0560	2.7953	1.0363	1.0495	1.0633	107.0277	1.0069	1.0363	1.0497	1.0636	0.0078	0.0040	0.0042	13.4546
	Level 8	4.9min	1.0182	1.0312	1.0404	4.5011	1.0182	1.0313	1.0404	4.4841	1.0257	1.0362	1.0453	213.0853	1.0055	1.0260	1.0362	1.0454	0.0053	0.0030	0.0027	26.9267
	Level 9	9.9min	1.0160	1.0268	1.0350	7.8795	1.0160	1.0268	1.0350	7.9000	1.0219	1.0308	1.0393	425.3010	1.0053	1.0219	1.0309	1.0394	0.0045	0.0028	0.0023	53.8790

Table A.37: EDM6 Other Results Table –Continued

EDM6	Bid Ask	Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.9sec	1.4156	1.5651	1.6554	1.7866	1.4160	1.5653	1.6556	1.7861	1.4549	1.6065	1.6783	1.8962	1.3702	1.5054	1.6098	1.7143	0.0394	0.0497	0.0272	0.0686
	Level 2	27.8sec	1.2066	1.2912	1.3704	1.5719	1.2068	1.2908	1.3702	1.5746	1.2602	1.3232	1.4157	1.9355	1.1760	1.2622	1.3299	1.4377	0.0335	0.0244	0.0366	0.2089
	Level 3	55.5sec	1.1002	1.1502	1.2039	1.3551	1.1004	1.1502	1.2037	1.3558	1.1183	1.1748	1.2216	1.6019	1.0760	1.1254	1.1813	1.2516	0.0166	0.0213	0.0146	0.1405
30	**Level 4**	1.9min	1.0488	1.0825	1.1288	1.2352	1.0490	1.0825	1.1288	1.2364	1.0598	1.1007	1.1768	1.3418	1.0308	1.0696	1.1038	1.1816	0.0116	0.0125	0.0297	0.0620
days	**Level 5**	3.7min	1.0268	1.0476	1.0785	1.1764	1.0267	1.0475	1.0787	1.1772	1.0401	1.0565	1.1032	1.2323	1.0146	1.0439	1.0572	1.1329	0.0092	0.0052	0.0175	0.0414
before	**Level 6**	7.4min	1.0154	1.0287	1.0495	1.1192	1.0154	1.0287	1.0496	1.1188	1.0242	1.0338	1.0668	1.1692	1.0086	1.0265	1.0354	1.0806	0.0059	0.0030	0.0123	0.0360
	Level 7	14.8min	1.0098	1.0184	1.0350	1.0779	1.0098	1.0184	1.0350	1.0780	1.0153	1.0198	1.0475	1.0987	1.0055	1.0172	1.0236	1.0496	0.0038	0.0010	0.0097	0.0227
	Level 8	29.6min	1.0070	1.0133	1.0255	1.0563	1.0071	1.0133	1.0256	1.0562	1.0115	1.0144	1.0344	1.0723	1.0039	1.0128	1.0174	1.0373	0.0030	0.0006	0.0070	0.0147
	Level 9	59.2min	1.0065	1.0122	1.0235	1.0525	1.0065	1.0122	1.0236	1.0528	1.0105	1.0139	1.0323	1.0681	1.0034	1.0110	1.0148	1.0347	0.0027	0.0011	0.0072	0.0137
	Level 1	6.1sec	1.4597	1.5679	1.6333	1.7432	1.4589	1.5683	1.6335	1.7430	1.5169	1.5990	1.6564	1.8962	1.3702	1.5312	1.6065	1.6609	0.0533	0.0272	0.0192	0.0752
	Level 2	12.3sec	1.2330	1.3076	1.3925	1.5153	1.2332	1.3075	1.3925	1.5139	1.2764	1.3354	1.4126	1.9355	1.1760	1.2795	1.3675	1.4157	0.0372	0.0202	0.0143	0.1558
	Level 3	24.6sec	1.1128	1.1705	1.2346	1.3418	1.1133	1.1706	1.2346	1.3427	1.1386	1.2048	1.2702	1.6019	1.0760	1.1420	1.2069	1.2703	0.0214	0.0220	0.0214	0.0954
60	**Level 4**	49.1sec	1.0576	1.1009	1.1544	1.2422	1.0576	1.1009	1.1544	1.2413	1.0774	1.1235	1.1897	1.3664	1.0308	1.0800	1.1281	1.1925	0.0154	0.0135	0.0225	0.0607
days	**Level 5**	1.6min	1.0320	1.0636	1.0998	1.1819	1.0322	1.0638	1.0997	1.1833	1.0449	1.0815	1.1186	1.3487	1.0146	1.0474	1.0825	1.1315	0.0108	0.0111	0.0131	0.0674
before	**Level 6**	3.3min	1.0190	1.0403	1.0595	1.1079	1.0190	1.0403	1.0594	1.1079	1.0274	1.0509	1.0696	1.1692	1.0086	1.0294	1.0511	1.0806	0.0068	0.0073	0.0067	0.0301
	Level 7	6.5min	1.0101	1.0237	1.0393	1.0729	1.0101	1.0238	1.0393	1.0728	1.0177	1.0303	1.0482	1.0987	0.9965	1.0186	1.0308	1.0496	0.0062	0.0039	0.0056	0.0192
	Level 8	13.1min	1.0089	1.0167	1.0279	1.0581	1.0089	1.0167	1.0278	1.0582	1.0131	1.0203	1.0344	1.0959	1.0039	1.0131	1.0208	1.0373	0.0034	0.0026	0.0042	0.0171
	Level 9	26.2min	1.0075	1.0138	1.0227	1.1097	1.0076	1.0138	1.0228	1.1101	1.0110	1.0163	1.0323	1.6825	1.0034	1.0113	1.0166	1.0344	0.0026	0.0015	0.0050	0.2015
	Level 1	3.7sec	1.4789	1.5717	1.6310	1.7598	1.4789	1.5717	1.6308	1.7594	1.5430	1.5990	1.6564	1.9540	1.3702	1.5471	1.6065	1.6609	0.0526	0.0209	0.0194	0.0859
	Level 2	7.3sec	1.2480	1.3261	1.3832	1.5488	1.2479	1.3262	1.3831	1.5487	1.2882	1.3607	1.4063	1.9355	1.1760	1.2906	1.3616	1.4126	0.0360	0.0211	0.0145	0.1660
	Level 3	14.6sec	1.1233	1.1930	1.2406	1.3841	1.1231	1.1930	1.2406	1.3841	1.1524	1.2190	1.2702	1.6282	1.0760	1.1583	1.2195	1.2703	0.0217	0.0203	0.0152	0.1328
3	**Level 4**	29.2sec	1.0657	1.1194	1.1643	1.2687	1.0657	1.1194	1.1644	1.2690	1.0908	1.1413	1.1897	1.4675	1.0308	1.0938	1.1434	1.1925	0.0173	0.0165	0.0125	0.0906
months	**Level 5**	58.5sec	1.0379	1.0780	1.1102	1.1968	1.0379	1.0779	1.1101	1.1972	1.0565	1.0943	1.1205	1.3487	1.0146	1.0572	1.0967	1.1305	0.0121	0.0122	0.0078	0.0756
before	**Level 6**	1.9min	1.0232	1.0489	1.0710	1.1241	1.0232	1.0489	1.0710	1.1241	1.0353	1.0572	1.0811	1.2289	1.0086	1.0354	1.0590	1.0833	0.0080	0.0072	0.0081	0.0476
	Level 7	3.9min	1.0135	1.0304	1.0463	1.0846	1.0135	1.0305	1.0463	1.0845	1.0213	1.0369	1.0537	1.1525	0.9965	1.0228	1.0384	1.0572	0.0067	0.0053	0.0051	0.0297
	Level 8	7.8min	1.0108	1.0210	1.0322	1.0628	1.0107	1.0209	1.0322	1.0624	1.0145	1.0251	1.0382	1.0989	1.0039	1.0153	1.0270	1.0422	0.0036	0.0033	0.0037	0.0207
	Level 9	15.6min	1.0091	1.0163	1.0255	1.0872	1.0092	1.0163	1.0255	1.0883	1.0132	1.0194	1.0323	1.6825	1.0034	1.0132	1.0194	1.0336	0.0030	0.0022	0.0037	0.1592
	Level 1	2.3sec	1.4703	1.5357	1.5931	1.7030	1.4702	1.5356	1.5932	1.7027	1.5054	1.5629	1.6286	1.9540	1.3702	1.5057	1.5635	1.6288	0.0274	0.0168	0.0178	0.0714
	Level 2	4.6sec	1.2445	1.2987	1.3556	1.4717	1.2444	1.2987	1.3557	1.4725	1.2735	1.3225	1.3891	1.9355	1.1760	1.2741	1.3232	1.3900	0.0234	0.0150	0.0190	0.1059
	Level 3	9.2sec	1.1375	1.1829	1.2280	1.3201	1.1374	1.1829	1.2280	1.3193	1.1650	1.2053	1.2513	1.6282	1.0760	1.1658	1.2058	1.2516	0.0215	0.0114	0.0146	0.0870
1	**Level 4**	18.5sec	1.0819	1.1224	1.1566	1.2227	1.0820	1.1224	1.1566	1.2226	1.1068	1.1399	1.1746	1.4675	1.0308	1.1069	1.1400	1.1750	0.0187	0.0094	0.0101	0.0599
Year	**Level 5**	37sec	1.0511	1.0829	1.1081	1.1586	1.0511	1.0829	1.1081	1.1588	1.0712	1.0942	1.1194	1.3487	1.0146	1.0712	1.0943	1.1195	0.0147	0.0066	0.0074	0.0492
before	**Level 6**	1.2min	1.0325	1.0549	1.0718	1.1060	1.0325	1.0549	1.0718	1.1060	1.0466	1.0628	1.0811	1.2289	1.0086	1.0467	1.0632	1.0811	0.0103	0.0049	0.0057	0.0307
	Level 7	2.5min	1.0202	1.0357	1.0469	1.0703	1.0203	1.0357	1.0469	1.0704	1.0295	1.0415	1.0531	1.1525	0.9965	1.0295	1.0415	1.0536	0.0071	0.0034	0.0034	0.0201
	Level 8	4.9min	1.0140	1.0238	1.0314	1.0484	1.0139	1.0238	1.0314	1.0484	1.0196	1.0274	1.0352	1.0989	1.0039	1.0197	1.0276	1.0360	0.0042	0.0023	0.0021	0.0148
	Level 9	9.9min	1.0111	1.0180	1.0243	1.0472	1.0111	1.0180	1.0243	1.0475	1.0148	1.0215	1.0272	1.6825	1.0034	1.0148	1.0215	1.0273	0.0031	0.0018	0.0016	0.0827

Table A.37: EDM6 Other Results Table –Continued

EDM6 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.9sec	0.5576	0.6036	0.6388	0.7063	0.5575	0.6034	0.6383	0.7063	0.5842	0.6219	0.6647	0.7292	0.5281	0.5945	0.6224	0.6875	0.0212	0.0110	0.0208	0.0195
	Level 2	27.8sec	0.6317	0.7285	0.7737	0.8292	0.6327	0.7282	0.7735	0.8291	0.6957	0.7492	0.7937	0.8504	0.5231	0.7019	0.7511	0.7939	0.0710	0.0207	0.0161	0.0225
	Level 3	55.5sec	0.7285	0.8268	0.8687	0.9086	0.7297	0.8269	0.8685	0.9084	0.8017	0.8438	0.8882	0.9299	0.6226	0.8161	0.8447	0.8926	0.0676	0.0113	0.0181	0.0144
30	**Level 4**	1.9min	0.7936	0.8799	0.9221	0.9526	0.7936	0.8796	0.9221	0.9527	0.8361	0.9003	0.9350	0.9699	0.7303	0.8372	0.9067	0.9420	0.0428	0.0258	0.0113	0.0110
days	**Level 5**	3.7min	0.8342	0.9182	0.9510	0.9730	0.8344	0.9180	0.9511	0.9728	0.8719	0.9374	0.9564	0.9847	0.7969	0.8928	0.9415	0.9598	0.0324	0.0176	0.0057	0.0090
before	**Level 6**	7.4min	0.8736	0.9425	0.9675	0.9826	0.8738	0.9428	0.9675	0.9826	0.9084	0.9553	0.9711	0.9901	0.8357	0.9247	0.9612	0.9721	0.0318	0.0125	0.0037	0.0069
	Level 7	14.8min	0.9020	0.9558	0.9764	0.9877	0.9021	0.9558	0.9764	0.9877	0.9331	0.9669	0.9785	0.9931	0.8719	0.9414	0.9736	0.9796	0.0273	0.0104	0.0019	0.0052
	Level 8	29.6min	0.9147	0.9629	0.9805	0.9899	0.9152	0.9630	0.9805	0.9899	0.9447	0.9716	0.9815	0.9946	0.8785	0.9521	0.9780	0.9823	0.0269	0.0078	0.0014	0.0048
	Level 9	59.2min	0.9060	0.9612	0.9797	0.9900	0.9058	0.9614	0.9797	0.9899	0.9430	0.9710	0.9826	0.9947	0.8635	0.9511	0.9743	0.9830	0.0328	0.0077	0.0032	0.0045
	Level 1	6.1sec	0.5493	0.6088	0.6356	0.6864	0.5491	0.6087	0.6355	0.6863	0.5963	0.6219	0.6527	0.7292	0.3639	0.6000	0.6224	0.6572	0.0689	0.0064	0.0123	0.0255
	Level 2	12.3sec	0.6113	0.7170	0.7629	0.8111	0.6115	0.7170	0.7630	0.8114	0.7019	0.7290	0.7792	0.8504	0.2277	0.7041	0.7490	0.7821	0.1455	0.0071	0.0124	0.0252
	Level 3	24.6sec	0.6704	0.8065	0.8524	0.8975	0.6772	0.8063	0.8524	0.8975	0.7780	0.8246	0.8740	0.9299	0.1299	0.7853	0.8260	0.8752	0.1975	0.0129	0.0168	0.0185
60	**Level 4**	49.1sec	0.7288	0.8590	0.9033	0.9449	0.7300	0.8588	0.9031	0.9449	0.8307	0.8824	0.9253	0.9699	0.0697	0.8361	0.8836	0.9254	0.2340	0.0181	0.0131	0.0144
days	**Level 5**	1.6min	0.7684	0.9006	0.9337	0.9673	0.7646	0.9006	0.9338	0.9672	0.8763	0.9151	0.9505	0.9847	0.0362	0.8825	0.9156	0.9528	0.2574	0.0110	0.0118	0.0110
before	**Level 6**	3.3min	0.7987	0.9312	0.9550	0.9786	0.7970	0.9312	0.9552	0.9787	0.9097	0.9412	0.9678	0.9901	0.0185	0.9104	0.9426	0.9683	0.2748	0.0107	0.0080	0.0079
	Level 7	6.5min	0.8132	0.9499	0.9696	0.9847	0.8193	0.9499	0.9696	0.9847	0.9331	0.9579	0.9759	0.9931	0.0093	0.9414	0.9625	0.9762	0.2854	0.0058	0.0047	0.0061
	Level 8	13.1min	0.8290	0.9621	0.9767	0.9875	0.8327	0.9621	0.9767	0.9875	0.9453	0.9689	0.9814	0.9946	0.0047	0.9521	0.9694	0.9814	0.2917	0.0044	0.0042	0.0052
	Level 9	26.2min	0.8354	0.9644	0.9777	0.9883	0.8319	0.9643	0.9777	0.9883	0.9539	0.9710	0.9813	0.9947	0.0024	0.9542	0.9725	0.9826	0.2930	0.0057	0.0033	0.0044
	Level 1	3.7sec	0.5541	0.6111	0.6357	0.6770	0.5541	0.6112	0.6357	0.6771	0.5963	0.6224	0.6465	0.7292	0.3639	0.6000	0.6230	0.6480	0.0572	0.0076	0.0090	0.0247
	Level 2	7.3sec	0.6171	0.7226	0.7531	0.8014	0.6175	0.7225	0.7531	0.8017	0.7041	0.7351	0.7747	0.8504	0.2277	0.7079	0.7356	0.7774	0.1199	0.0071	0.0119	0.0240
	Level 3	14.6sec	0.6838	0.8033	0.8365	0.8896	0.6826	0.8033	0.8361	0.8897	0.7780	0.8145	0.8619	0.9299	0.1299	0.7853	0.8161	0.8671	0.1604	0.0094	0.0152	0.0181
3	**Level 4**	29.2sec	0.7429	0.8529	0.8893	0.9371	0.7394	0.8530	0.8893	0.9372	0.8359	0.8696	0.9097	0.9699	0.0697	0.8361	0.8740	0.9130	0.1870	0.0097	0.0129	0.0161
months	**Level 5**	58.5sec	0.7800	0.8939	0.9221	0.9615	0.7812	0.8940	0.9220	0.9614	0.8784	0.9035	0.9406	0.9847	0.0362	0.8825	0.9054	0.9415	0.2046	0.0059	0.0109	0.0123
before	**Level 6**	1.9min	0.8203	0.9236	0.9467	0.9745	0.8189	0.9236	0.9467	0.9745	0.9104	0.9378	0.9600	0.9901	0.0185	0.9130	0.9382	0.9612	0.2174	0.0077	0.0073	0.0087
	Level 7	3.9min	0.8459	0.9453	0.9629	0.9816	0.8460	0.9453	0.9628	0.9817	0.9331	0.9537	0.9731	0.9931	0.0093	0.9331	0.9538	0.9736	0.2255	0.0058	0.0062	0.0064
	Level 8	7.8min	0.8632	0.9596	0.9723	0.9854	0.8634	0.9596	0.9723	0.9854	0.9484	0.9643	0.9787	0.9946	0.0047	0.9502	0.9660	0.9806	0.2306	0.0039	0.0044	0.0049
	Level 9	15.6min	0.8666	0.9638	0.9751	0.9863	0.8668	0.9638	0.9751	0.9862	0.9542	0.9696	0.9802	0.9947	0.0024	0.9559	0.9699	0.9810	0.2323	0.0041	0.0033	0.0045
	Level 1	2.3sec	0.5842	0.6268	0.6509	0.6803	0.5842	0.6268	0.6509	0.6804	0.6129	0.6390	0.6638	0.7292	0.3639	0.6130	0.6393	0.6641	0.0366	0.0071	0.0074	0.0128
	Level 2	4.6sec	0.6729	0.7362	0.7690	0.8033	0.6729	0.7361	0.7690	0.8033	0.7176	0.7522	0.7845	0.8504	0.2277	0.7181	0.7533	0.7847	0.0708	0.0100	0.0092	0.0155
	Level 3	9.2sec	0.7477	0.8113	0.8430	0.8785	0.7472	0.8113	0.8429	0.8784	0.7952	0.8273	0.8568	0.9299	0.1299	0.7957	0.8274	0.8570	0.0906	0.0096	0.0086	0.0173
1	**Level 4**	18.5sec	0.8024	0.8597	0.8873	0.9225	0.8021	0.8596	0.8873	0.9224	0.8446	0.8737	0.9003	0.9699	0.0697	0.8455	0.8740	0.9004	0.1009	0.0077	0.0081	0.0173
Year	**Level 5**	37sec	0.8439	0.8958	0.9183	0.9488	0.8437	0.8958	0.9183	0.9488	0.8865	0.9070	0.9289	0.9847	0.0362	0.8868	0.9083	0.9299	0.1085	0.0060	0.0061	0.0146
before	**Level 6**	1.2min	0.8793	0.9251	0.9418	0.9653	0.8789	0.9251	0.9418	0.9653	0.9153	0.9343	0.9506	0.9901	0.0185	0.9159	0.9345	0.9507	0.1136	0.0052	0.0048	0.0108
	Level 7	2.5min	0.9065	0.9471	0.9587	0.9760	0.9067	0.9471	0.9587	0.9759	0.9405	0.9526	0.9650	0.9931	0.0093	0.9405	0.9528	0.9659	0.1170	0.0037	0.0038	0.0074
	Level 8	4.9min	0.9255	0.9613	0.9698	0.9822	0.9253	0.9613	0.9698	0.9822	0.9567	0.9651	0.9749	0.9946	0.0047	0.9567	0.9651	0.9750	0.1194	0.0025	0.0029	0.0051
	Level 9	9.9min	0.9314	0.9662	0.9740	0.9844	0.9315	0.9662	0.9740	0.9844	0.9622	0.9700	0.9786	0.9947	0.0024	0.9622	0.9701	0.9787	0.1206	0.0021	0.0027	0.0043

Table A.38: EDM7 Other Results Table

EDM7 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	27.3sec	1.6275	1.7505	1.9834	4.5563	1.6267	1.7511	1.9924	4.5943	1.6712	1.7843	2.2379	6.9573	1.5899	1.6981	1.7973	2.3610	0.0412	0.0464	0.2246	2.3009
	Level 2	54.6sec	1.4614	1.6179	2.0017	4.9054	1.4610	1.6159	2.0025	4.9759	1.5056	1.6896	2.0537	8.2389	1.4028	1.5513	1.9551	2.3047	0.0527	0.0696	0.0494	3.0110
	Level 3	1.8min	1.3305	1.4774	1.8104	3.5874	1.3313	1.4773	1.8113	3.5729	1.3742	1.5955	1.8654	4.8791	1.2663	1.3939	1.7638	2.8935	0.0573	0.1052	0.0512	1.1315
30	**Level 4**	3.6min	1.2490	1.3956	1.5864	2.7280	1.2503	1.3952	1.5852	2.7329	1.3126	1.4253	1.6882	3.4389	1.1438	1.3701	1.4752	2.2963	0.0927	0.0280	0.1067	0.6171
days	**Level 5**	7.3min	1.1829	1.2979	1.4536	2.3930	1.1824	1.2979	1.4541	2.4127	1.2224	1.3220	1.5250	3.3281	1.1228	1.2609	1.3926	1.9290	0.0527	0.0326	0.0667	0.7932
before	**Level 6**	14.6min	1.1272	1.2258	1.3864	2.1201	1.1270	1.2263	1.3873	2.1073	1.1501	1.2591	1.4540	2.7863	1.0926	1.2071	1.2811	1.6460	0.0304	0.0285	0.0930	0.6005
	Level 7	29.1min	1.0940	1.1596	1.3241	1.9866	1.0942	1.1598	1.3260	1.9954	1.1069	1.1817	1.4123	2.6432	1.0707	1.1354	1.2121	1.5122	0.0203	0.0232	0.1029	0.5832
	Level 8	58.3min	1.0876	1.1316	1.3110	1.9750	1.0874	1.1315	1.3125	1.9806	1.1051	1.1440	1.4373	2.6248	1.0554	1.1066	1.1780	1.5532	0.0277	0.0216	0.1299	0.5677
	Level 9	116.6min	1.0952	1.1498	1.3892	2.0957	1.0944	1.1503	1.3921	2.0975	1.1295	1.1760	1.5975	2.6986	1.0483	1.1300	1.2221	1.7539	0.0417	0.0235	0.1902	0.5224
	Level 1	11sec	1.5461	1.6884	1.8216	3.3144	1.5449	1.6882	1.8216	3.3492	1.6189	1.7709	1.8731	6.9573	1.4356	1.6437	1.7843	1.8934	0.0687	0.0448	0.0313	1.9009
	Level 2	22sec	1.3551	1.5211	1.6555	4.0587	1.3551	1.5212	1.6563	4.1275	1.4475	1.5670	1.7557	10.2974	1.1707	1.4746	1.5792	1.7874	0.0937	0.0362	0.0587	3.3250
	Level 3	43.9sec	1.2292	1.3647	1.4779	3.3165	1.2287	1.3647	1.4778	3.3042	1.3117	1.4051	1.5768	8.6856	1.0994	1.3161	1.4270	1.5955	0.0670	0.0300	0.0514	2.4304
60	**Level 4**	1.5min	1.1432	1.2493	1.3707	2.7208	1.1435	1.2496	1.3703	2.7074	1.1806	1.3117	1.4253	7.2735	1.0804	1.1957	1.3126	1.4315	0.0340	0.0491	0.0386	1.9655
days	**Level 5**	2.9min	1.0951	1.1752	1.2734	2.4066	1.0951	1.1756	1.2734	2.4085	1.1228	1.2246	1.3169	6.3453	1.0594	1.1333	1.2388	1.3220	0.0200	0.0364	0.0310	1.7187
before	**Level 6**	5.9min	1.0666	1.1218	1.1942	2.2062	1.0665	1.1215	1.1940	2.2240	1.0890	1.1553	1.2128	6.0489	1.0412	1.0926	1.1704	1.2591	0.0189	0.0233	0.0157	1.6231
	Level 7	11.7min	1.0421	1.0839	1.1399	1.9634	1.0424	1.0838	1.1397	1.9727	1.0573	1.1069	1.1624	4.6362	1.0251	1.0679	1.1152	1.1817	0.0123	0.0172	0.0149	1.1758
	Level 8	23.4min	1.0305	1.0603	1.1113	1.7897	1.0304	1.0606	1.1114	1.7854	1.0401	1.0818	1.1439	3.2603	1.0173	1.0450	1.1013	1.1440	0.0077	0.0155	0.0140	0.7607
	Level 9	46.9min	1.0279	1.0531	1.1108	1.7970	1.0278	1.0529	1.1108	1.8017	1.0358	1.0752	1.1448	2.7690	1.0157	1.0391	1.0868	1.1760	0.0072	0.0140	0.0218	0.6223
	Level 1	6.4sec	1.5426	1.6574	1.7883	2.8658	1.5424	1.6575	1.7882	2.8832	1.6276	1.6871	1.8510	6.9573	1.4356	1.6287	1.6981	1.8731	0.0641	0.0176	0.0396	1.5605
	Level 2	12.9sec	1.3364	1.4704	1.5970	3.2280	1.3368	1.4704	1.5967	3.2393	1.4202	1.5243	1.6896	10.2974	1.1707	1.4226	1.5430	1.6908	0.0691	0.0347	0.0484	2.6915
	Level 3	25.7sec	1.2072	1.3238	1.4323	2.6406	1.2068	1.3237	1.4328	2.6434	1.2663	1.3711	1.5017	8.6856	1.0994	1.2681	1.3742	1.5184	0.0421	0.0330	0.0375	1.9742
3	**Level 4**	51.4sec	1.1311	1.2116	1.3181	2.2050	1.1314	1.2119	1.3178	2.2007	1.1740	1.2575	1.3745	7.2735	1.0804	1.1764	1.2614	1.3812	0.0232	0.0258	0.0362	1.5743
months	**Level 5**	1.7min	1.0920	1.1428	1.2225	1.9554	1.0920	1.1429	1.2228	1.9624	1.1220	1.1709	1.2768	6.3453	1.0594	1.1228	1.1723	1.2812	0.0187	0.0171	0.0313	1.3734
before	**Level 6**	3.4min	1.0620	1.0998	1.1592	1.8159	1.0620	1.1000	1.1594	1.8177	1.0834	1.1203	1.1968	6.0489	1.0376	1.0877	1.1248	1.2000	0.0145	0.0113	0.0230	1.2903
	Level 7	6.9min	1.0401	1.0673	1.1123	1.6357	1.0402	1.0673	1.1125	1.6408	1.0523	1.0849	1.1357	4.6362	1.0242	1.0560	1.0866	1.1453	0.0092	0.0080	0.0139	0.9523
	Level 8	13.7min	1.0289	1.0468	1.0852	1.5125	1.0289	1.0468	1.0854	1.5139	1.0371	1.0554	1.1066	3.2603	1.0164	1.0378	1.0657	1.1070	0.0067	0.0053	0.0133	0.6482
	Level 9	27.4min	1.0260	1.0409	1.0737	1.5249	1.0259	1.0409	1.0738	1.5236	1.0345	1.0484	1.0965	2.7690	1.0128	1.0350	1.0553	1.1054	0.0071	0.0044	0.0132	0.5671
	Level 1	3.1sec	1.4697	1.5401	1.6249	2.0433	1.4698	1.5400	1.6250	2.0472	1.5060	1.5737	1.6871	6.9573	1.3311	1.5072	1.5742	1.6911	0.0319	0.0203	0.0317	0.8638
	Level 2	6.3sec	1.2384	1.3079	1.3941	1.9675	1.2387	1.3079	1.3941	1.9630	1.2757	1.3371	1.4656	10.2974	1.1219	1.2768	1.3395	1.4661	0.0308	0.0182	0.0368	1.4390
	Level 3	12.6sec	1.1327	1.1909	1.2620	1.6905	1.1327	1.1909	1.2620	1.6899	1.1646	1.2145	1.3249	8.6856	1.0566	1.1669	1.2155	1.3280	0.0240	0.0150	0.0349	1.0593
1	**Level 4**	25.2sec	1.0813	1.1281	1.1833	1.5119	1.0814	1.1280	1.1833	1.5064	1.1111	1.1439	1.2298	7.2735	1.0288	1.1112	1.1441	1.2304	0.0201	0.0104	0.0262	0.8284
Year	**Level 5**	50.4sec	1.0536	1.0900	1.1318	1.3955	1.0536	1.0900	1.1317	1.3985	1.0752	1.1058	1.1663	6.3453	1.0166	1.0753	1.1061	1.1664	0.0168	0.0091	0.0191	0.7192
before	**Level 6**	1.7min	1.0358	1.0636	1.0937	1.3314	1.0357	1.0636	1.0938	1.3371	1.0523	1.0771	1.1180	6.0489	1.0099	1.0523	1.0777	1.1180	0.0126	0.0070	0.0127	0.6977
	Level 7	3.4min	1.0243	1.0444	1.0652	1.2999	1.0243	1.0445	1.0652	1.2983	1.0368	1.0533	1.0833	4.9149	1.0059	1.0369	1.0534	1.0849	0.0089	0.0049	0.0085	0.6854
	Level 8	6.7min	1.0173	1.0322	1.0472	1.3287	1.0173	1.0322	1.0472	1.3199	1.0259	1.0384	1.0566	8.7907	1.0044	1.0268	1.0386	1.0627	0.0063	0.0032	0.0056	1.0367
	Level 9	13.4min	1.0148	1.0280	1.0421	1.4643	1.0148	1.0281	1.0420	1.4592	1.0225	1.0339	1.0553	16.5601	1.0042	1.0230	1.0341	1.0555	0.0053	0.0032	0.0055	1.9980

Table A.38: EDM7 Other Results Table –Continued

EDM7 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	27.3sec	1.6220	1.8121	2.0255	4.1945	1.6215	1.8114	2.0260	4.1923	1.7013	1.8617	2.1676	5.9204	1.5324	1.7729	1.8650	2.3376	0.0848	0.0455	0.1522	1.7947
	Level 2	54.6sec	1.4183	1.6415	1.9697	4.5508	1.4191	1.6417	1.9697	4.5422	1.5046	1.6929	2.0881	6.8629	1.3103	1.6067	1.8865	2.2576	0.0992	0.0453	0.1053	2.3029
	Level 3	1.8min	1.2998	1.4436	1.8358	2.9955	1.2989	1.4453	1.8346	2.9861	1.3706	1.5356	1.9000	4.0269	1.2002	1.3765	1.7968	1.9859	0.0883	0.0817	0.0568	1.0211
30	**Level 4**	3.6min	1.2201	1.4083	1.5897	2.2047	1.2204	1.4081	1.5897	2.2097	1.2781	1.4327	1.6102	2.6870	1.1440	1.3921	1.5708	1.8806	0.0690	0.0216	0.0197	0.4232
days	**Level 5**	7.3min	1.1661	1.3122	1.4642	1.9515	1.1658	1.3123	1.4643	1.9678	1.2023	1.3190	1.4761	2.4455	1.1087	1.3026	1.4570	1.6088	0.0501	0.0086	0.0103	0.4308
before	**Level 6**	14.6min	1.1149	1.2275	1.4089	1.8570	1.1151	1.2269	1.4072	1.8593	1.1517	1.2651	1.4598	2.3155	1.0637	1.2037	1.3365	1.4711	0.0458	0.0334	0.0637	0.4263
	Level 7	29.1min	1.0815	1.1725	1.3276	1.6809	1.0816	1.1726	1.3286	1.6814	1.1059	1.1981	1.3778	1.9613	1.0460	1.1498	1.2457	1.3838	0.0315	0.0243	0.0723	0.2891
	Level 8	58.3min	1.0770	1.1525	1.2736	1.6118	1.0771	1.1515	1.2736	1.6131	1.0984	1.1663	1.3230	1.7624	1.0551	1.1271	1.2086	1.4082	0.0217	0.0213	0.0587	0.1835
	Level 9	116.6min	1.0903	1.1717	1.3145	1.6613	1.0902	1.1718	1.3140	1.6605	1.0998	1.1941	1.4022	1.7292	1.0783	1.1371	1.2169	1.5392	0.0109	0.0305	0.0930	0.1054
	Level 1	11sec	1.5400	1.7076	1.8507	3.2263	1.5401	1.7074	1.8509	3.2150	1.6309	1.7916	1.8800	5.9204	1.4329	1.6333	1.7996	1.9492	0.0667	0.0647	0.0246	1.6073
	Level 2	22sec	1.3395	1.5234	1.6739	3.9815	1.3389	1.5234	1.6735	3.9620	1.4426	1.6007	1.7689	10.3447	1.1693	1.4478	1.6067	1.8156	0.0919	0.0534	0.0620	3.1372
	Level 3	43.9sec	1.2193	1.3580	1.4909	3.1802	1.2217	1.3586	1.4898	3.2022	1.3243	1.3910	1.5543	9.5837	1.0965	1.3258	1.4101	1.5719	0.0733	0.0234	0.0577	2.7051
60	**Level 4**	1.5min	1.1380	1.2443	1.3959	2.7209	1.1380	1.2441	1.3955	2.7587	1.1855	1.2809	1.4475	9.2103	1.0732	1.1938	1.3161	1.4610	0.0387	0.0298	0.0394	2.6368
days	**Level 5**	2.9min	1.0922	1.1763	1.2989	2.7344	1.0923	1.1759	1.2987	2.6887	1.1186	1.2125	1.3336	9.8676	1.0561	1.1337	1.2477	1.3457	0.0202	0.0261	0.0343	2.9220
before	**Level 6**	5.9min	1.0668	1.1231	1.2111	2.4698	1.0667	1.1232	1.2113	2.4874	1.0897	1.1522	1.2329	8.8344	1.0385	1.0955	1.1729	1.2651	0.0192	0.0213	0.0183	2.5866
	Level 7	11.7min	1.0437	1.0828	1.1517	2.1005	1.0438	1.0829	1.1518	2.0741	1.0585	1.1084	1.1742	6.3641	1.0230	1.0596	1.1146	1.1981	0.0134	0.0183	0.0204	1.7517
	Level 8	23.4min	1.0318	1.0628	1.1197	1.8651	1.0318	1.0629	1.1199	1.8552	1.0402	1.0851	1.1612	5.0152	1.0156	1.0421	1.0887	1.1663	0.0087	0.0158	0.0252	1.2942
	Level 9	46.9min	1.0294	1.0574	1.1166	1.7372	1.0293	1.0572	1.1170	1.7348	1.0372	1.0783	1.1842	3.7605	1.0179	1.0377	1.0805	1.1941	0.0066	0.0165	0.0335	0.8437
	Level 1	6.4sec	1.5376	1.6564	1.8098	2.7914	1.5379	1.6566	1.8100	2.7921	1.6133	1.7013	1.8650	5.9204	1.4329	1.6137	1.7564	1.8800	0.0588	0.0233	0.0421	1.3403
	Level 2	12.9sec	1.3262	1.4672	1.5985	3.0852	1.3263	1.4667	1.5988	3.1390	1.4127	1.5254	1.6929	10.3447	1.1693	1.4146	1.5339	1.7030	0.0640	0.0350	0.0468	2.5335
	Level 3	25.7sec	1.2017	1.3242	1.4314	2.5856	1.2021	1.3241	1.4313	2.5841	1.2711	1.3706	1.5296	9.5837	1.0965	1.2800	1.3765	1.5332	0.0424	0.0288	0.0532	2.1401
3	**Level 4**	51.4sec	1.1286	1.2148	1.3245	2.2258	1.1288	1.2148	1.3242	2.2330	1.1717	1.2445	1.3996	9.2103	1.0732	1.1774	1.2601	1.3999	0.0259	0.0254	0.0548	2.0422
months	**Level 5**	1.7min	1.0912	1.1448	1.2311	2.1113	1.0911	1.1449	1.2310	2.1314	1.1214	1.1738	1.2925	9.8676	1.0561	1.1229	1.1839	1.3026	0.0189	0.0186	0.0399	2.2481
before	**Level 6**	3.4min	1.0619	1.1001	1.1646	1.9725	1.0618	1.1002	1.1647	1.9705	1.0783	1.1246	1.2117	8.8344	1.0350	1.0819	1.1280	1.2146	0.0143	0.0142	0.0282	1.9984
	Level 7	6.9min	1.0405	1.0661	1.1142	1.7119	1.0405	1.0659	1.1141	1.7042	1.0514	1.0798	1.1498	6.3641	1.0212	1.0527	1.0829	1.1590	0.0104	0.0090	0.0187	1.3612
	Level 8	13.7min	1.0295	1.0475	1.0833	1.5755	1.0294	1.0475	1.0832	1.5621	1.0364	1.0625	1.1077	5.0152	1.0150	1.0395	1.0666	1.1222	0.0077	0.0069	0.0117	1.0139
	Level 9	27.4min	1.0262	1.0413	1.0749	1.4920	1.0262	1.0413	1.0749	1.4881	1.0339	1.0586	1.0998	3.7605	1.0121	1.0347	1.0611	1.1100	0.0066	0.0067	0.0127	0.6871
	Level 1	3.1sec	1.4703	1.5401	1.6239	2.0380	1.4702	1.5401	1.6240	2.0363	1.5050	1.5707	1.6854	5.9204	1.3320	1.5051	1.5723	1.6898	0.0320	0.0194	0.0316	0.7556
	Level 2	6.3sec	1.2389	1.3065	1.3914	1.9422	1.2389	1.3066	1.3914	1.9443	1.2747	1.3379	1.4560	10.3447	1.1227	1.2755	1.3392	1.4619	0.0309	0.0178	0.0372	1.3533
	Level 3	12.6sec	1.1327	1.1892	1.2584	1.6712	1.1327	1.1892	1.2586	1.6791	1.1651	1.2158	1.3257	9.5837	1.0562	1.1656	1.2166	1.3258	0.0245	0.0144	0.0347	1.1152
1	**Level 4**	25.2sec	1.0815	1.1267	1.1810	1.5131	1.0814	1.1267	1.1809	1.5124	1.1104	1.1445	1.2298	9.2103	1.0284	1.1110	1.1445	1.2324	0.0207	0.0109	0.0254	1.0312
Year	**Level 5**	50.4sec	1.0534	1.0903	1.1295	1.4192	1.0533	1.0903	1.1295	1.4261	1.0766	1.1060	1.1647	9.8676	1.0164	1.0767	1.1060	1.1695	0.0172	0.0083	0.0171	1.1167
before	**Level 6**	1.7min	1.0355	1.0637	1.0923	1.3477	1.0355	1.0637	1.0923	1.3427	1.0533	1.0760	1.1188	8.8344	1.0094	1.0537	1.0765	1.1192	0.0130	0.0061	0.0129	0.9926
	Level 7	3.4min	1.0241	1.0443	1.0636	1.2529	1.0241	1.0443	1.0636	1.2497	1.0366	1.0514	1.0793	6.3641	1.0057	1.0370	1.0514	1.0798	0.0091	0.0043	0.0083	0.6820
	Level 8	6.7min	1.0172	1.0323	1.0464	1.2012	1.0172	1.0323	1.0464	1.2019	1.0261	1.0376	1.0564	5.0152	1.0039	1.0265	1.0376	1.0592	0.0064	0.0030	0.0058	0.5169
	Level 9	13.4min	1.0150	1.0281	1.0406	1.1902	1.0149	1.0281	1.0406	1.1916	1.0227	1.0333	1.0546	3.7605	1.0029	1.0230	1.0334	1.0546	0.0056	0.0027	0.0056	0.3901

Table A.38: EDM7 Other Results Table –Continued

EDM7 Bid Ask		Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	27.3sec	1.6254	1.7617	1.9775	4.4658	1.6245	1.7616	1.9763	4.4190	1.6970	1.7854	2.0952	6.5224	1.5529	1.7159	1.8124	2.3484	0.0720	0.0396	0.1466	2.0872
	Level 2	54.6sec	1.4402	1.6108	1.9358	4.7746	1.4378	1.6106	1.9371	4.7040	1.5206	1.6677	2.0668	7.6319	1.3409	1.5483	1.7998	2.0983	0.0906	0.0599	0.1337	2.7808
	Level 3	1.8min	1.3064	1.4412	1.7626	3.1544	1.3042	1.4413	1.7629	3.1383	1.3517	1.5346	1.8095	4.4162	1.2123	1.3618	1.6885	2.1648	0.0796	0.0873	0.0651	1.1561
30	**Level 4**	3.6min	1.2206	1.3774	1.5218	2.2662	1.2227	1.3778	1.5222	2.2656	1.2857	1.3969	1.5710	2.8171	1.1288	1.3682	1.4815	1.9377	0.0829	0.0165	0.0453	0.4804
days	**Level 5**	7.3min	1.1604	1.2716	1.3745	1.9168	1.1604	1.2712	1.3753	1.9055	1.1996	1.2875	1.3947	2.5514	1.1026	1.2487	1.3514	1.5485	0.0511	0.0201	0.0220	0.5604
before	**Level 6**	14.6min	1.1014	1.1908	1.2968	1.6973	1.1021	1.1909	1.2964	1.6917	1.1284	1.2357	1.3602	2.1867	1.0595	1.1630	1.2578	1.3609	0.0372	0.0391	0.0557	0.4367
	Level 7	29.1min	1.0649	1.1259	1.2169	1.5753	1.0651	1.1261	1.2174	1.5761	1.0794	1.1590	1.2687	1.9385	1.0378	1.1019	1.1893	1.2747	0.0236	0.0295	0.0445	0.3361
	Level 8	58.3min	1.0501	1.1005	1.1690	1.4838	1.0499	1.0999	1.1693	1.4816	1.0665	1.1230	1.2049	1.7979	1.0288	1.0718	1.1460	1.2221	0.0193	0.0260	0.0313	0.2921
	Level 9	116.6min	1.0492	1.1068	1.1991	1.4117	1.0493	1.1067	1.1983	1.4149	1.0659	1.1425	1.2380	1.5803	1.0230	1.0681	1.1521	1.2609	0.0230	0.0373	0.0433	0.1600
	Level 1	11sec	1.5414	1.7000	1.8282	3.2648	1.5408	1.6995	1.8282	3.2731	1.6237	1.7854	1.8701	6.5224	1.4340	1.6380	1.7918	1.8710	0.0664	0.0584	0.0265	1.7861
	Level 2	22sec	1.3425	1.5193	1.6542	3.9678	1.3432	1.5192	1.6541	4.0012	1.4473	1.5748	1.7210	10.3192	1.1691	1.4518	1.6111	1.7672	0.0909	0.0447	0.0417	3.2661
	Level 3	43.9sec	1.2201	1.3544	1.4684	3.1805	1.2200	1.3540	1.4685	3.1677	1.3142	1.3896	1.5346	9.0930	1.0962	1.3181	1.4066	1.5446	0.0677	0.0232	0.0463	2.5732
60	**Level 4**	1.5min	1.1365	1.2319	1.3546	2.6248	1.1365	1.2323	1.3551	2.6025	1.1796	1.2857	1.3969	8.0303	1.0742	1.1902	1.2943	1.4265	0.0360	0.0368	0.0380	2.2409
days	**Level 5**	2.9min	1.0886	1.1590	1.2524	2.3070	1.0887	1.1592	1.2527	2.3361	1.1036	1.1996	1.2875	7.5544	1.0546	1.1118	1.2132	1.2922	0.0172	0.0317	0.0301	2.1472
before	**Level 6**	5.9min	1.0601	1.1048	1.1674	2.0540	1.0602	1.1045	1.1673	2.0577	1.0823	1.1299	1.1821	6.2616	1.0362	1.0838	1.1468	1.2357	0.0161	0.0190	0.0122	1.7269
	Level 7	11.7min	1.0371	1.0638	1.1103	1.6656	1.0370	1.0638	1.1104	1.6610	1.0508	1.0794	1.1315	3.7488	1.0221	1.0508	1.0908	1.1590	0.0103	0.0127	0.0131	0.8826
	Level 8	23.4min	1.0252	1.0420	1.0789	1.4035	1.0251	1.0420	1.0789	1.4122	1.0304	1.0611	1.1050	2.2217	1.0149	1.0305	1.0617	1.1230	0.0057	0.0119	0.0141	0.3969
	Level 9	46.9min	1.0194	1.0339	1.0691	1.3548	1.0194	1.0339	1.0692	1.3588	1.0233	1.0480	1.1094	1.8885	1.0125	1.0245	1.0571	1.1425	0.0043	0.0098	0.0172	0.2588
	Level 1	6.4sec	1.5387	1.6562	1.7952	2.8318	1.5391	1.6565	1.7950	2.8315	1.6201	1.6970	1.8524	6.5224	1.4340	1.6234	1.7159	1.8701	0.0612	0.0219	0.0360	1.4699
	Level 2	12.9sec	1.3273	1.4674	1.5942	3.1500	1.3282	1.4673	1.5941	3.1577	1.4094	1.5240	1.6677	10.3192	1.1691	1.4131	1.5322	1.6815	0.0644	0.0368	0.0438	2.6308
	Level 3	25.7sec	1.1997	1.3194	1.4229	2.5863	1.1995	1.3190	1.4223	2.5587	1.2541	1.3618	1.5012	9.0930	1.0962	1.2668	1.3678	1.5186	0.0397	0.0295	0.0412	2.0467
3	**Level 4**	51.4sec	1.1242	1.2051	1.3047	2.1306	1.1241	1.2050	1.3047	2.1310	1.1718	1.2369	1.3684	8.0303	1.0742	1.1731	1.2536	1.3709	0.0232	0.0234	0.0413	1.7475
months	**Level 5**	1.7min	1.0858	1.1321	1.2073	1.9096	1.0860	1.1321	1.2072	1.9102	1.1104	1.1572	1.2572	7.5544	1.0546	1.1108	1.1671	1.2689	0.0162	0.0167	0.0285	1.6592
before	**Level 6**	3.4min	1.0558	1.0878	1.1392	1.7168	1.0559	1.0876	1.1392	1.7070	1.0712	1.1040	1.1636	6.2616	1.0352	1.0721	1.1075	1.1741	0.0119	0.0105	0.0181	1.3378
	Level 7	6.9min	1.0343	1.0542	1.0900	1.4453	1.0343	1.0543	1.0900	1.4476	1.0431	1.0660	1.1087	3.7488	1.0213	1.0448	1.0661	1.1169	0.0071	0.0059	0.0119	0.6987
	Level 8	13.7min	1.0235	1.0343	1.0613	1.2868	1.0235	1.0343	1.0613	1.2855	1.0296	1.0401	1.0744	2.2217	1.0138	1.0297	1.0466	1.0755	0.0051	0.0035	0.0084	0.3311
	Level 9	27.4min	1.0181	1.0269	1.0492	1.2477	1.0181	1.0268	1.0492	1.2462	1.0230	1.0306	1.0607	1.8885	1.0093	1.0233	1.0318	1.0659	0.0046	0.0024	0.0084	0.2349
	Level 1	3.1sec	1.4691	1.5385	1.6225	2.0362	1.4690	1.5386	1.6224	2.0374	1.5037	1.5707	1.6862	6.5224	1.3315	1.5049	1.5708	1.6890	0.0316	0.0199	0.0317	0.8163
	Level 2	6.3sec	1.2370	1.3045	1.3874	1.9450	1.2368	1.3045	1.3875	1.9409	1.2732	1.3342	1.4505	10.3192	1.1222	1.2748	1.3363	1.4518	0.0302	0.0178	0.0362	1.3983
	Level 3	12.6sec	1.1298	1.1851	1.2520	1.6646	1.1301	1.1850	1.2519	1.6609	1.1624	1.2096	1.3181	9.0930	1.0562	1.1628	1.2114	1.3189	0.0235	0.0147	0.0332	1.0742
1	**Level 4**	25.2sec	1.0777	1.1206	1.1712	1.4690	1.0777	1.1206	1.1712	1.4721	1.1044	1.1367	1.2186	8.0303	1.0283	1.1052	1.1370	1.2202	0.0189	0.0094	0.0231	0.8915
Year	**Level 5**	50.4sec	1.0493	1.0819	1.1178	1.3543	1.0492	1.0819	1.1178	1.3561	1.0692	1.0961	1.1474	7.5544	1.0160	1.0694	1.0963	1.1501	0.0153	0.0073	0.0152	0.8308
before	**Level 6**	1.7min	1.0313	1.0547	1.0793	1.2599	1.0313	1.0547	1.0793	1.2615	1.0453	1.0646	1.1018	6.2616	1.0089	1.0454	1.0653	1.1019	0.0109	0.0054	0.0106	0.6695
	Level 7	3.4min	1.0199	1.0357	1.0508	1.1649	1.0200	1.0357	1.0508	1.1670	1.0292	1.0418	1.0646	3.7488	1.0049	1.0292	1.0419	1.0655	0.0072	0.0038	0.0064	0.3602
	Level 8	6.7min	1.0129	1.0236	1.0331	1.1076	1.0129	1.0236	1.0331	1.1079	1.0190	1.0277	1.0413	2.2217	1.0032	1.0191	1.0277	1.0414	0.0047	0.0025	0.0037	0.1827
	Level 9	13.4min	1.0095	1.0178	1.0253	1.0888	1.0095	1.0178	1.0253	1.0891	1.0142	1.0213	1.0309	1.8885	1.0024	1.0144	1.0215	1.0310	0.0035	0.0019	0.0029	0.1396

Table A.38: EDM7 Other Results Table –Continued

EDM7 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	27.3sec	0.2730	0.4957	0.5524	0.6169	0.2761	0.4955	0.5523	0.6178	0.4278	0.5362	0.5640	0.6526	0.1689	0.4613	0.5371	0.5878	0.1351	0.0378	0.0138	0.0326
	Level 2	54.6sec	0.2701	0.5081	0.6097	0.7070	0.2702	0.5086	0.6094	0.7070	0.4429	0.5301	0.6224	0.7632	0.1457	0.4789	0.5907	0.6646	0.1544	0.0266	0.0166	0.0507
	Level 3	1.8min	0.3606	0.5452	0.6923	0.7735	0.3638	0.5454	0.6933	0.7724	0.5036	0.5565	0.7265	0.8332	0.2483	0.5263	0.6512	0.7296	0.1293	0.0166	0.0384	0.0541
30	**Level 4**	3.6min	0.4637	0.6291	0.7101	0.8201	0.4630	0.6291	0.7103	0.8212	0.5318	0.6366	0.7184	0.8741	0.3722	0.6211	0.6980	0.7824	0.0821	0.0078	0.0108	0.0475
days	**Level 5**	7.3min	0.5238	0.6830	0.7620	0.8595	0.5238	0.6829	0.7621	0.8588	0.6216	0.6864	0.7677	0.9020	0.4089	0.6775	0.7581	0.8317	0.1074	0.0048	0.0050	0.0378
before	**Level 6**	14.6min	0.5573	0.7115	0.8152	0.8982	0.5566	0.7116	0.8155	0.8978	0.6797	0.7482	0.8308	0.9401	0.4319	0.6850	0.7904	0.8683	0.1239	0.0328	0.0219	0.0376
	Level 7	29.1min	0.6090	0.7541	0.8533	0.9254	0.6070	0.7542	0.8531	0.9251	0.7226	0.8028	0.8697	0.9560	0.5099	0.7258	0.8347	0.9042	0.1076	0.0423	0.0176	0.0273
	Level 8	58.3min	0.6284	0.7866	0.8686	0.9288	0.6256	0.7863	0.8686	0.9286	0.7101	0.8274	0.8872	0.9478	0.5674	0.7559	0.8574	0.9104	0.0749	0.0369	0.0162	0.0187
	Level 9	116.6min	0.6048	0.7626	0.8535	0.9174	0.6039	0.7636	0.8538	0.9173	0.6497	0.8218	0.8794	0.9274	0.5783	0.7132	0.8374	0.9093	0.0398	0.0547	0.0225	0.0092
	Level 1	11sec	0.3750	0.5403	0.5869	0.6501	0.3745	0.5404	0.5864	0.6504	0.5130	0.5557	0.6123	0.6979	0.1689	0.5319	0.5582	0.6132	0.1477	0.0073	0.0220	0.0287
	Level 2	22sec	0.3740	0.5979	0.6573	0.7493	0.3730	0.5983	0.6571	0.7501	0.5508	0.6224	0.6907	0.8552	0.0967	0.5653	0.6247	0.6932	0.1867	0.0219	0.0230	0.0538
	Level 3	43.9sec	0.4316	0.6716	0.7362	0.8211	0.4335	0.6721	0.7362	0.8211	0.6362	0.7092	0.7543	0.9120	0.1043	0.6434	0.7189	0.7551	0.1834	0.0264	0.0127	0.0503
60	**Level 4**	1.5min	0.5105	0.7174	0.8045	0.8799	0.5087	0.7171	0.8042	0.8796	0.6845	0.7598	0.8376	0.9318	0.1086	0.6908	0.7807	0.8435	0.1906	0.0207	0.0194	0.0302
days	**Level 5**	2.9min	0.5600	0.7703	0.8508	0.9159	0.5581	0.7705	0.8508	0.9158	0.7431	0.8014	0.8821	0.9469	0.1013	0.7499	0.8247	0.8940	0.2126	0.0206	0.0190	0.0171
before	**Level 6**	5.9min	0.5869	0.8257	0.8907	0.9379	0.5885	0.8257	0.8906	0.9378	0.7904	0.8526	0.9128	0.9629	0.1132	0.8111	0.8679	0.9176	0.2230	0.0127	0.0168	0.0170
	Level 7	11.7min	0.6356	0.8683	0.9241	0.9583	0.6344	0.8685	0.9237	0.9582	0.8347	0.8972	0.9438	0.9775	0.1571	0.8517	0.9022	0.9447	0.2204	0.0155	0.0155	0.0123
	Level 8	23.4min	0.6635	0.8932	0.9411	0.9694	0.6616	0.8933	0.9410	0.9692	0.8574	0.9185	0.9596	0.9846	0.1994	0.8612	0.9216	0.9614	0.2126	0.0200	0.0139	0.0082
	Level 9	46.9min	0.6517	0.8958	0.9462	0.9716	0.6507	0.8960	0.9461	0.9715	0.8374	0.9255	0.9636	0.9824	0.2659	0.8444	0.9274	0.9642	0.1840	0.0263	0.0148	0.0063
	Level 1	6.4sec	0.4151	0.5529	0.6038	0.6512	0.4156	0.5528	0.6038	0.6512	0.5319	0.5693	0.6197	0.6979	0.1689	0.5362	0.5878	0.6198	0.1325	0.0128	0.0085	0.0254
	Level 2	12.9sec	0.4352	0.6259	0.6822	0.7554	0.4349	0.6259	0.6822	0.7557	0.5872	0.6519	0.7069	0.8552	0.0967	0.5907	0.6556	0.7078	0.1702	0.0181	0.0162	0.0381
	Level 3	25.7sec	0.5037	0.6994	0.7553	0.8332	0.5025	0.6995	0.7556	0.8329	0.6522	0.7265	0.7813	0.9120	0.1043	0.6538	0.7296	0.7867	0.1731	0.0253	0.0164	0.0303
3	**Level 4**	51.4sec	0.5766	0.7563	0.8235	0.8862	0.5765	0.7564	0.8235	0.8863	0.7144	0.7936	0.8493	0.9318	0.1086	0.7145	0.8035	0.8535	0.1719	0.0308	0.0173	0.0204
months	**Level 5**	1.7min	0.6283	0.8131	0.8736	0.9168	0.6307	0.8131	0.8737	0.9168	0.7677	0.8447	0.8905	0.9469	0.1013	0.7737	0.8520	0.8917	0.1843	0.0261	0.0141	0.0159
before	**Level 6**	3.4min	0.6737	0.8591	0.9090	0.9422	0.6736	0.8590	0.9091	0.9420	0.8233	0.8865	0.9243	0.9662	0.1132	0.8253	0.8892	0.9274	0.1980	0.0206	0.0117	0.0128
	Level 7	6.9min	0.7167	0.8978	0.9382	0.9613	0.7184	0.8978	0.9382	0.9612	0.8628	0.9235	0.9500	0.9792	0.1571	0.8697	0.9261	0.9511	0.1946	0.0150	0.0079	0.0096
	Level 8	13.7min	0.7471	0.9232	0.9547	0.9714	0.7453	0.9233	0.9547	0.9714	0.8911	0.9376	0.9620	0.9852	0.1994	0.9028	0.9411	0.9649	0.1887	0.0099	0.0063	0.0073
	Level 9	27.4min	0.7454	0.9306	0.9603	0.9744	0.7424	0.9305	0.9603	0.9745	0.9009	0.9424	0.9665	0.9880	0.2659	0.9093	0.9447	0.9672	0.1761	0.0109	0.0062	0.0063
	Level 1	3.1sec	0.5225	0.6159	0.6494	0.6806	0.5221	0.6160	0.6494	0.6805	0.5918	0.6360	0.6644	0.7507	0.1689	0.5933	0.6367	0.6644	0.0890	0.0120	0.0082	0.0154
	Level 2	6.3sec	0.5863	0.7191	0.7655	0.8077	0.5868	0.7192	0.7655	0.8077	0.6841	0.7467	0.7840	0.8907	0.0967	0.6868	0.7474	0.7845	0.1201	0.0192	0.0104	0.0208
	Level 3	12.6sec	0.6633	0.7951	0.8410	0.8833	0.6631	0.7951	0.8410	0.8833	0.7543	0.8219	0.8579	0.9468	0.1043	0.7543	0.8225	0.8583	0.1228	0.0216	0.0102	0.0195
1	**Level 4**	25.2sec	0.7266	0.8471	0.8876	0.9251	0.7271	0.8472	0.8876	0.9250	0.8114	0.8737	0.9001	0.9724	0.1086	0.8131	0.8738	0.9006	0.1187	0.0181	0.0085	0.0178
Year	**Level 5**	50.4sec	0.7786	0.8856	0.9173	0.9497	0.7790	0.8856	0.9173	0.9496	0.8550	0.9041	0.9288	0.9839	0.1013	0.8586	0.9042	0.9289	0.1206	0.0134	0.0069	0.0156
before	**Level 6**	1.7min	0.8221	0.9156	0.9402	0.9659	0.8217	0.9156	0.9402	0.9659	0.8935	0.9290	0.9491	0.9907	0.1132	0.8938	0.9294	0.9494	0.1244	0.0108	0.0054	0.0121
	Level 7	3.4min	0.8565	0.9403	0.9576	0.9765	0.8570	0.9403	0.9576	0.9766	0.9261	0.9511	0.9643	0.9943	0.1571	0.9265	0.9511	0.9647	0.1207	0.0073	0.0040	0.0087
	Level 8	6.7min	0.8776	0.9557	0.9687	0.9832	0.8777	0.9557	0.9688	0.9832	0.9441	0.9637	0.9742	0.9961	0.1994	0.9466	0.9637	0.9746	0.1217	0.0053	0.0029	0.0062
	Level 9	13.4min	0.8765	0.9610	0.9726	0.9853	0.8779	0.9610	0.9727	0.9853	0.9482	0.9677	0.9775	0.9971	0.2659	0.9482	0.9678	0.9778	0.1299	0.0052	0.0026	0.0055

Table A.39: EDM8 Other Results Table

EDM8 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	4.9sec	1.5204	1.5858	1.6734	1.8354	1.5207	1.5858	1.6727	1.8358	1.5676	1.6020	1.7351	1.9431	1.4947	1.5768	1.6308	1.7404	0.0286	0.0086	0.0556	0.0758
	Level 2	9.9sec	1.2753	1.3324	1.4030	1.5751	1.2757	1.3323	1.4028	1.5735	1.3021	1.3397	1.4599	1.8174	1.2411	1.3208	1.3591	1.4768	0.0295	0.0078	0.0407	0.1403
	Level 3	19.7sec	1.1395	1.1874	1.2454	1.3327	1.1389	1.1876	1.2453	1.3325	1.1609	1.2045	1.2551	1.4453	1.1110	1.1677	1.2244	1.2732	0.0212	0.0150	0.0129	0.0687
30	**Level 4**	39.4sec	1.0771	1.1111	1.1396	1.2001	1.0771	1.1112	1.1396	1.2003	1.0909	1.1301	1.1509	1.2706	1.0626	1.0938	1.1334	1.1550	0.0130	0.0165	0.0069	0.0444
days	**Level 5**	1.3min	1.0451	1.0673	1.0852	1.1178	1.0450	1.0673	1.0851	1.1178	1.0575	1.0747	1.0905	1.1713	1.0360	1.0619	1.0751	1.0910	0.0081	0.0056	0.0060	0.0318
before	**Level 6**	2.6min	1.0285	1.0445	1.0555	1.0737	1.0286	1.0445	1.0555	1.0735	1.0385	1.0475	1.0623	1.1059	1.0216	1.0401	1.0494	1.0630	0.0062	0.0027	0.0051	0.0183
	Level 7	5.3min	1.0204	1.0318	1.0387	1.0542	1.0204	1.0318	1.0387	1.0543	1.0263	1.0340	1.0463	1.0764	1.0160	1.0302	1.0356	1.0470	0.0038	0.0014	0.0044	0.0125
	Level 8	10.5min	1.0174	1.0258	1.0318	1.0480	1.0174	1.0258	1.0318	1.0479	1.0225	1.0277	1.0383	1.0649	1.0137	1.0233	1.0284	1.0398	0.0032	0.0017	0.0045	0.0098
	Level 9	21min	1.0187	1.0266	1.0360	1.0557	1.0188	1.0266	1.0360	1.0556	1.0217	1.0300	1.0412	1.0708	1.0148	1.0229	1.0308	1.0463	0.0026	0.0026	0.0047	0.0101
	Level 1	2.2sec	1.4792	1.5418	1.5971	1.7485	1.4792	1.5420	1.5971	1.7480	1.5177	1.5768	1.6236	1.9431	1.4414	1.5220	1.5790	1.6308	0.0240	0.0195	0.0171	0.1030
	Level 2	4.3sec	1.2411	1.2999	1.3517	1.4898	1.2413	1.2998	1.3517	1.4883	1.2698	1.3313	1.3766	1.8174	1.2092	1.2728	1.3333	1.3947	0.0208	0.0195	0.0168	0.1216
	Level 3	8.6sec	1.1228	1.1675	1.2106	1.2941	1.1227	1.1677	1.2108	1.2945	1.1425	1.1896	1.2244	1.4453	1.1023	1.1526	1.1917	1.2412	0.0153	0.0123	0.0121	0.0586
60	**Level 4**	17.2sec	1.0674	1.0978	1.1333	1.1836	1.0674	1.0975	1.1333	1.1838	1.0869	1.1082	1.1408	1.2706	1.0498	1.0891	1.1231	1.1423	0.0130	0.0068	0.0061	0.0428
days	**Level 5**	34.4sec	1.0398	1.0639	1.0821	1.1221	1.0397	1.0639	1.0820	1.1216	1.0528	1.0704	1.0910	1.1999	1.0266	1.0560	1.0710	1.0953	0.0091	0.0049	0.0080	0.0339
before	**Level 6**	1.1min	1.0257	1.0433	1.0559	1.0826	1.0256	1.0433	1.0558	1.0829	1.0362	1.0478	1.0630	1.1536	1.0172	1.0365	1.0494	1.0632	0.0063	0.0040	0.0052	0.0265
	Level 7	2.3min	1.0183	1.0307	1.0390	1.0635	1.0183	1.0307	1.0389	1.0636	1.0249	1.0349	1.0470	1.1064	1.0125	1.0262	1.0356	1.0471	0.0042	0.0030	0.0042	0.0207
	Level 8	4.6min	1.0147	1.0240	1.0309	1.0596	1.0147	1.0240	1.0309	1.0589	1.0187	1.0269	1.0383	1.1669	1.0099	1.0189	1.0271	1.0392	0.0033	0.0029	0.0042	0.0373
	Level 9	9.2min	1.0146	1.0229	1.0328	1.0746	1.0146	1.0229	1.0327	1.0744	1.0183	1.0259	1.0385	1.3150	1.0094	1.0186	1.0270	1.0399	0.0034	0.0024	0.0037	0.0803
	Level 1	1.4sec	1.4820	1.5373	1.5918	1.7424	1.4818	1.5371	1.5918	1.7421	1.5093	1.5606	1.6255	1.9431	1.4414	1.5177	1.5664	1.6284	0.0207	0.0142	0.0196	0.0926
	Level 2	2.8sec	1.2409	1.2892	1.3418	1.4837	1.2407	1.2894	1.3418	1.4831	1.2673	1.3037	1.3751	1.8174	1.2092	1.2698	1.3133	1.3766	0.0182	0.0110	0.0191	0.1061
	Level 3	5.6sec	1.1228	1.1572	1.2015	1.2899	1.1228	1.1573	1.2014	1.2898	1.1425	1.1728	1.2244	1.4453	1.1023	1.1426	1.1732	1.2343	0.0136	0.0081	0.0165	0.0507
3	**Level 4**	11.1sec	1.0657	1.0913	1.1250	1.1801	1.0657	1.0913	1.1249	1.1800	1.0795	1.1011	1.1408	1.2706	1.0498	1.0808	1.1019	1.1423	0.0096	0.0060	0.0133	0.0359
months	**Level 5**	22.2sec	1.0379	1.0585	1.0793	1.1196	1.0379	1.0585	1.0792	1.1198	1.0477	1.0675	1.0921	1.1999	1.0266	1.0481	1.0686	1.0953	0.0066	0.0055	0.0088	0.0282
before	**Level 6**	44.4sec	1.0239	1.0394	1.0541	1.0815	1.0239	1.0394	1.0541	1.0815	1.0320	1.0463	1.0632	1.1536	1.0172	1.0321	1.0470	1.0655	0.0047	0.0044	0.0059	0.0220
	Level 7	1.5min	1.0167	1.0276	1.0377	1.0607	1.0167	1.0276	1.0377	1.0607	1.0218	1.0323	1.0470	1.1064	1.0121	1.0229	1.0326	1.0471	0.0036	0.0033	0.0042	0.0176
	Level 8	3min	1.0132	1.0212	1.0297	1.0529	1.0132	1.0212	1.0298	1.0533	1.0171	1.0259	1.0383	1.1669	1.0088	1.0176	1.0264	1.0392	0.0030	0.0027	0.0039	0.0317
	Level 9	5.9min	1.0126	1.0204	1.0304	1.0634	1.0126	1.0204	1.0304	1.0632	1.0163	1.0243	1.0369	1.3150	1.0076	1.0172	1.0243	1.0375	0.0030	0.0023	0.0047	0.0678
	Level 1	1.1sec	1.4678	1.5176	1.5561	1.6703	1.4678	1.5176	1.5561	1.6698	1.4992	1.5354	1.5813	2.9143	1.3822	1.5003	1.5371	1.5820	0.0249	0.0108	0.0130	0.1764
	Level 2	2.2sec	1.2262	1.2697	1.3005	1.4130	1.2261	1.2697	1.3005	1.4123	1.2516	1.2851	1.3215	2.9182	1.1735	1.2520	1.2851	1.3227	0.0204	0.0088	0.0100	0.2070
	Level 3	4.4sec	1.1142	1.1417	1.1661	1.2420	1.1142	1.1416	1.1660	1.2420	1.1300	1.1520	1.1821	2.0892	1.0864	1.1303	1.1521	1.1825	0.0120	0.0066	0.0087	0.1174
1	**Level 4**	8.7sec	1.0614	1.0804	1.0967	1.1511	1.0613	1.0804	1.0967	1.1509	1.0736	1.0868	1.1113	1.6011	1.0370	1.0741	1.0869	1.1125	0.0085	0.0039	0.0071	0.0645
Year	**Level 5**	17.5sec	1.0359	1.0505	1.0636	1.1006	1.0359	1.0505	1.0636	1.1006	1.0447	1.0558	1.0732	1.3883	1.0175	1.0451	1.0560	1.0733	0.0068	0.0032	0.0052	0.0425
before	**Level 6**	35sec	1.0228	1.0348	1.0439	1.0701	1.0228	1.0348	1.0440	1.0702	1.0312	1.0388	1.0499	1.2631	1.0103	1.0317	1.0390	1.0501	0.0053	0.0022	0.0032	0.0297
	Level 7	1.2min	1.0158	1.0243	1.0311	1.0512	1.0158	1.0243	1.0311	1.0512	1.0218	1.0277	1.0357	1.1680	1.0076	1.0218	1.0278	1.0357	0.0040	0.0016	0.0021	0.0212
	Level 8	2.3min	1.0118	1.0177	1.0231	1.0459	1.0118	1.0177	1.0231	1.0460	1.0160	1.0202	1.0268	1.2569	1.0056	1.0160	1.0202	1.0269	0.0031	0.0012	0.0019	0.0386
	Level 9	4.7min	1.0104	1.0157	1.0206	1.0547	1.0104	1.0157	1.0206	1.0549	1.0139	1.0179	1.0243	1.4913	1.0046	1.0140	1.0180	1.0243	0.0026	0.0011	0.0019	0.0781

Table A.39: EDM8 Other Results Table –Continued

EDM8 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	4.9sec	1.5213	1.5775	1.6717	1.8211	1.5211	1.5774	1.6711	1.8218	1.5477	1.6079	1.7261	1.8814	1.4943	1.5612	1.6230	1.7568	0.0206	0.0176	0.0503	0.0474
	Level 2	9.9sec	1.2770	1.3276	1.3975	1.5621	1.2768	1.3276	1.3974	1.5621	1.2993	1.3450	1.4510	1.7549	1.2350	1.3075	1.3475	1.4707	0.0301	0.0124	0.0392	0.1155
	Level 3	19.7sec	1.1425	1.1836	1.2487	1.3183	1.1424	1.1838	1.2486	1.3182	1.1633	1.2041	1.2559	1.4126	1.1194	1.1640	1.2417	1.2614	0.0191	0.0131	0.0056	0.0622
30	**Level 4**	39.4sec	1.0790	1.1076	1.1434	1.1872	1.0790	1.1077	1.1433	1.1878	1.0894	1.1242	1.1525	1.2472	1.0689	1.0929	1.1333	1.1566	0.0095	0.0147	0.0072	0.0356
days	**Level 5**	1.3min	1.0465	1.0643	1.0873	1.1158	1.0466	1.0643	1.0874	1.1157	1.0551	1.0717	1.0938	1.1656	1.0390	1.0558	1.0793	1.0951	0.0061	0.0069	0.0061	0.0294
before	**Level 6**	2.6min	1.0292	1.0439	1.0566	1.0745	1.0292	1.0440	1.0567	1.0743	1.0354	1.0475	1.0599	1.1053	1.0227	1.0379	1.0525	1.0610	0.0046	0.0036	0.0029	0.0185
	Level 7	5.3min	1.0209	1.0322	1.0391	1.0541	1.0209	1.0323	1.0391	1.0539	1.0252	1.0336	1.0433	1.0749	1.0159	1.0295	1.0366	1.0453	0.0034	0.0017	0.0028	0.0122
	Level 8	10.5min	1.0179	1.0270	1.0328	1.0474	1.0179	1.0270	1.0328	1.0474	1.0226	1.0291	1.0371	1.0644	1.0136	1.0236	1.0292	1.0397	0.0032	0.0022	0.0031	0.0097
	Level 9	21min	1.0188	1.0285	1.0381	1.0549	1.0188	1.0285	1.0382	1.0548	1.0212	1.0317	1.0414	1.0694	1.0148	1.0224	1.0341	1.0443	0.0025	0.0034	0.0037	0.0093
	Level 1	2.2sec	1.4800	1.5427	1.6029	1.7450	1.4803	1.5429	1.6028	1.7441	1.5214	1.5643	1.6309	1.8814	1.4391	1.5237	1.5711	1.6402	0.0250	0.0138	0.0223	0.0848
	Level 2	4.3sec	1.2403	1.3043	1.3565	1.5147	1.2404	1.3045	1.3565	1.5125	1.2660	1.3297	1.3829	1.7564	1.2123	1.2751	1.3309	1.3937	0.0181	0.0168	0.0194	0.1324
	Level 3	8.6sec	1.1233	1.1687	1.2182	1.3793	1.1231	1.1688	1.2182	1.3760	1.1445	1.1893	1.2444	2.2224	1.1037	1.1496	1.1938	1.2500	0.0137	0.0132	0.0182	0.2849
60	**Level 4**	17.2sec	1.0677	1.0979	1.1369	1.3622	1.0679	1.0977	1.1368	1.3702	1.0826	1.1157	1.1489	3.2160	1.0507	1.0856	1.1227	1.1506	0.0122	0.0105	0.0092	0.6136
days	**Level 5**	34.4sec	1.0405	1.0611	1.0853	1.4978	1.0404	1.0611	1.0852	1.4993	1.0518	1.0703	1.0951	5.2558	1.0271	1.0519	1.0717	1.0966	0.0089	0.0063	0.0084	1.2464
before	**Level 6**	1.1min	1.0258	1.0416	1.0559	1.8341	1.0259	1.0416	1.0560	1.8354	1.0346	1.0461	1.0610	9.3730	1.0173	1.0347	1.0475	1.0612	0.0059	0.0043	0.0041	2.5000
	Level 7	2.3min	1.0183	1.0298	1.0387	2.5746	1.0182	1.0298	1.0388	2.5654	1.0236	1.0334	1.0453	17.6516	1.0125	1.0247	1.0336	1.0455	0.0039	0.0032	0.0034	5.0035
	Level 8	4.6min	1.0145	1.0237	1.0316	3.9969	1.0146	1.0237	1.0316	4.0663	1.0185	1.0279	1.0371	34.2641	1.0098	1.0190	1.0282	1.0377	0.0032	0.0031	0.0032	10.0155
	Level 9	9.2min	1.0141	1.0226	1.0339	7.4103	1.0141	1.0227	1.0338	7.0901	1.0187	1.0292	1.0399	67.5024	1.0092	1.0190	1.0294	1.0413	0.0033	0.0034	0.0036	20.0365
	Level 1	1.4sec	1.4817	1.5388	1.5948	1.7356	1.4815	1.5389	1.5945	1.7354	1.5080	1.5606	1.6303	1.8814	1.4391	1.5214	1.5612	1.6309	0.0204	0.0130	0.0248	0.0782
	Level 2	2.8sec	1.2396	1.2927	1.3437	1.4959	1.2395	1.2928	1.3437	1.4960	1.2652	1.3082	1.3785	1.7564	1.2123	1.2660	1.3095	1.3829	0.0162	0.0121	0.0222	0.1154
	Level 3	5.6sec	1.1228	1.1585	1.2054	1.3448	1.1226	1.1586	1.2054	1.3455	1.1444	1.1804	1.2417	2.2224	1.1037	1.1445	1.1806	1.2444	0.0120	0.0094	0.0200	0.2378
3	**Level 4**	11.1sec	1.0664	1.0900	1.1284	1.3097	1.0664	1.0900	1.1283	1.3078	1.0808	1.1006	1.1489	3.2160	1.0507	1.0816	1.1048	1.1497	0.0097	0.0060	0.0141	0.5101
months	**Level 5**	22.2sec	1.0383	1.0564	1.0806	1.3809	1.0383	1.0564	1.0807	1.3797	1.0477	1.0643	1.0951	5.2558	1.0271	1.0496	1.0684	1.0966	0.0067	0.0044	0.0099	1.0340
before	**Level 6**	44.4sec	1.0242	1.0380	1.0535	1.5843	1.0242	1.0380	1.0535	1.5988	1.0308	1.0455	1.0612	9.3730	1.0173	1.0321	1.0458	1.0643	0.0049	0.0042	0.0057	2.0732
	Level 7	1.5min	1.0168	1.0267	1.0371	2.1120	1.0168	1.0267	1.0371	2.0934	1.0214	1.0320	1.0453	17.6516	1.0109	1.0219	1.0322	1.0455	0.0039	0.0034	0.0037	4.1489
	Level 8	3min	1.0130	1.0207	1.0301	3.1380	1.0130	1.0207	1.0301	3.1214	1.0165	1.0250	1.0371	34.2641	1.0077	1.0173	1.0253	1.0377	0.0033	0.0025	0.0034	8.3047
	Level 9	5.9min	1.0122	1.0197	1.0309	5.3284	1.0122	1.0196	1.0309	5.1997	1.0157	1.0231	1.0383	67.5024	1.0069	1.0160	1.0234	1.0390	0.0033	0.0022	0.0043	16.6140
	Level 1	1.1sec	1.4676	1.5186	1.5564	1.6704	1.4674	1.5185	1.5563	1.6695	1.4977	1.5359	1.5801	2.8669	1.3859	1.4987	1.5367	1.5843	0.0246	0.0115	0.0130	0.1678
	Level 2	2.2sec	1.2261	1.2702	1.3024	1.4200	1.2262	1.2702	1.3025	1.4201	1.2530	1.2875	1.3225	3.0101	1.1711	1.2542	1.2878	1.3234	0.0202	0.0089	0.0100	0.2193
	Level 3	4.4sec	1.1148	1.1420	1.1669	1.2675	1.1148	1.1420	1.1669	1.2674	1.1299	1.1525	1.1831	2.2575	1.0849	1.1301	1.1530	1.1844	0.0124	0.0069	0.0085	0.1851
1	**Level 4**	8.7sec	1.0616	1.0808	1.0973	1.2042	1.0616	1.0808	1.0973	1.2026	1.0735	1.0870	1.1117	3.2160	1.0370	1.0740	1.0873	1.1117	0.0089	0.0039	0.0072	0.2836
Year	**Level 5**	17.5sec	1.0357	1.0507	1.0632	1.2017	1.0357	1.0507	1.0633	1.2027	1.0455	1.0558	1.0732	5.2558	1.0177	1.0456	1.0558	1.0732	0.0068	0.0031	0.0051	0.5542
before	**Level 6**	35sec	1.0227	1.0345	1.0439	1.2689	1.0226	1.0345	1.0439	1.2734	1.0308	1.0384	1.0505	9.3730	1.0101	1.0309	1.0387	1.0508	0.0053	0.0022	0.0033	1.1081
	Level 7	1.2min	1.0156	1.0241	1.0310	1.4642	1.0156	1.0241	1.0310	1.4574	1.0214	1.0277	1.0358	17.6516	1.0071	1.0215	1.0278	1.0360	0.0040	0.0016	0.0020	2.2171
	Level 8	2.3min	1.0116	1.0177	1.0231	1.8372	1.0116	1.0177	1.0231	1.8556	1.0160	1.0204	1.0268	34.2641	1.0055	1.0160	1.0205	1.0273	0.0031	0.0011	0.0016	4.4373
	Level 9	4.7min	1.0101	1.0156	1.0204	2.6505	1.0101	1.0156	1.0204	2.6730	1.0137	1.0180	1.0235	67.5024	1.0046	1.0138	1.0181	1.0235	0.0026	0.0011	0.0016	8.8769

Table A.39: EDM8 Other Results Table –Continued

EDM8	Bid Ask	Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	4.9sec	1.5197	1.5776	1.6706	1.8250	1.5190	1.5776	1.6703	1.8249	1.5587	1.6028	1.7290	1.9102	1.4936	1.5624	1.6252	1.7376	0.0253	0.0143	0.0531	0.0642
	Level 2	9.9sec	1.2730	1.3224	1.3926	1.5593	1.2736	1.3224	1.3927	1.5603	1.3001	1.3333	1.4488	1.7783	1.2365	1.3044	1.3457	1.4573	0.0293	0.0102	0.0404	0.1287
	Level 3	19.7sec	1.1357	1.1751	1.2357	1.3116	1.1361	1.1752	1.2357	1.3117	1.1581	1.1871	1.2444	1.4107	1.1106	1.1582	1.2175	1.2591	0.0192	0.0105	0.0115	0.0641
30	**Level 4**	39.4sec	1.0718	1.0992	1.1266	1.1763	1.0717	1.0987	1.1267	1.1762	1.0844	1.1191	1.1369	1.2347	1.0587	1.0856	1.1229	1.1393	0.0107	0.0152	0.0058	0.0354
days	**Level 5**	1.3min	1.0375	1.0556	1.0687	1.0984	1.0375	1.0557	1.0686	1.0976	1.0430	1.0611	1.0739	1.1417	1.0329	1.0499	1.0626	1.0807	0.0048	0.0050	0.0050	0.0254
before	**Level 6**	2.6min	1.0207	1.0330	1.0409	1.0527	1.0207	1.0330	1.0409	1.0527	1.0248	1.0350	1.0431	1.0778	1.0169	1.0298	1.0382	1.0442	0.0030	0.0020	0.0024	0.0142
	Level 7	5.3min	1.0131	1.0207	1.0246	1.0330	1.0132	1.0207	1.0246	1.0331	1.0165	1.0223	1.0266	1.0474	1.0106	1.0176	1.0230	1.0290	0.0022	0.0020	0.0016	0.0080
	Level 8	10.5min	1.0097	1.0142	1.0180	1.0248	1.0097	1.0142	1.0179	1.0248	1.0127	1.0154	1.0205	1.0334	1.0079	1.0128	1.0164	1.0216	0.0018	0.0012	0.0015	0.0049
	Level 9	21min	1.0089	1.0128	1.0179	1.0258	1.0089	1.0128	1.0179	1.0258	1.0108	1.0138	1.0200	1.0311	1.0074	1.0119	1.0146	1.0216	0.0013	0.0008	0.0021	0.0046
	Level 1	2.2sec	1.4743	1.5375	1.5935	1.7418	1.4745	1.5374	1.5932	1.7416	1.5012	1.5624	1.6242	1.9102	1.4389	1.5135	1.5711	1.6252	0.0198	0.0164	0.0199	0.0956
	Level 2	4.3sec	1.2383	1.2949	1.3427	1.4733	1.2383	1.2947	1.3424	1.4742	1.2652	1.3216	1.3714	1.7783	1.2082	1.2670	1.3218	1.3769	0.0189	0.0173	0.0186	0.1172
	Level 3	8.6sec	1.1194	1.1618	1.1975	1.2765	1.1193	1.1619	1.1977	1.2767	1.1397	1.1801	1.2178	1.4107	1.1010	1.1440	1.1821	1.2311	0.0139	0.0119	0.0141	0.0534
60	**Level 4**	17.2sec	1.0623	1.0893	1.1195	1.1635	1.0622	1.0892	1.1195	1.1634	1.0775	1.1037	1.1246	1.2347	1.0479	1.0795	1.1105	1.1258	0.0108	0.0082	0.0043	0.0382
days	**Level 5**	34.4sec	1.0338	1.0528	1.0686	1.0994	1.0337	1.0528	1.0687	1.0994	1.0430	1.0601	1.0780	1.1742	1.0243	1.0446	1.0611	1.0781	0.0068	0.0052	0.0061	0.0304
before	**Level 6**	1.1min	1.0194	1.0321	1.0409	1.0590	1.0194	1.0321	1.0410	1.0590	1.0261	1.0355	1.0442	1.1120	1.0144	1.0267	1.0360	1.0444	0.0038	0.0030	0.0027	0.0198
	Level 7	2.3min	1.0118	1.0196	1.0248	1.0368	1.0118	1.0196	1.0248	1.0368	1.0159	1.0222	1.0273	1.0678	1.0093	1.0160	1.0223	1.0290	0.0020	0.0023	0.0018	0.0116
	Level 8	4.6min	1.0063	1.0132	1.0172	1.0261	1.0063	1.0132	1.0172	1.0259	1.0102	1.0152	1.0205	1.0456	0.9859	1.0104	1.0154	1.0216	0.0069	0.0014	0.0014	0.0073
	Level 9	9.2min	1.0015	1.0111	1.0153	1.0234	1.0019	1.0111	1.0154	1.0234	1.0091	1.0127	1.0183	1.0311	0.9501	1.0094	1.0129	1.0188	0.0172	0.0013	0.0022	0.0047
	Level 1	1.4sec	1.4786	1.5333	1.5874	1.7341	1.4783	1.5335	1.5875	1.7344	1.5034	1.5587	1.6248	1.9102	1.4389	1.5073	1.5590	1.6252	0.0186	0.0156	0.0222	0.0861
	Level 2	2.8sec	1.2376	1.2856	1.3325	1.4695	1.2376	1.2857	1.3326	1.4686	1.2652	1.3043	1.3644	1.7783	1.2082	1.2655	1.3044	1.3714	0.0173	0.0123	0.0192	0.1015
	Level 3	5.6sec	1.1191	1.1522	1.1901	1.2723	1.1191	1.1521	1.1903	1.2719	1.1397	1.1668	1.2175	1.4107	1.1010	1.1403	1.1713	1.2178	0.0121	0.0075	0.0150	0.0464
3	**Level 4**	11.1sec	1.0618	1.0822	1.1128	1.1595	1.0618	1.0822	1.1127	1.1594	1.0734	1.0916	1.1246	1.2347	1.0479	1.0744	1.0952	1.1258	0.0088	0.0047	0.0101	0.0323
months	**Level 5**	22.2sec	1.0331	1.0483	1.0657	1.0979	1.0330	1.0483	1.0657	1.0978	1.0407	1.0535	1.0780	1.1742	1.0243	1.0421	1.0554	1.0781	0.0051	0.0040	0.0067	0.0254
before	**Level 6**	44.4sec	1.0188	1.0294	1.0396	1.0583	1.0188	1.0294	1.0396	1.0582	1.0236	1.0344	1.0444	1.1120	1.0144	1.0248	1.0347	1.0446	0.0032	0.0033	0.0036	0.0164
	Level 7	1.5min	1.0115	1.0179	1.0243	1.0360	1.0115	1.0179	1.0243	1.0360	1.0145	1.0217	1.0285	1.0678	1.0085	1.0148	1.0221	1.0290	0.0021	0.0022	0.0021	0.0097
	Level 8	3min	1.0065	1.0119	1.0164	1.0248	1.0065	1.0119	1.0164	1.0248	1.0098	1.0139	1.0199	1.0456	0.9859	1.0098	1.0140	1.0205	0.0057	0.0014	0.0014	0.0063
	Level 9	5.9min	1.0028	1.0097	1.0140	1.0219	1.0028	1.0098	1.0140	1.0219	1.0080	1.0119	1.0174	1.0311	0.9501	1.0082	1.0121	1.0174	0.0141	0.0012	0.0016	0.0045
	Level 1	1.1sec	1.4663	1.5165	1.5543	1.6649	1.4665	1.5165	1.5543	1.6661	1.4970	1.5352	1.5772	2.8839	1.3835	1.4977	1.5356	1.5781	0.0243	0.0113	0.0124	0.1718
	Level 2	2.2sec	1.2248	1.2676	1.2982	1.4057	1.2246	1.2676	1.2982	1.4054	1.2503	1.2825	1.3170	2.9541	1.1713	1.2505	1.2832	1.3179	0.0201	0.0084	0.0092	0.2106
	Level 3	4.4sec	1.1121	1.1384	1.1622	1.2321	1.1122	1.1384	1.1622	1.2326	1.1269	1.1484	1.1747	2.1351	1.0850	1.1274	1.1484	1.1747	0.0117	0.0066	0.0081	0.1223
1	**Level 4**	8.7sec	1.0584	1.0760	1.0906	1.1388	1.0585	1.0759	1.0906	1.1387	1.0699	1.0823	1.1027	1.6152	1.0363	1.0701	1.0825	1.1037	0.0080	0.0036	0.0064	0.0656
Year	**Level 5**	17.5sec	1.0321	1.0449	1.0554	1.0864	1.0321	1.0449	1.0554	1.0865	1.0401	1.0498	1.0630	1.3535	1.0166	1.0403	1.0498	1.0631	0.0058	0.0029	0.0041	0.0385
before	**Level 6**	35sec	1.0187	1.0285	1.0354	1.0547	1.0186	1.0285	1.0354	1.0547	1.0248	1.0316	1.0396	1.2162	1.0089	1.0249	1.0317	1.0397	0.0039	0.0023	0.0023	0.0235
	Level 7	1.2min	1.0114	1.0179	1.0228	1.0346	1.0114	1.0179	1.0228	1.0345	1.0155	1.0204	1.0258	1.1236	1.0057	1.0155	1.0206	1.0258	0.0026	0.0015	0.0015	0.0134
	Level 8	2.3min	1.0070	1.0115	1.0148	1.0226	1.0070	1.0115	1.0148	1.0227	1.0098	1.0130	1.0167	1.0743	0.9859	1.0098	1.0131	1.0168	0.0032	0.0010	0.0011	0.0081
	Level 9	4.7min	1.0042	1.0085	1.0111	1.0180	1.0042	1.0085	1.0111	1.0179	1.0074	1.0096	1.0127	1.0511	0.9501	1.0074	1.0096	1.0127	0.0072	0.0007	0.0009	0.0060

Table A.39: EDM8 Other Results Table –Continued

EDM8 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	4.9sec	0.5493	0.6024	0.6363	0.6576	0.5492	0.6027	0.6364	0.6575	0.5692	0.6219	0.6405	0.6692	0.5315	0.5793	0.6297	0.6461	0.0144	0.0186	0.0042	0.0089
	Level 2	9.9sec	0.6442	0.7211	0.7553	0.7836	0.6428	0.7206	0.7553	0.7835	0.6799	0.7435	0.7648	0.8097	0.5698	0.6892	0.7499	0.7697	0.0445	0.0212	0.0058	0.0187
	Level 3	19.7sec	0.7606	0.8060	0.8478	0.8753	0.7599	0.8058	0.8477	0.8756	0.7928	0.8305	0.8591	0.8933	0.7079	0.7963	0.8408	0.8596	0.0349	0.0125	0.0069	0.0146
30	**Level 4**	39.4sec	0.8424	0.8769	0.9056	0.9267	0.8425	0.8771	0.9056	0.9269	0.8646	0.8895	0.9150	0.9355	0.8018	0.8676	0.8907	0.9180	0.0246	0.0078	0.0112	0.0081
days	**Level 5**	1.3min	0.8968	0.9219	0.9410	0.9555	0.8967	0.9219	0.9409	0.9555	0.9131	0.9331	0.9471	0.9624	0.8579	0.9142	0.9343	0.9477	0.0230	0.0072	0.0058	0.0056
before	**Level 6**	2.6min	0.9311	0.9478	0.9586	0.9717	0.9311	0.9477	0.9585	0.9717	0.9425	0.9547	0.9635	0.9778	0.9047	0.9435	0.9559	0.9658	0.0157	0.0041	0.0033	0.0044
	Level 7	5.3min	0.9487	0.9633	0.9690	0.9795	0.9489	0.9632	0.9690	0.9795	0.9566	0.9675	0.9713	0.9844	0.9303	0.9585	0.9677	0.9755	0.0108	0.0031	0.0017	0.0033
	Level 8	10.5min	0.9549	0.9689	0.9741	0.9824	0.9548	0.9688	0.9741	0.9824	0.9618	0.9717	0.9769	0.9866	0.9395	0.9642	0.9721	0.9779	0.0088	0.0029	0.0021	0.0031
	Level 9	21min	0.9481	0.9642	0.9729	0.9815	0.9481	0.9643	0.9729	0.9815	0.9576	0.9693	0.9781	0.9854	0.9351	0.9603	0.9701	0.9793	0.0083	0.0040	0.0032	0.0024
	Level 1	2.2sec	0.5748	0.6255	0.6492	0.6759	0.5746	0.6254	0.6491	0.6757	0.6097	0.6393	0.6563	0.6949	0.5315	0.6132	0.6405	0.6573	0.0277	0.0095	0.0053	0.0114
	Level 2	4.3sec	0.6656	0.7386	0.7682	0.8064	0.6654	0.7387	0.7682	0.8063	0.7175	0.7520	0.7843	0.8249	0.5694	0.7231	0.7535	0.7899	0.0538	0.0109	0.0091	0.0118
	Level 3	8.6sec	0.7451	0.8228	0.8572	0.8905	0.7458	0.8229	0.8572	0.8905	0.8000	0.8408	0.8699	0.9060	0.4500	0.8036	0.8443	0.8738	0.1020	0.0131	0.0087	0.0108
60	**Level 4**	17.2sec	0.7943	0.8811	0.9126	0.9366	0.7960	0.8812	0.9125	0.9365	0.8691	0.8963	0.9212	0.9518	0.3109	0.8704	0.8998	0.9237	0.1634	0.0084	0.0076	0.0107
days	**Level 5**	34.4sec	0.8291	0.9227	0.9433	0.9611	0.8271	0.9227	0.9433	0.9613	0.9119	0.9343	0.9507	0.9736	0.1903	0.9131	0.9355	0.9508	0.2128	0.0078	0.0052	0.0082
before	**Level 6**	1.1min	0.8527	0.9478	0.9605	0.9748	0.8504	0.9478	0.9605	0.9748	0.9423	0.9559	0.9664	0.9830	0.1067	0.9425	0.9560	0.9666	0.2473	0.0044	0.0039	0.0056
	Level 7	2.3min	0.8655	0.9631	0.9714	0.9821	0.8655	0.9631	0.9714	0.9821	0.9564	0.9677	0.9759	0.9877	0.0567	0.9566	0.9677	0.9769	0.2685	0.0034	0.0030	0.0038
	Level 8	4.6min	0.8673	0.9698	0.9772	0.9856	0.8714	0.9697	0.9772	0.9856	0.9636	0.9728	0.9814	0.9903	0.0292	0.9642	0.9729	0.9819	0.2794	0.0030	0.0028	0.0031
	Level 9	9.2min	0.8648	0.9677	0.9785	0.9861	0.8681	0.9677	0.9785	0.9861	0.9604	0.9717	0.9814	0.9909	0.0148	0.9616	0.9739	0.9817	0.2831	0.0034	0.0026	0.0032
	Level 1	1.4sec	0.5772	0.6274	0.6499	0.6750	0.5773	0.6273	0.6499	0.6751	0.6132	0.6405	0.6573	0.6949	0.5315	0.6134	0.6408	0.6631	0.0257	0.0097	0.0055	0.0094
	Level 2	2.8sec	0.6717	0.7444	0.7736	0.8071	0.6719	0.7444	0.7736	0.8069	0.7231	0.7636	0.7899	0.8249	0.5694	0.7254	0.7644	0.7904	0.0474	0.0123	0.0073	0.0106
	Level 3	5.6sec	0.7577	0.8297	0.8632	0.8907	0.7573	0.8298	0.8632	0.8909	0.8036	0.8470	0.8738	0.9060	0.4500	0.8054	0.8471	0.8738	0.0856	0.0137	0.0069	0.0095
3	**Level 4**	11.1sec	0.8156	0.8864	0.9175	0.9378	0.8143	0.8865	0.9175	0.9378	0.8698	0.9052	0.9245	0.9518	0.3109	0.8704	0.9086	0.9253	0.1365	0.0111	0.0050	0.0085
months	**Level 5**	22.2sec	0.8489	0.9255	0.9466	0.9631	0.8485	0.9254	0.9466	0.9632	0.9119	0.9360	0.9527	0.9736	0.1903	0.9131	0.9396	0.9544	0.1769	0.0085	0.0040	0.0062
before	**Level 6**	44.4sec	0.8757	0.9492	0.9635	0.9764	0.8745	0.9492	0.9634	0.9764	0.9396	0.9562	0.9689	0.9830	0.1067	0.9423	0.9565	0.9701	0.2053	0.0051	0.0039	0.0047
	Level 7	1.5min	0.8920	0.9642	0.9740	0.9835	0.8913	0.9642	0.9740	0.9835	0.9564	0.9688	0.9786	0.9892	0.0567	0.9566	0.9690	0.9790	0.2227	0.0034	0.0032	0.0038
	Level 8	3min	0.8993	0.9708	0.9798	0.9871	0.8988	0.9708	0.9797	0.9871	0.9636	0.9753	0.9829	0.9924	0.0292	0.9642	0.9756	0.9837	0.2320	0.0032	0.0024	0.0032
	Level 9	5.9min	0.8962	0.9700	0.9807	0.9879	0.8971	0.9700	0.9807	0.9879	0.9624	0.9771	0.9842	0.9931	0.0148	0.9631	0.9775	0.9846	0.2354	0.0040	0.0022	0.0032
	Level 1	1.1sec	0.6030	0.6427	0.6587	0.6816	0.6029	0.6427	0.6587	0.6817	0.6312	0.6511	0.6673	0.7215	0.3488	0.6329	0.6512	0.6677	0.0406	0.0054	0.0049	0.0116
	Level 2	2.2sec	0.7127	0.7680	0.7875	0.8158	0.7132	0.7680	0.7875	0.8158	0.7556	0.7767	0.7973	0.8539	0.3322	0.7561	0.7779	0.7981	0.0618	0.0059	0.0054	0.0136
	Level 3	4.4sec	0.7995	0.8571	0.8758	0.8972	0.7993	0.8572	0.8758	0.8971	0.8443	0.8677	0.8849	0.9218	0.4430	0.8452	0.8681	0.8851	0.0725	0.0063	0.0053	0.0100
1	**Level 4**	8.7sec	0.8523	0.9115	0.9253	0.9420	0.8524	0.9115	0.9253	0.9420	0.8995	0.9199	0.9311	0.9643	0.3109	0.8995	0.9200	0.9315	0.0944	0.0060	0.0033	0.0079
Year	**Level 5**	17.5sec	0.8830	0.9406	0.9518	0.9656	0.8832	0.9406	0.9518	0.9656	0.9318	0.9472	0.9564	0.9826	0.1903	0.9318	0.9474	0.9565	0.1245	0.0046	0.0028	0.0064
before	**Level 6**	35sec	0.9017	0.9580	0.9667	0.9779	0.9021	0.9580	0.9667	0.9779	0.9517	0.9630	0.9701	0.9900	0.1067	0.9519	0.9632	0.9701	0.1535	0.0031	0.0020	0.0051
	Level 7	1.2min	0.9141	0.9700	0.9765	0.9847	0.9142	0.9700	0.9765	0.9847	0.9653	0.9730	0.9789	0.9929	0.0567	0.9655	0.9733	0.9790	0.1760	0.0019	0.0015	0.0039
	Level 8	2.3min	0.9196	0.9775	0.9826	0.9886	0.9198	0.9775	0.9826	0.9886	0.9735	0.9800	0.9842	0.9946	0.0292	0.9739	0.9800	0.9843	0.1910	0.0016	0.0011	0.0030
	Level 9	4.7min	0.9167	0.9800	0.9847	0.9900	0.9178	0.9800	0.9847	0.9900	0.9771	0.9823	0.9864	0.9954	0.0148	0.9771	0.9824	0.9864	0.2004	0.0016	0.0010	0.0026

Table A.40: EDM9 Other Results Table

EDM9 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	3sec	1.4487	1.5304	1.5949	1.7791	1.4486	1.5305	1.5946	1.7782	1.4907	1.5580	1.6062	1.9046	1.4110	1.5005	1.5773	1.6580	0.0337	0.0201	0.0142	0.1126
	Level 2	6sec	1.2266	1.2978	1.3901	1.4784	1.2257	1.2978	1.3901	1.4775	1.2571	1.3178	1.4140	1.6455	1.1843	1.2681	1.3674	1.4199	0.0306	0.0193	0.0182	0.0955
	Level 3	12sec	1.1067	1.1777	1.2250	1.3033	1.1074	1.1783	1.2254	1.3031	1.1376	1.2039	1.2580	1.3749	1.0838	1.1383	1.2063	1.2635	0.0212	0.0231	0.0212	0.0465
30	**Level 4**	24.1sec	1.0537	1.1061	1.1433	1.1964	1.0538	1.1062	1.1434	1.1964	1.0758	1.1294	1.1641	1.2240	1.0394	1.0794	1.1305	1.1717	0.0147	0.0172	0.0128	0.0211
days	**Level 5**	48.2sec	1.0306	1.0656	1.0955	1.1263	1.0305	1.0656	1.0955	1.1264	1.0448	1.0800	1.1067	1.1373	1.0194	1.0449	1.0856	1.1096	0.0095	0.0141	0.0081	0.0110
before	**Level 6**	1.6min	1.0186	1.0417	1.0641	1.0839	1.0185	1.0416	1.0641	1.0840	1.0268	1.0525	1.0701	1.0927	1.0102	1.0272	1.0585	1.0732	0.0060	0.0097	0.0051	0.0091
	Level 7	3.2min	1.0123	1.0288	1.0436	1.0584	1.0123	1.0288	1.0436	1.0584	1.0168	1.0376	1.0467	1.0704	1.0062	1.0175	1.0395	1.0484	0.0039	0.0078	0.0029	0.0093
	Level 8	6.4min	1.0090	1.0220	1.0335	1.0475	1.0090	1.0220	1.0335	1.0473	1.0117	1.0295	1.0357	1.0650	1.0044	1.0120	1.0303	1.0376	0.0027	0.0072	0.0025	0.0111
	Level 9	12.9min	1.0082	1.0193	1.0322	1.0496	1.0082	1.0194	1.0322	1.0497	1.0101	1.0250	1.0367	1.0708	1.0038	1.0105	1.0285	1.0379	0.0025	0.0064	0.0036	0.0124
	Level 1	1.6sec	1.4838	1.5724	1.6229	1.7720	1.4841	1.5722	1.6227	1.7713	1.5341	1.6015	1.6507	1.9046	1.4110	1.5344	1.6022	1.6518	0.0410	0.0251	0.0190	0.0954
	Level 2	3.1sec	1.2624	1.3421	1.4039	1.5039	1.2624	1.3424	1.4040	1.5028	1.3090	1.3761	1.4268	1.6676	1.1843	1.3126	1.3779	1.4301	0.0415	0.0237	0.0154	0.0898
	Level 3	6.3sec	1.1418	1.2103	1.2592	1.3318	1.1422	1.2103	1.2591	1.3311	1.1872	1.2322	1.2877	1.4332	1.0838	1.1976	1.2373	1.2879	0.0379	0.0128	0.0165	0.0475
60	**Level 4**	12.6sec	1.0801	1.1368	1.1688	1.2271	1.0798	1.1367	1.1688	1.2269	1.1171	1.1579	1.1822	1.2937	1.0394	1.1284	1.1583	1.1940	0.0281	0.0089	0.0088	0.0326
days	**Level 5**	25.2sec	1.0481	1.0898	1.1132	1.1523	1.0483	1.0899	1.1132	1.1524	1.0796	1.1040	1.1250	1.2215	1.0194	1.0797	1.1067	1.1251	0.0200	0.0082	0.0052	0.0298
before	**Level 6**	50.4sec	1.0298	1.0597	1.0756	1.1065	1.0298	1.0596	1.0756	1.1059	1.0470	1.0701	1.0866	1.1648	1.0102	1.0498	1.0705	1.0888	0.0126	0.0064	0.0047	0.0236
	Level 7	1.7min	1.0200	1.0412	1.0512	1.0764	1.0201	1.0411	1.0512	1.0764	1.0315	1.0458	1.0562	1.1175	1.0062	1.0359	1.0467	1.0612	0.0088	0.0035	0.0031	0.0172
	Level 8	3.4min	1.0151	1.0313	1.0394	1.0610	1.0150	1.0313	1.0395	1.0607	1.0237	1.0353	1.0450	1.0876	1.0044	1.0271	1.0357	1.0479	0.0071	0.0026	0.0034	0.0132
	Level 9	6.7min	1.0138	1.0277	1.0384	1.0595	1.0138	1.0277	1.0383	1.0596	1.0227	1.0308	1.0453	1.0853	1.0038	1.0230	1.0316	1.0459	0.0068	0.0031	0.0045	0.0141
	Level 1	1sec	1.4923	1.5576	1.6060	1.7329	1.4921	1.5576	1.6060	1.7320	1.5341	1.5850	1.6329	1.9046	1.4110	1.5344	1.5869	1.6410	0.0373	0.0182	0.0144	0.0985
	Level 2	2sec	1.2695	1.3282	1.3800	1.4811	1.2692	1.3282	1.3799	1.4813	1.3054	1.3455	1.4080	1.6676	1.1843	1.3090	1.3481	1.4140	0.0368	0.0120	0.0189	0.0823
	Level 3	4sec	1.1470	1.2010	1.2411	1.3210	1.1470	1.2011	1.2409	1.3210	1.1843	1.2141	1.2635	1.4332	1.0838	1.1872	1.2186	1.2669	0.0324	0.0084	0.0139	0.0485
3	**Level 4**	8sec	1.0844	1.1288	1.1568	1.2184	1.0847	1.1288	1.1568	1.2183	1.1146	1.1380	1.1735	1.2937	1.0394	1.1165	1.1381	1.1756	0.0250	0.0069	0.0111	0.0339
months	**Level 5**	16sec	1.0510	1.0837	1.1052	1.1460	1.0511	1.0838	1.1052	1.1459	1.0743	1.0918	1.1129	1.2215	1.0194	1.0762	1.0930	1.1151	0.0171	0.0051	0.0069	0.0279
before	**Level 6**	32sec	1.0319	1.0554	1.0701	1.1000	1.0319	1.0554	1.0701	1.1001	1.0470	1.0607	1.0780	1.1648	1.0102	1.0483	1.0626	1.0785	0.0113	0.0039	0.0049	0.0217
	Level 7	1.1min	1.0213	1.0385	1.0478	1.0710	1.0213	1.0386	1.0478	1.0710	1.0315	1.0433	1.0525	1.1175	1.0062	1.0326	1.0435	1.0541	0.0079	0.0026	0.0029	0.0165
	Level 8	2.1min	1.0160	1.0291	1.0364	1.0564	1.0159	1.0291	1.0364	1.0563	1.0236	1.0319	1.0408	1.0876	1.0044	1.0237	1.0334	1.0426	0.0064	0.0023	0.0021	0.0129
	Level 9	4.3min	1.0143	1.0259	1.0340	1.0551	1.0144	1.0259	1.0340	1.0551	1.0219	1.0300	1.0416	1.0853	1.0038	1.0223	1.0302	1.0419	0.0060	0.0029	0.0033	0.0135
	Level 1	1sec	1.4668	1.5280	1.5695	1.6932	1.4668	1.5280	1.5695	1.6925	1.5016	1.5491	1.5910	2.9685	1.3918	1.5020	1.5493	1.5955	0.0270	0.0138	0.0126	0.1910
	Level 2	2sec	1.2305	1.2811	1.3185	1.4435	1.2305	1.2811	1.3185	1.4442	1.2617	1.2972	1.3427	2.6274	1.1534	1.2649	1.2978	1.3442	0.0218	0.0095	0.0131	0.1934
	Level 3	4sec	1.1179	1.1501	1.1820	1.2864	1.1179	1.1502	1.1820	1.2866	1.1373	1.1654	1.2005	2.1996	1.0715	1.1376	1.1657	1.2037	0.0159	0.0084	0.0106	0.1557
1	**Level 4**	7.9sec	1.0614	1.0841	1.1114	1.1888	1.0614	1.0841	1.1114	1.1896	1.0746	1.0955	1.1294	1.7246	1.0306	1.0747	1.0958	1.1298	0.0107	0.0058	0.0087	0.1003
Year	**Level 5**	15.8sec	1.0342	1.0509	1.0717	1.1285	1.0342	1.0509	1.0716	1.1283	1.0431	1.0586	1.0853	1.5107	1.0146	1.0432	1.0591	1.0855	0.0068	0.0047	0.0072	0.0742
before	**Level 6**	31.6sec	1.0208	1.0332	1.0476	1.0945	1.0207	1.0332	1.0476	1.0940	1.0268	1.0394	1.0566	1.9639	1.0068	1.0268	1.0396	1.0566	0.0047	0.0037	0.0051	0.1142
	Level 7	1.1min	1.0138	1.0228	1.0332	1.0825	1.0138	1.0228	1.0332	1.0829	1.0183	1.0275	1.0389	2.8906	1.0036	1.0184	1.0275	1.0392	0.0033	0.0028	0.0037	0.2286
	Level 8	2.1min	1.0101	1.0166	1.0244	1.0961	1.0102	1.0166	1.0244	1.0987	1.0136	1.0195	1.0292	4.7510	1.0024	1.0137	1.0196	1.0294	0.0025	0.0019	0.0026	0.4604
	Level 9	4.2min	1.0090	1.0144	1.0212	1.1485	1.0090	1.0144	1.0212	1.1545	1.0121	1.0169	1.0253	8.4811	1.0020	1.0121	1.0172	1.0254	0.0022	0.0016	0.0023	0.9232

Table A.40: EDM9 Other Results Table –Continued

EDM9 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	3sec	1.4497	1.5307	1.5944	1.7678	1.4489	1.5305	1.5948	1.7692	1.4904	1.5555	1.6186	1.9028	1.4132	1.5006	1.5648	1.6605	0.0318	0.0193	0.0212	0.1140
	Level 2	6sec	1.2247	1.2982	1.3848	1.4757	1.2250	1.2980	1.3844	1.4743	1.2530	1.3128	1.4064	1.6410	1.1879	1.2716	1.3501	1.4135	0.0296	0.0164	0.0274	0.0947
	Level 3	12sec	1.1068	1.1812	1.2173	1.3051	1.1069	1.1812	1.2176	1.3047	1.1361	1.2025	1.2448	1.3694	1.0871	1.1381	1.2027	1.2586	0.0199	0.0237	0.0178	0.0489
30	**Level 4**	24.1sec	1.0546	1.1085	1.1421	1.1991	1.0547	1.1081	1.1419	1.1990	1.0758	1.1279	1.1689	1.2255	1.0403	1.0773	1.1289	1.1698	0.0143	0.0198	0.0156	0.0251
days	**Level 5**	48.2sec	1.0310	1.0656	1.0952	1.1320	1.0308	1.0655	1.0954	1.1323	1.0434	1.0869	1.1078	1.1508	1.0198	1.0441	1.0870	1.1170	0.0089	0.0158	0.0077	0.0139
before	**Level 6**	1.6min	1.0187	1.0401	1.0660	1.0880	1.0187	1.0401	1.0660	1.0880	1.0262	1.0552	1.0676	1.1022	1.0102	1.0266	1.0652	1.0785	0.0060	0.0100	0.0009	0.0089
	Level 7	3.2min	1.0124	1.0271	1.0461	1.0619	1.0124	1.0270	1.0461	1.0619	1.0166	1.0382	1.0525	1.0693	1.0062	1.0173	1.0434	1.0562	0.0039	0.0073	0.0037	0.0056
	Level 8	6.4min	1.0091	1.0208	1.0349	1.0549	1.0091	1.0207	1.0349	1.0549	1.0116	1.0288	1.0402	1.0813	1.0044	1.0118	1.0315	1.0409	0.0027	0.0063	0.0035	0.0160
	Level 9	12.9min	1.0084	1.0192	1.0324	1.0653	1.0084	1.0191	1.0324	1.0655	1.0103	1.0247	1.0376	1.1365	1.0039	1.0105	1.0258	1.0419	0.0026	0.0058	0.0042	0.0403
	Level 1	1.6sec	1.4839	1.5724	1.6295	1.7659	1.4840	1.5725	1.6296	1.7658	1.5296	1.6050	1.6586	1.9028	1.4132	1.5360	1.6057	1.6586	0.0399	0.0266	0.0183	0.0947
	Level 2	3.1sec	1.2626	1.3458	1.4074	1.4974	1.2625	1.3461	1.4075	1.4973	1.3094	1.3756	1.4249	1.6410	1.1879	1.3105	1.3775	1.4283	0.0416	0.0231	0.0161	0.0822
	Level 3	6.3sec	1.1469	1.2095	1.2558	1.3258	1.1465	1.2095	1.2558	1.3265	1.1979	1.2334	1.2899	1.3968	1.0871	1.1992	1.2334	1.2900	0.0429	0.0107	0.0176	0.0381
60	**Level 4**	12.6sec	1.0837	1.1366	1.1689	1.2235	1.0835	1.1366	1.1690	1.2237	1.1269	1.1557	1.1841	1.2944	1.0403	1.1270	1.1561	1.1964	0.0320	0.0099	0.0084	0.0278
days	**Level 5**	25.2sec	1.0489	1.0923	1.1133	1.1519	1.0491	1.0923	1.1132	1.1520	1.0801	1.1065	1.1245	1.2212	1.0198	1.0829	1.1074	1.1305	0.0209	0.0071	0.0061	0.0253
before	**Level 6**	50.4sec	1.0297	1.0628	1.0784	1.1042	1.0299	1.0628	1.0784	1.1043	1.0497	1.0693	1.0873	1.1566	1.0102	1.0536	1.0726	1.0879	0.0128	0.0054	0.0054	0.0191
	Level 7	1.7min	1.0200	1.0434	1.0543	1.0797	1.0199	1.0434	1.0543	1.0795	1.0330	1.0487	1.0612	1.1149	1.0062	1.0382	1.0487	1.0650	0.0087	0.0039	0.0036	0.0178
	Level 8	3.4min	1.0151	1.0323	1.0411	1.0756	1.0150	1.0323	1.0412	1.0752	1.0257	1.0370	1.0470	1.1948	1.0044	1.0264	1.0372	1.0478	0.0070	0.0032	0.0034	0.0414
	Level 9	6.7min	1.0136	1.0289	1.0390	1.0930	1.0136	1.0289	1.0390	1.0940	1.0222	1.0331	1.0441	1.3692	1.0039	1.0241	1.0333	1.0464	0.0063	0.0035	0.0035	0.0947
	Level 1	1sec	1.4926	1.5600	1.6126	1.7302	1.4925	1.5600	1.6124	1.7291	1.5360	1.5886	1.6356	1.9028	1.4132	1.5395	1.5890	1.6417	0.0368	0.0179	0.0164	0.0956
	Level 2	2sec	1.2686	1.3327	1.3848	1.4791	1.2683	1.3326	1.3850	1.4790	1.3094	1.3501	1.4155	1.6410	1.1879	1.3105	1.3593	1.4172	0.0371	0.0142	0.0197	0.0754
	Level 3	4sec	1.1486	1.2019	1.2394	1.3194	1.1489	1.2019	1.2393	1.3193	1.1913	1.2107	1.2635	1.4060	1.0871	1.1922	1.2206	1.2640	0.0345	0.0056	0.0128	0.0445
3	**Level 4**	8sec	1.0861	1.1289	1.1591	1.2178	1.0862	1.1289	1.1591	1.2176	1.1181	1.1383	1.1747	1.2944	1.0403	1.1209	1.1393	1.1751	0.0258	0.0051	0.0104	0.0321
months	**Level 5**	16sec	1.0513	1.0845	1.1068	1.1491	1.0514	1.0845	1.1068	1.1490	1.0745	1.0944	1.1170	1.2212	1.0198	1.0746	1.0946	1.1217	0.0174	0.0058	0.0066	0.0246
before	**Level 6**	32sec	1.0318	1.0565	1.0730	1.1050	1.0319	1.0566	1.0730	1.1052	1.0476	1.0654	1.0829	1.1566	1.0102	1.0479	1.0657	1.0865	0.0113	0.0056	0.0050	0.0209
	Level 7	1.1min	1.0214	1.0391	1.0508	1.0845	1.0212	1.0391	1.0508	1.0842	1.0321	1.0447	1.0562	1.2056	1.0062	1.0330	1.0448	1.0571	0.0077	0.0037	0.0036	0.0364
	Level 8	2.1min	1.0157	1.0292	1.0384	1.0876	1.0157	1.0291	1.0384	1.0870	1.0239	1.0322	1.0437	1.3541	1.0044	1.0251	1.0338	1.0463	0.0059	0.0029	0.0026	0.0796
	Level 9	4.3min	1.0143	1.0259	1.0353	1.1193	1.0144	1.0259	1.0354	1.1190	1.0209	1.0311	1.0421	1.6709	1.0039	1.0218	1.0312	1.0421	0.0054	0.0033	0.0036	0.1675
	Level 1	1sec	1.4673	1.5286	1.5696	1.6937	1.4672	1.5286	1.5697	1.6920	1.5020	1.5503	1.5957	3.0077	1.4052	1.5021	1.5503	1.5969	0.0262	0.0144	0.0124	0.1933
	Level 2	2sec	1.2311	1.2799	1.3182	1.4477	1.2312	1.2799	1.3182	1.4470	1.2608	1.2975	1.3432	2.7735	1.1677	1.2620	1.2976	1.3455	0.0213	0.0098	0.0136	0.2099
	Level 3	4sec	1.1183	1.1494	1.1819	1.2885	1.1183	1.1494	1.1819	1.2877	1.1372	1.1621	1.2009	2.2478	1.0813	1.1373	1.1633	1.2025	0.0149	0.0077	0.0112	0.1678
1	**Level 4**	7.9sec	1.0617	1.0840	1.1115	1.1902	1.0618	1.0840	1.1114	1.1908	1.0755	1.0955	1.1270	1.8070	1.0327	1.0755	1.0957	1.1270	0.0103	0.0055	0.0087	0.1172
Year	**Level 5**	15.8sec	1.0344	1.0508	1.0715	1.1260	1.0344	1.0508	1.0715	1.1259	1.0430	1.0592	1.0829	1.4925	1.0154	1.0432	1.0600	1.0836	0.0068	0.0046	0.0068	0.0709
before	**Level 6**	31.6sec	1.0210	1.0330	1.0475	1.0856	1.0210	1.0330	1.0475	1.0857	1.0269	1.0390	1.0564	1.3505	1.0072	1.0269	1.0393	1.0565	0.0048	0.0036	0.0052	0.0472
	Level 7	1.1min	1.0140	1.0226	1.0327	1.0611	1.0140	1.0226	1.0327	1.0610	1.0186	1.0266	1.0392	1.2168	1.0039	1.0186	1.0267	1.0394	0.0034	0.0027	0.0036	0.0343
	Level 8	2.1min	1.0102	1.0167	1.0239	1.0510	1.0103	1.0167	1.0239	1.0510	1.0135	1.0198	1.0288	1.3541	1.0024	1.0136	1.0200	1.0294	0.0025	0.0019	0.0025	0.0475
	Level 9	4.2min	1.0091	1.0145	1.0209	1.0566	1.0091	1.0145	1.0209	1.0564	1.0120	1.0170	1.0249	1.6709	1.0019	1.0120	1.0172	1.0253	0.0022	0.0015	0.0022	0.0906

Table A.40: EDM9 Other Results Table –Continued

EDM9 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	3sec	1.4483	1.5286	1.5925	1.7727	1.4484	1.5288	1.5926	1.7705	1.4928	1.5562	1.6083	1.8983	1.4113	1.4929	1.5710	1.6541	0.0338	0.0218	0.0164	0.1129
	Level 2	6sec	1.2244	1.2949	1.3843	1.4686	1.2243	1.2949	1.3839	1.4695	1.2542	1.3134	1.4069	1.6372	1.1845	1.2689	1.3534	1.4110	0.0306	0.0179	0.0236	0.0954
	Level 3	12sec	1.1059	1.1746	1.2144	1.2955	1.1056	1.1745	1.2143	1.2955	1.1359	1.1996	1.2422	1.3631	1.0835	1.1361	1.2023	1.2540	0.0209	0.0225	0.0173	0.0465
30	**Level 4**	24.1sec	1.0521	1.1002	1.1343	1.1860	1.0520	1.0999	1.1342	1.1864	1.0738	1.1167	1.1534	1.2137	1.0394	1.0760	1.1245	1.1632	0.0142	0.0144	0.0113	0.0214
days	**Level 5**	48.2sec	1.0279	1.0586	1.0859	1.1154	1.0280	1.0585	1.0859	1.1154	1.0410	1.0710	1.0995	1.1268	1.0189	1.0421	1.0760	1.1025	0.0085	0.0113	0.0086	0.0103
before	**Level 6**	1.6min	1.0162	1.0337	1.0538	1.0721	1.0162	1.0336	1.0538	1.0720	1.0239	1.0404	1.0610	1.0820	1.0095	1.0243	1.0491	1.0624	0.0055	0.0064	0.0049	0.0075
	Level 7	3.2min	1.0098	1.0202	1.0323	1.0460	1.0098	1.0202	1.0323	1.0460	1.0141	1.0241	1.0349	1.0518	1.0054	1.0142	1.0297	1.0393	0.0033	0.0037	0.0020	0.0053
	Level 8	6.4min	1.0063	1.0131	1.0211	1.0317	1.0063	1.0131	1.0211	1.0317	1.0084	1.0159	1.0222	1.0388	1.0036	1.0089	1.0199	1.0258	0.0019	0.0027	0.0010	0.0052
	Level 9	12.9min	1.0050	1.0103	1.0169	1.0254	1.0051	1.0103	1.0169	1.0253	1.0066	1.0125	1.0177	1.0338	1.0029	1.0068	1.0153	1.0181	0.0014	0.0024	0.0009	0.0059
	Level 1	1.6sec	1.4823	1.5693	1.6216	1.7643	1.4819	1.5692	1.6216	1.7651	1.5316	1.6004	1.6407	1.8983	1.4113	1.5348	1.6022	1.6538	0.0397	0.0250	0.0160	0.0951
	Level 2	3.1sec	1.2594	1.3385	1.3973	1.4903	1.2594	1.3383	1.3972	1.4895	1.3072	1.3696	1.4177	1.6372	1.1845	1.3084	1.3697	1.4184	0.0400	0.0212	0.0167	0.0825
	Level 3	6.3sec	1.1402	1.2014	1.2467	1.3115	1.1406	1.2015	1.2468	1.3117	1.1875	1.2201	1.2773	1.3672	1.0835	1.1877	1.2272	1.2806	0.0380	0.0099	0.0180	0.0360
60	**Level 4**	12.6sec	1.0768	1.1266	1.1554	1.2047	1.0767	1.1265	1.1553	1.2046	1.1098	1.1387	1.1708	1.2488	1.0394	1.1152	1.1418	1.1876	0.0267	0.0078	0.0101	0.0198
days	**Level 5**	25.2sec	1.0440	1.0795	1.0998	1.1309	1.0439	1.0795	1.0997	1.1310	1.0678	1.0896	1.1103	1.1831	1.0189	1.0685	1.0924	1.1137	0.0176	0.0069	0.0066	0.0188
before	**Level 6**	50.4sec	1.0255	1.0491	1.0632	1.0841	1.0253	1.0490	1.0632	1.0843	1.0393	1.0560	1.0703	1.1276	1.0095	1.0404	1.0575	1.0735	0.0102	0.0054	0.0046	0.0150
	Level 7	1.7min	1.0152	1.0305	1.0398	1.0551	1.0152	1.0305	1.0398	1.0551	1.0235	1.0352	1.0454	1.0826	1.0054	1.0241	1.0353	1.0469	0.0061	0.0034	0.0033	0.0096
	Level 8	3.4min	1.0097	1.0204	1.0272	1.0383	1.0098	1.0204	1.0272	1.0382	1.0156	1.0247	1.0304	1.0533	1.0036	1.0159	1.0256	1.0318	0.0039	0.0023	0.0019	0.0061
	Level 9	6.7min	1.0076	1.0160	1.0217	1.0312	1.0076	1.0160	1.0218	1.0311	1.0121	1.0181	1.0258	1.0392	1.0029	1.0122	1.0189	1.0258	0.0030	0.0022	0.0022	0.0048
	Level 1	1sec	1.4897	1.5546	1.6054	1.7253	1.4899	1.5546	1.6054	1.7259	1.5320	1.5823	1.6317	1.8983	1.4113	1.5348	1.5864	1.6331	0.0364	0.0167	0.0154	0.0982
	Level 2	2sec	1.2647	1.3236	1.3733	1.4699	1.2648	1.3236	1.3733	1.4692	1.3060	1.3442	1.4003	1.6372	1.1845	1.3072	1.3476	1.4069	0.0353	0.0118	0.0181	0.0755
	Level 3	4sec	1.1431	1.1938	1.2271	1.3031	1.1431	1.1938	1.2270	1.3034	1.1780	1.2024	1.2540	1.3672	1.0835	1.1803	1.2047	1.2579	0.0311	0.0065	0.0139	0.0388
3	**Level 4**	8sec	1.0800	1.1184	1.1434	1.1980	1.0800	1.1184	1.1434	1.1980	1.1066	1.1298	1.1623	1.2488	1.0394	1.1082	1.1308	1.1632	0.0228	0.0065	0.0095	0.0237
months	**Level 5**	16sec	1.0459	1.0727	1.0918	1.1266	1.0459	1.0727	1.0918	1.1266	1.0636	1.0830	1.1025	1.1831	1.0189	1.0644	1.0836	1.1034	0.0148	0.0051	0.0060	0.0183
before	**Level 6**	32sec	1.0269	1.0445	1.0580	1.0809	1.0269	1.0445	1.0580	1.0808	1.0394	1.0499	1.0670	1.1276	1.0095	1.0395	1.0518	1.0673	0.0091	0.0036	0.0044	0.0140
	Level 7	1.1min	1.0164	1.0284	1.0365	1.0522	1.0163	1.0284	1.0365	1.0523	1.0235	1.0314	1.0418	1.0826	1.0054	1.0241	1.0315	1.0425	0.0055	0.0023	0.0031	0.0092
	Level 8	2.1min	1.0106	1.0191	1.0249	1.0362	1.0106	1.0191	1.0249	1.0362	1.0157	1.0217	1.0285	1.0533	1.0036	1.0159	1.0217	1.0286	0.0038	0.0018	0.0023	0.0062
	Level 9	4.3min	1.0082	1.0149	1.0195	1.0294	1.0082	1.0148	1.0195	1.0293	1.0121	1.0172	1.0227	1.0392	1.0029	1.0122	1.0172	1.0228	0.0029	0.0018	0.0019	0.0051
	Level 1	1sec	1.4656	1.5267	1.5676	1.6947	1.4656	1.5267	1.5675	1.6946	1.4987	1.5478	1.5887	2.9884	1.3977	1.4994	1.5482	1.5890	0.0263	0.0140	0.0123	0.2026
	Level 2	2sec	1.2290	1.2774	1.3135	1.4461	1.2288	1.2774	1.3136	1.4452	1.2595	1.2942	1.3339	2.6967	1.1591	1.2601	1.2943	1.3348	0.0214	0.0094	0.0121	0.2205
	Level 3	4sec	1.1155	1.1457	1.1748	1.2836	1.1154	1.1456	1.1749	1.2834	1.1344	1.1587	1.1926	2.2219	1.0745	1.1345	1.1588	1.1936	0.0149	0.0076	0.0100	0.1934
1	**Level 4**	7.9sec	1.0583	1.0785	1.1022	1.1815	1.0583	1.0785	1.1022	1.1828	1.0706	1.0888	1.1160	2.1412	1.0310	1.0711	1.0889	1.1167	0.0097	0.0048	0.0075	0.1534
Year	**Level 5**	15.8sec	1.0303	1.0444	1.0612	1.1138	1.0303	1.0444	1.0612	1.1137	1.0381	1.0514	1.0712	1.7400	1.0143	1.0382	1.0517	1.0718	0.0058	0.0037	0.0059	0.0944
before	**Level 6**	31.6sec	1.0166	1.0262	1.0372	1.0688	1.0166	1.0262	1.0372	1.0691	1.0215	1.0304	1.0437	1.4159	1.0063	1.0218	1.0306	1.0438	0.0037	0.0026	0.0039	0.0514
	Level 7	1.1min	1.0096	1.0160	1.0231	1.0420	1.0096	1.0160	1.0231	1.0420	1.0131	1.0188	1.0273	1.2057	1.0030	1.0132	1.0188	1.0273	0.0023	0.0018	0.0027	0.0253
	Level 8	2.1min	1.0059	1.0100	1.0148	1.0273	1.0059	1.0100	1.0148	1.0274	1.0081	1.0118	1.0181	1.1160	0.9999	1.0081	1.0118	1.0181	0.0017	0.0011	0.0018	0.0141
	Level 9	4.2min	1.0039	1.0072	1.0108	1.0211	1.0039	1.0072	1.0108	1.0211	1.0057	1.0085	1.0130	1.0708	0.9846	1.0057	1.0085	1.0131	0.0027	0.0008	0.0014	0.0097

Table A.40: EDM9 Other Results Table –Continued

EDM9 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	3sec	0.5679	0.6298	0.6556	0.6903	0.5671	0.6297	0.6556	0.6904	0.6022	0.6429	0.6664	0.7076	0.5256	0.6178	0.6493	0.6710	0.0359	0.0099	0.0072	0.0151
	Level 2	6sec	0.6810	0.7290	0.7722	0.8166	0.6804	0.7291	0.7722	0.8167	0.7074	0.7618	0.7864	0.8418	0.6094	0.7110	0.7631	0.7981	0.0405	0.0205	0.0098	0.0199
	Level 3	12sec	0.7672	0.8232	0.8502	0.9039	0.7673	0.8231	0.8500	0.9036	0.7945	0.8316	0.8787	0.9199	0.7303	0.8033	0.8348	0.8802	0.0285	0.0114	0.0174	0.0161
30	**Level 4**	24.1sec	0.8343	0.8776	0.9060	0.9483	0.8343	0.8777	0.9059	0.9482	0.8548	0.8866	0.9282	0.9612	0.8160	0.8555	0.8873	0.9296	0.0176	0.0114	0.0159	0.0128
days	**Level 5**	48.2sec	0.8835	0.9140	0.9423	0.9703	0.8833	0.9141	0.9424	0.9702	0.8953	0.9200	0.9578	0.9806	0.8690	0.9027	0.9306	0.9584	0.0108	0.0064	0.0117	0.0083
before	**Level 6**	1.6min	0.9193	0.9397	0.9643	0.9817	0.9192	0.9397	0.9643	0.9817	0.9272	0.9477	0.9741	0.9899	0.9072	0.9367	0.9567	0.9745	0.0075	0.0040	0.0070	0.0058
	Level 7	3.2min	0.9417	0.9572	0.9759	0.9878	0.9417	0.9571	0.9758	0.9877	0.9468	0.9632	0.9830	0.9938	0.9352	0.9501	0.9689	0.9837	0.0050	0.0042	0.0052	0.0038
	Level 8	6.4min	0.9483	0.9673	0.9813	0.9910	0.9482	0.9672	0.9813	0.9910	0.9607	0.9720	0.9883	0.9956	0.9248	0.9613	0.9742	0.9885	0.0142	0.0037	0.0053	0.0027
	Level 9	12.9min	0.9393	0.9698	0.9824	0.9917	0.9396	0.9698	0.9823	0.9917	0.9598	0.9759	0.9897	0.9961	0.8799	0.9638	0.9761	0.9898	0.0340	0.0046	0.0056	0.0025
	Level 1	1.6sec	0.5682	0.6146	0.6374	0.6742	0.5678	0.6146	0.6374	0.6743	0.6029	0.6231	0.6510	0.7076	0.5256	0.6029	0.6241	0.6538	0.0301	0.0071	0.0104	0.0185
	Level 2	3.1sec	0.6693	0.7120	0.7446	0.7927	0.6696	0.7120	0.7447	0.7929	0.7001	0.7270	0.7631	0.8418	0.6094	0.7018	0.7297	0.7637	0.0354	0.0092	0.0123	0.0267
	Level 3	6.3sec	0.7546	0.7980	0.8285	0.8737	0.7544	0.7978	0.8284	0.8733	0.7752	0.8108	0.8339	0.9199	0.7159	0.7753	0.8154	0.8348	0.0212	0.0113	0.0051	0.0328
60	**Level 4**	12.6sec	0.8175	0.8564	0.8814	0.9237	0.8176	0.8564	0.8814	0.9237	0.8359	0.8652	0.8873	0.9612	0.7726	0.8445	0.8671	0.8874	0.0179	0.0065	0.0062	0.0272
days	**Level 5**	25.2sec	0.8681	0.8988	0.9166	0.9536	0.8684	0.8988	0.9167	0.9535	0.8846	0.9038	0.9234	0.9806	0.8189	0.8893	0.9083	0.9258	0.0183	0.0050	0.0047	0.0190
before	**Level 6**	50.4sec	0.9060	0.9280	0.9414	0.9711	0.9058	0.9281	0.9415	0.9711	0.9192	0.9352	0.9491	0.9899	0.8646	0.9197	0.9367	0.9527	0.0151	0.0050	0.0046	0.0121
	Level 7	1.7min	0.9266	0.9490	0.9589	0.9805	0.9266	0.9490	0.9589	0.9805	0.9389	0.9536	0.9632	0.9938	0.8970	0.9423	0.9546	0.9680	0.0150	0.0035	0.0034	0.0083
	Level 8	3.4min	0.9314	0.9608	0.9692	0.9853	0.9313	0.9608	0.9692	0.9853	0.9544	0.9643	0.9742	0.9956	0.8369	0.9551	0.9653	0.9750	0.0330	0.0032	0.0028	0.0068
	Level 9	6.7min	0.9182	0.9629	0.9723	0.9866	0.9193	0.9630	0.9723	0.9866	0.9557	0.9680	0.9765	0.9961	0.7304	0.9577	0.9687	0.9783	0.0662	0.0035	0.0032	0.0061
	Level 1	1sec	0.5798	0.6202	0.6412	0.6706	0.5799	0.6203	0.6411	0.6704	0.6091	0.6293	0.6495	0.7076	0.5256	0.6114	0.6295	0.6510	0.0309	0.0063	0.0073	0.0169
	Level 2	2sec	0.6773	0.7222	0.7506	0.7889	0.6777	0.7222	0.7505	0.7891	0.7056	0.7357	0.7631	0.8418	0.6094	0.7065	0.7407	0.7637	0.0327	0.0102	0.0080	0.0237
	Level 3	4sec	0.7590	0.8069	0.8320	0.8712	0.7587	0.8070	0.8320	0.8711	0.7911	0.8193	0.8388	0.9199	0.7112	0.7914	0.8260	0.8394	0.0250	0.0083	0.0039	0.0266
3	**Level 4**	8sec	0.8217	0.8627	0.8858	0.9209	0.8218	0.8628	0.8858	0.9211	0.8510	0.8777	0.8921	0.9612	0.7726	0.8513	0.8785	0.8944	0.0211	0.0077	0.0040	0.0222
months	**Level 5**	16sec	0.8703	0.9035	0.9221	0.9514	0.8707	0.9035	0.9221	0.9514	0.8915	0.9136	0.9306	0.9806	0.8189	0.8953	0.9138	0.9307	0.0180	0.0054	0.0049	0.0158
before	**Level 6**	32sec	0.9053	0.9320	0.9464	0.9692	0.9051	0.9320	0.9465	0.9692	0.9204	0.9383	0.9543	0.9899	0.8646	0.9235	0.9386	0.9545	0.0167	0.0043	0.0050	0.0107
	Level 7	1.1min	0.9233	0.9517	0.9624	0.9794	0.9232	0.9516	0.9624	0.9793	0.9460	0.9572	0.9680	0.9938	0.8295	0.9468	0.9572	0.9689	0.0287	0.0032	0.0034	0.0074
	Level 8	2.1min	0.9240	0.9631	0.9718	0.9846	0.9239	0.9631	0.9717	0.9845	0.9557	0.9673	0.9755	0.9956	0.7385	0.9582	0.9688	0.9767	0.0571	0.0024	0.0027	0.0057
	Level 9	4.3min	0.9072	0.9658	0.9748	0.9858	0.9075	0.9658	0.9748	0.9859	0.9596	0.9698	0.9787	0.9961	0.5985	0.9596	0.9698	0.9795	0.0997	0.0033	0.0031	0.0052
	Level 1	1sec	0.5961	0.6373	0.6544	0.6817	0.5960	0.6372	0.6544	0.6818	0.6262	0.6451	0.6658	0.7116	0.3325	0.6267	0.6452	0.6658	0.0456	0.0051	0.0061	0.0123
	Level 2	2sec	0.7000	0.7589	0.7815	0.8125	0.7000	0.7589	0.7815	0.8125	0.7432	0.7707	0.7924	0.8564	0.3606	0.7445	0.7714	0.7931	0.0641	0.0079	0.0059	0.0143
	Level 3	4sec	0.7853	0.8464	0.8702	0.8943	0.7852	0.8464	0.8702	0.8944	0.8316	0.8605	0.8793	0.9248	0.4449	0.8327	0.8607	0.8794	0.0686	0.0082	0.0058	0.0120
1	**Level 4**	7.9sec	0.8455	0.9000	0.9227	0.9420	0.8457	0.9000	0.9227	0.9419	0.8873	0.9129	0.9298	0.9683	0.5534	0.8873	0.9135	0.9298	0.0618	0.0072	0.0045	0.0092
Year	**Level 5**	15.8sec	0.8910	0.9335	0.9518	0.9668	0.8910	0.9335	0.9518	0.9668	0.9229	0.9441	0.9586	0.9848	0.6700	0.9234	0.9453	0.9587	0.0460	0.0061	0.0041	0.0063
before	**Level 6**	31.6sec	0.9225	0.9548	0.9682	0.9795	0.9226	0.9548	0.9682	0.9795	0.9465	0.9625	0.9738	0.9929	0.7405	0.9466	0.9626	0.9738	0.0346	0.0048	0.0034	0.0046
	Level 7	1.1min	0.9434	0.9684	0.9780	0.9862	0.9434	0.9684	0.9779	0.9862	0.9621	0.9740	0.9818	0.9961	0.8218	0.9623	0.9742	0.9818	0.0278	0.0034	0.0025	0.0033
	Level 8	2.1min	0.9529	0.9767	0.9837	0.9899	0.9531	0.9767	0.9837	0.9899	0.9714	0.9806	0.9866	0.9976	0.7385	0.9720	0.9807	0.9866	0.0359	0.0024	0.0019	0.0024
	Level 9	4.2min	0.9515	0.9796	0.9858	0.9910	0.9513	0.9795	0.9857	0.9910	0.9753	0.9833	0.9882	0.9981	0.5985	0.9757	0.9834	0.9882	0.0567	0.0022	0.0014	0.0022

Table A.41: EDU0 Other Results Table

EDU0 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.4sec	1.4766	1.6452	1.8041	2.3779	1.4771	1.6452	1.8040	2.3733	1.5442	1.7573	1.8393	3.9125	1.3982	1.5554	1.7795	1.8789	0.0551	0.0713	0.0248	0.8722
	Level 2	28.8sec	1.2827	1.4403	1.5998	2.0232	1.2835	1.4398	1.5975	2.0225	1.3626	1.4843	1.6904	2.7725	1.2173	1.3730	1.5104	1.7055	0.0623	0.0467	0.0820	0.4463
	Level 3	57.5sec	1.1796	1.3007	1.4300	1.6759	1.1795	1.3009	1.4294	1.6781	1.2226	1.3288	1.4676	1.8003	1.1306	1.2623	1.3605	1.5212	0.0442	0.0305	0.0443	0.1141
30	**Level 4**	1.9min	1.1068	1.1964	1.3342	1.4651	1.1067	1.1962	1.3339	1.4650	1.1200	1.2341	1.3701	1.5715	1.0889	1.1255	1.2956	1.3886	0.0144	0.0382	0.0329	0.0709
days	**Level 5**	3.8min	1.0677	1.1451	1.2514	1.3409	1.0677	1.1449	1.2512	1.3409	1.0715	1.1868	1.2674	1.4209	1.0646	1.0821	1.2317	1.2761	0.0033	0.0358	0.0149	0.0569
before	**Level 6**	7.7min	1.0482	1.1166	1.1778	1.2412	1.0482	1.1160	1.1779	1.2416	1.0562	1.1589	1.1886	1.2856	1.0407	1.0620	1.1591	1.2135	0.0063	0.0384	0.0118	0.0274
	Level 7	15.3min	1.0346	1.0824	1.1480	1.1819	1.0345	1.0820	1.1480	1.1820	1.0462	1.1124	1.1601	1.1951	1.0267	1.0514	1.1316	1.1699	0.0073	0.0256	0.0125	0.0110
	Level 8	30.7min	1.0239	1.0588	1.1121	1.1501	1.0239	1.0591	1.1121	1.1502	1.0316	1.0878	1.1258	1.1895	1.0189	1.0400	1.1012	1.1288	0.0051	0.0176	0.0090	0.0240
	Level 9	61.3min	1.0187	1.0505	1.0924	1.1288	1.0187	1.0505	1.0924	1.1291	1.0234	1.0789	1.1004	1.1719	1.0156	1.0361	1.0790	1.1026	0.0036	0.0155	0.0084	0.0263
	Level 1	5.6sec	1.5073	1.6311	1.7449	2.1792	1.5073	1.6312	1.7452	2.1790	1.5572	1.6924	1.7897	3.9125	1.3982	1.5695	1.6968	1.7915	0.0512	0.0420	0.0339	0.6554
	Level 2	11.2sec	1.2995	1.4278	1.5427	1.9376	1.3004	1.4279	1.5426	1.9428	1.3700	1.4673	1.6678	2.7725	1.2173	1.3730	1.4682	1.6904	0.0533	0.0350	0.0618	0.3893
	Level 3	22.5sec	1.1843	1.2917	1.4082	1.6658	1.1842	1.2920	1.4081	1.6638	1.2260	1.3264	1.4676	2.1265	1.1306	1.2623	1.3288	1.5059	0.0350	0.0254	0.0530	0.1851
60	**Level 4**	44.9sec	1.1117	1.1978	1.3016	1.4506	1.1117	1.1974	1.3011	1.4509	1.1328	1.2338	1.3476	1.7021	1.0887	1.1638	1.2341	1.3594	0.0166	0.0214	0.0437	0.1050
days	**Level 5**	1.5min	1.0746	1.1391	1.2151	1.3145	1.0747	1.1392	1.2150	1.3132	1.1005	1.1619	1.2465	1.4209	1.0639	1.1107	1.1629	1.2498	0.0121	0.0185	0.0306	0.0635
before	**Level 6**	3min	1.0513	1.0943	1.1488	1.2196	1.0515	1.0942	1.1487	1.2206	1.0624	1.1214	1.1591	1.3073	1.0407	1.0712	1.1227	1.1737	0.0080	0.0164	0.0115	0.0450
	Level 7	6min	1.0347	1.0608	1.0956	1.1772	1.0346	1.0609	1.0956	1.1773	1.0464	1.0817	1.1124	1.2999	1.0267	1.0465	1.0846	1.1316	0.0067	0.0119	0.0089	0.0453
	Level 8	12min	1.0225	1.0405	1.0626	1.1497	1.0225	1.0404	1.0627	1.1493	1.0301	1.0508	1.0878	1.3313	1.0170	1.0316	1.0519	1.1012	0.0044	0.0061	0.0098	0.0653
	Level 9	24min	1.0174	1.0324	1.0500	1.1362	1.0175	1.0323	1.0499	1.1358	1.0229	1.0376	1.0789	1.3864	1.0132	1.0234	1.0420	1.0790	0.0033	0.0048	0.0108	0.0869
	Level 1	3.4sec	1.5038	1.5989	1.7080	2.0639	1.5037	1.5992	1.7084	2.0683	1.5512	1.6409	1.7646	3.9125	1.3982	1.5554	1.6471	1.7656	0.0398	0.0258	0.0394	0.5632
	Level 2	6.9sec	1.2911	1.3955	1.4886	1.8524	1.2907	1.3955	1.4890	1.8521	1.3435	1.4321	1.5773	2.7725	1.2173	1.3622	1.4346	1.5974	0.0383	0.0258	0.0397	0.3488
	Level 3	13.7sec	1.1784	1.2659	1.3551	1.6061	1.1784	1.2656	1.3551	1.6067	1.2103	1.3039	1.4512	2.1265	1.1306	1.2226	1.3119	1.4524	0.0286	0.0250	0.0458	0.1753
3	**Level 4**	27.4sec	1.1103	1.1760	1.2529	1.4215	1.1105	1.1758	1.2533	1.4210	1.1328	1.2069	1.3175	1.7021	1.0758	1.1329	1.2107	1.3339	0.0172	0.0224	0.0379	0.0984
months	**Level 5**	54.8sec	1.0739	1.1216	1.1828	1.2972	1.0739	1.1215	1.1829	1.2970	1.0927	1.1446	1.2321	1.4209	1.0497	1.0991	1.1462	1.2402	0.0122	0.0164	0.0300	0.0608
before	**Level 6**	1.8min	1.0506	1.0807	1.1291	1.2071	1.0505	1.0807	1.1293	1.2071	1.0624	1.1001	1.1552	1.3073	1.0341	1.0654	1.1030	1.1587	0.0088	0.0112	0.0183	0.0443
	Level 7	3.7min	1.0329	1.0524	1.0841	1.1585	1.0329	1.0523	1.0841	1.1582	1.0436	1.0636	1.0992	1.2999	1.0222	1.0439	1.0670	1.1031	0.0059	0.0066	0.0099	0.0476
	Level 8	7.3min	1.0215	1.0351	1.0544	1.1266	1.0215	1.0351	1.0544	1.1268	1.0279	1.0430	1.0631	1.3313	1.0162	1.0280	1.0449	1.0638	0.0037	0.0057	0.0066	0.0638
	Level 9	14.6min	1.0167	1.0280	1.0424	1.1142	1.0167	1.0280	1.0424	1.1131	1.0215	1.0361	1.0498	1.3864	1.0132	1.0216	1.0361	1.0503	0.0026	0.0056	0.0047	0.0793
	Level 1	1.8sec	1.4798	1.5381	1.6006	1.8492	1.4799	1.5381	1.6006	1.8458	1.5132	1.5675	1.6394	4.5225	1.3982	1.5133	1.5695	1.6409	0.0281	0.0139	0.0215	0.4664
	Level 2	3.5sec	1.2518	1.3120	1.3778	1.6518	1.2518	1.3121	1.3778	1.6534	1.2865	1.3366	1.4276	6.6078	1.1764	1.2868	1.3400	1.4279	0.0274	0.0147	0.0234	0.6730
	Level 3	7.1sec	1.1417	1.1959	1.2509	1.4628	1.1416	1.1958	1.2510	1.4660	1.1748	1.2173	1.2873	5.0338	1.0833	1.1750	1.2199	1.2875	0.0229	0.0123	0.0206	0.4769
1	**Level 4**	14.2sec	1.0869	1.1304	1.1727	1.3369	1.0868	1.1304	1.1727	1.3363	1.1144	1.1477	1.2020	4.2372	1.0409	1.1144	1.1478	1.2033	0.0195	0.0095	0.0154	0.3808
Year	**Level 5**	28.4sec	1.0559	1.0905	1.1222	1.2439	1.0559	1.0906	1.1222	1.2438	1.0772	1.1036	1.1462	3.4148	1.0215	1.0772	1.1040	1.1470	0.0150	0.0075	0.0130	0.2834
before	**Level 6**	56.7sec	1.0370	1.0617	1.0845	1.1750	1.0370	1.0617	1.0845	1.1746	1.0521	1.0704	1.1020	2.8023	1.0098	1.0522	1.0709	1.1030	0.0108	0.0051	0.0085	0.2116
	Level 7	1.9min	1.0245	1.0416	1.0571	1.1236	1.0245	1.0416	1.0571	1.1235	1.0344	1.0470	1.0693	2.1731	1.0056	1.0348	1.0474	1.0693	0.0072	0.0034	0.0060	0.1395
	Level 8	3.8min	1.0168	1.0285	1.0398	1.0911	1.0168	1.0285	1.0398	1.0914	1.0234	1.0326	1.0496	1.7805	1.0039	1.0234	1.0330	1.0498	0.0048	0.0025	0.0045	0.0980
	Level 9	7.6min	1.0136	1.0228	1.0326	1.0776	1.0136	1.0228	1.0326	1.0780	1.0186	1.0267	1.0398	1.6142	1.0033	1.0191	1.0267	1.0400	0.0038	0.0021	0.0036	0.0839

Table A.41: EDU0 Other Results Table –Continued

EDU0 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.2sec	1.4856	1.7060	1.7820	2.6071	1.4852	1.7059	1.7821	2.6085	1.5664	1.7665	1.8053	4.0812	1.3794	1.5979	1.7719	1.8622	0.0737	0.0633	0.0136	0.9311
	Level 2	26.4sec	1.2837	1.4577	1.6380	2.6664	1.2839	1.4578	1.6382	2.6547	1.3659	1.5030	1.7001	4.9044	1.1834	1.4352	1.5415	1.7589	0.0816	0.0266	0.0669	1.3394
	Level 3	52.8sec	1.1765	1.2961	1.4614	3.1192	1.1751	1.2959	1.4626	3.1080	1.2227	1.3937	1.5267	8.8394	1.1056	1.2544	1.3943	1.5962	0.0525	0.0525	0.0610	3.2045
30	**Level 4**	1.8min	1.1047	1.1879	1.3502	4.5680	1.1044	1.1880	1.3507	4.5317	1.1167	1.2721	1.3927	16.6950	1.0831	1.1178	1.3303	1.4477	0.0160	0.0517	0.0244	6.7996
days	**Level 5**	3.5min	1.0659	1.1339	1.2541	7.1866	1.0659	1.1343	1.2538	7.6021	1.0717	1.1843	1.2955	32.4187	1.0624	1.0734	1.2381	1.3322	0.0042	0.0411	0.0243	13.8730
before	**Level 6**	7min	1.0456	1.1054	1.1796	14.4065	1.0456	1.1059	1.1800	13.8054	1.0529	1.1542	1.2175	63.8712	1.0375	1.0591	1.1612	1.2696	0.0060	0.0359	0.0220	27.9876
	Level 7	14.1min	1.0335	1.0800	1.1490	25.9705	1.0335	1.0800	1.1489	26.3220	1.0444	1.1023	1.1804	126.7420	1.0250	1.0512	1.1242	1.1930	0.0071	0.0235	0.0227	56.1365
	Level 8	28.2min	1.0262	1.0645	1.1237	51.8508	1.0262	1.0647	1.1236	51.4481	1.0360	1.0873	1.1312	252.4836	1.0207	1.0379	1.1164	1.1393	0.0061	0.0203	0.0066	112.3823
	Level 9	56.3min	1.0249	1.0655	1.1285	102.3891	1.0250	1.0654	1.1285	101.7863	1.0324	1.1018	1.1332	503.9670	1.0191	1.0410	1.1231	1.1726	0.0057	0.0216	0.0042	224.8259
	Level 1	5.4sec	1.5078	1.6397	1.7566	2.1959	1.5073	1.6391	1.7563	2.1907	1.5601	1.7135	1.7751	4.0812	1.3794	1.5660	1.7203	1.7753	0.0568	0.0483	0.0182	0.7141
	Level 2	10.7sec	1.2987	1.4256	1.5566	2.1550	1.2992	1.4258	1.5586	2.1512	1.3535	1.4539	1.6814	4.9044	1.1834	1.3659	1.4549	1.6826	0.0600	0.0254	0.0839	0.9752
	Level 3	21.4sec	1.1844	1.2761	1.4123	2.2389	1.1845	1.2761	1.4122	2.2647	1.2227	1.3117	1.4963	8.8394	1.1056	1.2544	1.3165	1.5101	0.0400	0.0186	0.0624	2.1820
60	**Level 4**	42.8sec	1.1097	1.1795	1.2959	2.7232	1.1097	1.1794	1.2965	2.8129	1.1305	1.2160	1.3415	16.6950	1.0831	1.1432	1.2259	1.3461	0.0165	0.0220	0.0380	4.6046
days	**Level 5**	1.4min	1.0708	1.1262	1.1999	4.1840	1.0707	1.1259	1.1998	4.1463	1.0907	1.1599	1.2381	32.4187	1.0604	1.0957	1.1748	1.2388	0.0106	0.0186	0.0224	9.3772
before	**Level 6**	2.9min	1.0487	1.0885	1.1375	7.0368	1.0487	1.0884	1.1374	6.9231	1.0621	1.1176	1.1612	63.8712	1.0375	1.0628	1.1218	1.1685	0.0084	0.0183	0.0136	18.8876
	Level 7	5.7min	1.0331	1.0619	1.0963	12.2955	1.0331	1.0618	1.0963	12.5924	1.0417	1.0800	1.1242	126.7420	1.0250	1.0444	1.0801	1.1260	0.0059	0.0124	0.0125	37.8592
	Level 8	11.4min	1.0237	1.0454	1.0729	24.5287	1.0237	1.0452	1.0730	24.0023	1.0304	1.0567	1.0926	252.4836	1.0185	1.0330	1.0584	1.1164	0.0042	0.0082	0.0121	75.7787
	Level 9	22.8min	1.0214	1.0425	1.0681	44.8336	1.0214	1.0425	1.0681	46.8906	1.0290	1.0528	1.1018	503.9670	1.0154	1.0296	1.0535	1.1231	0.0044	0.0087	0.0142	151.5951
	Level 1	3.2sec	1.5019	1.5992	1.7150	2.0915	1.5019	1.5992	1.7149	2.0876	1.5540	1.6532	1.7665	4.0812	1.3794	1.5552	1.6550	1.7719	0.0447	0.0319	0.0395	0.6115
	Level 2	6.5sec	1.2879	1.3921	1.4782	2.0079	1.2877	1.3921	1.4787	2.0110	1.3445	1.4344	1.5748	4.9044	1.1834	1.3520	1.4352	1.5965	0.0472	0.0251	0.0449	0.8276
	Level 3	13sec	1.1770	1.2538	1.3398	2.0352	1.1770	1.2539	1.3394	2.0286	1.2140	1.2806	1.4127	8.8394	1.1056	1.2166	1.2815	1.4570	0.0348	0.0207	0.0453	1.8184
3	**Level 4**	26sec	1.1068	1.1609	1.2405	2.3237	1.1067	1.1610	1.2405	2.3569	1.1305	1.1887	1.3078	16.6950	1.0719	1.1324	1.1929	1.3114	0.0171	0.0208	0.0394	3.8241
months	**Level 5**	52sec	1.0690	1.1098	1.1667	3.2074	1.0691	1.1097	1.1665	3.2404	1.0873	1.1348	1.2124	32.4187	1.0498	1.0874	1.1393	1.2163	0.0105	0.0156	0.0239	7.7812
before	**Level 6**	1.7min	1.0480	1.0739	1.1179	5.3991	1.0477	1.0739	1.1180	5.1288	1.0591	1.0951	1.1438	63.8712	1.0349	1.0597	1.0967	1.1443	0.0083	0.0116	0.0150	15.6647
	Level 7	3.5min	1.0326	1.0508	1.0821	9.1838	1.0325	1.0509	1.0820	9.0114	1.0409	1.0664	1.1009	126.7420	1.0228	1.0414	1.0669	1.1023	0.0058	0.0083	0.0122	31.3948
	Level 8	6.9min	1.0233	1.0370	1.0599	17.3059	1.0233	1.0371	1.0599	16.8508	1.0288	1.0475	1.0764	252.4836	1.0168	1.0299	1.0482	1.0857	0.0040	0.0062	0.0094	62.8354
	Level 9	13.9min	1.0215	1.0340	1.0555	32.5003	1.0215	1.0340	1.0554	32.5944	1.0258	1.0455	1.0675	503.9670	1.0154	1.0272	1.0457	1.0739	0.0036	0.0056	0.0071	125.6994
	Level 1	1.7sec	1.4798	1.5393	1.5972	1.8211	1.4798	1.5393	1.5972	1.8191	1.5147	1.5660	1.6401	4.0812	1.3794	1.5153	1.5664	1.6405	0.0282	0.0133	0.0234	0.3597
	Level 2	3.4sec	1.2504	1.3115	1.3729	1.6341	1.2503	1.3115	1.3729	1.6374	1.2882	1.3381	1.4156	4.9044	1.1806	1.2897	1.3383	1.4160	0.0272	0.0152	0.0233	0.5174
	Level 3	6.9sec	1.1410	1.1945	1.2440	1.5277	1.1409	1.1944	1.2440	1.5320	1.1728	1.2160	1.2790	8.8394	1.0859	1.1732	1.2161	1.2794	0.0226	0.0126	0.0193	0.9589
1	**Level 4**	13.8sec	1.0862	1.1274	1.1636	1.5306	1.0861	1.1274	1.1636	1.5378	1.1132	1.1411	1.1887	16.6950	1.0420	1.1138	1.1413	1.1888	0.0191	0.0084	0.0137	1.9352
Year	**Level 5**	27.5sec	1.0548	1.0870	1.1147	1.6883	1.0549	1.0870	1.1148	1.7034	1.0734	1.0974	1.1364	32.4187	1.0220	1.0735	1.0975	1.1371	0.0144	0.0067	0.0110	3.9035
before	**Level 6**	55.1sec	1.0362	1.0592	1.0799	2.1031	1.0362	1.0592	1.0799	2.1338	1.0508	1.0673	1.0937	63.8712	1.0102	1.0509	1.0674	1.0945	0.0103	0.0047	0.0081	7.8404
	Level 7	1.8min	1.0245	1.0404	1.0556	3.1122	1.0244	1.0404	1.0556	3.0773	1.0346	1.0458	1.0669	126.7420	1.0059	1.0346	1.0460	1.0671	0.0071	0.0031	0.0063	15.7037
	Level 8	3.7min	1.0175	1.0288	1.0410	5.0778	1.0175	1.0288	1.0410	5.0227	1.0240	1.0334	1.0518	252.4836	1.0041	1.0241	1.0336	1.0524	0.0050	0.0025	0.0053	31.4237
	Level 9	7.3min	1.0151	1.0250	1.0362	8.5895	1.0152	1.0250	1.0362	8.9589	1.0207	1.0290	1.0466	503.9670	1.0034	1.0209	1.0290	1.0469	0.0042	0.0023	0.0053	62.8582

Table A.41: EDU0 Other Results Table –Continued

EDU0 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.8sec	1.2587	1.6569	1.7811	2.3685	1.2551	1.6567	1.7810	2.3683	1.5306	1.7560	1.7954	4.0120	0.4321	1.5422	1.7741	1.8113	0.4633	0.0748	0.0086	0.9325
	Level 2	27.6sec	1.2034	1.4335	1.5721	1.9938	1.2032	1.4336	1.5709	1.9997	1.3213	1.4909	1.6657	2.8182	1.0016	1.3632	1.5055	1.7004	0.1268	0.0446	0.0618	0.4671
	Level 3	55.2sec	0.9027	1.2643	1.4040	1.6262	0.8999	1.2640	1.4041	1.6265	1.1990	1.3013	1.4777	1.7290	-0.1209	1.2208	1.3509	1.5202	0.5724	0.0283	0.0558	0.0764
30	**Level 4**	1.8min	0.6419	1.1540	1.2897	1.4270	0.6472	1.1538	1.2887	1.4259	1.1131	1.2015	1.3343	1.5435	-1.1304	1.1139	1.2161	1.3381	0.9939	0.0341	0.0527	0.0771
days	**Level 5**	3.7min	0.7321	1.0969	1.1981	1.3099	0.7295	1.0972	1.1979	1.3084	1.0605	1.1272	1.2244	1.4070	-0.5768	1.0616	1.1612	1.2403	0.7302	0.0262	0.0241	0.0749
before	**Level 6**	7.4min	1.0376	1.0680	1.1304	1.1975	1.0376	1.0682	1.1304	1.1969	1.0419	1.0874	1.1379	1.2653	1.0342	1.0427	1.1201	1.1427	0.0032	0.0190	0.0076	0.0468
	Level 7	14.7min	1.0240	1.0495	1.0848	1.1237	1.0240	1.0499	1.0849	1.1242	1.0256	1.0734	1.0976	1.1614	1.0195	1.0289	1.0768	1.1028	0.0025	0.0192	0.0095	0.0226
	Level 8	29.4min	1.0150	1.0296	1.0655	1.0805	1.0150	1.0297	1.0655	1.0804	1.0175	1.0403	1.0724	1.0949	1.0125	1.0187	1.0565	1.0728	0.0019	0.0100	0.0063	0.0092
	Level 9	58.8min	1.0097	1.0201	1.0473	1.0650	1.0097	1.0201	1.0473	1.0650	1.0109	1.0257	1.0555	1.0733	1.0081	1.0154	1.0390	1.0570	0.0012	0.0048	0.0060	0.0076
	Level 1	5.5sec	1.4066	1.6267	1.7373	2.1901	1.4024	1.6265	1.7372	2.1865	1.5525	1.6807	1.7751	4.0120	0.4321	1.5548	1.6829	1.7797	0.3260	0.0486	0.0337	0.7186
	Level 2	11sec	1.2589	1.4134	1.5189	1.9602	1.2591	1.4129	1.5194	1.9611	1.3522	1.4479	1.5933	3.0673	1.0016	1.3573	1.4548	1.6657	0.1010	0.0339	0.0513	0.4948
	Level 3	21.9sec	1.0553	1.2602	1.3742	1.6628	1.0533	1.2603	1.3742	1.6607	1.2095	1.2866	1.4604	2.5432	-0.1209	1.2208	1.3013	1.4654	0.3911	0.0207	0.0566	0.3057
60	**Level 4**	43.9sec	0.8929	1.1599	1.2488	1.4374	0.8972	1.1602	1.2485	1.4360	1.1196	1.1963	1.2956	1.9492	-1.1304	1.1231	1.2015	1.3083	0.6728	0.0217	0.0342	0.1833
days	**Level 5**	1.5min	0.9122	1.1057	1.1598	1.2866	0.9123	1.1055	1.1598	1.2873	1.0798	1.1260	1.1862	1.5441	-0.5768	1.0869	1.1272	1.1924	0.4939	0.0128	0.0188	0.1089
before	**Level 6**	2.9min	1.0403	1.0675	1.0990	1.1818	1.0404	1.0675	1.0990	1.1823	1.0521	1.0828	1.1201	1.3407	1.0342	1.0529	1.0836	1.1249	0.0061	0.0117	0.0101	0.0678
	Level 7	5.9min	1.0244	1.0402	1.0614	1.1166	1.0245	1.0402	1.0613	1.1169	1.0300	1.0520	1.0768	1.2389	1.0195	1.0310	1.0538	1.0777	0.0034	0.0069	0.0085	0.0475
	Level 8	11.7min	1.0140	1.0226	1.0338	1.0783	1.0140	1.0225	1.0338	1.0783	1.0180	1.0265	1.0408	1.1320	1.0104	1.0184	1.0270	1.0565	0.0026	0.0030	0.0052	0.0206
	Level 9	23.4min	1.0084	1.0136	1.0208	1.0585	1.0085	1.0136	1.0208	1.0586	1.0107	1.0156	1.0257	1.0834	1.0063	1.0109	1.0157	1.0390	0.0017	0.0015	0.0036	0.0135
	Level 1	3.3sec	1.4297	1.5908	1.7007	2.0650	1.4283	1.5910	1.7009	2.0730	1.5422	1.6291	1.7560	4.0120	0.4321	1.5518	1.6432	1.7576	0.2687	0.0281	0.0353	0.6144
	Level 2	6.7sec	1.2588	1.3779	1.4702	1.8523	1.2584	1.3778	1.4701	1.8492	1.3264	1.4249	1.5373	3.0673	1.0016	1.3303	1.4270	1.5539	0.0793	0.0255	0.0360	0.4400
	Level 3	13.3sec	1.0848	1.2390	1.3172	1.5871	1.0843	1.2390	1.3178	1.5891	1.1990	1.2744	1.3923	2.5432	-0.1209	1.2006	1.2745	1.3930	0.3228	0.0232	0.0387	0.2730
3	**Level 4**	26.7sec	0.9666	1.1456	1.2098	1.3868	0.9577	1.1457	1.2095	1.3884	1.1151	1.1775	1.2619	1.9492	-1.1304	1.1196	1.1778	1.2680	0.5571	0.0202	0.0286	0.1666
months	**Level 5**	53.4sec	0.9542	1.0941	1.1377	1.2580	0.9573	1.0942	1.1378	1.2573	1.0726	1.1099	1.1707	1.5441	-0.5768	1.0762	1.1111	1.1727	0.4092	0.0118	0.0191	0.1008
before	**Level 6**	1.8min	1.0383	1.0579	1.0871	1.1644	1.0384	1.0579	1.0872	1.1636	1.0473	1.0711	1.1016	1.3407	1.0261	1.0481	1.0720	1.1027	0.0056	0.0069	0.0090	0.0630
	Level 7	3.6min	1.0229	1.0339	1.0516	1.1048	1.0229	1.0339	1.0516	1.1045	1.0279	1.0401	1.0602	1.2389	1.0146	1.0286	1.0423	1.0686	0.0037	0.0038	0.0054	0.0434
	Level 8	7.1min	1.0127	1.0194	1.0286	1.0674	1.0127	1.0194	1.0286	1.0672	1.0159	1.0235	1.0366	1.1320	1.0080	1.0163	1.0242	1.0389	0.0024	0.0024	0.0035	0.0241
	Level 9	14.2min	1.0076	1.0119	1.0173	1.0489	1.0076	1.0119	1.0173	1.0490	1.0091	1.0142	1.0223	1.0834	1.0055	1.0094	1.0144	1.0234	0.0013	0.0017	0.0026	0.0189
	Level 1	1.7sec	1.4599	1.5335	1.5924	1.8232	1.4601	1.5336	1.5924	1.8254	1.5090	1.5548	1.6293	4.0120	0.4321	1.5107	1.5551	1.6295	0.1323	0.0127	0.0215	0.4128
	Level 2	3.5sec	1.2417	1.3029	1.3631	1.6121	1.2419	1.3029	1.3630	1.6146	1.2791	1.3245	1.4046	5.0971	1.0016	1.2800	1.3264	1.4056	0.0396	0.0145	0.0221	0.5215
	Level 3	7sec	1.1153	1.1835	1.2311	1.4181	1.1155	1.1834	1.2311	1.4184	1.1646	1.2024	1.2687	3.7996	-0.1209	1.1651	1.2036	1.2688	0.1571	0.0111	0.0181	0.3536
1	**Level 4**	14sec	1.0469	1.1162	1.1489	1.2830	1.0454	1.1162	1.1490	1.2831	1.1044	1.1273	1.1721	3.1911	-1.1304	1.1045	1.1279	1.1735	0.2746	0.0068	0.0128	0.2688
Year	**Level 5**	27.9sec	1.0226	1.0753	1.0981	1.1889	1.0232	1.0754	1.0981	1.1888	1.0651	1.0846	1.1120	2.4294	-0.5768	1.0653	1.0847	1.1122	0.2019	0.0054	0.0085	0.1740
before	**Level 6**	55.9sec	1.0297	1.0476	1.0628	1.1190	1.0297	1.0477	1.0628	1.1192	1.0411	1.0532	1.0720	1.7953	1.0089	1.0413	1.0536	1.0721	0.0084	0.0037	0.0055	0.0976
	Level 7	1.9min	1.0178	1.0293	1.0388	1.0734	1.0178	1.0293	1.0388	1.0736	1.0250	1.0334	1.0455	1.3916	1.0048	1.0252	1.0335	1.0457	0.0052	0.0024	0.0035	0.0510
	Level 8	3.7min	1.0105	1.0177	1.0237	1.0456	1.0105	1.0177	1.0237	1.0458	1.0147	1.0207	1.0275	1.1818	1.0031	1.0148	1.0207	1.0276	0.0031	0.0015	0.0020	0.0262
	Level 9	7.5min	1.0067	1.0115	1.0154	1.0311	1.0067	1.0115	1.0154	1.0311	1.0094	1.0132	1.0180	1.1023	1.0023	1.0095	1.0132	1.0183	0.0020	0.0011	0.0013	0.0180

Table A.41: EDU0 Other Results Table –Continued

EDU0 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.8sec	0.4174	0.5620	0.5912	0.6749	0.4181	0.5620	0.5910	0.6747	0.5370	0.5661	0.6258	0.7250	0.2450	0.5539	0.5694	0.6384	0.1243	0.0043	0.0223	0.0341
	Level 2	27.6sec	0.4380	0.6202	0.6903	0.7821	0.4387	0.6203	0.6903	0.7815	0.5685	0.6654	0.6968	0.8450	0.2039	0.5882	0.6777	0.7321	0.1583	0.0318	0.0078	0.0504
	Level 3	55.2sec	0.5016	0.6905	0.7837	0.8515	0.5008	0.6901	0.7837	0.8524	0.6265	0.7175	0.7972	0.9045	0.1131	0.6550	0.7596	0.8179	0.2178	0.0288	0.0145	0.0388
30	**Level 4**	1.8min	0.5436	0.7479	0.8543	0.9055	0.5490	0.7482	0.8544	0.9056	0.6908	0.7861	0.8946	0.9232	0.0599	0.7181	0.8224	0.8955	0.2741	0.0220	0.0258	0.0132
days	**Level 5**	3.7min	0.5772	0.8057	0.8898	0.9381	0.5791	0.8056	0.8902	0.9382	0.7507	0.8444	0.9316	0.9413	0.0308	0.7719	0.8512	0.9331	0.3075	0.0233	0.0293	0.0037
before	**Level 6**	7.4min	0.6133	0.8509	0.9130	0.9564	0.6239	0.8508	0.9128	0.9564	0.7876	0.8664	0.9442	0.9638	0.0157	0.8214	0.8855	0.9498	0.3401	0.0158	0.0251	0.0055
	Level 7	14.7min	0.6558	0.8766	0.9299	0.9677	0.6591	0.8767	0.9301	0.9676	0.8382	0.9072	0.9513	0.9756	0.0079	0.8472	0.9084	0.9575	0.3643	0.0214	0.0202	0.0066
	Level 8	29.4min	0.6673	0.8948	0.9434	0.9743	0.6744	0.8949	0.9435	0.9745	0.8778	0.9197	0.9635	0.9797	0.0040	0.8840	0.9211	0.9652	0.3760	0.0130	0.0168	0.0057
	Level 9	58.8min	0.6442	0.8898	0.9452	0.9757	0.6463	0.8897	0.9452	0.9756	0.8528	0.9076	0.9606	0.9812	0.0020	0.8824	0.9274	0.9686	0.3620	0.0093	0.0122	0.0055
	Level 1	5.5sec	0.4850	0.5708	0.6137	0.6644	0.4865	0.5707	0.6133	0.6643	0.5633	0.5836	0.6386	0.7250	0.2450	0.5633	0.5918	0.6410	0.1036	0.0071	0.0166	0.0261
	Level 2	11sec	0.5145	0.6471	0.7030	0.7718	0.5146	0.6473	0.7029	0.7712	0.5943	0.6878	0.7321	0.8450	0.2039	0.5947	0.6904	0.7388	0.1242	0.0352	0.0126	0.0371
	Level 3	21.9sec	0.5771	0.7142	0.7859	0.8453	0.5772	0.7142	0.7859	0.8451	0.6622	0.7624	0.7972	0.9045	0.1131	0.6683	0.7665	0.8179	0.1567	0.0339	0.0092	0.0294
60	**Level 4**	43.9sec	0.6447	0.7766	0.8507	0.9015	0.6448	0.7765	0.8507	0.9014	0.7429	0.8224	0.8748	0.9232	0.0599	0.7454	0.8262	0.8846	0.1964	0.0266	0.0141	0.0135
days	**Level 5**	1.5min	0.6968	0.8363	0.8911	0.9340	0.6941	0.8363	0.8910	0.9341	0.8072	0.8622	0.9126	0.9430	0.0308	0.8077	0.8745	0.9168	0.2238	0.0170	0.0124	0.0091
before	**Level 6**	2.9min	0.7418	0.8806	0.9213	0.9534	0.7429	0.8807	0.9214	0.9536	0.8558	0.8948	0.9409	0.9638	0.0157	0.8612	0.8993	0.9415	0.2437	0.0110	0.0138	0.0076
	Level 7	5.9min	0.7762	0.9133	0.9435	0.9680	0.7736	0.9135	0.9435	0.9680	0.8881	0.9259	0.9575	0.9756	0.0079	0.8895	0.9292	0.9599	0.2554	0.0106	0.0102	0.0055
	Level 8	11.7min	0.7871	0.9332	0.9578	0.9769	0.7890	0.9334	0.9578	0.9769	0.8957	0.9463	0.9681	0.9818	0.0040	0.9153	0.9490	0.9705	0.2621	0.0108	0.0070	0.0040
	Level 9	23.4min	0.7723	0.9377	0.9602	0.9790	0.7709	0.9376	0.9603	0.9790	0.8904	0.9499	0.9713	0.9848	0.0020	0.9076	0.9502	0.9719	0.2589	0.0123	0.0078	0.0043
	Level 1	3.3sec	0.5025	0.5847	0.6268	0.6665	0.5036	0.5847	0.6268	0.6664	0.5644	0.6049	0.6430	0.7250	0.2450	0.5661	0.6097	0.6435	0.0918	0.0141	0.0116	0.0206
	Level 2	6.7sec	0.5371	0.6780	0.7198	0.7777	0.5382	0.6781	0.7199	0.7776	0.6264	0.6971	0.7396	0.8450	0.2039	0.6350	0.6984	0.7438	0.1099	0.0199	0.0121	0.0293
	Level 3	13.3sec	0.6028	0.7492	0.7988	0.8502	0.6043	0.7494	0.7988	0.8503	0.6864	0.7809	0.8220	0.9045	0.1131	0.7079	0.7831	0.8237	0.1356	0.0257	0.0130	0.0256
3	**Level 4**	26.7sec	0.6740	0.8091	0.8626	0.9040	0.6744	0.8089	0.8629	0.9038	0.7626	0.8413	0.8831	0.9329	0.0599	0.7646	0.8417	0.8846	0.1673	0.0259	0.0150	0.0141
months	**Level 5**	53.4sec	0.7277	0.8589	0.9027	0.9354	0.7280	0.8590	0.9026	0.9354	0.8222	0.8812	0.9196	0.9525	0.0308	0.8248	0.8848	0.9197	0.1905	0.0178	0.0120	0.0092
before	**Level 6**	1.8min	0.7752	0.8958	0.9325	0.9544	0.7757	0.8957	0.9325	0.9545	0.8739	0.9131	0.9436	0.9662	0.0157	0.8742	0.9154	0.9442	0.2061	0.0124	0.0091	0.0076
	Level 7	3.6min	0.8119	0.9251	0.9525	0.9686	0.8078	0.9251	0.9525	0.9685	0.9072	0.9378	0.9602	0.9777	0.0079	0.9084	0.9402	0.9607	0.2155	0.0106	0.0068	0.0055
	Level 8	7.1min	0.8222	0.9442	0.9649	0.9773	0.8224	0.9442	0.9649	0.9773	0.9211	0.9546	0.9710	0.9835	0.0040	0.9290	0.9563	0.9720	0.2209	0.0085	0.0053	0.0038
	Level 9	14.2min	0.8055	0.9481	0.9677	0.9790	0.8055	0.9480	0.9678	0.9789	0.9312	0.9565	0.9736	0.9848	0.0020	0.9368	0.9593	0.9749	0.2218	0.0065	0.0046	0.0035
	Level 1	1.7sec	0.5625	0.6265	0.6499	0.6763	0.5625	0.6265	0.6499	0.6762	0.6097	0.6384	0.6602	0.7250	0.2450	0.6097	0.6386	0.6606	0.0638	0.0089	0.0057	0.0131
	Level 2	3.5sec	0.6392	0.7290	0.7628	0.8006	0.6392	0.7289	0.7628	0.8005	0.7064	0.7472	0.7763	0.8471	0.2039	0.7084	0.7473	0.7779	0.0940	0.0121	0.0089	0.0175
	Level 3	7sec	0.7101	0.8044	0.8375	0.8773	0.7100	0.8044	0.8375	0.8772	0.7818	0.8223	0.8526	0.9209	0.1131	0.7821	0.8224	0.8528	0.1063	0.0122	0.0090	0.0174
1	**Level 4**	14sec	0.7716	0.8598	0.8872	0.9214	0.7713	0.8598	0.8872	0.9214	0.8413	0.8762	0.8983	0.9597	0.0599	0.8416	0.8764	0.8987	0.1149	0.0099	0.0067	0.0162
Year	**Level 5**	27.9sec	0.8196	0.8974	0.9202	0.9484	0.8194	0.8974	0.9202	0.9484	0.8799	0.9112	0.9316	0.9785	0.0308	0.8810	0.9112	0.9318	0.1201	0.0086	0.0058	0.0130
before	**Level 6**	55.9sec	0.8603	0.9262	0.9442	0.9654	0.8594	0.9262	0.9442	0.9654	0.9143	0.9368	0.9517	0.9899	0.0157	0.9143	0.9369	0.9522	0.1207	0.0068	0.0042	0.0096
	Level 7	1.9min	0.8880	0.9475	0.9613	0.9763	0.8878	0.9475	0.9613	0.9764	0.9373	0.9560	0.9666	0.9941	0.0079	0.9375	0.9562	0.9669	0.1215	0.0056	0.0029	0.0067
	Level 8	3.7min	0.9022	0.9608	0.9721	0.9829	0.9028	0.9608	0.9721	0.9829	0.9507	0.9675	0.9765	0.9959	0.0040	0.9526	0.9677	0.9766	0.1224	0.0048	0.0024	0.0048
	Level 9	7.5min	0.8987	0.9653	0.9757	0.9852	0.8991	0.9653	0.9757	0.9852	0.9555	0.9718	0.9798	0.9966	0.0020	0.9558	0.9719	0.9798	0.1278	0.0048	0.0022	0.0041

Table A.42: EDU1 Other Results Table

EDU1 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	11.3sec	1.4628	1.5812	1.7457	2.1232	1.4627	1.5808	1.7439	2.1236	1.4922	1.6502	1.8730	2.4979	1.4405	1.5154	1.6631	1.9258	0.0195	0.0585	0.0874	0.2356
	Level 2	22.6sec	1.2440	1.3630	1.5271	1.9523	1.2442	1.3628	1.5263	1.9484	1.2698	1.4913	1.5784	2.5475	1.2123	1.2985	1.4987	1.6430	0.0242	0.0759	0.0310	0.3510
	Level 3	45.1sec	1.1422	1.2206	1.3220	1.5932	1.1419	1.2202	1.3219	1.5944	1.1688	1.2884	1.3531	1.7832	1.1249	1.1754	1.2921	1.4929	0.0173	0.0517	0.0244	0.1186
30	**Level 4**	1.5min	1.0817	1.1355	1.1969	1.3645	1.0815	1.1351	1.1970	1.3654	1.1041	1.1711	1.2090	1.5105	1.0601	1.1044	1.1800	1.3154	0.0157	0.0258	0.0120	0.0816
days	**Level 5**	3min	1.0462	1.0866	1.1294	1.2402	1.0465	1.0870	1.1294	1.2407	1.0582	1.1024	1.1420	1.3215	1.0307	1.0649	1.1225	1.1938	0.0099	0.0147	0.0076	0.0479
before	**Level 6**	6min	1.0284	1.0579	1.0880	1.1597	1.0284	1.0577	1.0881	1.1597	1.0374	1.0706	1.1040	1.1914	1.0183	1.0435	1.0784	1.1264	0.0068	0.0088	0.0106	0.0233
	Level 7	12min	1.0191	1.0392	1.0598	1.1048	1.0191	1.0392	1.0597	1.1049	1.0273	1.0460	1.0795	1.1152	1.0121	1.0280	1.0500	1.0886	0.0054	0.0061	0.0116	0.0106
	Level 8	24.1min	1.0134	1.0280	1.0406	1.0722	1.0135	1.0280	1.0405	1.0720	1.0193	1.0337	1.0575	1.0851	1.0083	1.0194	1.0350	1.0599	0.0039	0.0050	0.0096	0.0090
	Level 9	48.1min	1.0110	1.0222	1.0325	1.0756	1.0110	1.0222	1.0323	1.0756	1.0153	1.0259	1.0433	1.0967	1.0068	1.0169	1.0260	1.0537	0.0030	0.0040	0.0065	0.0185
	Level 1	5.5sec	1.4885	1.5784	1.6511	1.9460	1.4887	1.5783	1.6512	1.9475	1.5506	1.6153	1.6736	2.4979	1.4405	1.5506	1.6378	1.6991	0.0350	0.0187	0.0112	0.2358
	Level 2	10.9sec	1.2649	1.3626	1.4665	1.7328	1.2648	1.3617	1.4669	1.7297	1.3110	1.4195	1.5007	2.5475	1.2123	1.3119	1.4229	1.5122	0.0309	0.0448	0.0314	0.3070
	Level 3	21.8sec	1.1486	1.2090	1.3116	1.4853	1.1488	1.2094	1.3112	1.4864	1.1691	1.2740	1.3476	1.7832	1.1249	1.1754	1.2843	1.3531	0.0168	0.0324	0.0222	0.1376
60	**Level 4**	43.7sec	1.0884	1.1264	1.1947	1.3315	1.0886	1.1267	1.1947	1.3310	1.1076	1.1556	1.2286	1.5105	1.0601	1.1085	1.1711	1.2310	0.0148	0.0176	0.0183	0.0797
days	**Level 5**	1.5min	1.0540	1.0831	1.1291	1.2263	1.0540	1.0833	1.1292	1.2258	1.0696	1.1018	1.1459	1.3215	1.0307	1.0698	1.1024	1.1561	0.0117	0.0112	0.0133	0.0485
before	**Level 6**	2.9min	1.0335	1.0569	1.0878	1.1543	1.0335	1.0568	1.0877	1.1543	1.0435	1.0706	1.0990	1.2111	1.0183	1.0472	1.0715	1.1040	0.0076	0.0073	0.0102	0.0313
	Level 7	5.8min	1.0218	1.0382	1.0583	1.1015	1.0218	1.0381	1.0584	1.1018	1.0280	1.0460	1.0684	1.1373	1.0121	1.0321	1.0500	1.0793	0.0049	0.0049	0.0070	0.0181
	Level 8	11.6min	1.0150	1.0264	1.0393	1.0685	1.0150	1.0263	1.0393	1.0684	1.0194	1.0329	1.0484	1.0922	1.0083	1.0204	1.0337	1.0491	0.0032	0.0044	0.0054	0.0132
	Level 9	23.3min	1.0119	1.0206	1.0304	1.0618	1.0120	1.0206	1.0304	1.0616	1.0153	1.0259	1.0371	1.0967	1.0068	1.0153	1.0259	1.0396	0.0023	0.0040	0.0035	0.0194
	Level 1	3.5sec	1.4749	1.5593	1.6321	1.8868	1.4747	1.5592	1.6317	1.8882	1.5154	1.5781	1.6631	2.4979	1.4196	1.5305	1.5899	1.6736	0.0321	0.0159	0.0223	0.2151
	Level 2	7.1sec	1.2532	1.3213	1.4296	1.6956	1.2531	1.3214	1.4299	1.6948	1.2921	1.3445	1.4987	2.5475	1.1961	1.2923	1.3477	1.5003	0.0276	0.0166	0.0496	0.2799
	Level 3	14.1sec	1.1431	1.1908	1.2772	1.5123	1.1430	1.1907	1.2769	1.5127	1.1688	1.2157	1.3245	2.4302	1.1150	1.1691	1.2190	1.3276	0.0175	0.0152	0.0329	0.2758
3	**Level 4**	28.3sec	1.0863	1.1218	1.1789	1.3394	1.0864	1.1218	1.1789	1.3388	1.1041	1.1491	1.2090	1.8324	1.0601	1.1044	1.1511	1.2211	0.0126	0.0145	0.0197	0.1528
months	**Level 5**	56.5sec	1.0550	1.0825	1.1224	1.2245	1.0550	1.0826	1.1223	1.2238	1.0696	1.1018	1.1420	1.4462	1.0307	1.0698	1.1021	1.1459	0.0106	0.0101	0.0144	0.0769
before	**Level 6**	1.9min	1.0349	1.0561	1.0845	1.1504	1.0349	1.0561	1.0845	1.1506	1.0435	1.0672	1.0990	1.2472	1.0183	1.0472	1.0706	1.1008	0.0071	0.0060	0.0097	0.0407
	Level 7	3.8min	1.0228	1.0376	1.0562	1.0992	1.0227	1.0376	1.0562	1.0993	1.0280	1.0455	1.0661	1.1563	1.0121	1.0313	1.0460	1.0670	0.0045	0.0046	0.0064	0.0243
	Level 8	7.5min	1.0154	1.0255	1.0372	1.0663	1.0154	1.0255	1.0371	1.0666	1.0194	1.0312	1.0440	1.1001	1.0083	1.0203	1.0314	1.0467	0.0028	0.0038	0.0039	0.0158
	Level 9	15.1min	1.0120	1.0195	1.0286	1.0567	1.0120	1.0195	1.0286	1.0566	1.0153	1.0237	1.0330	1.0967	1.0068	1.0153	1.0251	1.0331	0.0020	0.0029	0.0028	0.0190
	Level 1	2.2sec	1.4985	1.5789	1.6588	1.9008	1.4985	1.5789	1.6589	1.8993	1.5496	1.6149	1.7062	5.0000	1.4196	1.5506	1.6153	1.7063	0.0356	0.0199	0.0264	0.4361
	Level 2	4.3sec	1.2730	1.3530	1.4529	1.9055	1.2731	1.3531	1.4528	1.9017	1.3210	1.3941	1.5096	17.0000	1.1961	1.3216	1.4000	1.5122	0.0330	0.0206	0.0338	1.9295
	Level 3	8.7sec	1.1603	1.2339	1.3061	2.0855	1.1602	1.2338	1.3061	2.0899	1.1991	1.2677	1.3476	38.8513	1.0947	1.2020	1.2690	1.3493	0.0264	0.0199	0.0233	4.6724
1	**Level 4**	17.4sec	1.0997	1.1565	1.2106	1.6660	1.0998	1.1565	1.2106	1.6804	1.1310	1.1800	1.2471	21.5506	1.0488	1.1312	1.1800	1.2483	0.0199	0.0153	0.0183	2.5274
Year	**Level 5**	34.7sec	1.0648	1.1068	1.1457	1.4171	1.0648	1.1068	1.1457	1.4143	1.0872	1.1245	1.1748	11.2936	1.0274	1.0888	1.1255	1.1752	0.0147	0.0111	0.0147	1.2579
before	**Level 6**	1.2min	1.0426	1.0720	1.0988	1.2613	1.0426	1.0720	1.0987	1.2595	1.0594	1.0839	1.1157	6.1901	1.0172	1.0597	1.0839	1.1165	0.0107	0.0068	0.0095	0.6304
	Level 7	2.3min	1.0277	1.0467	1.0645	1.1643	1.0277	1.0467	1.0646	1.1633	1.0390	1.0546	1.0745	3.7079	1.0116	1.0396	1.0552	1.0746	0.0072	0.0044	0.0060	0.3287
	Level 8	4.6min	1.0183	1.0309	1.0426	1.1137	1.0183	1.0309	1.0426	1.1136	1.0257	1.0355	1.0491	2.6849	1.0081	1.0257	1.0356	1.0496	0.0046	0.0028	0.0039	0.2176
	Level 9	9.3min	1.0142	1.0241	1.0329	1.1141	1.0143	1.0241	1.0329	1.1127	1.0190	1.0277	1.0391	2.9256	1.0059	1.0191	1.0278	1.0392	0.0033	0.0021	0.0032	0.2867

Table A.42: EDU1 Other Results Table –Continued

EDU1 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	11.6sec	1.4679	1.5719	1.7334	2.1545	1.4677	1.5730	1.7332	2.1559	1.4927	1.6649	1.8388	2.6509	1.4372	1.4928	1.6807	1.9354	0.0218	0.0712	0.0708	0.2893
	Level 2	23.2sec	1.2396	1.3516	1.5118	1.9479	1.2393	1.3525	1.5119	1.9515	1.2586	1.4593	1.5417	2.4121	1.2128	1.2650	1.4836	1.7441	0.0206	0.0731	0.0260	0.2718
	Level 3	46.4sec	1.1342	1.2121	1.3069	1.5834	1.1341	1.2121	1.3070	1.5837	1.1452	1.2776	1.3420	1.7305	1.1216	1.1577	1.2791	1.4737	0.0088	0.0510	0.0226	0.0942
30	**Level 4**	1.5min	1.0768	1.1315	1.1839	1.3637	1.0768	1.1311	1.1840	1.3636	1.0895	1.1646	1.2094	1.4688	1.0580	1.0930	1.1670	1.3280	0.0116	0.0289	0.0161	0.0592
days	**Level 5**	3.1min	1.0453	1.0835	1.1227	1.2384	1.0451	1.0833	1.1228	1.2389	1.0573	1.1002	1.1460	1.2864	1.0300	1.0581	1.1082	1.1929	0.0098	0.0166	0.0141	0.0342
before	**Level 6**	6.2min	1.0286	1.0550	1.0849	1.1563	1.0286	1.0551	1.0849	1.1566	1.0379	1.0659	1.1007	1.1722	1.0178	1.0394	1.0773	1.1268	0.0072	0.0095	0.0103	0.0185
	Level 7	12.4min	1.0201	1.0400	1.0569	1.1062	1.0201	1.0399	1.0569	1.1061	1.0278	1.0493	1.0661	1.1200	1.0120	1.0283	1.0523	1.0936	0.0057	0.0069	0.0059	0.0097
	Level 8	24.8min	1.0154	1.0326	1.0425	1.0806	1.0154	1.0326	1.0424	1.0805	1.0218	1.0374	1.0485	1.0992	1.0089	1.0234	1.0378	1.0717	0.0046	0.0050	0.0046	0.0109
	Level 9	49.5min	1.0160	1.0349	1.0513	1.0794	1.0161	1.0349	1.0512	1.0796	1.0223	1.0376	1.0641	1.1071	1.0083	1.0317	1.0416	1.0667	0.0053	0.0022	0.0093	0.0160
	Level 1	5.5sec	1.4858	1.5770	1.6601	1.9610	1.4859	1.5770	1.6601	1.9587	1.5245	1.6173	1.6838	2.6509	1.4372	1.5508	1.6339	1.6884	0.0272	0.0235	0.0170	0.2764
	Level 2	11.1sec	1.2593	1.3599	1.4634	1.7321	1.2593	1.3602	1.4636	1.7308	1.3039	1.4185	1.5007	2.4121	1.2128	1.3080	1.4213	1.5129	0.0283	0.0427	0.0293	0.2750
	Level 3	22.2sec	1.1436	1.2053	1.2960	1.4723	1.1435	1.2052	1.2963	1.4722	1.1665	1.2650	1.3281	1.7305	1.1216	1.1714	1.2745	1.3343	0.0150	0.0309	0.0184	0.1269
60	**Level 4**	44.4sec	1.0834	1.1247	1.1834	1.3177	1.0835	1.1247	1.1834	1.3180	1.1019	1.1580	1.2094	1.4688	1.0580	1.1025	1.1646	1.2122	0.0123	0.0183	0.0166	0.0731
days	**Level 5**	1.5min	1.0512	1.0806	1.1237	1.2171	1.0511	1.0804	1.1239	1.2165	1.0648	1.0965	1.1460	1.2864	1.0300	1.0662	1.1002	1.1460	0.0107	0.0107	0.0142	0.0481
before	**Level 6**	3min	1.0323	1.0547	1.0849	1.1472	1.0323	1.0547	1.0849	1.1471	1.0400	1.0659	1.0965	1.1875	1.0178	1.0454	1.0660	1.1007	0.0068	0.0065	0.0101	0.0294
	Level 7	5.9min	1.0222	1.0385	1.0585	1.1010	1.0223	1.0385	1.0585	1.1010	1.0283	1.0486	1.0658	1.1334	1.0120	1.0321	1.0493	1.0661	0.0048	0.0048	0.0063	0.0197
	Level 8	11.8min	1.0170	1.0301	1.0435	1.0746	1.0170	1.0301	1.0435	1.0746	1.0229	1.0373	1.0496	1.0992	1.0089	1.0234	1.0374	1.0525	0.0039	0.0048	0.0047	0.0146
	Level 9	23.7min	1.0165	1.0300	1.0444	1.0718	1.0165	1.0300	1.0444	1.0717	1.0223	1.0348	1.0521	1.1071	1.0083	1.0235	1.0371	1.0555	0.0037	0.0044	0.0055	0.0158
	Level 1	3.6sec	1.4688	1.5565	1.6364	1.8921	1.4689	1.5566	1.6363	1.8914	1.5166	1.5845	1.6807	2.6509	1.4156	1.5182	1.5975	1.6838	0.0324	0.0194	0.0276	0.2500
	Level 2	7.1sec	1.2457	1.3180	1.4244	1.6835	1.2458	1.3179	1.4243	1.6855	1.2855	1.3450	1.4836	2.4121	1.1863	1.2869	1.3484	1.4882	0.0246	0.0199	0.0431	0.2520
	Level 3	14.2sec	1.1388	1.1888	1.2630	1.4668	1.1388	1.1889	1.2628	1.4678	1.1631	1.2137	1.3029	1.9388	1.1133	1.1665	1.2166	1.3079	0.0159	0.0135	0.0296	0.1743
3	**Level 4**	28.5sec	1.0832	1.1191	1.1673	1.3073	1.0833	1.1191	1.1673	1.3085	1.1004	1.1433	1.1872	1.5463	1.0580	1.1019	1.1486	1.1968	0.0116	0.0124	0.0132	0.0981
months	**Level 5**	56.9sec	1.0531	1.0790	1.1131	1.2060	1.0528	1.0791	1.1132	1.2058	1.0648	1.0945	1.1331	1.2864	1.0300	1.0655	1.0947	1.1423	0.0103	0.0088	0.0108	0.0533
before	**Level 6**	1.9min	1.0339	1.0535	1.0789	1.1392	1.0339	1.0535	1.0789	1.1391	1.0425	1.0625	1.0954	1.1875	1.0178	1.0454	1.0659	1.0962	0.0069	0.0050	0.0089	0.0314
	Level 7	3.8min	1.0233	1.0371	1.0551	1.0963	1.0233	1.0371	1.0551	1.0963	1.0291	1.0427	1.0655	1.1334	1.0120	1.0321	1.0484	1.0658	0.0047	0.0036	0.0058	0.0212
	Level 8	7.6min	1.0174	1.0283	1.0406	1.0720	1.0174	1.0282	1.0406	1.0720	1.0229	1.0340	1.0485	1.1038	1.0089	1.0234	1.0361	1.0492	0.0036	0.0038	0.0041	0.0171
	Level 9	15.2min	1.0160	1.0270	1.0389	1.0702	1.0160	1.0270	1.0389	1.0703	1.0199	1.0327	1.0504	1.1106	1.0083	1.0200	1.0331	1.0520	0.0031	0.0043	0.0050	0.0184
	Level 1	2.2sec	1.4954	1.5769	1.6521	1.8836	1.4953	1.5769	1.6520	1.8847	1.5436	1.6121	1.6944	5.0000	1.4156	1.5448	1.6123	1.6953	0.0344	0.0217	0.0239	0.4429
	Level 2	4.3sec	1.2688	1.3509	1.4423	1.8678	1.2688	1.3508	1.4423	1.8714	1.3181	1.3987	1.4907	17.0000	1.1863	1.3187	1.3994	1.4918	0.0325	0.0227	0.0274	1.9324
	Level 3	8.7sec	1.1564	1.2251	1.2931	2.0787	1.1564	1.2252	1.2931	2.0367	1.1929	1.2573	1.3333	38.1965	1.0932	1.1931	1.2582	1.3343	0.0263	0.0186	0.0207	4.5947
1	**Level 4**	17.3sec	1.0956	1.1479	1.1944	2.5079	1.0957	1.1479	1.1944	2.5523	1.1246	1.1679	1.2222	79.4511	1.0462	1.1249	1.1688	1.2242	0.0187	0.0132	0.0165	9.7658
Year	**Level 5**	34.6sec	1.0614	1.0982	1.1327	1.9686	1.0614	1.0982	1.1327	2.0125	1.0810	1.1125	1.1547	51.1641	1.0253	1.0823	1.1138	1.1557	0.0137	0.0095	0.0135	6.2420
before	**Level 6**	1.2min	1.0402	1.0661	1.0916	1.6854	1.0403	1.0661	1.0915	1.6871	1.0538	1.0769	1.1067	34.6829	1.0153	1.0538	1.0773	1.1073	0.0100	0.0065	0.0091	4.1905
	Level 7	2.3min	1.0271	1.0450	1.0626	1.4159	1.0271	1.0450	1.0627	1.4142	1.0364	1.0529	1.0740	20.3453	1.0104	1.0365	1.0530	1.0741	0.0068	0.0047	0.0060	2.4044
	Level 8	4.6min	1.0196	1.0325	1.0453	1.2733	1.0196	1.0325	1.0453	1.2793	1.0265	1.0379	1.0525	13.6225	1.0080	1.0267	1.0381	1.0532	0.0048	0.0035	0.0045	1.5677
	Level 9	9.2min	1.0174	1.0287	1.0404	1.2801	1.0175	1.0287	1.0404	1.2820	1.0236	1.0339	1.0492	14.1713	1.0074	1.0236	1.0340	1.0494	0.0042	0.0031	0.0043	1.6370

Table A.42: EDU1 Other Results Table –Continued

EDU1	Bid Ask Covariance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	11.4sec	1.4636	1.5777	1.7332	2.1406	1.4632	1.5757	1.7341	2.1388	1.4913	1.6583	1.8539	2.5635	1.4385	1.5101	1.6686	1.9280	0.0190	0.0652	0.0811	0.2554
	Level 2	22.9sec	1.2414	1.3512	1.5159	1.9422	1.2417	1.3514	1.5161	1.9425	1.2663	1.4693	1.5549	2.4749	1.2118	1.2698	1.4901	1.6686	0.0237	0.0746	0.0259	0.3142
	Level 3	45.8sec	1.1356	1.2088	1.3082	1.5743	1.1357	1.2084	1.3086	1.5735	1.1484	1.2731	1.3394	1.7488	1.1228	1.1590	1.2856	1.4685	0.0108	0.0498	0.0215	0.1136
30	**Level 4**	1.5min	1.0763	1.1236	1.1809	1.3448	1.0762	1.1241	1.1808	1.3423	1.0912	1.1523	1.2069	1.4767	1.0584	1.0923	1.1619	1.2940	0.0117	0.0254	0.0191	0.0758
days	**Level 5**	3.1min	1.0427	1.0750	1.1134	1.2156	1.0425	1.0749	1.1133	1.2162	1.0526	1.0879	1.1276	1.2883	1.0293	1.0539	1.0977	1.1756	0.0083	0.0133	0.0122	0.0425
before	**Level 6**	6.1min	1.0247	1.0458	1.0723	1.1314	1.0246	1.0457	1.0724	1.1318	1.0318	1.0532	1.0789	1.1648	1.0165	1.0336	1.0633	1.1073	0.0055	0.0070	0.0059	0.0208
	Level 7	12.2min	1.0149	1.0291	1.0435	1.0760	1.0149	1.0291	1.0435	1.0761	1.0198	1.0335	1.0496	1.0925	1.0098	1.0215	1.0339	1.0682	0.0037	0.0040	0.0059	0.0098
	Level 8	24.4min	1.0089	1.0187	1.0259	1.0453	1.0090	1.0187	1.0259	1.0453	1.0117	1.0223	1.0296	1.0504	1.0058	1.0138	1.0226	1.0406	0.0022	0.0028	0.0034	0.0038
	Level 9	48.8min	1.0060	1.0125	1.0182	1.0319	1.0060	1.0125	1.0182	1.0319	1.0078	1.0137	1.0208	1.0377	1.0040	1.0096	1.0161	1.0277	0.0014	0.0015	0.0020	0.0039
	Level 1	5.5sec	1.4857	1.5760	1.6517	1.9497	1.4856	1.5758	1.6515	1.9508	1.5351	1.6224	1.6687	2.5635	1.4385	1.5500	1.6255	1.6928	0.0302	0.0219	0.0139	0.2536
	Level 2	11sec	1.2598	1.3576	1.4588	1.7220	1.2597	1.3576	1.4589	1.7210	1.3047	1.4101	1.4952	2.4749	1.2118	1.3076	1.4111	1.4967	0.0283	0.0426	0.0318	0.2925
	Level 3	22sec	1.1430	1.2014	1.2949	1.4617	1.1432	1.2016	1.2951	1.4618	1.1635	1.2566	1.3183	1.7488	1.1213	1.1662	1.2692	1.3270	0.0147	0.0304	0.0181	0.1328
60	**Level 4**	44sec	1.0822	1.1191	1.1771	1.3022	1.0822	1.1192	1.1771	1.3019	1.0987	1.1520	1.2069	1.4767	1.0584	1.0993	1.1523	1.2070	0.0117	0.0169	0.0183	0.0741
days	**Level 5**	1.5min	1.0485	1.0733	1.1118	1.1963	1.0484	1.0734	1.1116	1.1968	1.0607	1.0853	1.1276	1.2883	1.0293	1.0631	1.0879	1.1376	0.0096	0.0086	0.0132	0.0449
before	**Level 6**	2.9min	1.0282	1.0463	1.0709	1.1237	1.0283	1.0463	1.0710	1.1236	1.0358	1.0532	1.0810	1.1648	1.0165	1.0408	1.0571	1.0818	0.0057	0.0043	0.0082	0.0255
	Level 7	5.9min	1.0168	1.0287	1.0433	1.0737	1.0169	1.0287	1.0432	1.0736	1.0215	1.0335	1.0496	1.0934	1.0098	1.0248	1.0339	1.0506	0.0034	0.0027	0.0054	0.0144
	Level 8	11.7min	1.0100	1.0178	1.0259	1.0432	1.0100	1.0178	1.0259	1.0433	1.0131	1.0209	1.0307	1.0590	1.0058	1.0138	1.0223	1.0310	0.0019	0.0024	0.0033	0.0085
	Level 9	23.5min	1.0064	1.0116	1.0167	1.0280	1.0063	1.0116	1.0168	1.0279	1.0078	1.0137	1.0197	1.0377	1.0040	1.0087	1.0138	1.0199	0.0010	0.0018	0.0018	0.0063
	Level 1	3.5sec	1.4688	1.5555	1.6291	1.8849	1.4688	1.5555	1.6292	1.8840	1.5148	1.5770	1.6625	2.5635	1.4161	1.5154	1.5821	1.6686	0.0305	0.0178	0.0244	0.2337
	Level 2	7.1sec	1.2456	1.3144	1.4212	1.6746	1.2455	1.3144	1.4211	1.6746	1.2828	1.3423	1.4880	2.4749	1.1886	1.2872	1.3427	1.4896	0.0242	0.0174	0.0457	0.2604
	Level 3	14.2sec	1.1378	1.1825	1.2599	1.4672	1.1380	1.1826	1.2598	1.4681	1.1607	1.2079	1.3076	2.0673	1.1110	1.1635	1.2081	1.3135	0.0161	0.0130	0.0320	0.2018
3	**Level 4**	28.4sec	1.0812	1.1130	1.1609	1.2981	1.0812	1.1129	1.1609	1.2986	1.0964	1.1381	1.1881	1.6090	1.0584	1.0979	1.1402	1.1914	0.0109	0.0118	0.0152	0.1108
months	**Level 5**	56.7sec	1.0496	1.0724	1.1042	1.1885	1.0496	1.0724	1.1042	1.1887	1.0605	1.0848	1.1221	1.3038	1.0293	1.0607	1.0853	1.1265	0.0091	0.0076	0.0113	0.0550
before	**Level 6**	1.9min	1.0298	1.0458	1.0672	1.1173	1.0298	1.0458	1.0672	1.1174	1.0380	1.0532	1.0801	1.1648	1.0165	1.0394	1.0539	1.0810	0.0057	0.0042	0.0073	0.0266
	Level 7	3.8min	1.0178	1.0281	1.0412	1.0700	1.0178	1.0281	1.0412	1.0699	1.0229	1.0335	1.0492	1.0934	1.0098	1.0231	1.0339	1.0496	0.0034	0.0029	0.0047	0.0143
	Level 8	7.6min	1.0103	1.0170	1.0245	1.0416	1.0103	1.0170	1.0245	1.0415	1.0131	1.0200	1.0292	1.0590	1.0058	1.0138	1.0201	1.0296	0.0018	0.0021	0.0029	0.0085
	Level 9	15.1min	1.0063	1.0104	1.0157	1.0268	1.0063	1.0104	1.0158	1.0269	1.0078	1.0127	1.0180	1.0377	1.0040	1.0078	1.0130	1.0180	0.0009	0.0016	0.0016	0.0062
	Level 1	2.2sec	1.4912	1.5716	1.6471	1.8773	1.4913	1.5715	1.6472	1.8781	1.5394	1.6064	1.6928	5.0000	1.4161	1.5420	1.6067	1.6934	0.0336	0.0189	0.0252	0.4413
	Level 2	4.3sec	1.2641	1.3401	1.4313	1.8642	1.2640	1.3403	1.4311	1.8587	1.3082	1.3844	1.4879	17.0000	1.1886	1.3121	1.3851	1.4880	0.0314	0.0193	0.0290	1.9339
	Level 3	8.7sec	1.1508	1.2133	1.2811	1.9751	1.1508	1.2133	1.2813	1.9442	1.1850	1.2423	1.3183	33.5061	1.0897	1.1856	1.2428	1.3196	0.0247	0.0170	0.0207	4.0115
1	**Level 4**	17.3sec	1.0897	1.1366	1.1792	1.7220	1.0898	1.1367	1.1792	1.7280	1.1159	1.1555	1.2069	28.3718	1.0417	1.1162	1.1565	1.2070	0.0174	0.0125	0.0147	3.3859
Year	**Level 5**	34.7sec	1.0552	1.0862	1.1158	1.4495	1.0553	1.0862	1.1158	1.4489	1.0708	1.1001	1.1372	16.9065	1.0206	1.0709	1.1003	1.1376	0.0124	0.0090	0.0114	1.9645
before	**Level 6**	1.2min	1.0335	1.0541	1.0733	1.2516	1.0336	1.0541	1.0733	1.2527	1.0441	1.0626	1.0867	8.7856	1.0109	1.0449	1.0629	1.0871	0.0081	0.0056	0.0080	0.9587
	Level 7	2.3min	1.0199	1.0321	1.0442	1.1423	1.0199	1.0321	1.0442	1.1401	1.0266	1.0370	1.0516	4.8575	1.0061	1.0268	1.0374	1.0518	0.0050	0.0030	0.0043	0.4738
	Level 8	4.6min	1.0116	1.0189	1.0263	1.0743	1.0116	1.0189	1.0263	1.0766	1.0155	1.0223	1.0306	2.8817	1.0037	1.0160	1.0223	1.0307	0.0029	0.0017	0.0026	0.2302
	Level 9	9.3min	1.0073	1.0121	1.0167	1.0537	1.0072	1.0121	1.0167	1.0546	1.0098	1.0140	1.0196	2.5054	1.0021	1.0098	1.0144	1.0197	0.0018	0.0011	0.0014	0.1847

Table A.42: EDU1 Other Results Table –Continued

EDU1 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	11.4sec	0.4680	0.5814	0.6442	0.6817	0.4698	0.5815	0.6440	0.6815	0.5167	0.6006	0.6699	0.6958	0.3772	0.5438	0.6044	0.6699	0.0556	0.0226	0.0249	0.0102
	Level 2	22.9sec	0.5184	0.6655	0.7517	0.8070	0.5195	0.6655	0.7524	0.8071	0.5734	0.6853	0.7905	0.8246	0.4146	0.6486	0.7050	0.7945	0.0641	0.0140	0.0316	0.0135
	Level 3	45.8sec	0.6336	0.7685	0.8349	0.8819	0.6332	0.7682	0.8349	0.8818	0.6785	0.7827	0.8638	0.8916	0.5779	0.7452	0.7846	0.8732	0.0366	0.0137	0.0298	0.0069
30	**Level 4**	1.5min	0.7346	0.8472	0.8898	0.9288	0.7344	0.8470	0.8897	0.9287	0.7530	0.8587	0.9149	0.9452	0.6808	0.8269	0.8636	0.9179	0.0302	0.0117	0.0211	0.0101
days	**Level 5**	3.1min	0.8077	0.8941	0.9262	0.9570	0.8076	0.8938	0.9261	0.9569	0.8383	0.9089	0.9451	0.9709	0.7774	0.8726	0.9120	0.9458	0.0223	0.0123	0.0138	0.0090
before	**Level 6**	6.1min	0.8647	0.9246	0.9496	0.9722	0.8648	0.9245	0.9497	0.9722	0.8874	0.9382	0.9621	0.9825	0.8531	0.9085	0.9412	0.9635	0.0140	0.0103	0.0081	0.0068
	Level 7	12.2min	0.9042	0.9474	0.9634	0.9803	0.9042	0.9473	0.9634	0.9803	0.9144	0.9530	0.9724	0.9882	0.8928	0.9380	0.9591	0.9730	0.0079	0.0055	0.0053	0.0055
	Level 8	24.4min	0.9255	0.9601	0.9694	0.9848	0.9255	0.9601	0.9693	0.9848	0.9331	0.9639	0.9771	0.9912	0.9098	0.9538	0.9651	0.9787	0.0092	0.0042	0.0046	0.0045
	Level 9	48.8min	0.9266	0.9533	0.9668	0.9843	0.9264	0.9534	0.9668	0.9842	0.9375	0.9638	0.9693	0.9918	0.9033	0.9397	0.9642	0.9782	0.0135	0.0091	0.0018	0.0051
	Level 1	5.5sec	0.5180	0.6038	0.6358	0.6734	0.5186	0.6039	0.6358	0.6732	0.5923	0.6183	0.6448	0.6958	0.3772	0.5939	0.6202	0.6559	0.0637	0.0076	0.0082	0.0124
	Level 2	11sec	0.5890	0.6856	0.7391	0.7945	0.5891	0.6855	0.7389	0.7945	0.6610	0.7050	0.7646	0.8246	0.4146	0.6664	0.7059	0.7669	0.0794	0.0146	0.0216	0.0179
	Level 3	22sec	0.6849	0.7733	0.8342	0.8747	0.6837	0.7733	0.8342	0.8747	0.7494	0.7905	0.8537	0.8916	0.5779	0.7530	0.7984	0.8573	0.0563	0.0118	0.0171	0.0115
60	**Level 4**	44sec	0.7608	0.8467	0.8917	0.9230	0.7608	0.8468	0.8919	0.9230	0.8250	0.8636	0.9070	0.9452	0.6808	0.8269	0.8693	0.9075	0.0419	0.0125	0.0121	0.0106
days	**Level 5**	1.5min	0.8232	0.8918	0.9271	0.9515	0.8232	0.8919	0.9270	0.9514	0.8726	0.9120	0.9379	0.9709	0.7774	0.8726	0.9135	0.9391	0.0327	0.0126	0.0083	0.0097
before	**Level 6**	2.9min	0.8726	0.9234	0.9492	0.9688	0.8723	0.9233	0.9492	0.9688	0.9085	0.9382	0.9565	0.9825	0.8421	0.9120	0.9412	0.9615	0.0225	0.0095	0.0050	0.0064
	Level 7	5.9min	0.9086	0.9455	0.9639	0.9782	0.9086	0.9455	0.9639	0.9782	0.9380	0.9537	0.9689	0.9882	0.8823	0.9382	0.9591	0.9724	0.0163	0.0060	0.0034	0.0046
	Level 8	11.7min	0.9306	0.9589	0.9715	0.9833	0.9307	0.9588	0.9715	0.9833	0.9501	0.9641	0.9771	0.9912	0.9098	0.9527	0.9651	0.9776	0.0126	0.0044	0.0041	0.0038
	Level 9	23.5min	0.9333	0.9582	0.9713	0.9838	0.9332	0.9583	0.9713	0.9838	0.9474	0.9663	0.9770	0.9918	0.9033	0.9505	0.9666	0.9782	0.0136	0.0055	0.0041	0.0036
	Level 1	3.5sec	0.5363	0.6126	0.6433	0.6810	0.5360	0.6124	0.6432	0.6811	0.5939	0.6311	0.6587	0.7064	0.3772	0.5950	0.6322	0.6594	0.0592	0.0111	0.0078	0.0152
	Level 2	7.1sec	0.6041	0.7050	0.7598	0.8030	0.6038	0.7051	0.7599	0.8030	0.6719	0.7435	0.7771	0.8429	0.4146	0.6740	0.7436	0.7779	0.0757	0.0232	0.0111	0.0161
	Level 3	14.2sec	0.6897	0.7944	0.8422	0.8782	0.6892	0.7942	0.8423	0.8783	0.7646	0.8239	0.8573	0.8982	0.5158	0.7675	0.8291	0.8598	0.0718	0.0197	0.0088	0.0123
3	**Level 4**	28.4sec	0.7679	0.8578	0.8947	0.9233	0.7681	0.8578	0.8948	0.9232	0.8356	0.8747	0.9075	0.9452	0.6467	0.8423	0.8776	0.9087	0.0545	0.0104	0.0089	0.0099
months	**Level 5**	56.7sec	0.8309	0.8993	0.9276	0.9500	0.8308	0.8993	0.9276	0.9499	0.8755	0.9136	0.9385	0.9709	0.7774	0.8826	0.9150	0.9391	0.0365	0.0092	0.0070	0.0094
before	**Level 6**	1.9min	0.8786	0.9277	0.9498	0.9673	0.8785	0.9278	0.9497	0.9672	0.9122	0.9412	0.9565	0.9825	0.8421	0.9129	0.9434	0.9592	0.0243	0.0082	0.0041	0.0064
	Level 7	3.8min	0.9123	0.9485	0.9646	0.9772	0.9125	0.9485	0.9646	0.9773	0.9382	0.9591	0.9689	0.9882	0.8823	0.9385	0.9595	0.9717	0.0177	0.0057	0.0032	0.0045
	Level 8	7.6min	0.9330	0.9613	0.9729	0.9829	0.9330	0.9613	0.9729	0.9829	0.9531	0.9671	0.9771	0.9912	0.9060	0.9538	0.9672	0.9776	0.0147	0.0039	0.0034	0.0035
	Level 9	15.1min	0.9346	0.9630	0.9741	0.9842	0.9346	0.9629	0.9741	0.9842	0.9506	0.9684	0.9804	0.9918	0.9004	0.9520	0.9686	0.9805	0.0158	0.0047	0.0040	0.0030
	Level 1	2.2sec	0.5450	0.6057	0.6345	0.6694	0.5449	0.6057	0.6345	0.6695	0.5902	0.6202	0.6479	0.7064	0.2000	0.5915	0.6203	0.6480	0.0622	0.0086	0.0088	0.0155
	Level 2	4.3sec	0.6122	0.6939	0.7407	0.7892	0.6124	0.6939	0.7408	0.7891	0.6708	0.7146	0.7587	0.8429	0.0588	0.6714	0.7149	0.7588	0.0904	0.0130	0.0125	0.0202
	Level 3	8.7sec	0.6805	0.7737	0.8167	0.8657	0.6811	0.7739	0.8167	0.8656	0.7500	0.7948	0.8383	0.9148	0.0262	0.7526	0.7953	0.8388	0.1028	0.0121	0.0126	0.0197
1	**Level 4**	17.3sec	0.7462	0.8377	0.8716	0.9134	0.7461	0.8377	0.8715	0.9133	0.8182	0.8555	0.8892	0.9559	0.0126	0.8182	0.8563	0.8901	0.1095	0.0114	0.0102	0.0155
Year	**Level 5**	34.7sec	0.8038	0.8832	0.9108	0.9426	0.8033	0.8832	0.9108	0.9426	0.8660	0.8978	0.9251	0.9753	0.0195	0.8666	0.8989	0.9253	0.1099	0.0104	0.0080	0.0122
before	**Level 6**	1.2min	0.8489	0.9164	0.9382	0.9615	0.8499	0.9164	0.9382	0.9616	0.9036	0.9283	0.9490	0.9850	0.0288	0.9039	0.9286	0.9494	0.1123	0.0076	0.0058	0.0092
	Level 7	2.3min	0.8867	0.9412	0.9571	0.9738	0.8867	0.9412	0.9570	0.9738	0.9311	0.9497	0.9648	0.9897	0.0492	0.9312	0.9497	0.9649	0.1109	0.0052	0.0043	0.0064
	Level 8	4.6min	0.9109	0.9568	0.9686	0.9809	0.9111	0.9568	0.9686	0.9809	0.9501	0.9633	0.9742	0.9921	0.0734	0.9504	0.9635	0.9748	0.1084	0.0041	0.0033	0.0046
	Level 9	9.3min	0.9154	0.9613	0.9722	0.9830	0.9159	0.9613	0.9722	0.9830	0.9531	0.9671	0.9770	0.9926	0.0706	0.9533	0.9672	0.9770	0.1089	0.0038	0.0030	0.0040

Table A.43: EDU2 Other Results Table

EDU2 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.8sec	1.4484	1.5207	1.6828	2.3801	1.4489	1.5204	1.6845	2.3809	1.4892	1.5575	1.7479	2.9962	1.3990	1.5009	1.5734	1.7864	0.0387	0.0252	0.0756	0.5102
	Level 2	27.5sec	1.2384	1.3752	1.5647	2.3003	1.2385	1.3762	1.5644	2.3071	1.2645	1.4355	1.6692	3.1908	1.2173	1.3458	1.4798	1.7009	0.0206	0.0419	0.0967	0.6667
	Level 3	55sec	1.1582	1.2607	1.3916	2.0543	1.1582	1.2608	1.3928	2.0547	1.1929	1.2889	1.4729	2.9169	1.1349	1.2058	1.3081	1.5547	0.0264	0.0373	0.0700	0.6410
30	**Level 4**	1.8min	1.1088	1.1844	1.2697	1.6850	1.1091	1.1846	1.2703	1.6821	1.1350	1.2036	1.3127	2.1274	1.0793	1.1679	1.2335	1.3538	0.0206	0.0152	0.0370	0.3727
days	**Level 5**	3.7min	1.0779	1.1266	1.1878	1.4409	1.0783	1.1266	1.1877	1.4410	1.1060	1.1410	1.2259	1.6222	1.0537	1.1134	1.1517	1.2411	0.0222	0.0142	0.0278	0.2052
before	**Level 6**	7.3min	1.0544	1.0881	1.1386	1.3002	1.0546	1.0879	1.1380	1.3004	1.0710	1.1034	1.1642	1.4180	1.0443	1.0781	1.1093	1.1769	0.0127	0.0112	0.0246	0.1183
	Level 7	14.7min	1.0393	1.0580	1.0988	1.2371	1.0393	1.0580	1.0988	1.2378	1.0473	1.0666	1.1290	1.3454	1.0299	1.0481	1.0796	1.1345	0.0085	0.0082	0.0198	0.0888
	Level 8	29.4min	1.0272	1.0467	1.0702	1.2031	1.0272	1.0467	1.0703	1.2040	1.0358	1.0521	1.1005	1.2797	1.0203	1.0380	1.0588	1.1113	0.0066	0.0062	0.0178	0.0699
	Level 9	58.7min	1.0218	1.0404	1.0610	1.2297	1.0219	1.0402	1.0608	1.2293	1.0299	1.0439	1.0819	1.3019	1.0173	1.0318	1.0490	1.1266	0.0057	0.0056	0.0126	0.0777
	Level 1	6.5sec	1.4673	1.6018	1.7266	2.1158	1.4673	1.6021	1.7261	2.1194	1.5118	1.6423	1.7766	2.9962	1.3990	1.5430	1.6457	1.7864	0.0390	0.0351	0.0451	0.3985
	Level 2	13.1sec	1.2827	1.4020	1.5474	2.0160	1.2823	1.4022	1.5470	2.0152	1.3475	1.4798	1.6692	3.1908	1.2173	1.3569	1.4832	1.6893	0.0519	0.0490	0.0718	0.4720
	Level 3	26.1sec	1.1817	1.2755	1.3906	1.8054	1.1820	1.2754	1.3905	1.8083	1.2368	1.3081	1.4426	2.9169	1.1349	1.2472	1.3349	1.4729	0.0332	0.0158	0.0394	0.4616
60	**Level 4**	52.2sec	1.1234	1.1895	1.2734	1.5263	1.1231	1.1896	1.2738	1.5279	1.1584	1.2292	1.3127	2.1274	1.0793	1.1679	1.2335	1.3190	0.0245	0.0183	0.0318	0.2843
days	**Level 5**	1.7min	1.0835	1.1292	1.1793	1.3414	1.0835	1.1292	1.1796	1.3406	1.1050	1.1517	1.2019	1.6222	1.0537	1.1060	1.1537	1.2225	0.0176	0.0150	0.0188	0.1636
before	**Level 6**	3.5min	1.0549	1.0842	1.1233	1.2263	1.0549	1.0844	1.1233	1.2267	1.0680	1.1009	1.1425	1.4180	1.0413	1.0710	1.1011	1.1430	0.0101	0.0100	0.0147	0.1049
	Level 7	7min	1.0359	1.0534	1.0798	1.1709	1.0358	1.0535	1.0798	1.1698	1.0447	1.0625	1.0881	1.3454	1.0229	1.0450	1.0666	1.0905	0.0072	0.0067	0.0076	0.0864
	Level 8	13.9min	1.0227	1.0397	1.0539	1.1383	1.0226	1.0397	1.0539	1.1381	1.0275	1.0471	1.0590	1.2797	1.0142	1.0324	1.0483	1.0609	0.0040	0.0046	0.0044	0.0788
	Level 9	27.8min	1.0181	1.0340	1.0458	1.1452	1.0181	1.0339	1.0459	1.1469	1.0221	1.0400	1.0544	1.3019	1.0101	1.0260	1.0412	1.0568	0.0034	0.0049	0.0046	0.0975
	Level 1	4.3sec	1.4888	1.6029	1.7044	2.1042	1.4891	1.6031	1.7045	2.1038	1.5551	1.6361	1.7542	2.9962	1.3990	1.5575	1.6397	1.7688	0.0448	0.0246	0.0396	0.3721
	Level 2	8.5sec	1.2899	1.3919	1.5130	2.0113	1.2900	1.3918	1.5133	2.0076	1.3569	1.4437	1.6251	3.1908	1.2151	1.3576	1.4507	1.6686	0.0516	0.0272	0.0458	0.4223
	Level 3	17.1sec	1.1798	1.2634	1.3620	1.7800	1.1798	1.2634	1.3623	1.7783	1.2320	1.2835	1.4331	2.9169	1.0846	1.2368	1.2889	1.4381	0.0398	0.0152	0.0441	0.3969
3	**Level 4**	34.1sec	1.1161	1.1752	1.2514	1.5135	1.1160	1.1752	1.2516	1.5135	1.1569	1.1978	1.3076	2.1274	1.0359	1.1573	1.2036	1.3103	0.0301	0.0136	0.0324	0.2448
months	**Level 5**	1.1min	1.0762	1.1171	1.1691	1.3353	1.0765	1.1170	1.1691	1.3355	1.0990	1.1406	1.1985	1.6222	1.0202	1.1007	1.1410	1.1992	0.0204	0.0135	0.0186	0.1460
before	**Level 6**	2.3min	1.0497	1.0759	1.1145	1.2266	1.0498	1.0760	1.1145	1.2262	1.0641	1.0903	1.1348	1.4180	1.0117	1.0657	1.0927	1.1372	0.0127	0.0075	0.0136	0.0956
	Level 7	4.6min	1.0318	1.0486	1.0729	1.1619	1.0317	1.0486	1.0730	1.1615	1.0419	1.0595	1.0867	1.3454	1.0065	1.0421	1.0597	1.0877	0.0086	0.0055	0.0092	0.0772
	Level 8	9.1min	1.0202	1.0332	1.0492	1.1272	1.0202	1.0332	1.0492	1.1271	1.0250	1.0397	1.0578	1.2797	1.0041	1.0255	1.0402	1.0588	0.0055	0.0049	0.0060	0.0708
	Level 9	18.2min	1.0155	1.0259	1.0412	1.1323	1.0156	1.0259	1.0412	1.1318	1.0189	1.0317	1.0490	1.3019	1.0027	1.0208	1.0318	1.0529	0.0044	0.0036	0.0042	0.0892
	Level 1	2.9sec	1.4773	1.5690	1.6312	1.8472	1.4771	1.5689	1.6312	1.8469	1.5318	1.5977	1.6854	2.9962	1.3704	1.5319	1.5982	1.6862	0.0397	0.0204	0.0243	0.2399
	Level 2	5.9sec	1.2606	1.3487	1.4161	1.6629	1.2607	1.3487	1.4161	1.6641	1.3128	1.3788	1.4657	3.1908	1.1556	1.3138	1.3793	1.4725	0.0382	0.0197	0.0259	0.2843
	Level 3	11.7sec	1.1543	1.2220	1.2824	1.4819	1.1542	1.2221	1.2825	1.4833	1.1900	1.2518	1.3265	2.9169	1.0764	1.1921	1.2525	1.3274	0.0272	0.0196	0.0187	0.2555
1	**Level 4**	23.4sec	1.0944	1.1421	1.1909	1.3317	1.0944	1.1422	1.1910	1.3323	1.1190	1.1655	1.2223	2.1274	1.0359	1.1191	1.1658	1.2242	0.0186	0.0140	0.0151	0.1587
Year	**Level 5**	46.8sec	1.0591	1.0925	1.1281	1.2206	1.0590	1.0925	1.1281	1.2210	1.0766	1.1082	1.1505	1.6222	1.0202	1.0769	1.1084	1.1506	0.0126	0.0094	0.0119	0.1003
before	**Level 6**	1.6min	1.0368	1.0590	1.0832	1.1464	1.0368	1.0590	1.0831	1.1462	1.0473	1.0687	1.0960	1.4180	1.0117	1.0482	1.0697	1.0965	0.0082	0.0060	0.0076	0.0691
	Level 7	3.1min	1.0228	1.0370	1.0525	1.0977	1.0228	1.0371	1.0525	1.0976	1.0301	1.0425	1.0617	1.3454	1.0065	1.0303	1.0441	1.0617	0.0053	0.0038	0.0052	0.0534
	Level 8	6.2min	1.0146	1.0238	1.0339	1.0696	1.0146	1.0238	1.0339	1.0695	1.0195	1.0280	1.0409	1.2797	1.0041	1.0197	1.0280	1.0409	0.0035	0.0024	0.0037	0.0473
	Level 9	12.5min	1.0110	1.0182	1.0258	1.0625	1.0110	1.0182	1.0259	1.0624	1.0150	1.0212	1.0321	1.3019	1.0027	1.0151	1.0213	1.0321	0.0028	0.0018	0.0033	0.0576

Table A.43: EDU2 Other Results Table –Continued

EDU2 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.3sec	1.4475	1.5224	1.7223	2.4806	1.4469	1.5229	1.7218	2.4864	1.4988	1.5584	1.9368	3.1178	1.3422	1.5103	1.5766	1.9505	0.0644	0.0237	0.1338	0.4970
	Level 2	26.6sec	1.2390	1.4065	1.6239	2.5047	1.2399	1.4069	1.6232	2.5140	1.2634	1.4575	1.7967	3.5934	1.1581	1.3700	1.4804	1.8618	0.0458	0.0437	0.1325	0.7860
	Level 3	53.3sec	1.1613	1.2768	1.4245	2.2332	1.1610	1.2766	1.4249	2.2281	1.2020	1.3127	1.4738	3.3330	1.0982	1.2174	1.3690	1.6160	0.0407	0.0413	0.0525	0.7917
30	**Level 4**	1.8min	1.1116	1.1934	1.2854	1.7822	1.1113	1.1937	1.2847	1.7841	1.1397	1.2318	1.3355	2.3710	1.0809	1.1669	1.2398	1.3458	0.0213	0.0316	0.0401	0.4659
days	**Level 5**	3.6min	1.0797	1.1268	1.2014	1.5234	1.0795	1.1270	1.2014	1.5186	1.1006	1.1575	1.2162	1.7666	1.0570	1.1038	1.1854	1.2456	0.0182	0.0223	0.0128	0.2548
before	**Level 6**	7.1min	1.0559	1.0841	1.1460	1.3627	1.0560	1.0841	1.1458	1.3644	1.0721	1.0920	1.1634	1.5403	1.0413	1.0789	1.1296	1.1878	0.0144	0.0060	0.0154	0.1612
	Level 7	14.2min	1.0409	1.0601	1.1073	1.3103	1.0410	1.0600	1.1073	1.3096	1.0499	1.0765	1.1447	1.4891	1.0319	1.0541	1.0888	1.1681	0.0085	0.0110	0.0245	0.1349
	Level 8	28.4min	1.0291	1.0529	1.0866	1.3057	1.0291	1.0529	1.0872	1.3025	1.0367	1.0676	1.1244	1.4634	1.0224	1.0447	1.0694	1.1786	0.0064	0.0103	0.0234	0.1185
	Level 9	56.8min	1.0267	1.0597	1.0996	1.3666	1.0267	1.0596	1.0996	1.3649	1.0435	1.0676	1.1162	1.4853	1.0185	1.0462	1.0797	1.2362	0.0100	0.0094	0.0160	0.1106
	Level 1	6.1sec	1.4709	1.5982	1.7377	2.1507	1.4711	1.5980	1.7378	2.1552	1.5121	1.6464	1.8005	3.1178	1.3422	1.5584	1.6644	1.8153	0.0520	0.0334	0.0489	0.4122
	Level 2	12.2sec	1.2807	1.3887	1.5668	2.0836	1.2814	1.3884	1.5668	2.0854	1.3457	1.4575	1.6798	3.5934	1.1581	1.3479	1.4804	1.6877	0.0576	0.0394	0.0807	0.5926
	Level 3	24.5sec	1.1771	1.2691	1.3896	1.8308	1.1770	1.2692	1.3898	1.8320	1.2124	1.3127	1.4736	3.3330	1.0982	1.2174	1.3252	1.4738	0.0346	0.0286	0.0558	0.5813
60	**Level 4**	48.9sec	1.1130	1.1846	1.2640	1.5351	1.1130	1.1847	1.2641	1.5359	1.1360	1.2318	1.3076	2.3710	1.0809	1.1397	1.2375	1.3145	0.0167	0.0260	0.0268	0.3502
days	**Level 5**	1.6min	1.0761	1.1216	1.1778	1.3561	1.0760	1.1218	1.1778	1.3526	1.0959	1.1575	1.1946	1.7666	1.0570	1.1006	1.1595	1.2040	0.0124	0.0157	0.0143	0.2099
before	**Level 6**	3.3min	1.0527	1.0800	1.1132	1.2486	1.0526	1.0801	1.1130	1.2481	1.0708	1.0920	1.1308	1.5403	1.0379	1.0710	1.0944	1.1318	0.0113	0.0074	0.0126	0.1396
	Level 7	6.5min	1.0348	1.0535	1.0770	1.2076	1.0350	1.0535	1.0770	1.2067	1.0438	1.0629	1.0889	1.4891	1.0201	1.0441	1.0638	1.0941	0.0075	0.0061	0.0090	0.1219
	Level 8	13min	1.0242	1.0419	1.0624	1.2032	1.0242	1.0419	1.0622	1.2033	1.0322	1.0501	1.0761	1.4634	1.0125	1.0330	1.0521	1.0802	0.0056	0.0066	0.0087	0.1202
	Level 9	26.1min	1.0209	1.0409	1.0731	1.2553	1.0209	1.0410	1.0731	1.2559	1.0281	1.0506	1.0973	1.4853	1.0102	1.0303	1.0541	1.1130	0.0057	0.0068	0.0163	0.1418
	Level 1	4sec	1.4918	1.5963	1.7037	2.1179	1.4918	1.5961	1.7037	2.1198	1.5590	1.6415	1.7749	3.1178	1.3422	1.5616	1.6464	1.7970	0.0519	0.0247	0.0408	0.3683
	Level 2	8sec	1.2885	1.3823	1.5102	2.0361	1.2894	1.3822	1.5103	2.0448	1.3538	1.4294	1.6590	3.5934	1.1581	1.3542	1.4379	1.6631	0.0543	0.0243	0.0640	0.5027
	Level 3	16sec	1.1757	1.2558	1.3478	1.8010	1.1753	1.2555	1.3467	1.7969	1.2174	1.2873	1.4377	3.3330	1.0852	1.2231	1.2891	1.4605	0.0394	0.0209	0.0456	0.4860
3	**Level 4**	32.1sec	1.1086	1.1659	1.2376	1.5171	1.1083	1.1657	1.2377	1.5219	1.1387	1.1950	1.2941	2.3710	1.0343	1.1397	1.1999	1.2942	0.0261	0.0163	0.0264	0.2972
months	**Level 5**	1.1min	1.0705	1.1080	1.1609	1.3446	1.0703	1.1080	1.1607	1.3453	1.0903	1.1264	1.1915	1.7666	1.0173	1.0917	1.1288	1.1936	0.0176	0.0125	0.0186	0.1819
before	**Level 6**	2.1min	1.0461	1.0717	1.1033	1.2389	1.0460	1.0716	1.1033	1.2378	1.0590	1.0855	1.1229	1.5403	1.0102	1.0597	1.0889	1.1296	0.0119	0.0075	0.0103	0.1224
	Level 7	4.3min	1.0303	1.0475	1.0696	1.1863	1.0303	1.0475	1.0697	1.1870	1.0378	1.0591	1.0854	1.4891	1.0059	1.0399	1.0602	1.0888	0.0085	0.0059	0.0077	0.1085
	Level 8	8.5min	1.0210	1.0356	1.0546	1.1760	1.0210	1.0356	1.0546	1.1753	1.0260	1.0447	1.0694	1.4634	1.0038	1.0266	1.0468	1.0702	0.0058	0.0059	0.0076	0.1098
	Level 9	17.1min	1.0183	1.0327	1.0585	1.2144	1.0183	1.0327	1.0585	1.2148	1.0236	1.0433	1.0903	1.4853	1.0031	1.0239	1.0435	1.0917	0.0053	0.0057	0.0129	0.1336
	Level 1	2.8sec	1.4744	1.5635	1.6253	1.8435	1.4744	1.5635	1.6252	1.8446	1.5216	1.5907	1.6713	3.1178	1.3422	1.5218	1.5910	1.6716	0.0405	0.0184	0.0257	0.2473
	Level 2	5.6sec	1.2563	1.3400	1.4031	1.6653	1.2564	1.3400	1.4031	1.6666	1.3080	1.3708	1.4575	3.5934	1.1581	1.3089	1.3709	1.4583	0.0371	0.0191	0.0231	0.3248
	Level 3	11.3sec	1.1490	1.2117	1.2691	1.4702	1.1489	1.2117	1.2691	1.4720	1.1842	1.2405	1.3010	3.3330	1.0852	1.1863	1.2417	1.3021	0.0260	0.0165	0.0169	0.2975
1	**Level 4**	22.5sec	1.0903	1.1343	1.1739	1.3172	1.0903	1.1343	1.1739	1.3174	1.1133	1.1524	1.1994	2.3710	1.0343	1.1136	1.1534	1.1999	0.0165	0.0126	0.0136	0.1851
Year	**Level 5**	45.1sec	1.0562	1.0858	1.1146	1.2116	1.0562	1.0858	1.1146	1.2118	1.0716	1.1007	1.1303	1.7666	1.0173	1.0718	1.1015	1.1311	0.0113	0.0089	0.0086	0.1177
before	**Level 6**	1.5min	1.0355	1.0559	1.0755	1.1406	1.0355	1.0559	1.0755	1.1409	1.0462	1.0666	1.0874	1.5403	1.0102	1.0466	1.0667	1.0874	0.0075	0.0058	0.0056	0.0824
	Level 7	3min	1.0229	1.0370	1.0502	1.1008	1.0228	1.0371	1.0502	1.1008	1.0303	1.0436	1.0577	1.4891	1.0059	1.0305	1.0436	1.0584	0.0049	0.0037	0.0042	0.0719
	Level 8	6min	1.0159	1.0257	1.0357	1.0835	1.0159	1.0257	1.0357	1.0834	1.0212	1.0305	1.0432	1.4634	1.0038	1.0215	1.0306	1.0433	0.0036	0.0025	0.0036	0.0736
	Level 9	12min	1.0134	1.0221	1.0314	1.0907	1.0134	1.0221	1.0314	1.0902	1.0183	1.0260	1.0385	1.4853	1.0031	1.0184	1.0260	1.0385	0.0033	0.0024	0.0038	0.0943

Table A.43: EDU2 Other Results Table –Continued

EDU2 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.5sec	1.4374	1.5187	1.6953	2.4411	1.4367	1.5192	1.6950	2.4307	1.4930	1.5579	1.8226	3.0527	1.3599	1.4974	1.5728	1.8490	0.0531	0.0265	0.0940	0.5108
	Level 2	27.1sec	1.2284	1.3824	1.5826	2.3909	1.2287	1.3822	1.5829	2.3946	1.2633	1.4340	1.6812	3.3655	1.1570	1.3563	1.4687	1.7385	0.0427	0.0352	0.1029	0.7299
	Level 3	54.2sec	1.1465	1.2555	1.3921	2.1006	1.1459	1.2556	1.3917	2.1140	1.1961	1.2900	1.4726	3.0920	1.0826	1.2068	1.3341	1.5691	0.0410	0.0350	0.0572	0.7143
30	**Level 4**	1.8min	1.0959	1.1643	1.2596	1.6640	1.0966	1.1644	1.2590	1.6810	1.1334	1.1958	1.2978	2.2217	1.0372	1.1462	1.2303	1.3190	0.0358	0.0236	0.0276	0.4271
days	**Level 5**	3.6min	1.0656	1.1059	1.1690	1.4227	1.0656	1.1057	1.1688	1.4234	1.0876	1.1167	1.1897	1.6471	1.0279	1.0966	1.1427	1.1923	0.0240	0.0103	0.0197	0.2338
before	**Level 6**	7.2min	1.0430	1.0705	1.1052	1.2617	1.0431	1.0705	1.1051	1.2638	1.0612	1.0789	1.1273	1.4069	1.0214	1.0636	1.0869	1.1350	0.0156	0.0071	0.0177	0.1328
	Level 7	14.4min	1.0281	1.0425	1.0633	1.1734	1.0281	1.0425	1.0633	1.1756	1.0374	1.0449	1.0739	1.2903	1.0191	1.0400	1.0517	1.1009	0.0083	0.0021	0.0099	0.0861
	Level 8	28.9min	1.0163	1.0271	1.0365	1.1176	1.0163	1.0272	1.0364	1.1173	1.0218	1.0288	1.0462	1.2014	1.0139	1.0256	1.0291	1.0686	0.0035	0.0016	0.0071	0.0625
	Level 9	57.8min	1.0112	1.0165	1.0274	1.0870	1.0112	1.0165	1.0274	1.0870	1.0138	1.0175	1.0380	1.1492	1.0086	1.0150	1.0239	1.0411	0.0024	0.0012	0.0060	0.0532
	Level 1	6.3sec	1.4618	1.5944	1.7248	2.1312	1.4620	1.5944	1.7255	2.1258	1.5109	1.6399	1.7945	3.0527	1.3599	1.5422	1.6464	1.7977	0.0479	0.0324	0.0489	0.4067
	Level 2	12.6sec	1.2721	1.3793	1.5446	2.0328	1.2733	1.3795	1.5448	2.0264	1.3396	1.4385	1.6674	3.3655	1.1570	1.3491	1.4636	1.6812	0.0578	0.0328	0.0794	0.5362
	Level 3	25.3sec	1.1692	1.2581	1.3602	1.7837	1.1688	1.2580	1.3603	1.7884	1.2097	1.3043	1.4355	3.0920	1.0826	1.2147	1.3147	1.4616	0.0384	0.0266	0.0403	0.5175
60	**Level 4**	50.6sec	1.1052	1.1658	1.2490	1.4825	1.1050	1.1660	1.2490	1.4803	1.1334	1.1958	1.2754	2.2217	1.0372	1.1372	1.2200	1.2836	0.0271	0.0216	0.0199	0.3096
days	**Level 5**	1.7min	1.0677	1.1058	1.1584	1.2940	1.0674	1.1058	1.1585	1.2927	1.0876	1.1167	1.1795	1.6471	1.0279	1.0883	1.1368	1.1797	0.0164	0.0089	0.0145	0.1784
before	**Level 6**	3.4min	1.0431	1.0668	1.0912	1.1790	1.0430	1.0669	1.0912	1.1795	1.0550	1.0777	1.1022	1.4069	1.0214	1.0564	1.0789	1.1081	0.0102	0.0069	0.0081	0.1063
	Level 7	6.7min	1.0254	1.0392	1.0527	1.1130	1.0253	1.0392	1.0526	1.1137	1.0333	1.0433	1.0596	1.2903	1.0184	1.0348	1.0449	1.0600	0.0050	0.0028	0.0053	0.0734
	Level 8	13.5min	1.0142	1.0224	1.0299	1.0740	1.0141	1.0223	1.0299	1.0740	1.0178	1.0277	1.0319	1.2014	1.0097	1.0183	1.0281	1.0349	0.0023	0.0034	0.0012	0.0527
	Level 9	27min	1.0079	1.0142	1.0186	1.0548	1.0079	1.0142	1.0186	1.0545	1.0096	1.0165	1.0239	1.1492	1.0052	1.0116	1.0166	1.0240	0.0014	0.0018	0.0022	0.0428
	Level 1	4.1sec	1.4843	1.5934	1.6945	2.1028	1.4849	1.5934	1.6946	2.1036	1.5576	1.6286	1.7531	3.0527	1.3599	1.5579	1.6375	1.7787	0.0506	0.0204	0.0394	0.3697
	Level 2	8.3sec	1.2838	1.3754	1.4939	2.0105	1.2835	1.3755	1.4935	2.0064	1.3523	1.4031	1.6248	3.3655	1.1570	1.3537	1.4320	1.6634	0.0552	0.0173	0.0577	0.4619
	Level 3	16.5sec	1.1689	1.2452	1.3291	1.7615	1.1691	1.2454	1.3288	1.7568	1.2147	1.2666	1.4107	3.0920	1.0826	1.2180	1.2738	1.4278	0.0409	0.0170	0.0341	0.4367
3	**Level 4**	33.1sec	1.1017	1.1541	1.2230	1.4702	1.1017	1.1544	1.2229	1.4703	1.1334	1.1827	1.2714	2.2217	1.0339	1.1372	1.1849	1.2740	0.0297	0.0152	0.0284	0.2634
months	**Level 5**	1.1min	1.0632	1.0978	1.1419	1.2926	1.0632	1.0977	1.1418	1.2925	1.0803	1.1122	1.1729	1.6471	1.0169	1.0809	1.1145	1.1781	0.0179	0.0102	0.0171	0.1539
before	**Level 6**	2.2min	1.0391	1.0603	1.0858	1.1785	1.0390	1.0603	1.0858	1.1782	1.0500	1.0735	1.0977	1.4069	1.0088	1.0508	1.0766	1.1016	0.0110	0.0060	0.0072	0.0936
	Level 7	4.4min	1.0227	1.0356	1.0494	1.1091	1.0227	1.0356	1.0493	1.1101	1.0293	1.0414	1.0577	1.2903	1.0045	1.0308	1.0416	1.0589	0.0061	0.0036	0.0045	0.0643
	Level 8	8.8min	1.0126	1.0196	1.0288	1.0709	1.0127	1.0196	1.0288	1.0708	1.0158	1.0238	1.0309	1.2014	1.0024	1.0160	1.0256	1.0310	0.0033	0.0025	0.0016	0.0469
	Level 9	17.7min	1.0069	1.0123	1.0173	1.0533	1.0069	1.0123	1.0173	1.0534	1.0094	1.0153	1.0193	1.1492	1.0009	1.0095	1.0154	1.0196	0.0021	0.0018	0.0012	0.0413
	Level 1	2.9sec	1.4692	1.5609	1.6192	1.8381	1.4694	1.5610	1.6191	1.8378	1.5196	1.5895	1.6667	3.0527	1.3599	1.5220	1.5895	1.6671	0.0396	0.0189	0.0239	0.2430
	Level 2	5.7sec	1.2507	1.3316	1.3949	1.6489	1.2507	1.3316	1.3950	1.6496	1.2993	1.3586	1.4466	3.3655	1.1570	1.3005	1.3587	1.4484	0.0369	0.0190	0.0229	0.3023
	Level 3	11.5sec	1.1417	1.2039	1.2587	1.4520	1.1418	1.2038	1.2586	1.4526	1.1781	1.2325	1.2892	3.0920	1.0789	1.1788	1.2331	1.2895	0.0248	0.0173	0.0165	0.2724
1	**Level 4**	23sec	1.0831	1.1253	1.1630	1.2951	1.0831	1.1253	1.1631	1.2950	1.1045	1.1435	1.1864	2.2217	1.0339	1.1053	1.1436	1.1872	0.0167	0.0121	0.0128	0.1632
Year	**Level 5**	45.9sec	1.0493	1.0760	1.1029	1.1873	1.0494	1.0761	1.1029	1.1873	1.0647	1.0892	1.1206	1.6471	1.0169	1.0651	1.0892	1.1208	0.0106	0.0075	0.0088	0.0986
before	**Level 6**	1.5min	1.0291	1.0456	1.0630	1.1142	1.0291	1.0456	1.0631	1.1145	1.0390	1.0523	1.0735	1.4069	1.0088	1.0390	1.0528	1.0760	0.0066	0.0042	0.0057	0.0615
	Level 7	3.1min	1.0166	1.0272	1.0371	1.0687	1.0166	1.0272	1.0371	1.0686	1.0220	1.0312	1.0434	1.2903	1.0045	1.0226	1.0314	1.0435	0.0038	0.0027	0.0033	0.0408
	Level 8	6.1min	1.0093	1.0157	1.0214	1.0417	1.0093	1.0157	1.0214	1.0416	1.0128	1.0183	1.0250	1.2014	1.0024	1.0129	1.0183	1.0251	0.0023	0.0017	0.0019	0.0286
	Level 9	12.3min	1.0056	1.0095	1.0136	1.0281	1.0056	1.0095	1.0136	1.0281	1.0075	1.0115	1.0161	1.1492	1.0009	1.0075	1.0115	1.0161	0.0014	0.0012	0.0013	0.0245

Table A.43: EDU2 Other Results Table –Continued

EDU2 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.5sec	0.4335	0.6000	0.6589	0.6987	0.4347	0.6002	0.6588	0.6985	0.5163	0.6343	0.6672	0.7450	0.3207	0.5755	0.6417	0.6691	0.0840	0.0250	0.0099	0.0333
	Level 2	27.1sec	0.4509	0.6342	0.7269	0.8111	0.4511	0.6351	0.7273	0.8115	0.5566	0.6755	0.7915	0.8635	0.2783	0.5953	0.6861	0.7930	0.1171	0.0419	0.0406	0.0347
	Level 3	54.2sec	0.5265	0.7091	0.7933	0.8694	0.5256	0.7086	0.7935	0.8698	0.6785	0.7305	0.8320	0.9106	0.3000	0.6786	0.7618	0.8391	0.1535	0.0258	0.0311	0.0298
30	**Level 4**	1.8min	0.6223	0.7866	0.8462	0.9059	0.6209	0.7865	0.8460	0.9057	0.7488	0.8066	0.8775	0.9252	0.4218	0.7608	0.8118	0.8952	0.1456	0.0201	0.0259	0.0136
days	**Level 5**	3.6min	0.7016	0.8350	0.8917	0.9311	0.7028	0.8350	0.8918	0.9310	0.8223	0.8436	0.9086	0.9461	0.5661	0.8265	0.8640	0.9125	0.1197	0.0078	0.0178	0.0139
before	**Level 6**	7.2min	0.7632	0.8761	0.9246	0.9505	0.7645	0.8762	0.9245	0.9507	0.8595	0.8853	0.9328	0.9604	0.6492	0.8636	0.9157	0.9338	0.0930	0.0105	0.0064	0.0116
	Level 7	14.4min	0.7909	0.9108	0.9452	0.9627	0.7903	0.9110	0.9453	0.9628	0.8736	0.9184	0.9525	0.9691	0.6716	0.8931	0.9290	0.9539	0.0812	0.0121	0.0093	0.0073
	Level 8	28.9min	0.7947	0.9278	0.9529	0.9734	0.7958	0.9278	0.9528	0.9735	0.8893	0.9351	0.9646	0.9781	0.6833	0.9124	0.9366	0.9663	0.0788	0.0106	0.0104	0.0053
	Level 9	57.8min	0.7698	0.9131	0.9468	0.9779	0.7682	0.9130	0.9467	0.9780	0.8959	0.9262	0.9584	0.9818	0.6733	0.8962	0.9367	0.9728	0.0884	0.0124	0.0098	0.0038
	Level 1	6.3sec	0.4771	0.5759	0.6258	0.6807	0.4767	0.5758	0.6260	0.6806	0.5509	0.6008	0.6417	0.7450	0.3207	0.5554	0.6074	0.6613	0.0744	0.0163	0.0130	0.0255
	Level 2	12.6sec	0.5059	0.6396	0.7211	0.7817	0.5046	0.6397	0.7208	0.7819	0.5925	0.6755	0.7419	0.8635	0.2783	0.5953	0.6861	0.7431	0.1001	0.0324	0.0200	0.0364
	Level 3	25.3sec	0.5788	0.7208	0.7881	0.8504	0.5802	0.7206	0.7883	0.8503	0.6785	0.7546	0.8214	0.9106	0.3000	0.6786	0.7618	0.8248	0.1236	0.0286	0.0180	0.0258
60	**Level 4**	50.6sec	0.6750	0.7913	0.8443	0.8988	0.6749	0.7914	0.8444	0.8986	0.7608	0.8081	0.8775	0.9252	0.4218	0.7648	0.8118	0.8803	0.1171	0.0166	0.0185	0.0136
days	**Level 5**	1.7min	0.7523	0.8491	0.8916	0.9293	0.7532	0.8492	0.8916	0.9295	0.8306	0.8625	0.9086	0.9461	0.5661	0.8371	0.8640	0.9125	0.0995	0.0103	0.0123	0.0107
before	**Level 6**	3.4min	0.8077	0.8984	0.9260	0.9502	0.8093	0.8985	0.9259	0.9502	0.8835	0.9138	0.9337	0.9635	0.6492	0.8843	0.9157	0.9338	0.0804	0.0102	0.0064	0.0102
	Level 7	6.7min	0.8354	0.9285	0.9492	0.9662	0.8356	0.9285	0.9492	0.9663	0.9140	0.9400	0.9577	0.9803	0.6716	0.9183	0.9408	0.9581	0.0758	0.0077	0.0055	0.0071
	Level 8	13.5min	0.8397	0.9416	0.9598	0.9764	0.8380	0.9415	0.9598	0.9764	0.9258	0.9505	0.9680	0.9877	0.6833	0.9292	0.9523	0.9688	0.0779	0.0077	0.0061	0.0054
	Level 9	27min	0.8056	0.9320	0.9606	0.9796	0.8052	0.9320	0.9606	0.9796	0.8985	0.9487	0.9706	0.9899	0.6733	0.9113	0.9519	0.9727	0.0883	0.0141	0.0062	0.0055
	Level 1	4.1sec	0.4877	0.5890	0.6275	0.6730	0.4880	0.5889	0.6276	0.6731	0.5634	0.6074	0.6414	0.7450	0.3207	0.5653	0.6092	0.6417	0.0708	0.0129	0.0100	0.0241
	Level 2	8.3sec	0.5155	0.6668	0.7248	0.7795	0.5150	0.6672	0.7246	0.7794	0.6028	0.6954	0.7387	0.8635	0.2783	0.6154	0.6996	0.7419	0.0904	0.0225	0.0127	0.0334
	Level 3	16.5sec	0.5898	0.7469	0.7983	0.8539	0.5901	0.7465	0.7982	0.8538	0.6956	0.7757	0.8214	0.9214	0.3000	0.6973	0.7768	0.8216	0.1092	0.0218	0.0143	0.0295
3	**Level 4**	33.1sec	0.6815	0.8105	0.8592	0.9047	0.6818	0.8107	0.8592	0.9044	0.7727	0.8334	0.8782	0.9668	0.4218	0.7813	0.8368	0.8803	0.1034	0.0147	0.0126	0.0217
months	**Level 5**	1.1min	0.7594	0.8633	0.9037	0.9358	0.7598	0.8632	0.9035	0.9357	0.8393	0.8859	0.9171	0.9830	0.5661	0.8427	0.8878	0.9186	0.0887	0.0129	0.0105	0.0156
before	**Level 6**	2.2min	0.8185	0.9075	0.9341	0.9569	0.8193	0.9075	0.9339	0.9569	0.8906	0.9183	0.9443	0.9899	0.6492	0.8934	0.9212	0.9450	0.0724	0.0075	0.0069	0.0110
	Level 7	4.4min	0.8530	0.9358	0.9552	0.9712	0.8529	0.9358	0.9552	0.9711	0.9214	0.9432	0.9636	0.9941	0.6716	0.9256	0.9442	0.9637	0.0693	0.0058	0.0056	0.0081
	Level 8	8.8min	0.8617	0.9491	0.9662	0.9798	0.8620	0.9491	0.9662	0.9798	0.9351	0.9553	0.9746	0.9962	0.6833	0.9366	0.9572	0.9754	0.0731	0.0060	0.0057	0.0057
	Level 9	17.7min	0.8371	0.9467	0.9689	0.9824	0.8372	0.9467	0.9689	0.9824	0.9172	0.9584	0.9770	0.9969	0.6733	0.9262	0.9585	0.9776	0.0849	0.0089	0.0056	0.0052
	Level 1	2.9sec	0.5491	0.6155	0.6397	0.6787	0.5493	0.6155	0.6397	0.6788	0.5982	0.6285	0.6571	0.7450	0.3207	0.5983	0.6287	0.6572	0.0553	0.0097	0.0076	0.0192
	Level 2	5.7sec	0.6144	0.7129	0.7464	0.7966	0.6142	0.7129	0.7464	0.7966	0.6857	0.7294	0.7640	0.8635	0.2783	0.6861	0.7295	0.7645	0.0777	0.0116	0.0106	0.0240
	Level 3	11.5sec	0.6957	0.7881	0.8255	0.8709	0.6956	0.7881	0.8254	0.8709	0.7680	0.8053	0.8429	0.9214	0.3000	0.7686	0.8061	0.8444	0.0861	0.0105	0.0112	0.0200
1	**Level 4**	23sec	0.7692	0.8519	0.8818	0.9174	0.7693	0.8520	0.8817	0.9174	0.8334	0.8670	0.8980	0.9668	0.4218	0.8338	0.8678	0.8983	0.0758	0.0099	0.0098	0.0141
Year	**Level 5**	45.9sec	0.8308	0.8972	0.9211	0.9469	0.8313	0.8972	0.9211	0.9469	0.8841	0.9078	0.9330	0.9830	0.5661	0.8848	0.9085	0.9332	0.0637	0.0069	0.0076	0.0102
before	**Level 6**	1.5min	0.8804	0.9299	0.9471	0.9657	0.8803	0.9298	0.9471	0.9657	0.9196	0.9374	0.9554	0.9899	0.6492	0.9197	0.9375	0.9558	0.0530	0.0049	0.0052	0.0071
	Level 7	3.1min	0.9113	0.9522	0.9643	0.9777	0.9116	0.9522	0.9643	0.9777	0.9448	0.9582	0.9704	0.9941	0.6716	0.9454	0.9582	0.9706	0.0498	0.0038	0.0034	0.0047
	Level 8	6.1min	0.9261	0.9655	0.9749	0.9844	0.9265	0.9655	0.9749	0.9844	0.9585	0.9703	0.9789	0.9962	0.6833	0.9586	0.9704	0.9792	0.0525	0.0033	0.0024	0.0035
	Level 9	12.3min	0.9230	0.9696	0.9783	0.9868	0.9228	0.9695	0.9784	0.9868	0.9629	0.9746	0.9820	0.9969	0.6733	0.9629	0.9747	0.9821	0.0653	0.0036	0.0023	0.0032

Table A.44: EDU3 Other Results Table

EDU3 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.5sec	1.5750	2.0994	2.8954	4.2347	1.5758	2.1006	2.8953	4.2028	1.6516	2.5070	2.9046	5.1142	1.5000	1.8919	2.8859	3.2914	0.1072	0.3519	0.0132	1.2889
	Level 2	33sec	1.3125	1.7677	3.2405	5.2754	1.3138	1.7703	3.2474	5.2670	1.3776	1.9933	4.4006	6.1065	1.2500	1.4840	2.0942	4.4275	0.0903	0.2604	1.6309	1.1872
	Level 3	1.1min	1.1780	1.4857	2.8251	5.7433	1.1799	1.4856	2.8466	5.7508	1.2349	1.5638	3.8230	6.3270	1.1249	1.3448	1.8702	5.1746	0.0777	0.1222	1.3808	0.8149
30	**Level 4**	2.2min	1.0944	1.3028	2.0000	5.6175	1.0942	1.3029	1.9930	5.6263	1.1260	1.3596	2.4286	6.0675	1.0624	1.2703	1.5574	5.1852	0.0450	0.0493	0.6160	0.6239
days	**Level 5**	4.4min	1.0516	1.1923	1.5168	3.9847	1.0519	1.1937	1.5134	3.9783	1.0728	1.2566	1.7154	4.3770	1.0310	1.1575	1.3114	3.5797	0.0295	0.0547	0.2857	0.5638
before	**Level 6**	8.8min	1.0269	1.1282	1.2790	2.7457	1.0269	1.1285	1.2794	2.7553	1.0385	1.1722	1.3603	3.3183	1.0152	1.1029	1.1986	2.1923	0.0164	0.0381	0.1143	0.7962
	Level 7	17.6min	1.0142	1.0782	1.1536	2.0571	1.0142	1.0781	1.1540	2.0547	1.0212	1.1101	1.1861	2.3965	1.0072	1.0529	1.1219	1.7130	0.0099	0.0292	0.0455	0.4833
	Level 8	35.2min	1.0088	1.0469	1.0896	1.8562	1.0086	1.0466	1.0897	1.8562	1.0139	1.0657	1.1088	1.8885	1.0033	1.0288	1.0707	1.8239	0.0075	0.0185	0.0269	0.0457
	Level 9	70.4min	1.0055	1.0341	1.0756	1.7075	1.0055	1.0340	1.0761	1.7059	1.0091	1.0449	1.1004	1.7605	1.0019	1.0192	1.0517	1.6513	0.0051	0.0133	0.0344	0.0772
	Level 1	7.5sec	1.5141	1.6841	1.9834	3.2487	1.5133	1.6841	1.9805	3.2441	1.5574	1.7751	2.5070	5.1142	1.4787	1.5777	1.8150	2.5997	0.0276	0.0619	0.2357	0.8509
	Level 2	15sec	1.2794	1.4604	1.7857	4.0133	1.2801	1.4593	1.7842	4.0010	1.3776	1.5358	1.9933	6.1065	1.2387	1.3840	1.5393	2.0942	0.0582	0.0525	0.1784	1.3572
	Level 3	29.9sec	1.1685	1.3373	1.5486	4.0056	1.1679	1.3373	1.5482	4.0044	1.2349	1.3737	1.8702	6.3270	1.1249	1.2698	1.3741	1.8788	0.0452	0.0376	0.1699	1.7085
60	**Level 4**	59.9sec	1.1088	1.2418	1.3551	3.5274	1.1087	1.2427	1.3552	3.5500	1.1528	1.2774	1.5574	6.0675	1.0624	1.1826	1.2781	1.7790	0.0416	0.0344	0.0964	1.8242
days	**Level 5**	2min	1.0669	1.1486	1.2248	2.6923	1.0674	1.1487	1.2242	2.6934	1.1072	1.1669	1.3114	4.3770	1.0310	1.1244	1.1727	1.5599	0.0310	0.0156	0.0457	1.2197
before	**Level 6**	4min	1.0400	1.0874	1.1391	1.9971	1.0396	1.0872	1.1394	2.0067	1.0642	1.1029	1.1986	3.3183	1.0152	1.0703	1.1104	1.3445	0.0209	0.0135	0.0338	0.7698
	Level 7	8min	1.0222	1.0501	1.0869	1.5888	1.0222	1.0502	1.0871	1.5913	1.0370	1.0603	1.1219	2.3965	1.0072	1.0426	1.0627	1.1861	0.0130	0.0072	0.0215	0.4407
	Level 8	16min	1.0134	1.0301	1.0525	1.4236	1.0135	1.0301	1.0524	1.4265	1.0228	1.0362	1.0707	1.8885	1.0033	1.0240	1.0391	1.1088	0.0086	0.0038	0.0115	0.3253
	Level 9	31.9min	1.0102	1.0214	1.0415	1.3367	1.0102	1.0213	1.0418	1.3384	1.0178	1.0275	1.0544	1.7605	1.0019	1.0179	1.0320	1.0966	0.0069	0.0040	0.0087	0.2722
	Level 1	4.3sec	1.5315	1.6603	1.8011	2.7836	1.5312	1.6608	1.8011	2.7894	1.6045	1.7011	1.9228	5.1142	1.4638	1.6171	1.7026	1.9446	0.0451	0.0291	0.0771	0.8569
	Level 2	8.6sec	1.3096	1.4357	1.5813	3.1462	1.3089	1.4357	1.5832	3.1371	1.3848	1.4840	1.8096	6.1065	1.2387	1.3849	1.4922	1.8335	0.0623	0.0301	0.1152	1.4651
	Level 3	17.2sec	1.1861	1.3042	1.4099	3.0583	1.1865	1.3042	1.4094	3.0255	1.2387	1.3448	1.5638	6.3270	1.1249	1.2698	1.3452	1.5895	0.0461	0.0230	0.0723	1.7496
3	**Level 4**	34.4sec	1.1158	1.2024	1.2801	2.6431	1.1157	1.2027	1.2801	2.6641	1.1528	1.2289	1.3364	6.0675	1.0624	1.1600	1.2319	1.3596	0.0350	0.0232	0.0311	1.7367
months	**Level 5**	1.1min	1.0708	1.1283	1.1770	2.0977	1.0707	1.1283	1.1769	2.1014	1.1030	1.1502	1.2078	4.3770	1.0310	1.1061	1.1549	1.2143	0.0252	0.0158	0.0206	1.1608
before	**Level 6**	2.3min	1.0422	1.0774	1.1088	1.6632	1.0421	1.0775	1.1087	1.6630	1.0631	1.0902	1.1315	3.3183	1.0152	1.0642	1.0907	1.1375	0.0170	0.0094	0.0117	0.7100
	Level 7	4.6min	1.0238	1.0463	1.0663	1.3927	1.0240	1.0462	1.0663	1.3942	1.0370	1.0532	1.0802	2.3965	1.0072	1.0386	1.0542	1.0879	0.0104	0.0052	0.0084	0.4069
	Level 8	9.2min	1.0146	1.0288	1.0408	1.2846	1.0146	1.0288	1.0408	1.2807	1.0225	1.0328	1.0491	1.8885	1.0033	1.0228	1.0351	1.0513	0.0068	0.0034	0.0049	0.3006
	Level 9	18.4min	1.0107	1.0214	1.0313	1.2251	1.0107	1.0214	1.0312	1.2235	1.0178	1.0257	1.0379	1.7605	1.0019	1.0178	1.0260	1.0449	0.0054	0.0033	0.0042	0.2464
	Level 1	3.5sec	1.5245	1.6240	1.7242	2.3061	1.5244	1.6243	1.7237	2.3041	1.5804	1.6662	1.8048	5.1142	1.4246	1.5808	1.6665	1.8077	0.0373	0.0258	0.0367	0.6743
	Level 2	7.1sec	1.2962	1.3995	1.5198	2.5207	1.2962	1.3995	1.5197	2.5228	1.3581	1.4456	1.6113	13.2635	1.1781	1.3611	1.4463	1.6114	0.0449	0.0236	0.0467	1.7995
	Level 3	14.1sec	1.1738	1.2640	1.3519	2.7362	1.1739	1.2639	1.3519	2.7339	1.2273	1.3042	1.4013	25.5269	1.1185	1.2311	1.3046	1.4038	0.0370	0.0221	0.0290	3.5439
1	**Level 4**	28.2sec	1.1025	1.1689	1.2350	3.2146	1.1025	1.1690	1.2350	3.1904	1.1396	1.1995	1.2774	50.0539	1.0559	1.1405	1.1996	1.2774	0.0275	0.0186	0.0228	6.8978
Year	**Level 5**	56.5sec	1.0587	1.1065	1.1493	4.0906	1.0587	1.1065	1.1493	4.1078	1.0867	1.1280	1.1727	99.1078	1.0310	1.0882	1.1284	1.1740	0.0176	0.0115	0.0127	13.5662
before	**Level 6**	1.9min	1.0340	1.0648	1.0911	5.9050	1.0340	1.0649	1.0911	6.0829	1.0517	1.0762	1.1101	197.2156	1.0152	1.0524	1.0766	1.1104	0.0111	0.0070	0.0094	26.9284
	Level 7	3.8min	1.0198	1.0386	1.0553	10.4806	1.0198	1.0387	1.0554	10.3238	1.0310	1.0457	1.0686	393.4311	1.0072	1.0310	1.0458	1.0686	0.0070	0.0043	0.0066	53.8718
	Level 8	7.5min	1.0122	1.0241	1.0356	19.2639	1.0122	1.0241	1.0357	19.1714	1.0195	1.0290	1.0437	785.8623	1.0033	1.0196	1.0291	1.0439	0.0048	0.0027	0.0041	107.8097
	Level 9	15.1min	1.0090	1.0185	1.0280	36.6868	1.0090	1.0185	1.0280	37.0724	1.0147	1.0226	1.0346	1570.7246	1.0019	1.0148	1.0233	1.0355	0.0037	0.0020	0.0036	215.6770

Table A.44: EDU3 Other Results Table –Continued

EDU3 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.8sec	1.5874	2.1514	2.8988	4.2048	1.5864	2.1457	2.8987	4.2048	1.6728	2.4909	2.9115	5.1227	1.5000	1.8906	2.8859	3.2868	0.1222	0.3101	0.0181	1.2982
	Level 2	33.5sec	1.3156	1.8077	3.2230	5.2197	1.3143	1.8018	3.2356	5.2405	1.3787	1.9773	4.3797	6.0128	1.2500	1.4833	2.0914	4.4683	0.0910	0.2763	1.6181	1.0921
	Level 3	1.1min	1.1802	1.4938	2.8427	5.7339	1.1801	1.4919	2.8655	5.7154	1.2352	1.5458	3.7756	6.4845	1.1250	1.4100	1.9554	4.9463	0.0779	0.0721	1.2870	1.0877
30	**Level 4**	2.2min	1.0946	1.2776	2.0157	5.5416	1.0947	1.2773	2.0196	5.5443	1.1269	1.2930	2.4034	6.4528	1.0625	1.2660	1.6357	4.6357	0.0455	0.0140	0.5429	1.2849
days	**Level 5**	4.5min	1.0536	1.1620	1.5390	4.0662	1.0535	1.1617	1.5411	4.0662	1.0756	1.2133	1.7063	4.0671	1.0313	1.1352	1.3759	4.0652	0.0313	0.0447	0.2337	0.0013
before	**Level 6**	8.9min	1.0282	1.1101	1.2990	3.0338	1.0284	1.1100	1.2991	3.0442	1.0410	1.1727	1.3614	3.2567	1.0157	1.0687	1.2368	2.8317	0.0178	0.0552	0.0881	0.3005
	Level 7	17.9min	1.0177	1.0717	1.1685	2.5318	1.0174	1.0713	1.1683	2.5280	1.0268	1.1164	1.1971	2.8018	1.0081	1.0352	1.1396	2.2541	0.0133	0.0414	0.0407	0.3873
	Level 8	35.8min	1.0118	1.0498	1.1106	2.2685	1.0118	1.0495	1.1108	2.2681	1.0192	1.0896	1.1314	2.4801	1.0044	1.0198	1.0901	2.0561	0.0105	0.0360	0.0292	0.2998
	Level 9	71.6min	1.0077	1.0412	1.1084	2.1278	1.0079	1.0410	1.1090	2.1168	1.0128	1.0830	1.1314	2.4415	1.0029	1.0139	1.0866	1.7921	0.0070	0.0369	0.0317	0.4592
	Level 1	7.3sec	1.5092	1.6884	2.0133	3.2171	1.5095	1.6880	2.0130	3.2242	1.5571	1.7640	2.4909	5.1227	1.4776	1.5879	1.8906	2.5011	0.0245	0.0559	0.2182	0.8676
	Level 2	14.6sec	1.2603	1.4411	1.7691	4.0306	1.2602	1.4414	1.7696	4.0333	1.2869	1.4833	1.9773	6.0128	1.2371	1.3787	1.5610	2.0914	0.0189	0.0397	0.1646	1.4234
	Level 3	29.2sec	1.1653	1.2967	1.5045	4.0978	1.1660	1.2963	1.5038	4.0921	1.2337	1.3482	1.6295	6.4845	1.1250	1.2352	1.3507	1.9554	0.0420	0.0453	0.0988	1.8620
60	**Level 4**	58.5sec	1.1071	1.2020	1.3225	3.4525	1.1070	1.2024	1.3226	3.4869	1.1534	1.2439	1.4646	6.4528	1.0625	1.1576	1.2641	1.6357	0.0410	0.0313	0.0734	1.8465
days	**Level 5**	1.9min	1.0683	1.1297	1.2121	2.6486	1.0686	1.1297	1.2132	2.6445	1.1046	1.1372	1.3674	4.0671	1.0313	1.1111	1.1494	1.3759	0.0326	0.0097	0.0713	1.1923
before	**Level 6**	3.9min	1.0392	1.0805	1.1440	2.0190	1.0393	1.0807	1.1432	2.0354	1.0631	1.0911	1.2368	3.2567	1.0157	1.0687	1.1031	1.2925	0.0205	0.0087	0.0479	0.7861
	Level 7	7.8min	1.0238	1.0506	1.0951	1.7195	1.0237	1.0507	1.0944	1.7085	1.0362	1.0612	1.1396	2.8018	1.0081	1.0420	1.0624	1.1971	0.0127	0.0065	0.0263	0.6105
	Level 8	15.6min	1.0152	1.0334	1.0657	1.5534	1.0153	1.0334	1.0658	1.5482	1.0269	1.0398	1.0901	2.4801	1.0044	1.0281	1.0469	1.1314	0.0092	0.0051	0.0173	0.5203
	Level 9	31.2min	1.0116	1.0258	1.0614	1.4830	1.0116	1.0258	1.0616	1.4782	1.0218	1.0331	1.0866	2.4415	1.0029	1.0220	1.0409	1.1174	0.0079	0.0039	0.0195	0.4819
	Level 1	4.2sec	1.5239	1.6597	1.8082	2.7726	1.5238	1.6597	1.8080	2.7801	1.5912	1.6922	1.9218	5.1227	1.4375	1.6062	1.6972	1.9308	0.0463	0.0301	0.0830	0.8567
	Level 2	8.5sec	1.2937	1.4253	1.5613	3.1354	1.2936	1.4251	1.5613	3.1425	1.3812	1.4611	1.7451	6.0128	1.2371	1.3889	1.4649	1.7518	0.0512	0.0237	0.0903	1.5233
	Level 3	16.9sec	1.1836	1.2745	1.3895	3.0433	1.1835	1.2745	1.3881	3.0462	1.2337	1.3179	1.5198	6.4845	1.1250	1.2352	1.3210	1.5384	0.0436	0.0269	0.0662	1.8874
3	**Level 4**	33.9sec	1.1134	1.1823	1.2499	2.6266	1.1131	1.1823	1.2498	2.6086	1.1534	1.2037	1.2993	6.4528	1.0625	1.1576	1.2092	1.3246	0.0340	0.0166	0.0319	1.7434
months	**Level 5**	1.1min	1.0706	1.1187	1.1571	2.0671	1.0707	1.1185	1.1568	2.0659	1.1041	1.1329	1.2023	4.0671	1.0313	1.1046	1.1349	1.2048	0.0259	0.0088	0.0235	1.1351
before	**Level 6**	2.3min	1.0410	1.0742	1.1025	1.6705	1.0414	1.0742	1.1026	1.6795	1.0626	1.0817	1.1398	3.2567	1.0157	1.0631	1.0869	1.1424	0.0161	0.0060	0.0167	0.7287
	Level 7	4.5min	1.0250	1.0461	1.0684	1.4693	1.0249	1.0461	1.0682	1.4659	1.0357	1.0540	1.0975	2.8018	1.0081	1.0362	1.0546	1.0979	0.0099	0.0054	0.0133	0.5417
	Level 8	9min	1.0159	1.0310	1.0471	1.3576	1.0159	1.0310	1.0471	1.3594	1.0239	1.0369	1.0649	2.4801	1.0044	1.0265	1.0370	1.0660	0.0067	0.0037	0.0087	0.4498
	Level 9	18.1min	1.0126	1.0251	1.0401	1.3259	1.0127	1.0251	1.0402	1.3181	1.0206	1.0297	1.0649	2.4415	1.0029	1.0218	1.0305	1.0697	0.0060	0.0026	0.0099	0.4074
	Level 1	3.5sec	1.5212	1.6172	1.7265	2.3147	1.5212	1.6172	1.7264	2.3126	1.5738	1.6670	1.8071	5.1227	1.4333	1.5756	1.6706	1.8122	0.0372	0.0269	0.0421	0.6750
	Level 2	7sec	1.2910	1.3936	1.5076	2.5854	1.2908	1.3934	1.5075	2.5818	1.3532	1.4432	1.5749	13.2269	1.2006	1.3537	1.4436	1.5765	0.0396	0.0238	0.0406	1.8266
	Level 3	14.1sec	1.1702	1.2521	1.3338	2.8338	1.1702	1.2521	1.3340	2.8442	1.2182	1.2846	1.3946	25.4537	1.1198	1.2192	1.2855	1.3956	0.0348	0.0187	0.0337	3.5856
1	**Level 4**	28.1sec	1.1003	1.1581	1.2164	3.3570	1.1004	1.1581	1.2165	3.3761	1.1339	1.1829	1.2552	49.9075	1.0571	1.1346	1.1832	1.2606	0.0279	0.0157	0.0206	6.9619
Year	**Level 5**	56.3sec	1.0566	1.1011	1.1382	4.3119	1.0565	1.1011	1.1382	4.3159	1.0837	1.1199	1.1632	98.8149	1.0306	1.0839	1.1204	1.1642	0.0174	0.0105	0.0134	13.5399
before	**Level 6**	1.9min	1.0325	1.0622	1.0875	6.1980	1.0325	1.0621	1.0875	6.2597	1.0493	1.0740	1.1039	196.6299	1.0146	1.0499	1.0741	1.1040	0.0110	0.0074	0.0082	26.8416
	Level 7	3.8min	1.0192	1.0383	1.0571	10.4412	1.0192	1.0383	1.0571	10.4661	1.0304	1.0470	1.0718	392.2597	1.0062	1.0306	1.0471	1.0719	0.0071	0.0046	0.0068	53.7026
	Level 8	7.5min	1.0125	1.0255	1.0408	19.7250	1.0125	1.0255	1.0408	19.2880	1.0198	1.0318	1.0545	783.5194	1.0029	1.0199	1.0320	1.0556	0.0049	0.0033	0.0060	107.4862
	Level 9	15min	1.0106	1.0219	1.0355	38.0927	1.0106	1.0219	1.0355	37.1787	1.0164	1.0262	1.0502	1566.0388	1.0029	1.0165	1.0264	1.0505	0.0042	0.0031	0.0064	215.0330

Table A.44: EDU3 Other Results Table –Continued

EDU3 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.6sec	1.5745	2.1219	2.8957	4.1968	1.5754	2.1204	2.8953	4.2078	1.6509	2.4977	2.9048	5.1266	1.5000	1.8913	2.8859	3.2891	0.1067	0.3293	0.0134	1.2993
	Level 2	33.3sec	1.3015	1.7713	3.2516	5.2358	1.3013	1.7744	3.2413	5.2383	1.3527	1.9443	4.3900	6.0475	1.2499	1.4836	2.0926	4.4291	0.0726	0.2530	1.6245	1.1444
	Level 3	1.1min	1.1809	1.4630	2.8806	5.6907	1.1799	1.4635	2.8464	5.6774	1.2349	1.5463	3.7985	6.3421	1.1249	1.3382	1.8942	5.0127	0.0778	0.1104	1.3466	0.9400
30	**Level 4**	2.2min	1.0954	1.2597	1.9883	5.4661	1.0941	1.2608	1.9926	5.4498	1.1259	1.2894	2.4144	6.1289	1.0623	1.2198	1.5707	4.7706	0.0450	0.0364	0.5966	0.9605
days	**Level 5**	4.4min	1.0519	1.1503	1.5139	3.7988	1.0517	1.1501	1.5092	3.8040	1.0727	1.1969	1.7067	4.0321	1.0308	1.1170	1.3116	3.5760	0.0296	0.0416	0.2793	0.3225
before	**Level 6**	8.9min	1.0263	1.0939	1.2676	2.5724	1.0265	1.0936	1.2672	2.5653	1.0381	1.1354	1.3523	3.0090	1.0148	1.0680	1.1820	2.1215	0.0165	0.0365	0.1204	0.6276
	Level 7	17.7min	1.0133	1.0532	1.1315	1.8785	1.0135	1.0531	1.1327	1.8822	1.0203	1.0806	1.1741	2.1652	1.0067	1.0336	1.0914	1.5992	0.0097	0.0245	0.0585	0.4002
	Level 8	35.5min	1.0076	1.0260	1.0629	1.6583	1.0076	1.0262	1.0631	1.6581	1.0124	1.0417	1.0829	1.6802	1.0029	1.0160	1.0433	1.6360	0.0067	0.0136	0.0280	0.0313
	Level 9	71min	1.0039	1.0119	1.0283	1.4401	1.0040	1.0118	1.0286	1.4409	1.0064	1.0186	1.0332	1.5182	1.0016	1.0071	1.0241	1.3636	0.0034	0.0060	0.0064	0.1094
	Level 1	7.4sec	1.5100	1.6839	1.9870	3.2279	1.5099	1.6839	1.9853	3.2330	1.5571	1.7777	2.4977	5.1266	1.4767	1.5663	1.8155	2.5427	0.0248	0.0679	0.2307	0.8631
	Level 2	14.8sec	1.2628	1.4443	1.7538	4.0026	1.2627	1.4440	1.7537	4.0021	1.3108	1.4934	1.9443	6.0475	1.2346	1.3527	1.5431	2.0926	0.0290	0.0515	0.1512	1.3855
	Level 3	29.6sec	1.1632	1.3023	1.4830	4.0077	1.1631	1.3019	1.4832	3.9995	1.2318	1.3450	1.5884	6.3421	1.1249	1.2349	1.3480	1.8942	0.0406	0.0427	0.1001	1.7653
60	**Level 4**	59.2sec	1.1035	1.1979	1.3126	3.3967	1.1037	1.1978	1.3129	3.4105	1.1551	1.2288	1.4653	6.1289	1.0623	1.1562	1.2428	1.5707	0.0388	0.0295	0.0750	1.7986
days	**Level 5**	2min	1.0632	1.1155	1.1933	2.5268	1.0630	1.1155	1.1928	2.5218	1.0950	1.1364	1.3116	4.0321	1.0308	1.0979	1.1433	1.3753	0.0275	0.0144	0.0551	1.1166
before	**Level 6**	3.9min	1.0333	1.0665	1.1124	1.8605	1.0334	1.0666	1.1127	1.8547	1.0497	1.0774	1.1820	3.0090	1.0148	1.0560	1.0853	1.2736	0.0147	0.0094	0.0346	0.6496
	Level 7	7.9min	1.0167	1.0363	1.0632	1.4759	1.0168	1.0364	1.0632	1.4751	1.0243	1.0468	1.0914	2.1652	1.0067	1.0302	1.0482	1.1513	0.0075	0.0068	0.0170	0.3677
	Level 8	15.8min	1.0092	1.0185	1.0331	1.3164	1.0092	1.0184	1.0330	1.3153	1.0148	1.0216	1.0433	1.6802	1.0029	1.0159	1.0252	1.0755	0.0050	0.0022	0.0073	0.2581
	Level 9	31.6min	1.0050	1.0109	1.0192	1.2111	1.0050	1.0109	1.0191	1.2109	1.0081	1.0137	1.0275	1.5182	1.0015	1.0093	1.0145	1.0332	0.0028	0.0018	0.0050	0.1849
	Level 1	4.3sec	1.5240	1.6556	1.7995	2.7739	1.5240	1.6560	1.7986	2.7791	1.5995	1.6931	1.9072	5.1266	1.4494	1.6054	1.6993	1.9215	0.0434	0.0306	0.0788	0.8630
	Level 2	8.5sec	1.2921	1.4252	1.5605	3.1189	1.2926	1.4253	1.5598	3.1129	1.3694	1.4623	1.7497	6.0475	1.2346	1.3835	1.4642	1.7607	0.0483	0.0271	0.0992	1.5023
	Level 3	17.1sec	1.1796	1.2745	1.3734	2.9736	1.1803	1.2746	1.3730	2.9807	1.2318	1.3071	1.5024	6.3421	1.1249	1.2349	1.3169	1.5062	0.0421	0.0280	0.0610	1.8126
3	**Level 4**	34.2sec	1.1097	1.1737	1.2355	2.5731	1.1100	1.1737	1.2352	2.5535	1.1541	1.2022	1.2894	6.1289	1.0623	1.1546	1.2027	1.2935	0.0323	0.0194	0.0279	1.6993
months	**Level 5**	1.1min	1.0654	1.1030	1.1425	1.9726	1.0655	1.1030	1.1426	1.9786	1.0922	1.1170	1.1743	4.0321	1.0308	1.0939	1.1171	1.1748	0.0217	0.0075	0.0202	1.0639
before	**Level 6**	2.3min	1.0362	1.0603	1.0825	1.5559	1.0361	1.0603	1.0825	1.5548	1.0502	1.0689	1.0993	3.0090	1.0148	1.0532	1.0695	1.1173	0.0122	0.0052	0.0106	0.6065
	Level 7	4.6min	1.0188	1.0326	1.0472	1.3048	1.0189	1.0326	1.0472	1.3091	1.0275	1.0368	1.0630	2.1652	1.0067	1.0278	1.0377	1.0674	0.0064	0.0027	0.0078	0.3404
	Level 8	9.1min	1.0100	1.0172	1.0246	1.2018	1.0100	1.0173	1.0246	1.2007	1.0148	1.0191	1.0324	1.6802	1.0029	1.0159	1.0207	1.0355	0.0039	0.0011	0.0040	0.2374
	Level 9	18.2min	1.0051	1.0094	1.0138	1.1349	1.0051	1.0094	1.0138	1.1328	1.0078	1.0105	1.0183	1.5182	1.0015	1.0080	1.0111	1.0184	0.0021	0.0008	0.0020	0.1673
	Level 1	3.5sec	1.5160	1.6110	1.7158	2.2916	1.5160	1.6109	1.7157	2.2880	1.5663	1.6546	1.7964	5.1266	1.4255	1.5680	1.6558	1.7978	0.0363	0.0243	0.0387	0.6792
	Level 2	7sec	1.2868	1.3807	1.4962	2.4883	1.2866	1.3806	1.4960	2.4884	1.3402	1.4234	1.5710	13.1198	1.1836	1.3404	1.4295	1.5718	0.0384	0.0252	0.0408	1.8005
	Level 3	14.1sec	1.1649	1.2440	1.3220	2.6876	1.1649	1.2439	1.3218	2.6778	1.2126	1.2711	1.3730	24.9521	1.1191	1.2144	1.2718	1.3824	0.0331	0.0155	0.0286	3.4908
1	**Level 4**	28.2sec	1.0941	1.1490	1.2023	3.1608	1.0941	1.1489	1.2023	3.1225	1.1273	1.1730	1.2334	47.7545	1.0555	1.1275	1.1741	1.2341	0.0242	0.0139	0.0188	6.6470
Year	**Level 5**	56.4sec	1.0519	1.0880	1.1227	3.9066	1.0519	1.0880	1.1228	3.9237	1.0735	1.1052	1.1433	89.9102	1.0220	1.0736	1.1062	1.1439	0.0150	0.0090	0.0112	12.4486
before	**Level 6**	1.9min	1.0284	1.0500	1.0698	5.4557	1.0284	1.0500	1.0698	5.4132	1.0406	1.0597	1.0820	160.4251	1.0105	1.0409	1.0604	1.0834	0.0088	0.0054	0.0062	22.4042
	Level 7	3.8min	1.0153	1.0272	1.0381	7.6883	1.0153	1.0272	1.0381	7.7462	1.0221	1.0318	1.0452	246.2695	1.0064	1.0224	1.0318	1.0457	0.0049	0.0030	0.0042	36.0226
	Level 8	7.5min	1.0080	1.0146	1.0205	8.7993	1.0080	1.0146	1.0205	8.9760	1.0120	1.0174	1.0251	257.0000	1.0022	1.0120	1.0175	1.0252	0.0028	0.0017	0.0022	41.9621
	Level 9	15min	-12.2856	1.0083	1.0119	10.2142	-12.2989	1.0083	1.0119	9.9427	1.0063	1.0099	1.0145	513.0000	-783.8623	1.0064	1.0101	1.0148	102.1809	0.0011	0.0013	67.2145

Table A.44: EDU3 Other Results Table –Continued

EDU3 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.6sec	0.2486	0.3634	0.5082	0.6310	0.2497	0.3638	0.5077	0.6322	0.3042	0.4015	0.5289	0.6667	0.1952	0.3435	0.4865	0.5978	0.0771	0.0326	0.0300	0.0487
	Level 2	33.3sec	0.1950	0.4050	0.5958	0.7621	0.1951	0.4041	0.5942	0.7627	0.2238	0.5057	0.6742	0.8000	0.1663	0.2283	0.5142	0.7253	0.0406	0.1528	0.1131	0.0528
	Level 3	1.1min	0.1781	0.4739	0.6833	0.8498	0.1782	0.4744	0.6836	0.8492	0.2022	0.6469	0.7092	0.8889	0.1542	0.2649	0.6580	0.8096	0.0339	0.1937	0.0362	0.0561
30	**Level 4**	2.2min	0.1848	0.5993	0.7877	0.9133	0.1853	0.6003	0.7877	0.9143	0.2157	0.7734	0.7899	0.9411	0.1550	0.4161	0.7856	0.8874	0.0430	0.1789	0.0031	0.0380
days	**Level 5**	4.4min	0.2459	0.7112	0.8803	0.9494	0.2459	0.7124	0.8803	0.9497	0.2460	0.8242	0.8809	0.9696	0.2459	0.5861	0.8797	0.9297	0.0001	0.1197	0.0008	0.0283
before	**Level 6**	8.9min	0.3303	0.8002	0.9273	0.9727	0.3301	0.7986	0.9272	0.9726	0.3531	0.8528	0.9357	0.9845	0.3071	0.7346	0.9187	0.9607	0.0326	0.0597	0.0120	0.0169
	Level 7	17.7min	0.4009	0.8697	0.9531	0.9832	0.4003	0.8695	0.9537	0.9829	0.4436	0.8957	0.9660	0.9920	0.3569	0.8353	0.9413	0.9739	0.0613	0.0310	0.0175	0.0128
	Level 8	35.5min	0.4457	0.9061	0.9713	0.9885	0.4448	0.9063	0.9715	0.9884	0.4864	0.9178	0.9806	0.9956	0.4032	0.8839	0.9623	0.9812	0.0588	0.0195	0.0130	0.0102
	Level 9	71min	0.4829	0.9090	0.9806	0.9922	0.4838	0.9092	0.9804	0.9922	0.5580	0.9234	0.9863	0.9971	0.4096	0.8839	0.9745	0.9874	0.1049	0.0220	0.0083	0.0069
	Level 1	7.4sec	0.3243	0.5012	0.5931	0.6628	0.3245	0.5011	0.5930	0.6626	0.3998	0.5289	0.6298	0.6768	0.1952	0.4015	0.5669	0.6422	0.0635	0.0463	0.0200	0.0106
	Level 2	14.8sec	0.2807	0.5696	0.6943	0.7937	0.2826	0.5694	0.6942	0.7937	0.4781	0.6406	0.7253	0.8083	0.1663	0.5057	0.6742	0.7771	0.1192	0.0538	0.0194	0.0118
	Level 3	29.6sec	0.3002	0.6680	0.7724	0.8587	0.2998	0.6675	0.7722	0.8585	0.5114	0.7403	0.8096	0.8889	0.1542	0.6137	0.7417	0.8105	0.1497	0.0449	0.0271	0.0306
60	**Level 4**	59.2sec	0.3625	0.7579	0.8322	0.9047	0.3625	0.7580	0.8321	0.9044	0.6114	0.7911	0.8639	0.9411	0.1550	0.6828	0.8039	0.8670	0.1755	0.0399	0.0218	0.0337
days	**Level 5**	2min	0.4521	0.8262	0.8852	0.9365	0.4520	0.8265	0.8853	0.9365	0.7268	0.8701	0.9000	0.9696	0.2459	0.7313	0.8793	0.9053	0.1961	0.0447	0.0077	0.0287
before	**Level 6**	3.9min	0.5570	0.8759	0.9254	0.9628	0.5540	0.8760	0.9254	0.9625	0.7737	0.9065	0.9357	0.9845	0.3071	0.8085	0.9165	0.9407	0.1937	0.0352	0.0075	0.0190
	Level 7	7.9min	0.6389	0.9141	0.9517	0.9770	0.6422	0.9142	0.9518	0.9770	0.8353	0.9413	0.9596	0.9920	0.3569	0.8775	0.9424	0.9651	0.1907	0.0217	0.0059	0.0121
	Level 8	15.8min	0.6999	0.9386	0.9677	0.9850	0.6997	0.9385	0.9677	0.9850	0.8839	0.9552	0.9726	0.9956	0.4032	0.9173	0.9617	0.9738	0.1902	0.0151	0.0048	0.0090
	Level 9	31.6min	0.7243	0.9428	0.9748	0.9886	0.7255	0.9423	0.9748	0.9886	0.8949	0.9607	0.9784	0.9971	0.4096	0.9203	0.9680	0.9786	0.1793	0.0173	0.0037	0.0077
	Level 1	4.3sec	0.3944	0.5569	0.6047	0.6592	0.3948	0.5570	0.6047	0.6592	0.5204	0.5892	0.6285	0.6956	0.1952	0.5235	0.5909	0.6298	0.0966	0.0242	0.0128	0.0189
	Level 2	8.5sec	0.4004	0.6480	0.7036	0.7783	0.3996	0.6482	0.7036	0.7783	0.5730	0.6826	0.7240	0.8083	0.1663	0.5916	0.6844	0.7253	0.1575	0.0301	0.0127	0.0272
	Level 3	17.1sec	0.4535	0.7274	0.7871	0.8484	0.4553	0.7272	0.7869	0.8490	0.6580	0.7570	0.8105	0.8889	0.1542	0.6763	0.7588	0.8143	0.2047	0.0285	0.0173	0.0311
3	**Level 4**	34.2sec	0.5328	0.8031	0.8475	0.9019	0.5337	0.8032	0.8476	0.9018	0.7696	0.8270	0.8670	0.9411	0.1550	0.7734	0.8307	0.8745	0.2299	0.0189	0.0128	0.0275
months	**Level 5**	1.1min	0.6169	0.8674	0.8950	0.9370	0.6143	0.8675	0.8950	0.9369	0.8317	0.8811	0.9057	0.9696	0.2459	0.8400	0.8827	0.9100	0.2305	0.0149	0.0075	0.0220
before	**Level 6**	2.3min	0.6941	0.9097	0.9317	0.9618	0.6916	0.9097	0.9317	0.9621	0.8773	0.9201	0.9411	0.9845	0.3071	0.8836	0.9245	0.9414	0.2073	0.0106	0.0057	0.0143
	Level 7	4.6min	0.7585	0.9384	0.9567	0.9766	0.7576	0.9383	0.9567	0.9766	0.9112	0.9483	0.9655	0.9920	0.3569	0.9189	0.9487	0.9656	0.1876	0.0091	0.0054	0.0093
	Level 8	9.1min	0.7988	0.9564	0.9704	0.9850	0.8004	0.9564	0.9704	0.9850	0.9391	0.9644	0.9766	0.9956	0.4032	0.9442	0.9644	0.9767	0.1763	0.0065	0.0038	0.0064
	Level 9	18.2min	0.8153	0.9633	0.9758	0.9881	0.8146	0.9633	0.9758	0.9881	0.9391	0.9704	0.9798	0.9971	0.4096	0.9489	0.9712	0.9803	0.1620	0.0063	0.0027	0.0057
	Level 1	3.5sec	0.4587	0.5800	0.6188	0.6581	0.4587	0.5800	0.6188	0.6581	0.5534	0.5986	0.6354	0.6977	0.1952	0.5536	0.5999	0.6361	0.0910	0.0137	0.0104	0.0161
	Level 2	7sec	0.4808	0.6644	0.7182	0.7761	0.4801	0.6643	0.7182	0.7761	0.6350	0.6927	0.7390	0.8329	0.0756	0.6351	0.6929	0.7397	0.1557	0.0176	0.0124	0.0236
	Level 3	14.1sec	0.5434	0.7507	0.7992	0.8559	0.5428	0.7507	0.7992	0.8559	0.7171	0.7779	0.8209	0.8930	0.0393	0.7172	0.7785	0.8219	0.2043	0.0184	0.0122	0.0254
1	**Level 4**	28.2sec	0.6146	0.8227	0.8640	0.9098	0.6146	0.8227	0.8639	0.9099	0.7967	0.8452	0.8819	0.9460	0.0200	0.7989	0.8454	0.8823	0.2383	0.0135	0.0118	0.0232
Year	**Level 5**	56.4sec	0.6816	0.8790	0.9086	0.9472	0.6818	0.8790	0.9085	0.9472	0.8597	0.8925	0.9228	0.9703	0.0101	0.8602	0.8929	0.9232	0.2571	0.0101	0.0088	0.0155
before	**Level 6**	1.9min	0.7389	0.9198	0.9417	0.9689	0.7410	0.9198	0.9417	0.9689	0.9059	0.9310	0.9530	0.9857	0.0051	0.9065	0.9311	0.9530	0.2590	0.0068	0.0067	0.0102
	Level 7	3.8min	0.7869	0.9462	0.9632	0.9814	0.7868	0.9462	0.9633	0.9814	0.9330	0.9550	0.9705	0.9938	0.0025	0.9336	0.9551	0.9708	0.2541	0.0059	0.0043	0.0067
	Level 8	7.5min	0.8140	0.9610	0.9752	0.9878	0.8142	0.9611	0.9752	0.9878	0.9483	0.9690	0.9805	0.9971	0.0013	0.9484	0.9692	0.9806	0.2455	0.0053	0.0032	0.0048
	Level 9	15min	0.8143	0.9659	0.9787	0.9896	0.8138	0.9660	0.9787	0.9896	0.9522	0.9743	0.9839	0.9971	0.0006	0.9547	0.9744	0.9839	0.2378	0.0057	0.0030	0.0041

Table A.45: EDU4 Other Results Table

EDU4 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	6.4sec	1.5201	1.6323	1.7383	2.0715	1.5206	1.6315	1.7385	2.0773	1.5681	1.6973	1.7766	2.3450	1.4100	1.5814	1.7093	1.7943	0.0642	0.0482	0.0278	0.2501
	Level 2	12.8sec	1.3728	1.4336	1.5624	1.9679	1.3726	1.4333	1.5625	1.9795	1.3855	1.4968	1.5999	2.9460	1.3451	1.4077	1.5175	1.6218	0.0160	0.0369	0.0342	0.5568
	Level 3	25.5sec	1.2359	1.3275	1.4143	1.7535	1.2363	1.3270	1.4137	1.7489	1.2580	1.3474	1.4721	2.5173	1.2186	1.2803	1.3567	1.4770	0.0154	0.0281	0.0462	0.4375
30	**Level 4**	51sec	1.1522	1.2385	1.2920	1.5696	1.1520	1.2379	1.2920	1.5737	1.1650	1.2618	1.3074	2.3518	1.1316	1.2179	1.2787	1.3115	0.0139	0.0193	0.0123	0.4426
days	**Level 5**	1.7min	1.0934	1.1482	1.1900	1.3827	1.0934	1.1485	1.1901	1.3858	1.1100	1.1797	1.1973	1.9356	1.0720	1.1257	1.1848	1.2006	0.0149	0.0212	0.0048	0.3111
before	**Level 6**	3.4min	1.0582	1.0856	1.1102	1.2504	1.0581	1.0856	1.1103	1.2498	1.0779	1.0924	1.1177	1.6105	1.0394	1.0793	1.1051	1.1261	0.0139	0.0064	0.0062	0.2043
	Level 7	6.8min	1.0342	1.0464	1.0645	1.1568	1.0342	1.0464	1.0647	1.1593	1.0438	1.0504	1.0754	1.4130	1.0227	1.0439	1.0514	1.0775	0.0077	0.0024	0.0113	0.1431
	Level 8	13.6min	1.0203	1.0270	1.0411	1.1080	1.0204	1.0270	1.0410	1.1063	1.0236	1.0293	1.0477	1.2975	1.0136	1.0254	1.0340	1.0478	0.0039	0.0018	0.0058	0.1072
	Level 9	27.2min	1.0146	1.0193	1.0316	1.0906	1.0145	1.0193	1.0316	1.0905	1.0170	1.0241	1.0389	1.2782	1.0097	1.0172	1.0253	1.0407	0.0030	0.0028	0.0059	0.1050
	Level 1	4sec	1.5277	1.6444	1.7448	2.3035	1.5281	1.6451	1.7449	2.2973	1.5727	1.6973	1.7943	3.6026	1.4100	1.5814	1.7093	1.8298	0.0475	0.0372	0.0356	0.5963
	Level 2	7.9sec	1.3255	1.4374	1.5579	2.3778	1.3257	1.4369	1.5585	2.3854	1.3816	1.4968	1.6145	5.6226	1.2316	1.3855	1.5027	1.6218	0.0559	0.0346	0.0381	1.2534
	Level 3	15.8sec	1.2027	1.3117	1.4188	2.3467	1.2026	1.3119	1.4181	2.3578	1.2519	1.3474	1.4721	7.2376	1.1193	1.2580	1.3567	1.4770	0.0486	0.0307	0.0352	1.7671
60	**Level 4**	31.6sec	1.1279	1.2175	1.2903	2.1682	1.1280	1.2174	1.2904	2.1683	1.1656	1.2523	1.3118	7.2378	1.0575	1.1720	1.2618	1.3296	0.0390	0.0249	0.0188	1.8169
days	**Level 5**	1.1min	1.0779	1.1330	1.1873	1.8119	1.0780	1.1329	1.1873	1.8007	1.1048	1.1601	1.2006	5.4039	1.0385	1.1100	1.1772	1.2032	0.0240	0.0192	0.0083	1.2880
before	**Level 6**	2.1min	1.0463	1.0789	1.1092	1.5614	1.0464	1.0789	1.1091	1.5606	1.0612	1.0920	1.1261	4.3257	1.0261	1.0626	1.0924	1.1283	0.0134	0.0098	0.0102	0.9821
	Level 7	4.2min	1.0280	1.0442	1.0645	1.3535	1.0281	1.0442	1.0645	1.3557	1.0368	1.0500	1.0775	3.1174	1.0145	1.0385	1.0504	1.0786	0.0086	0.0038	0.0105	0.6273
	Level 8	8.4min	1.0178	1.0265	1.0418	1.2258	1.0178	1.0265	1.0419	1.2211	1.0236	1.0296	1.0478	2.2553	1.0096	1.0241	1.0340	1.0492	0.0053	0.0020	0.0053	0.3716
	Level 9	16.9min	1.0128	1.0195	1.0321	1.1565	1.0128	1.0195	1.0321	1.1602	1.0165	1.0241	1.0381	1.8231	1.0076	1.0170	1.0253	1.0389	0.0032	0.0024	0.0048	0.2443
	Level 1	2.7sec	1.5427	1.6724	1.7872	2.2228	1.5426	1.6722	1.7870	2.2217	1.5890	1.7143	1.8557	3.6026	1.4100	1.5932	1.7258	1.8680	0.0425	0.0362	0.0406	0.4942
	Level 2	5.5sec	1.3338	1.4587	1.5808	2.2276	1.3340	1.4584	1.5801	2.2385	1.3855	1.5173	1.6481	5.6226	1.2316	1.3908	1.5175	1.6500	0.0485	0.0398	0.0450	0.9984
	Level 3	10.9sec	1.2115	1.3232	1.4335	2.1933	1.2116	1.3230	1.4332	2.1927	1.2580	1.3857	1.5034	7.2376	1.1193	1.2803	1.3927	1.5242	0.0423	0.0310	0.0320	1.4010
3	**Level 4**	21.8sec	1.1377	1.2241	1.3029	1.9826	1.1378	1.2239	1.3031	2.0041	1.1850	1.2686	1.3351	7.2378	1.0575	1.1889	1.2787	1.3442	0.0352	0.0236	0.0175	1.4438
months	**Level 5**	43.7sec	1.0860	1.1469	1.2000	1.6911	1.0859	1.1469	1.1999	1.7062	1.1130	1.1781	1.2321	5.4039	1.0385	1.1205	1.1797	1.2500	0.0228	0.0172	0.0146	1.0256
before	**Level 6**	1.5min	1.0521	1.0889	1.1247	1.4828	1.0522	1.0889	1.1249	1.4842	1.0710	1.1051	1.1518	4.3257	1.0261	1.0779	1.1051	1.1589	0.0135	0.0082	0.0141	0.7803
	Level 7	2.9min	1.0315	1.0498	1.0764	1.3015	1.0315	1.0498	1.0763	1.3017	1.0399	1.0575	1.0894	3.1174	1.0145	1.0438	1.0630	1.0896	0.0083	0.0040	0.0083	0.4993
	Level 8	5.8min	1.0201	1.0304	1.0476	1.1857	1.0201	1.0305	1.0476	1.1875	1.0249	1.0361	1.0568	2.2553	1.0096	1.0254	1.0420	1.0581	0.0052	0.0034	0.0046	0.2963
	Level 9	11.6min	1.0143	1.0228	1.0356	1.1373	1.0143	1.0228	1.0356	1.1363	1.0179	1.0277	1.0407	1.8231	1.0076	1.0180	1.0302	1.0421	0.0033	0.0026	0.0034	0.1949
	Level 1	1.9sec	1.5210	1.6088	1.6974	1.9339	1.5209	1.6088	1.6974	1.9368	1.5681	1.6516	1.7514	3.6026	1.4100	1.5699	1.6517	1.7519	0.0372	0.0249	0.0301	0.3060
	Level 2	3.8sec	1.2984	1.3936	1.4815	1.7900	1.2982	1.3936	1.4815	1.7917	1.3582	1.4276	1.5369	5.6226	1.1868	1.3598	1.4295	1.5399	0.0370	0.0188	0.0327	0.5590
	Level 3	7.7sec	1.1804	1.2575	1.3330	1.6434	1.1802	1.2576	1.3329	1.6435	1.2210	1.2868	1.3915	7.2376	1.0890	1.2227	1.2878	1.3927	0.0328	0.0205	0.0288	0.7568
1	**Level 4**	15.3sec	1.1117	1.1702	1.2288	1.4969	1.1116	1.1703	1.2287	1.4947	1.1458	1.1959	1.2732	7.2378	1.0469	1.1469	1.1970	1.2753	0.0241	0.0156	0.0215	0.7653
Year	**Level 5**	30.7sec	1.0694	1.1096	1.1505	1.3396	1.0695	1.1096	1.1504	1.3402	1.0917	1.1306	1.1823	5.4039	1.0282	1.0921	1.1310	1.1837	0.0161	0.0117	0.0146	0.5448
before	**Level 6**	1min	1.0422	1.0675	1.0935	1.2219	1.0422	1.0675	1.0935	1.2240	1.0567	1.0821	1.1103	4.3257	1.0177	1.0568	1.0821	1.1111	0.0098	0.0085	0.0082	0.4104
	Level 7	2min	1.0251	1.0402	1.0561	1.1362	1.0252	1.0402	1.0561	1.1379	1.0330	1.0487	1.0658	3.1174	1.0110	1.0331	1.0490	1.0661	0.0056	0.0049	0.0048	0.2620
	Level 8	4.1min	1.0158	1.0251	1.0352	1.0869	1.0158	1.0251	1.0353	1.0860	1.0204	1.0300	1.0427	2.2553	1.0069	1.0204	1.0300	1.0428	0.0033	0.0028	0.0036	0.1564
	Level 9	8.2min	1.0120	1.0190	1.0265	1.0641	1.0120	1.0190	1.0265	1.0645	1.0157	1.0227	1.0318	1.8231	1.0053	1.0158	1.0227	1.0319	0.0025	0.0021	0.0025	0.1041

Table A.45: EDU4 Other Results Table –Continued

EDU4 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	5.6sec	1.4980	1.6170	1.7303	2.1138	1.4975	1.6174	1.7305	2.1098	1.5588	1.6645	1.7750	2.4933	1.4088	1.5685	1.7109	1.7779	0.0553	0.0454	0.0263	0.3214
	Level 2	11.1sec	1.3552	1.4184	1.5677	2.0368	1.3552	1.4184	1.5682	2.0415	1.3788	1.4494	1.6151	3.1591	1.3295	1.4052	1.5313	1.6214	0.0236	0.0181	0.0355	0.6500
	Level 3	22.3sec	1.2165	1.3096	1.4110	1.7853	1.2166	1.3096	1.4107	1.7786	1.2388	1.3428	1.4392	2.5921	1.1830	1.2587	1.3439	1.4790	0.0251	0.0354	0.0386	0.4696
30	**Level 4**	44.6sec	1.1315	1.2020	1.2769	1.6090	1.1310	1.2021	1.2769	1.5969	1.1581	1.2261	1.2963	2.3571	1.0885	1.1660	1.2398	1.3106	0.0297	0.0227	0.0220	0.4413
days	**Level 5**	1.5min	1.0826	1.1271	1.1849	1.3942	1.0827	1.1270	1.1849	1.4008	1.1140	1.1455	1.1979	1.9659	1.0537	1.1156	1.1768	1.2021	0.0235	0.0119	0.0079	0.3261
before	**Level 6**	3min	1.0505	1.0813	1.1125	1.2543	1.0506	1.0814	1.1125	1.2551	1.0609	1.0955	1.1234	1.6279	1.0334	1.0682	1.0960	1.1241	0.0117	0.0124	0.0111	0.2137
	Level 7	5.9min	1.0332	1.0484	1.0698	1.1617	1.0333	1.0482	1.0697	1.1610	1.0369	1.0599	1.0789	1.3951	1.0256	1.0407	1.0613	1.0796	0.0046	0.0085	0.0081	0.1334
	Level 8	11.9min	1.0242	1.0330	1.0485	1.1183	1.0242	1.0331	1.0485	1.1196	1.0247	1.0377	1.0555	1.2895	1.0231	1.0268	1.0390	1.0574	0.0006	0.0044	0.0073	0.0958
	Level 9	23.8min	1.0214	1.0283	1.0410	1.1119	1.0213	1.0283	1.0409	1.1120	1.0243	1.0313	1.0464	1.2779	1.0186	1.0268	1.0366	1.0610	0.0025	0.0019	0.0044	0.0929
	Level 1	3.5sec	1.5140	1.6350	1.7357	2.3100	1.5148	1.6343	1.7354	2.3068	1.5685	1.6761	1.7935	3.6265	1.4088	1.5690	1.6856	1.8108	0.0459	0.0366	0.0375	0.5815
	Level 2	7sec	1.3101	1.4220	1.5471	2.3113	1.3103	1.4221	1.5471	2.3280	1.3766	1.4499	1.6151	4.6063	1.2285	1.3788	1.5082	1.6214	0.0515	0.0230	0.0377	0.9799
	Level 3	14sec	1.1857	1.2925	1.4063	2.3084	1.1860	1.2921	1.4065	2.3222	1.2384	1.3334	1.4673	6.7865	1.1329	1.2387	1.3428	1.4726	0.0420	0.0366	0.0423	1.6334
60	**Level 4**	28.1sec	1.1137	1.1904	1.2740	2.3791	1.1140	1.1901	1.2743	2.3430	1.1523	1.2261	1.3074	8.8268	1.0700	1.1581	1.2296	1.3106	0.0324	0.0236	0.0260	2.3097
days	**Level 5**	56.2sec	1.0692	1.1209	1.1796	2.2690	1.0692	1.1208	1.1795	2.2590	1.0940	1.1454	1.2021	9.9530	1.0364	1.0965	1.1455	1.2021	0.0212	0.0132	0.0185	2.7160
before	**Level 6**	1.9min	1.0428	1.0736	1.1084	1.9125	1.0428	1.0734	1.1086	1.8902	1.0562	1.0921	1.1241	7.6499	1.0273	1.0588	1.0950	1.1332	0.0111	0.0115	0.0124	2.0295
	Level 7	3.7min	1.0289	1.0437	1.0668	1.6093	1.0290	1.0437	1.0669	1.6158	1.0357	1.0554	1.0789	5.7491	1.0166	1.0359	1.0567	1.0796	0.0059	0.0067	0.0088	1.4554
	Level 8	7.5min	1.0215	1.0296	1.0450	1.5292	1.0215	1.0296	1.0450	1.5173	1.0243	1.0363	1.0549	5.1098	1.0106	1.0245	1.0366	1.0555	0.0041	0.0038	0.0063	1.2643
	Level 9	15min	1.0179	1.0263	1.0388	1.5650	1.0180	1.0263	1.0387	1.5579	1.0212	1.0313	1.0464	5.5664	1.0091	1.0219	1.0324	1.0507	0.0035	0.0027	0.0052	1.4102
	Level 1	2.5sec	1.5326	1.6620	1.7929	2.2786	1.5324	1.6620	1.7933	2.2755	1.5735	1.7112	1.8681	3.6265	1.4088	1.6237	1.7242	1.8858	0.0430	0.0296	0.0429	0.4772
	Level 2	5sec	1.3239	1.4515	1.5697	2.1888	1.3240	1.4512	1.5701	2.1947	1.3788	1.5106	1.6346	4.6063	1.2285	1.3896	1.5119	1.6748	0.0464	0.0418	0.0442	0.7900
	Level 3	10sec	1.1977	1.3071	1.4264	2.1033	1.1975	1.3070	1.4264	2.1006	1.2388	1.3488	1.4726	6.7865	1.1329	1.2447	1.3736	1.4790	0.0376	0.0337	0.0301	1.3059
3	**Level 4**	20sec	1.1256	1.2012	1.2885	2.0836	1.1253	1.2013	1.2885	2.0656	1.1629	1.2398	1.3106	8.8268	1.0700	1.1660	1.2604	1.3235	0.0303	0.0225	0.0181	1.8414
months	**Level 5**	40sec	1.0788	1.1330	1.1914	1.9512	1.0785	1.1328	1.1915	1.9499	1.1099	1.1550	1.2102	9.9530	1.0364	1.1101	1.1708	1.2157	0.0212	0.0142	0.0123	2.1508
before	**Level 6**	1.3min	1.0486	1.0842	1.1202	1.6593	1.0487	1.0839	1.1204	1.6664	1.0615	1.1001	1.1356	7.6499	1.0273	1.0663	1.1005	1.1356	0.0118	0.0114	0.0112	1.6046
	Level 7	2.7min	1.0318	1.0512	1.0758	1.4585	1.0318	1.0512	1.0759	1.4560	1.0405	1.0613	1.0857	5.7491	1.0166	1.0407	1.0641	1.0867	0.0062	0.0070	0.0076	1.1497
	Level 8	5.3min	1.0227	1.0347	1.0527	1.3820	1.0228	1.0347	1.0527	1.3751	1.0273	1.0418	1.0638	5.1098	1.0106	1.0278	1.0419	1.0699	0.0039	0.0039	0.0062	0.9990
	Level 9	10.7min	1.0194	1.0302	1.0470	1.4119	1.0194	1.0302	1.0470	1.4003	1.0243	1.0346	1.0618	5.5664	1.0091	1.0256	1.0351	1.0686	0.0035	0.0036	0.0085	1.1132
	Level 1	1.8sec	1.5139	1.6044	1.6852	1.9397	1.5139	1.6044	1.6852	1.9377	1.5620	1.6465	1.7371	3.6265	1.4088	1.5641	1.6472	1.7373	0.0395	0.0233	0.0276	0.3140
	Level 2	3.7sec	1.2904	1.3812	1.4675	1.7596	1.2906	1.3811	1.4673	1.7599	1.3473	1.4177	1.5148	4.6063	1.1822	1.3502	1.4196	1.5150	0.0386	0.0172	0.0297	0.4674
	Level 3	7.4sec	1.1706	1.2412	1.3131	1.5983	1.1708	1.2412	1.3131	1.5987	1.2115	1.2727	1.3600	6.7865	1.0862	1.2117	1.2727	1.3614	0.0298	0.0170	0.0236	0.7028
1	**Level 4**	14.7sec	1.1032	1.1555	1.2057	1.4828	1.1033	1.1556	1.2057	1.4867	1.1337	1.1750	1.2459	8.8268	1.0456	1.1339	1.1754	1.2468	0.0214	0.0119	0.0203	0.9602
Year	**Level 5**	29.4sec	1.0641	1.0994	1.1336	1.3920	1.0640	1.0994	1.1335	1.3847	1.0863	1.1143	1.1619	9.9530	1.0272	1.0867	1.1148	1.1639	0.0150	0.0082	0.0135	1.1000
before	**Level 6**	58.9sec	1.0398	1.0620	1.0849	1.2566	1.0398	1.0620	1.0849	1.2622	1.0531	1.0719	1.1034	7.6499	1.0168	1.0531	1.0724	1.1038	0.0093	0.0057	0.0089	0.8177
	Level 7	2min	1.0253	1.0392	1.0541	1.1747	1.0253	1.0391	1.0541	1.1758	1.0325	1.0465	1.0641	5.7491	1.0106	1.0326	1.0465	1.0642	0.0055	0.0042	0.0054	0.5843
	Level 8	3.9min	1.0174	1.0271	1.0375	1.1375	1.0174	1.0271	1.0375	1.1375	1.0226	1.0329	1.0434	5.1098	1.0073	1.0226	1.0330	1.0449	0.0038	0.0032	0.0035	0.5068
	Level 9	7.9min	1.0146	1.0237	1.0326	1.1404	1.0146	1.0236	1.0326	1.1394	1.0189	1.0279	1.0388	5.5664	1.0065	1.0190	1.0279	1.0388	0.0031	0.0028	0.0030	0.5641

Table A.45: EDU4 Other Results Table –Continued

EDU4 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	6sec	1.5044	1.6120	1.7206	2.0825	1.5037	1.6119	1.7205	2.0831	1.5674	1.6537	1.7666	2.4013	1.4093	1.5685	1.6860	1.7689	0.0578	0.0398	0.0308	0.2862
	Level 2	12sec	1.3533	1.4038	1.5439	1.9787	1.3528	1.4038	1.5435	1.9878	1.3824	1.4128	1.5899	3.0419	1.3225	1.3913	1.4931	1.5979	0.0269	0.0092	0.0382	0.6062
	Level 3	23.9sec	1.2049	1.2967	1.3872	1.7354	1.2050	1.2968	1.3872	1.7350	1.2347	1.3239	1.4393	2.5293	1.1874	1.2533	1.3419	1.4620	0.0183	0.0280	0.0471	0.4498
30	**Level 4**	47.8sec	1.1254	1.1891	1.2585	1.5483	1.1249	1.1890	1.2580	1.5494	1.1437	1.1992	1.2915	2.2962	1.0937	1.1612	1.2190	1.3107	0.0211	0.0159	0.0337	0.4253
days	**Level 5**	1.6min	1.0724	1.1138	1.1616	1.3531	1.0722	1.1138	1.1613	1.3497	1.0872	1.1210	1.1822	1.8679	1.0465	1.1075	1.1446	1.1842	0.0169	0.0060	0.0178	0.2944
before	**Level 6**	3.2min	1.0402	1.0630	1.0876	1.2139	1.0402	1.0630	1.0876	1.2097	1.0496	1.0686	1.1021	1.5398	1.0220	1.0569	1.0729	1.1040	0.0116	0.0055	0.0108	0.1872
	Level 7	6.4min	1.0216	1.0327	1.0435	1.1167	1.0217	1.0327	1.0435	1.1178	1.0266	1.0375	1.0486	1.3160	1.0103	1.0276	1.0397	1.0493	0.0070	0.0038	0.0037	0.1127
	Level 8	12.8min	1.0121	1.0179	1.0214	1.0664	1.0121	1.0178	1.0214	1.0661	1.0163	1.0189	1.0238	1.1865	1.0058	1.0166	1.0190	1.0244	0.0040	0.0009	0.0020	0.0682
	Level 9	25.5min	1.0067	1.0097	1.0134	1.0403	1.0067	1.0097	1.0134	1.0410	1.0078	1.0116	1.0144	1.1249	1.0044	1.0078	1.0118	1.0156	0.0014	0.0015	0.0010	0.0471
	Level 1	3.7sec	1.5171	1.6291	1.7317	2.2816	1.5168	1.6292	1.7307	2.2854	1.5685	1.6570	1.8093	3.6147	1.4093	1.5700	1.6852	1.8186	0.0457	0.0325	0.0425	0.5853
	Level 2	7.5sec	1.3044	1.4166	1.5352	2.2991	1.3047	1.4164	1.5350	2.3052	1.3755	1.4586	1.5899	4.8089	1.2274	1.3824	1.4931	1.5979	0.0500	0.0245	0.0328	1.0378
	Level 3	14.9sec	1.1769	1.2859	1.3883	2.2424	1.1766	1.2856	1.3886	2.2310	1.2347	1.3239	1.4516	6.2070	1.0986	1.2354	1.3302	1.4620	0.0411	0.0335	0.0460	1.4672
60	**Level 4**	29.9sec	1.1072	1.1799	1.2557	2.0702	1.1069	1.1796	1.2557	2.0603	1.1437	1.1992	1.2915	6.4519	1.0518	1.1442	1.2009	1.3059	0.0323	0.0197	0.0322	1.5866
days	**Level 5**	59.7sec	1.0610	1.1062	1.1588	1.7063	1.0614	1.1061	1.1589	1.7038	1.0872	1.1210	1.1838	4.8623	1.0354	1.0880	1.1252	1.1842	0.0200	0.0123	0.0207	1.1365
before	**Level 6**	2min	1.0327	1.0588	1.0858	1.4301	1.0327	1.0588	1.0860	1.4316	1.0478	1.0686	1.1034	3.4899	1.0177	1.0480	1.0718	1.1035	0.0113	0.0078	0.0116	0.7368
	Level 7	4min	1.0177	1.0310	1.0433	1.2470	1.0178	1.0310	1.0433	1.2411	1.0259	1.0375	1.0493	2.3819	1.0103	1.0265	1.0392	1.0515	0.0065	0.0040	0.0039	0.4096
	Level 8	8min	1.0096	1.0171	1.0218	1.1404	1.0097	1.0171	1.0218	1.1362	1.0142	1.0189	1.0244	1.7625	1.0048	1.0145	1.0190	1.0247	0.0036	0.0014	0.0019	0.2263
	Level 9	15.9min	1.0052	1.0092	1.0128	1.0641	1.0052	1.0092	1.0128	1.0651	1.0076	1.0116	1.0140	1.2885	1.0023	1.0077	1.0118	1.0144	0.0019	0.0013	0.0008	0.0855
	Level 1	2.6sec	1.5328	1.6537	1.7820	2.2261	1.5325	1.6537	1.7825	2.2256	1.5712	1.7102	1.8307	3.6147	1.4093	1.5935	1.7187	1.8525	0.0416	0.0299	0.0390	0.4714
	Level 2	5.2sec	1.3161	1.4427	1.5529	2.1543	1.3159	1.4427	1.5528	2.1612	1.3755	1.5015	1.6214	4.8089	1.2274	1.3824	1.5029	1.6737	0.0439	0.0410	0.0398	0.8360
	Level 3	10.5sec	1.1879	1.2979	1.4027	2.0431	1.1879	1.2978	1.4021	2.0488	1.2354	1.3419	1.4608	6.2070	1.0986	1.2371	1.3484	1.4620	0.0371	0.0337	0.0375	1.1741
3	**Level 4**	20.9sec	1.1169	1.1869	1.2665	1.8838	1.1170	1.1868	1.2664	1.8867	1.1470	1.2190	1.2915	6.4519	1.0518	1.1558	1.2248	1.3059	0.0296	0.0196	0.0172	1.2762
months	**Level 5**	41.8sec	1.0694	1.1156	1.1676	1.5812	1.0694	1.1157	1.1676	1.5999	1.0910	1.1437	1.1853	4.8623	1.0354	1.0940	1.1446	1.1870	0.0196	0.0133	0.0145	0.9164
before	**Level 6**	1.4min	1.0384	1.0668	1.0940	1.3630	1.0383	1.0668	1.0938	1.3703	1.0545	1.0784	1.1078	3.4899	1.0177	1.0555	1.0828	1.1078	0.0120	0.0075	0.0091	0.5926
	Level 7	2.8min	1.0206	1.0360	1.0489	1.2065	1.0206	1.0359	1.0489	1.2073	1.0276	1.0409	1.0557	2.3819	1.0103	1.0305	1.0413	1.0599	0.0066	0.0038	0.0048	0.3302
	Level 8	5.6min	1.0115	1.0188	1.0250	1.1126	1.0115	1.0188	1.0250	1.1152	1.0166	1.0208	1.0297	1.7625	1.0048	1.0166	1.0210	1.0309	0.0039	0.0014	0.0025	0.1823
	Level 9	11.1min	1.0061	1.0104	1.0138	1.0538	1.0061	1.0104	1.0138	1.0539	1.0089	1.0119	1.0171	1.2885	1.0023	1.0091	1.0120	1.0173	0.0021	0.0011	0.0016	0.0683
	Level 1	1.9sec	1.5118	1.5968	1.6806	1.9169	1.5121	1.5967	1.6805	1.9196	1.5645	1.6354	1.7326	3.6147	1.4079	1.5656	1.6376	1.7372	0.0386	0.0217	0.0278	0.3016
	Level 2	3.8sec	1.2849	1.3737	1.4563	1.7359	1.2848	1.3737	1.4562	1.7359	1.3365	1.4095	1.5043	4.8089	1.1832	1.3367	1.4096	1.5056	0.0356	0.0179	0.0283	0.4837
	Level 3	7.5sec	1.1636	1.2308	1.3005	1.5653	1.1636	1.2309	1.3006	1.5664	1.1996	1.2620	1.3389	6.2070	1.0856	1.2003	1.2620	1.3401	0.0286	0.0167	0.0221	0.6400
1	**Level 4**	15sec	1.0957	1.1445	1.1905	1.4243	1.0957	1.1444	1.1906	1.4227	1.1232	1.1656	1.2202	6.4519	1.0435	1.1236	1.1657	1.2222	0.0207	0.0129	0.0154	0.6795
Year	**Level 5**	30.1sec	1.0558	1.0874	1.1164	1.2777	1.0557	1.0874	1.1163	1.2758	1.0738	1.0995	1.1386	4.8623	1.0248	1.0739	1.0997	1.1392	0.0135	0.0072	0.0099	0.4857
before	**Level 6**	1min	1.0314	1.0499	1.0673	1.1657	1.0314	1.0499	1.0673	1.1657	1.0435	1.0566	1.0804	3.4899	1.0143	1.0436	1.0569	1.0815	0.0080	0.0040	0.0060	0.3130
	Level 7	2min	1.0170	1.0273	1.0365	1.0930	1.0170	1.0273	1.0365	1.0919	1.0236	1.0308	1.0424	2.3819	1.0080	1.0236	1.0308	1.0426	0.0043	0.0023	0.0032	0.1748
	Level 8	4min	1.0091	1.0147	1.0194	1.0498	1.0091	1.0147	1.0194	1.0498	1.0121	1.0173	1.0221	1.7625	1.0040	1.0123	1.0173	1.0222	0.0023	0.0015	0.0013	0.0968
	Level 9	8min	1.0052	1.0083	1.0110	1.0254	1.0052	1.0083	1.0110	1.0254	1.0071	1.0094	1.0127	1.2885	1.0023	1.0071	1.0094	1.0127	0.0013	0.0007	0.0010	0.0373

Table A.45: EDU4 Other Results Table –Continued

EDU4 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	6sec	0.4828	0.5779	0.6189	0.6685	0.4829	0.5780	0.6187	0.6685	0.5625	0.5845	0.6376	0.7098	0.4011	0.5634	0.6008	0.6415	0.0734	0.0087	0.0175	0.0254
	Level 2	12sec	0.5249	0.6379	0.7050	0.7382	0.5216	0.6380	0.7051	0.7381	0.6168	0.6530	0.7116	0.7521	0.3165	0.6192	0.6899	0.7253	0.1264	0.0144	0.0089	0.0129
	Level 3	23.9sec	0.5861	0.7094	0.7645	0.8223	0.5876	0.7093	0.7641	0.8222	0.6761	0.7441	0.7945	0.8453	0.3858	0.6948	0.7447	0.8072	0.1211	0.0200	0.0210	0.0171
30	**Level 4**	47.8sec	0.6564	0.7830	0.8322	0.8845	0.6573	0.7833	0.8321	0.8847	0.7630	0.8066	0.8576	0.9187	0.4243	0.7714	0.8156	0.8635	0.1417	0.0137	0.0159	0.0235
days	**Level 5**	1.6min	0.7384	0.8440	0.8872	0.9239	0.7393	0.8440	0.8874	0.9239	0.8319	0.8498	0.8964	0.9490	0.5087	0.8348	0.8730	0.8976	0.1375	0.0056	0.0093	0.0200
before	**Level 6**	3.2min	0.8139	0.8990	0.9249	0.9517	0.8125	0.8990	0.9248	0.9519	0.8896	0.9124	0.9361	0.9677	0.6143	0.8901	0.9129	0.9426	0.1158	0.0090	0.0106	0.0107
	Level 7	6.4min	0.8689	0.9349	0.9539	0.9679	0.8694	0.9349	0.9540	0.9678	0.9262	0.9422	0.9609	0.9750	0.7168	0.9268	0.9435	0.9644	0.0879	0.0070	0.0077	0.0043
	Level 8	12.8min	0.8997	0.9537	0.9680	0.9764	0.8979	0.9537	0.9680	0.9764	0.9457	0.9625	0.9739	0.9775	0.7755	0.9475	0.9636	0.9759	0.0693	0.0067	0.0041	0.0006
	Level 9	25.5min	0.9035	0.9607	0.9724	0.9791	0.9038	0.9607	0.9725	0.9791	0.9425	0.9647	0.9739	0.9818	0.7825	0.9557	0.9696	0.9762	0.0680	0.0041	0.0018	0.0024
	Level 1	3.7sec	0.4547	0.5786	0.6138	0.6608	0.4541	0.5785	0.6139	0.6607	0.5523	0.5966	0.6373	0.7098	0.2757	0.5576	0.6008	0.6376	0.0927	0.0133	0.0137	0.0207
	Level 2	7.5sec	0.4838	0.6511	0.7047	0.7646	0.4818	0.6510	0.7048	0.7643	0.6168	0.6897	0.7253	0.8140	0.2171	0.6192	0.6899	0.7264	0.1427	0.0200	0.0110	0.0306
	Level 3	14.9sec	0.5309	0.7153	0.7776	0.8445	0.5327	0.7154	0.7772	0.8441	0.6791	0.7500	0.8073	0.8827	0.1474	0.6815	0.7542	0.8075	0.1764	0.0238	0.0217	0.0300
60	**Level 4**	29.9sec	0.5974	0.7877	0.8431	0.8986	0.5921	0.7881	0.8434	0.8983	0.7630	0.8156	0.8635	0.9346	0.1133	0.7649	0.8228	0.8678	0.2093	0.0181	0.0150	0.0261
days	**Level 5**	59.7sec	0.6720	0.8505	0.8945	0.9356	0.6701	0.8505	0.8944	0.9356	0.8319	0.8730	0.9120	0.9649	0.1005	0.8319	0.8833	0.9141	0.2307	0.0150	0.0086	0.0186
before	**Level 6**	2min	0.7404	0.9037	0.9335	0.9590	0.7422	0.9035	0.9335	0.9590	0.8825	0.9157	0.9445	0.9734	0.1307	0.8896	0.9200	0.9468	0.2309	0.0104	0.0087	0.0103
	Level 7	4min	0.8028	0.9384	0.9594	0.9718	0.8003	0.9384	0.9594	0.9719	0.9262	0.9475	0.9653	0.9837	0.1739	0.9268	0.9487	0.9655	0.2292	0.0079	0.0051	0.0056
	Level 8	8min	0.8296	0.9577	0.9718	0.9790	0.8276	0.9578	0.9719	0.9790	0.9475	0.9650	0.9761	0.9895	0.1957	0.9479	0.9682	0.9762	0.2283	0.0060	0.0030	0.0040
	Level 9	15.9min	0.8320	0.9636	0.9749	0.9823	0.8300	0.9634	0.9749	0.9823	0.9517	0.9696	0.9786	0.9910	0.1796	0.9557	0.9718	0.9792	0.2346	0.0050	0.0021	0.0034
	Level 1	2.6sec	0.4542	0.5597	0.6029	0.6530	0.4541	0.5596	0.6030	0.6531	0.5303	0.5844	0.6159	0.7098	0.2757	0.5353	0.5845	0.6355	0.0758	0.0146	0.0099	0.0192
	Level 2	5.2sec	0.4944	0.6388	0.6912	0.7562	0.4930	0.6389	0.6915	0.7562	0.5971	0.6620	0.7197	0.8140	0.2171	0.6118	0.6631	0.7253	0.1151	0.0184	0.0190	0.0274
	Level 3	10.5sec	0.5532	0.7039	0.7672	0.8360	0.5526	0.7039	0.7672	0.8359	0.6761	0.7414	0.8034	0.8827	0.1474	0.6791	0.7441	0.8072	0.1455	0.0175	0.0196	0.0268
3	**Level 4**	20.9sec	0.6110	0.7780	0.8346	0.8895	0.6132	0.7781	0.8345	0.8893	0.7556	0.8066	0.8576	0.9346	0.1133	0.7630	0.8133	0.8599	0.1784	0.0130	0.0145	0.0243
months	**Level 5**	41.8sec	0.6863	0.8409	0.8840	0.9274	0.6878	0.8410	0.8840	0.9276	0.8226	0.8658	0.9008	0.9649	0.1005	0.8263	0.8697	0.9010	0.1925	0.0107	0.0104	0.0185
before	**Level 6**	1.4min	0.7588	0.8937	0.9236	0.9538	0.7589	0.8937	0.9236	0.9537	0.8806	0.9090	0.9378	0.9734	0.1307	0.8806	0.9124	0.9421	0.1896	0.0096	0.0093	0.0108
	Level 7	2.8min	0.8174	0.9303	0.9519	0.9692	0.8180	0.9303	0.9520	0.9693	0.9202	0.9422	0.9609	0.9837	0.1739	0.9210	0.9435	0.9611	0.1844	0.0071	0.0061	0.0059
	Level 8	5.6min	0.8474	0.9506	0.9669	0.9777	0.8483	0.9506	0.9669	0.9778	0.9347	0.9599	0.9729	0.9895	0.1957	0.9400	0.9619	0.9734	0.1826	0.0060	0.0034	0.0037
	Level 9	11.1min	0.8471	0.9559	0.9709	0.9810	0.8494	0.9559	0.9709	0.9810	0.9358	0.9665	0.9750	0.9910	0.1796	0.9418	0.9666	0.9762	0.1859	0.0080	0.0033	0.0034
	Level 1	1.9sec	0.5259	0.5935	0.6234	0.6610	0.5253	0.5936	0.6234	0.6610	0.5756	0.6071	0.6394	0.7098	0.2757	0.5757	0.6074	0.6402	0.0594	0.0097	0.0090	0.0178
	Level 2	3.8sec	0.5893	0.6818	0.7241	0.7753	0.5889	0.6818	0.7242	0.7755	0.6601	0.7044	0.7406	0.8458	0.2171	0.6602	0.7054	0.7422	0.0839	0.0138	0.0090	0.0237
	Level 3	7.5sec	0.6630	0.7618	0.8059	0.8546	0.6629	0.7618	0.8058	0.8547	0.7345	0.7857	0.8253	0.9206	0.1474	0.7353	0.7857	0.8254	0.0987	0.0137	0.0111	0.0222
1	**Level 4**	15sec	0.7335	0.8296	0.8654	0.9068	0.7335	0.8296	0.8654	0.9068	0.8021	0.8508	0.8819	0.9564	0.1133	0.8026	0.8510	0.8821	0.1136	0.0139	0.0089	0.0178
Year	**Level 5**	30.1sec	0.7990	0.8824	0.9097	0.9401	0.7991	0.8823	0.9097	0.9400	0.8591	0.8970	0.9203	0.9735	0.1005	0.8606	0.8974	0.9205	0.1150	0.0104	0.0068	0.0133
before	**Level 6**	1min	0.8554	0.9218	0.9416	0.9618	0.8551	0.9218	0.9416	0.9618	0.9060	0.9325	0.9495	0.9834	0.1307	0.9063	0.9329	0.9495	0.1088	0.0076	0.0051	0.0086
	Level 7	2min	0.8978	0.9487	0.9623	0.9754	0.8975	0.9487	0.9623	0.9754	0.9396	0.9555	0.9684	0.9895	0.1739	0.9398	0.9555	0.9685	0.1017	0.0048	0.0038	0.0053
	Level 8	4min	0.9207	0.9638	0.9736	0.9829	0.9209	0.9639	0.9736	0.9829	0.9570	0.9681	0.9779	0.9927	0.1957	0.9584	0.9682	0.9779	0.0990	0.0033	0.0030	0.0037
	Level 9	8min	0.9256	0.9685	0.9769	0.9856	0.9251	0.9685	0.9769	0.9856	0.9626	0.9728	0.9813	0.9935	0.1796	0.9627	0.9728	0.9814	0.1014	0.0028	0.0027	0.0030

Table A.46: EDU5 Other Results Table

EDU5 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	1.4962	1.5973	1.9881	3.6833	1.4941	1.5973	1.9821	3.6834	1.5822	1.5979	2.6372	3.6838	1.4063	1.5968	1.6040	3.6829	0.0880	0.0008	0.5696	0.0006
	Level 2	42.4sec	1.2630	1.3256	1.6231	3.2744	1.2634	1.3256	1.6232	3.2708	1.2827	1.3299	1.8618	3.5273	1.2287	1.3213	1.3303	3.0143	0.0302	0.0061	0.2698	0.3627
	Level 3	1.4min	1.1325	1.1649	1.3623	2.4246	1.1323	1.1649	1.3685	2.4172	1.1423	1.1670	1.6247	2.6210	1.1264	1.1628	1.1714	2.2134	0.0087	0.0029	0.2323	0.2882
30	**Level 4**	2.8min	1.0650	1.0864	1.3178	1.8329	1.0645	1.0864	1.3162	1.8345	1.0791	1.0905	1.4500	1.9076	1.0528	1.0823	1.0982	1.7615	0.0134	0.0058	0.1904	0.1033
days	**Level 5**	5.7min	1.0340	1.0519	1.2482	1.5513	1.0337	1.0519	1.2462	1.5508	1.0459	1.0526	1.4011	1.5722	1.0243	1.0512	1.0672	1.5295	0.0111	0.0010	0.1682	0.0302
before	**Level 6**	11.3min	1.0221	1.0349	1.1804	1.4171	1.0218	1.0348	1.1814	1.4173	1.0321	1.0376	1.3295	1.4353	1.0148	1.0321	1.0439	1.3992	0.0091	0.0039	0.1431	0.0256
	Level 7	22.6min	1.0161	1.0266	1.1240	1.3030	1.0162	1.0266	1.1246	1.3030	1.0228	1.0290	1.2396	1.3054	1.0113	1.0241	1.0294	1.3007	0.0059	0.0035	0.1065	0.0033
	Level 8	45.2min	1.0131	1.0194	1.0892	1.2217	1.0131	1.0194	1.0896	1.2216	1.0164	1.0202	1.1709	1.2378	1.0099	1.0186	1.0264	1.2055	0.0033	0.0011	0.0739	0.0228
	Level 9	90.4min	1.0127	1.0183	1.0731	1.1732	1.0127	1.0183	1.0731	1.1734	1.0149	1.0193	1.1347	1.2098	1.0104	1.0172	1.0274	1.1370	0.0022	0.0015	0.0554	0.0515
	Level 1	12.3sec	1.4773	1.6274	1.8435	2.7840	1.4778	1.6284	1.8438	2.7724	1.5808	1.7050	1.9704	3.6838	1.3576	1.5822	1.7191	2.0093	0.0746	0.0437	0.0868	0.6320
	Level 2	24.7sec	1.2703	1.4037	1.5958	2.7067	1.2701	1.4030	1.5959	2.6925	1.3299	1.4730	1.6877	4.7108	1.1843	1.3303	1.4737	1.7451	0.0473	0.0480	0.0794	1.0124
	Level 3	49.3sec	1.1593	1.2702	1.4173	2.6211	1.1593	1.2705	1.4170	2.6277	1.1926	1.3211	1.4880	7.2273	1.1264	1.1929	1.3537	1.5218	0.0246	0.0401	0.0419	1.8937
60	**Level 4**	1.6min	1.0900	1.1969	1.3227	2.0938	1.0901	1.1962	1.3226	2.1036	1.1366	1.2649	1.4004	5.1770	1.0528	1.1460	1.2745	1.4500	0.0280	0.0400	0.0473	1.2580
days	**Level 5**	3.3min	1.0533	1.1296	1.2183	1.6875	1.0534	1.1296	1.2188	1.6882	1.0790	1.1572	1.2703	3.1456	1.0243	1.0891	1.1596	1.3074	0.0199	0.0268	0.0378	0.6076
before	**Level 6**	6.6min	1.0343	1.0812	1.1572	1.4619	1.0345	1.0813	1.1571	1.4650	1.0594	1.1013	1.1822	2.1579	1.0148	1.0627	1.1196	1.2352	0.0140	0.0144	0.0199	0.3003
	Level 7	13.2min	1.0238	1.0574	1.1105	1.3511	1.0239	1.0574	1.1104	1.3500	1.0397	1.0800	1.1372	1.9142	1.0113	1.0417	1.0815	1.1665	0.0090	0.0139	0.0172	0.2441
	Level 8	26.3min	1.0188	1.0446	1.0797	1.2706	1.0188	1.0445	1.0794	1.2671	1.0277	1.0552	1.1038	1.7529	1.0099	1.0279	1.0555	1.1204	0.0061	0.0103	0.0178	0.2059
	Level 9	52.6min	1.0171	1.0407	1.0686	1.2200	1.0171	1.0407	1.0689	1.2215	1.0243	1.0476	1.0955	1.6453	1.0104	1.0274	1.0478	1.1066	0.0046	0.0080	0.0192	0.1774
	Level 1	6.9sec	1.4845	1.6058	1.7446	2.4451	1.4847	1.6061	1.7434	2.4462	1.5477	1.6518	1.8312	3.6838	1.3576	1.5654	1.6548	1.8349	0.0558	0.0286	0.0676	0.6476
	Level 2	13.9sec	1.2778	1.3709	1.5166	2.3455	1.2775	1.3714	1.5165	2.3468	1.3255	1.4329	1.6071	4.7108	1.1843	1.3279	1.4460	1.6488	0.0417	0.0388	0.0508	0.9025
	Level 3	27.7sec	1.1626	1.2415	1.3744	2.2117	1.1628	1.2419	1.3740	2.2115	1.1926	1.2915	1.4299	7.2273	1.1092	1.1929	1.3095	1.4357	0.0276	0.0360	0.0453	1.5487
3	**Level 4**	55.4sec	1.0947	1.1665	1.2766	1.8079	1.0947	1.1662	1.2766	1.8234	1.1232	1.2121	1.3218	5.1770	1.0528	1.1320	1.2272	1.3269	0.0260	0.0273	0.0324	1.0295
months	**Level 5**	1.8min	1.0586	1.1144	1.1858	1.5145	1.0587	1.1144	1.1859	1.5206	1.0883	1.1479	1.2372	3.1456	1.0243	1.0887	1.1554	1.2431	0.0215	0.0228	0.0257	0.5140
before	**Level 6**	3.7min	1.0382	1.0773	1.1295	1.3498	1.0382	1.0773	1.1297	1.3548	1.0612	1.0972	1.1655	2.1579	1.0148	1.0627	1.0980	1.1708	0.0157	0.0128	0.0220	0.2715
	Level 7	7.4min	1.0264	1.0536	1.0912	1.2666	1.0261	1.0535	1.0915	1.2661	1.0409	1.0680	1.1132	1.9142	1.0113	1.0417	1.0719	1.1227	0.0104	0.0092	0.0135	0.2167
	Level 8	14.8min	1.0195	1.0407	1.0644	1.2039	1.0195	1.0408	1.0643	1.2033	1.0279	1.0519	1.0800	1.7529	1.0079	1.0310	1.0534	1.0888	0.0069	0.0072	0.0087	0.1783
	Level 9	29.6min	1.0175	1.0373	1.0536	1.1719	1.0175	1.0372	1.0536	1.1707	1.0255	1.0457	1.0685	1.6453	1.0063	1.0274	1.0459	1.0779	0.0057	0.0067	0.0075	0.1512
	Level 1	3.8sec	1.4571	1.5318	1.5934	1.8861	1.4571	1.5318	1.5934	1.8813	1.4969	1.5617	1.6307	3.6838	1.3576	1.4978	1.5633	1.6309	0.0287	0.0194	0.0210	0.4283
	Level 2	7.6sec	1.2331	1.3011	1.3585	1.6716	1.2333	1.3011	1.3585	1.6753	1.2743	1.3255	1.3966	4.7108	1.1733	1.2749	1.3255	1.3975	0.0289	0.0149	0.0208	0.5477
	Level 3	15.2sec	1.1300	1.1848	1.2329	1.5288	1.1300	1.1850	1.2329	1.5296	1.1621	1.2049	1.2670	7.2273	1.0832	1.1626	1.2051	1.2685	0.0223	0.0121	0.0170	0.7893
1	**Level 4**	30.3sec	1.0780	1.1218	1.1634	1.3731	1.0780	1.1218	1.1634	1.3724	1.1042	1.1402	1.1906	5.1770	1.0432	1.1046	1.1413	1.1921	0.0172	0.0105	0.0151	0.5243
Year	**Level 5**	1min	1.0495	1.0835	1.1172	1.2506	1.0496	1.0835	1.1173	1.2521	1.0688	1.1003	1.1375	3.1456	1.0235	1.0694	1.1010	1.1381	0.0134	0.0089	0.0106	0.2742
before	**Level 6**	2min	1.0324	1.0581	1.0830	1.1729	1.0324	1.0581	1.0830	1.1733	1.0465	1.0695	1.0962	2.1579	1.0108	1.0468	1.0697	1.0963	0.0093	0.0071	0.0074	0.1571
	Level 7	4min	1.0218	1.0403	1.0578	1.1238	1.0218	1.0403	1.0579	1.1240	1.0323	1.0480	1.0660	1.9142	1.0060	1.0323	1.0486	1.0673	0.0066	0.0049	0.0049	0.1241
	Level 8	8.1min	1.0154	1.0293	1.0415	1.0905	1.0154	1.0293	1.0415	1.0906	1.0235	1.0354	1.0478	1.7529	1.0036	1.0235	1.0357	1.0484	0.0049	0.0036	0.0036	0.1006
	Level 9	16.2min	1.0131	1.0248	1.0351	1.0761	1.0131	1.0248	1.0351	1.0762	1.0195	1.0302	1.0399	1.6453	1.0029	1.0198	1.0307	1.0400	0.0044	0.0032	0.0029	0.0849

Table A.46: EDU5 Other Results Table –Continued

EDU5 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	1.4975	1.5987	1.9562	3.5641	1.4962	1.5987	1.9617	3.5609	1.5895	1.5992	2.5819	3.6640	1.4103	1.5982	1.6038	3.4578	0.0899	0.0007	0.5393	0.1458
	Level 2	42.4sec	1.2584	1.3215	1.6193	3.1203	1.2585	1.3222	1.6252	3.1185	1.2766	1.3334	1.8879	3.2417	1.2321	1.3111	1.3404	2.9953	0.0234	0.0158	0.2744	0.1742
	Level 3	1.4min	1.1275	1.1582	1.3763	2.3146	1.1276	1.1583	1.3760	2.3135	1.1355	1.1694	1.6391	2.4135	1.1179	1.1471	1.1795	2.2135	0.0090	0.0157	0.2369	0.1414
30	**Level 4**	2.8min	1.0631	1.0786	1.3257	1.8031	1.0632	1.0786	1.3234	1.8031	1.0745	1.0795	1.4556	1.8051	1.0498	1.0777	1.0991	1.8012	0.0125	0.0013	0.1953	0.0028
days	**Level 5**	5.6min	1.0328	1.0507	1.2361	1.5202	1.0329	1.0507	1.2382	1.5193	1.0384	1.0512	1.3883	1.5466	1.0263	1.0502	1.0553	1.4920	0.0061	0.0007	0.1689	0.0386
before	**Level 6**	11.3min	1.0203	1.0333	1.1735	1.4057	1.0202	1.0334	1.1722	1.4056	1.0229	1.0340	1.3072	1.4385	1.0163	1.0327	1.0379	1.3727	0.0035	0.0009	0.1346	0.0466
	Level 7	22.6min	1.0150	1.0223	1.1286	1.3099	1.0150	1.0223	1.1273	1.3096	1.0188	1.0233	1.2433	1.3235	1.0123	1.0213	1.0327	1.2957	0.0034	0.0014	0.1069	0.0197
	Level 8	45.2min	1.0125	1.0172	1.0986	1.2255	1.0125	1.0172	1.0983	1.2252	1.0153	1.0179	1.1925	1.2538	1.0108	1.0164	1.0321	1.1967	0.0024	0.0010	0.0838	0.0403
	Level 9	90.4min	1.0130	1.0186	1.0720	1.2101	1.0130	1.0186	1.0723	1.2097	1.0145	1.0190	1.1320	1.2538	1.0111	1.0181	1.0329	1.1657	0.0017	0.0006	0.0526	0.0623
	Level 1	12.3sec	1.4750	1.6313	1.8423	2.7174	1.4754	1.6306	1.8427	2.7202	1.5836	1.6992	1.9901	3.6640	1.3573	1.5895	1.7221	2.0362	0.0738	0.0427	0.0924	0.5833
	Level 2	24.7sec	1.2689	1.4012	1.5922	2.6116	1.2694	1.4008	1.5945	2.6274	1.3334	1.4580	1.6980	4.3497	1.1846	1.3404	1.4843	1.7489	0.0461	0.0414	0.0730	0.8659
	Level 3	49.3sec	1.1567	1.2756	1.4165	2.3291	1.1562	1.2754	1.4172	2.3165	1.1888	1.3280	1.5029	4.7763	1.1179	1.1977	1.3371	1.5225	0.0271	0.0415	0.0499	1.0441
60	**Level 4**	1.6min	1.0868	1.1964	1.3291	1.8964	1.0867	1.1969	1.3296	1.9072	1.1353	1.2597	1.4155	3.4568	1.0498	1.1445	1.2816	1.4547	0.0275	0.0391	0.0467	0.6582
days	**Level 5**	3.3min	1.0512	1.1289	1.2223	1.5858	1.0515	1.1286	1.2235	1.5849	1.0790	1.1594	1.2709	2.2189	1.0263	1.0885	1.1691	1.3286	0.0192	0.0266	0.0336	0.3071
before	**Level 6**	6.6min	1.0334	1.0845	1.1591	1.4157	1.0330	1.0844	1.1590	1.4154	1.0605	1.1075	1.1866	1.6805	1.0163	1.0680	1.1096	1.2502	0.0137	0.0133	0.0246	0.1630
	Level 7	13.1min	1.0232	1.0575	1.1099	1.3103	1.0231	1.0574	1.1097	1.3119	1.0430	1.0720	1.1436	1.5725	1.0123	1.0468	1.0762	1.1816	0.0102	0.0096	0.0211	0.1341
	Level 8	26.3min	1.0181	1.0419	1.0788	1.2383	1.0181	1.0419	1.0786	1.2385	1.0294	1.0519	1.1009	1.5285	1.0108	1.0307	1.0599	1.1208	0.0071	0.0089	0.0155	0.1331
	Level 9	52.6min	1.0170	1.0366	1.0660	1.2181	1.0171	1.0366	1.0660	1.2157	1.0232	1.0484	1.0860	1.5369	1.0111	1.0244	1.0494	1.0928	0.0046	0.0085	0.0132	0.1442
	Level 1	6.9sec	1.4834	1.6052	1.7380	2.4203	1.4837	1.6051	1.7380	2.4178	1.5506	1.6571	1.8118	3.6640	1.3573	1.5600	1.6610	1.8369	0.0553	0.0307	0.0559	0.6000
	Level 2	13.9sec	1.2758	1.3712	1.5151	2.2950	1.2757	1.3712	1.5154	2.2996	1.3215	1.4346	1.5863	4.3497	1.1846	1.3334	1.4370	1.6444	0.0396	0.0363	0.0522	0.7954
	Level 3	27.7sec	1.1619	1.2428	1.3741	2.0176	1.1616	1.2433	1.3745	2.0195	1.1947	1.2964	1.4331	4.7763	1.1092	1.1949	1.3093	1.4439	0.0298	0.0395	0.0477	0.8911
3	**Level 4**	55.4sec	1.0935	1.1659	1.2817	1.6952	1.0936	1.1661	1.2822	1.7044	1.1272	1.2135	1.3283	3.4568	1.0498	1.1344	1.2229	1.3363	0.0269	0.0274	0.0363	0.5696
months	**Level 5**	1.8min	1.0579	1.1138	1.1932	1.4541	1.0582	1.1140	1.1933	1.4548	1.0880	1.1536	1.2342	2.2189	1.0263	1.0885	1.1546	1.2382	0.0216	0.0219	0.0301	0.2905
before	**Level 6**	3.7min	1.0378	1.0785	1.1352	1.3242	1.0378	1.0785	1.1351	1.3234	1.0605	1.0992	1.1697	1.6805	1.0163	1.0610	1.1007	1.1698	0.0159	0.0116	0.0257	0.1738
	Level 7	7.4min	1.0260	1.0541	1.0917	1.2433	1.0260	1.0541	1.0917	1.2437	1.0423	1.0679	1.1148	1.5725	1.0123	1.0430	1.0718	1.1180	0.0112	0.0082	0.0157	0.1366
	Level 8	14.8min	1.0196	1.0394	1.0646	1.1819	1.0196	1.0394	1.0645	1.1842	1.0294	1.0494	1.0788	1.5285	1.0091	1.0307	1.0498	1.0799	0.0079	0.0071	0.0101	0.1245
	Level 9	29.6min	1.0178	1.0348	1.0542	1.1632	1.0178	1.0348	1.0542	1.1641	1.0254	1.0428	1.0653	1.5369	1.0081	1.0256	1.0442	1.0687	0.0058	0.0056	0.0071	0.1295
	Level 1	3.8sec	1.4568	1.5309	1.5940	1.8724	1.4567	1.5310	1.5940	1.8731	1.4957	1.5612	1.6376	3.6640	1.3573	1.4961	1.5621	1.6381	0.0284	0.0207	0.0218	0.4054
	Level 2	7.6sec	1.2338	1.3004	1.3601	1.6670	1.2337	1.3005	1.3600	1.6665	1.2743	1.3283	1.3956	4.3497	1.1736	1.2766	1.3290	1.3961	0.0292	0.0145	0.0202	0.5006
	Level 3	15.1sec	1.1298	1.1846	1.2337	1.4900	1.1299	1.1845	1.2337	1.4912	1.1608	1.2055	1.2677	4.7763	1.0790	1.1624	1.2074	1.2690	0.0222	0.0115	0.0165	0.4958
1	**Level 4**	30.3sec	1.0778	1.1213	1.1629	1.3510	1.0778	1.1213	1.1629	1.3497	1.1030	1.1396	1.1915	3.4568	1.0433	1.1033	1.1409	1.1926	0.0171	0.0111	0.0151	0.3235
Year	**Level 5**	1min	1.0492	1.0834	1.1166	1.2410	1.0492	1.0834	1.1166	1.2411	1.0683	1.1010	1.1369	2.2189	1.0249	1.0694	1.1012	1.1369	0.0131	0.0091	0.0102	0.1786
before	**Level 6**	2min	1.0322	1.0582	1.0828	1.1681	1.0322	1.0582	1.0829	1.1682	1.0469	1.0697	1.0955	1.6805	1.0121	1.0469	1.0698	1.0966	0.0092	0.0072	0.0070	0.1161
	Level 7	4min	1.0216	1.0406	1.0578	1.1187	1.0217	1.0406	1.0578	1.1190	1.0322	1.0481	1.0652	1.5725	1.0067	1.0322	1.0481	1.0670	0.0065	0.0050	0.0049	0.0915
	Level 8	8.1min	1.0154	1.0292	1.0417	1.0867	1.0154	1.0292	1.0417	1.0868	1.0231	1.0354	1.0477	1.5285	1.0041	1.0233	1.0356	1.0483	0.0047	0.0036	0.0033	0.0769
	Level 9	16.2min	1.0134	1.0249	1.0352	1.0755	1.0133	1.0249	1.0352	1.0759	1.0192	1.0304	1.0397	1.5369	1.0030	1.0193	1.0309	1.0403	0.0040	0.0032	0.0026	0.0754

Table A.46: EDU5 Other Results Table –Continued

EDU5 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	1.4945	1.5985	1.9610	3.6181	1.4947	1.5985	1.9701	3.6210	1.5851	1.5999	2.6086	3.6739	1.4081	1.5972	1.6008	3.5680	0.0885	0.0019	0.5552	0.0749
	Level 2	42.4sec	1.2602	1.3221	1.6242	3.1924	1.2602	1.3222	1.6224	3.1905	1.2791	1.3302	1.8724	3.3769	1.2300	1.3142	1.3343	3.0041	0.0265	0.0113	0.2711	0.2636
	Level 3	1.4min	1.1289	1.1599	1.3673	2.3598	1.1289	1.1604	1.3690	2.3589	1.1373	1.1688	1.6278	2.5069	1.1220	1.1520	1.1718	2.2109	0.0078	0.0118	0.2342	0.2094
30	**Level 4**	2.8min	1.0620	1.0812	1.3211	1.8099	1.0620	1.0813	1.3155	1.8098	1.0739	1.0851	1.4514	1.8471	1.0501	1.0775	1.0923	1.7725	0.0119	0.0054	0.1948	0.0527
days	**Level 5**	5.6min	1.0305	1.0483	1.2411	1.5151	1.0306	1.0482	1.2362	1.5156	1.0381	1.0500	1.3902	1.5405	1.0234	1.0464	1.0555	1.4908	0.0073	0.0025	0.1690	0.0352
before	**Level 6**	11.3min	1.0171	1.0294	1.1613	1.3873	1.0171	1.0294	1.1612	1.3872	1.0207	1.0306	1.2926	1.3986	1.0129	1.0282	1.0331	1.3758	0.0039	0.0018	0.1298	0.0161
	Level 7	22.6min	1.0112	1.0185	1.1076	1.2760	1.0111	1.0185	1.1082	1.2762	1.0126	1.0193	1.2143	1.2858	1.0086	1.0177	1.0222	1.2667	0.0022	0.0012	0.0976	0.0135
	Level 8	45.2min	1.0080	1.0117	1.0726	1.1800	1.0079	1.0117	1.0713	1.1800	1.0092	1.0120	1.1437	1.1920	1.0064	1.0114	1.0177	1.1681	0.0015	0.0004	0.0651	0.0169
	Level 9	90.4min	1.0070	1.0090	1.0464	1.1335	1.0070	1.0090	1.0473	1.1334	1.0078	1.0099	1.0897	1.1736	1.0063	1.0082	1.0166	1.0932	0.0008	0.0012	0.0379	0.0568
	Level 1	12.3sec	1.4765	1.6284	1.8420	2.7479	1.4756	1.6286	1.8426	2.7449	1.5805	1.7009	1.9788	3.6739	1.3575	1.5851	1.7204	2.0224	0.0735	0.0428	0.0894	0.6063
	Level 2	24.7sec	1.2675	1.3996	1.5924	2.6338	1.2686	1.3991	1.5934	2.6418	1.3302	1.4649	1.6895	4.4142	1.1844	1.3343	1.4785	1.7468	0.0458	0.0440	0.0752	0.9063
	Level 3	49.3sec	1.1558	1.2685	1.4115	2.4097	1.1561	1.2693	1.4104	2.3964	1.1868	1.3235	1.4945	5.4587	1.1220	1.1901	1.3442	1.5185	0.0251	0.0417	0.0459	1.2827
60	**Level 4**	1.6min	1.0862	1.1922	1.3173	1.9157	1.0865	1.1913	1.3184	1.9046	1.1359	1.2651	1.4029	3.6370	1.0501	1.1416	1.2710	1.4166	0.0279	0.0416	0.0480	0.7282
days	**Level 5**	3.3min	1.0493	1.1205	1.2106	1.5513	1.0497	1.1209	1.2104	1.5500	1.0788	1.1513	1.2629	2.1713	1.0234	1.0838	1.1579	1.2761	0.0197	0.0263	0.0337	0.2937
before	**Level 6**	6.6min	1.0293	1.0724	1.1424	1.3643	1.0293	1.0726	1.1426	1.3637	1.0534	1.0865	1.1655	1.5479	1.0129	1.0582	1.1010	1.2016	0.0128	0.0110	0.0212	0.1297
	Level 7	13.1min	1.0183	1.0466	1.0917	1.2579	1.0184	1.0467	1.0921	1.2566	1.0349	1.0564	1.1189	1.4138	1.0086	1.0362	1.0615	1.1458	0.0081	0.0076	0.0175	0.0975
	Level 8	26.3min	1.0128	1.0318	1.0613	1.1736	1.0128	1.0318	1.0613	1.1730	1.0231	1.0405	1.0820	1.3181	1.0064	1.0231	1.0462	1.0917	0.0055	0.0068	0.0130	0.0766
	Level 9	52.6min	1.0104	1.0248	1.0474	1.1228	1.0105	1.0248	1.0474	1.1228	1.0166	1.0302	1.0639	1.2157	1.0063	1.0174	1.0357	1.0671	0.0041	0.0049	0.0106	0.0565
	Level 1	6.9sec	1.4834	1.6050	1.7383	2.4318	1.4834	1.6052	1.7383	2.4309	1.5477	1.6555	1.8170	3.6739	1.3575	1.5619	1.6574	1.8354	0.0552	0.0299	0.0619	0.6227
	Level 2	13.9sec	1.2750	1.3695	1.5119	2.3120	1.2750	1.3691	1.5123	2.3107	1.3216	1.4308	1.5900	4.4142	1.1844	1.3261	1.4316	1.6455	0.0396	0.0370	0.0511	0.8234
	Level 3	27.7sec	1.1598	1.2385	1.3687	2.0604	1.1600	1.2387	1.3683	2.0655	1.1895	1.2884	1.4221	5.4587	1.1084	1.1901	1.3074	1.4229	0.0277	0.0370	0.0444	1.0749
3	**Level 4**	55.4sec	1.0910	1.1606	1.2710	1.6923	1.0909	1.1606	1.2708	1.6979	1.1193	1.2081	1.3109	3.6370	1.0501	1.1304	1.2128	1.3206	0.0249	0.0253	0.0329	0.6196
months	**Level 5**	1.8min	1.0545	1.1055	1.1768	1.4305	1.0548	1.1059	1.1770	1.4290	1.0811	1.1471	1.2148	2.1713	1.0234	1.0816	1.1473	1.2243	0.0205	0.0206	0.0242	0.2753
before	**Level 6**	3.7min	1.0334	1.0690	1.1157	1.2838	1.0331	1.0691	1.1155	1.2839	1.0544	1.0864	1.1469	1.5479	1.0129	1.0558	1.0865	1.1477	0.0142	0.0103	0.0227	0.1445
	Level 7	7.4min	1.0208	1.0448	1.0742	1.2002	1.0208	1.0447	1.0741	1.1995	1.0349	1.0536	1.0948	1.4138	1.0086	1.0362	1.0545	1.0957	0.0092	0.0064	0.0137	0.1060
	Level 8	14.8min	1.0141	1.0297	1.0481	1.1352	1.0141	1.0297	1.0480	1.1352	1.0231	1.0368	1.0615	1.3181	1.0062	1.0231	1.0375	1.0647	0.0061	0.0050	0.0073	0.0770
	Level 9	29.6min	1.0116	1.0237	1.0363	1.0973	1.0116	1.0237	1.0362	1.0976	1.0177	1.0287	1.0464	1.2157	1.0045	1.0178	1.0289	1.0483	0.0049	0.0038	0.0060	0.0545
	Level 1	3.8sec	1.4563	1.5305	1.5928	1.8738	1.4563	1.5304	1.5927	1.8757	1.4959	1.5609	1.6324	3.6739	1.3575	1.4961	1.5610	1.6335	0.0286	0.0202	0.0211	0.4166
	Level 2	7.6sec	1.2327	1.2987	1.3569	1.6627	1.2324	1.2987	1.3569	1.6650	1.2727	1.3244	1.3926	4.4142	1.1729	1.2737	1.3250	1.3934	0.0289	0.0145	0.0201	0.5129
	Level 3	15.1sec	1.1280	1.1816	1.2291	1.4929	1.1281	1.1817	1.2290	1.4938	1.1594	1.2028	1.2606	5.4587	1.0798	1.1606	1.2037	1.2636	0.0217	0.0116	0.0163	0.5758
1	**Level 4**	30.3sec	1.0755	1.1171	1.1566	1.3385	1.0756	1.1171	1.1566	1.3386	1.0999	1.1355	1.1828	3.6370	1.0424	1.1001	1.1359	1.1836	0.0163	0.0105	0.0142	0.3420
Year	**Level 5**	1min	1.0464	1.0779	1.1078	1.2226	1.0464	1.0780	1.1078	1.2237	1.0648	1.0940	1.1247	2.1713	1.0234	1.0650	1.0942	1.1268	0.0122	0.0082	0.0091	0.1694
before	**Level 6**	2min	1.0289	1.0519	1.0727	1.1463	1.0289	1.0519	1.0727	1.1470	1.0412	1.0616	1.0847	1.5479	1.0111	1.0422	1.0621	1.0855	0.0081	0.0061	0.0062	0.0998
	Level 7	4min	1.0183	1.0340	1.0477	1.0980	1.0183	1.0340	1.0476	1.0976	1.0271	1.0404	1.0545	1.4138	1.0060	1.0274	1.0404	1.0547	0.0053	0.0039	0.0042	0.0730
	Level 8	8.1min	1.0120	1.0224	1.0316	1.0647	1.0120	1.0224	1.0315	1.0646	1.0177	1.0263	1.0358	1.3181	1.0035	1.0177	1.0265	1.0361	0.0037	0.0024	0.0028	0.0515
	Level 9	16.2min	1.0092	1.0171	1.0241	1.0479	1.0091	1.0171	1.0241	1.0477	1.0139	1.0205	1.0271	1.2157	1.0023	1.0139	1.0207	1.0278	0.0029	0.0018	0.0020	0.0365

Table A.46: EDU5 Other Results Table –Continued

EDU5 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	21.2sec	0.3153	0.6062	0.6267	0.6905	0.3165	0.6060	0.6267	0.6904	0.3873	0.6235	0.6291	0.7091	0.2729	0.5885	0.6253	0.6716	0.0619	0.0248	0.0021	0.0265
	Level 2	42.4sec	0.3901	0.6774	0.7653	0.8006	0.3907	0.6766	0.7654	0.8005	0.5297	0.7461	0.7833	0.8117	0.3085	0.6071	0.7500	0.7894	0.1211	0.0983	0.0168	0.0157
	Level 3	1.4min	0.4919	0.8063	0.8690	0.8899	0.4921	0.8058	0.8692	0.8900	0.6101	0.8478	0.8807	0.8945	0.4143	0.7638	0.8552	0.8854	0.1039	0.0594	0.0129	0.0065
30	**Level 4**	2.8min	0.5982	0.8103	0.9283	0.9458	0.5987	0.8081	0.9283	0.9456	0.6870	0.9098	0.9307	0.9526	0.5540	0.7064	0.9264	0.9386	0.0765	0.1438	0.0022	0.0099
days	**Level 5**	5.6min	0.6784	0.8626	0.9555	0.9706	0.6790	0.8672	0.9555	0.9708	0.7203	0.9476	0.9630	0.9743	0.6466	0.7869	0.9513	0.9673	0.0376	0.1136	0.0065	0.0050
before	**Level 6**	11.3min	0.7291	0.9073	0.9711	0.9815	0.7296	0.9086	0.9710	0.9815	0.7650	0.9635	0.9776	0.9840	0.6952	0.8536	0.9671	0.9789	0.0349	0.0776	0.0057	0.0036
	Level 7	22.6min	0.7777	0.9368	0.9793	0.9871	0.7772	0.9363	0.9793	0.9871	0.8043	0.9683	0.9815	0.9878	0.7556	0.9042	0.9772	0.9864	0.0248	0.0453	0.0021	0.0010
	Level 8	45.2min	0.8240	0.9516	0.9837	0.9890	0.8239	0.9517	0.9837	0.9890	0.8386	0.9689	0.9849	0.9893	0.7976	0.9345	0.9824	0.9887	0.0228	0.0243	0.0013	0.0004
	Level 9	90.4min	0.8459	0.9597	0.9830	0.9879	0.8463	0.9594	0.9831	0.9879	0.8834	0.9682	0.9857	0.9890	0.7976	0.9506	0.9813	0.9869	0.0440	0.0124	0.0023	0.0015
	Level 1	12.3sec	0.3811	0.5490	0.6174	0.6790	0.3821	0.5494	0.6172	0.6793	0.4911	0.5885	0.6291	0.7367	0.2729	0.5025	0.5944	0.6315	0.0786	0.0295	0.0131	0.0342
	Level 2	24.7sec	0.4121	0.6356	0.7185	0.7885	0.4129	0.6355	0.7185	0.7887	0.5718	0.6859	0.7461	0.8442	0.2299	0.5889	0.6959	0.7500	0.1163	0.0336	0.0193	0.0292
	Level 3	49.3sec	0.4838	0.7128	0.7895	0.8654	0.4836	0.7122	0.7893	0.8653	0.6568	0.7530	0.8350	0.8945	0.2094	0.6654	0.7638	0.8412	0.1402	0.0283	0.0246	0.0203
60	**Level 4**	1.6min	0.5629	0.7578	0.8427	0.9207	0.5624	0.7580	0.8424	0.9207	0.6874	0.7939	0.8737	0.9526	0.2893	0.7064	0.8142	0.8808	0.1303	0.0279	0.0229	0.0230
days	**Level 5**	3.3min	0.6486	0.8233	0.8902	0.9514	0.6485	0.8234	0.8899	0.9513	0.7527	0.8625	0.9187	0.9743	0.4507	0.7869	0.8661	0.9268	0.1042	0.0263	0.0201	0.0173
before	**Level 6**	6.6min	0.7152	0.8680	0.9249	0.9681	0.7142	0.8681	0.9250	0.9682	0.7999	0.9030	0.9363	0.9840	0.5950	0.8428	0.9154	0.9430	0.0762	0.0224	0.0088	0.0128
	Level 7	13.1min	0.7691	0.9057	0.9476	0.9777	0.7688	0.9053	0.9476	0.9775	0.8463	0.9328	0.9553	0.9878	0.6359	0.8744	0.9389	0.9588	0.0727	0.0194	0.0073	0.0096
	Level 8	26.3min	0.8141	0.9303	0.9612	0.9823	0.8147	0.9302	0.9612	0.9823	0.8922	0.9506	0.9702	0.9893	0.6542	0.9083	0.9530	0.9715	0.0779	0.0148	0.0079	0.0068
	Level 9	52.6min	0.8320	0.9399	0.9662	0.9832	0.8315	0.9402	0.9663	0.9832	0.9151	0.9538	0.9762	0.9890	0.6507	0.9208	0.9590	0.9773	0.0859	0.0121	0.0071	0.0044
	Level 1	6.9sec	0.4344	0.5783	0.6247	0.6748	0.4344	0.5779	0.6247	0.6749	0.5444	0.6035	0.6410	0.7367	0.2729	0.5519	0.6041	0.6449	0.0925	0.0192	0.0108	0.0261
	Level 2	13.9sec	0.4719	0.6630	0.7323	0.7845	0.4722	0.6632	0.7323	0.7846	0.6081	0.6970	0.7500	0.8442	0.2299	0.6304	0.7048	0.7567	0.1217	0.0240	0.0173	0.0251
	Level 3	27.7sec	0.5490	0.7312	0.8076	0.8615	0.5479	0.7314	0.8076	0.8614	0.6926	0.7714	0.8369	0.9016	0.2094	0.6978	0.7720	0.8370	0.1395	0.0269	0.0246	0.0224
3	**Level 4**	55.4sec	0.6240	0.7839	0.8606	0.9150	0.6250	0.7836	0.8606	0.9150	0.7483	0.8241	0.8816	0.9526	0.2893	0.7529	0.8336	0.8872	0.1297	0.0243	0.0181	0.0226
months	**Level 5**	1.8min	0.7072	0.8406	0.9005	0.9454	0.7076	0.8405	0.9004	0.9454	0.8076	0.8669	0.9187	0.9743	0.4507	0.8102	0.8702	0.9191	0.1114	0.0217	0.0157	0.0193
before	**Level 6**	3.7min	0.7664	0.8835	0.9286	0.9638	0.7665	0.8835	0.9286	0.9637	0.8549	0.9097	0.9425	0.9840	0.5950	0.8549	0.9154	0.9430	0.0902	0.0207	0.0090	0.0147
	Level 7	7.4min	0.8127	0.9175	0.9496	0.9748	0.8122	0.9176	0.9496	0.9747	0.8945	0.9364	0.9588	0.9878	0.6359	0.8970	0.9389	0.9594	0.0801	0.0138	0.0067	0.0106
	Level 8	14.8min	0.8529	0.9404	0.9628	0.9810	0.8519	0.9404	0.9628	0.9809	0.9260	0.9530	0.9702	0.9910	0.6542	0.9270	0.9538	0.9715	0.0773	0.0093	0.0063	0.0075
	Level 9	29.6min	0.8670	0.9494	0.9670	0.9825	0.8673	0.9494	0.9670	0.9825	0.9357	0.9590	0.9750	0.9920	0.6507	0.9387	0.9600	0.9753	0.0809	0.0067	0.0050	0.0056
	Level 1	3.8sec	0.5502	0.6277	0.6535	0.6868	0.5502	0.6277	0.6535	0.6868	0.6105	0.6405	0.6684	0.7367	0.2729	0.6107	0.6407	0.6686	0.0785	0.0086	0.0088	0.0137
	Level 2	7.6sec	0.6301	0.7358	0.7693	0.8111	0.6300	0.7357	0.7693	0.8110	0.7163	0.7529	0.7833	0.8521	0.2299	0.7165	0.7536	0.7848	0.1072	0.0111	0.0084	0.0193
	Level 3	15.1sec	0.7025	0.8109	0.8445	0.8853	0.7031	0.8110	0.8446	0.8854	0.7881	0.8296	0.8603	0.9268	0.2094	0.7888	0.8308	0.8615	0.1103	0.0110	0.0080	0.0176
1	**Level 4**	30.3sec	0.7634	0.8603	0.8921	0.9280	0.7627	0.8603	0.8922	0.9280	0.8385	0.8775	0.9064	0.9585	0.2893	0.8392	0.8781	0.9066	0.0993	0.0112	0.0087	0.0147
Year	**Level 5**	1min	0.8177	0.8958	0.9233	0.9532	0.8171	0.8959	0.9233	0.9532	0.8796	0.9082	0.9351	0.9757	0.4507	0.8796	0.9087	0.9361	0.0817	0.0083	0.0076	0.0119
before	**Level 6**	2min	0.8623	0.9237	0.9452	0.9690	0.8626	0.9237	0.9452	0.9689	0.9119	0.9349	0.9552	0.9881	0.5950	0.9128	0.9350	0.9552	0.0678	0.0061	0.0063	0.0086
	Level 7	4min	0.8982	0.9456	0.9611	0.9788	0.8984	0.9456	0.9611	0.9788	0.9372	0.9541	0.9688	0.9933	0.6359	0.9388	0.9544	0.9688	0.0595	0.0045	0.0046	0.0062
	Level 8	8.1min	0.9241	0.9601	0.9717	0.9848	0.9238	0.9601	0.9717	0.9848	0.9539	0.9658	0.9772	0.9959	0.6542	0.9545	0.9659	0.9774	0.0524	0.0031	0.0033	0.0045
	Level 9	16.2min	0.9329	0.9661	0.9758	0.9869	0.9329	0.9661	0.9758	0.9869	0.9612	0.9705	0.9811	0.9970	0.6507	0.9619	0.9707	0.9811	0.0511	0.0025	0.0030	0.0039

Table A.47: EDU6 Other Results Table

EDU6 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	20.5sec	1.4540	1.5840	1.7615	2.4504	1.4546	1.5848	1.7611	2.4449	1.5102	1.6491	1.8533	2.8232	1.3646	1.5228	1.6728	1.9106	0.0574	0.0564	0.0794	0.4096
	Level 2	41.1sec	1.2686	1.4146	1.6498	2.3489	1.2680	1.4145	1.6488	2.3357	1.3365	1.5138	1.7238	3.1854	1.1654	1.3622	1.5222	1.8056	0.0743	0.0687	0.0842	0.5949
	Level 3	1.4min	1.1554	1.3001	1.5371	1.9773	1.1563	1.2995	1.5383	1.9754	1.2032	1.3668	1.7205	2.3340	1.0850	1.2514	1.3853	1.7855	0.0560	0.0490	0.1580	0.2484
30	**Level 4**	2.7min	1.0942	1.1999	1.3747	1.7242	1.0940	1.1998	1.3746	1.7277	1.1288	1.2329	1.5071	1.9000	1.0503	1.1385	1.2431	1.5407	0.0320	0.0443	0.1241	0.1827
days	**Level 5**	5.5min	1.0597	1.1391	1.2803	1.5215	1.0598	1.1390	1.2808	1.5241	1.0852	1.1676	1.3729	1.6263	1.0391	1.0871	1.1678	1.3883	0.0217	0.0355	0.0826	0.1198
before	**Level 6**	11min	1.0433	1.1037	1.2120	1.4091	1.0430	1.1040	1.2125	1.4086	1.0641	1.1302	1.2844	1.4316	1.0263	1.0652	1.1335	1.3584	0.0193	0.0294	0.0605	0.0344
	Level 7	21.9min	1.0314	1.0821	1.1711	1.3553	1.0316	1.0824	1.1712	1.3555	1.0502	1.1051	1.2469	1.3860	1.0180	1.0504	1.1113	1.3134	0.0165	0.0250	0.0532	0.0304
	Level 8	43.8min	1.0270	1.0742	1.1456	1.3112	1.0269	1.0738	1.1448	1.3113	1.0434	1.0909	1.2094	1.3582	1.0147	1.0476	1.0927	1.2579	0.0138	0.0189	0.0467	0.0415
	Level 9	87.6min	1.0285	1.0771	1.1574	1.3067	1.0286	1.0772	1.1572	1.3069	1.0458	1.0905	1.2103	1.3544	1.0153	1.0538	1.1065	1.2304	0.0140	0.0165	0.0414	0.0535
	Level 1	8.1sec	1.4786	1.5768	1.6887	2.0906	1.4787	1.5770	1.6885	2.0954	1.5235	1.6467	1.7285	2.8232	1.3646	1.5393	1.6491	1.7364	0.0524	0.0371	0.0242	0.4043
	Level 2	16.2sec	1.2650	1.3555	1.4633	1.9428	1.2654	1.3555	1.4637	1.9446	1.3231	1.3815	1.5222	3.1854	1.1654	1.3286	1.3939	1.5954	0.0562	0.0199	0.0490	0.4839
	Level 3	32.4sec	1.1433	1.2186	1.3289	1.7201	1.1436	1.2184	1.3297	1.7224	1.1917	1.2514	1.3904	2.3340	1.0850	1.1951	1.2809	1.4040	0.0381	0.0188	0.0461	0.2773
60	**Level 4**	1.1min	1.0804	1.1422	1.2295	1.5279	1.0802	1.1423	1.2294	1.5273	1.1134	1.1742	1.2821	1.9000	1.0503	1.1142	1.1961	1.2921	0.0205	0.0173	0.0285	0.2131
days	**Level 5**	2.2min	1.0477	1.1003	1.1649	1.3839	1.0477	1.1006	1.1652	1.3841	1.0797	1.1355	1.2167	1.6263	1.0270	1.0809	1.1358	1.2248	0.0143	0.0181	0.0249	0.1456
before	**Level 6**	4.3min	1.0302	1.0723	1.1184	1.2925	1.0300	1.0723	1.1188	1.2910	1.0528	1.0929	1.1477	1.4316	1.0139	1.0583	1.0936	1.1706	0.0109	0.0129	0.0183	0.1092
	Level 7	8.6min	1.0195	1.0506	1.0874	1.2412	1.0195	1.0504	1.0875	1.2406	1.0333	1.0634	1.1078	1.3860	1.0088	1.0388	1.0641	1.1113	0.0074	0.0078	0.0153	0.1073
	Level 8	17.3min	1.0147	1.0378	1.0681	1.2063	1.0147	1.0377	1.0682	1.2063	1.0221	1.0459	1.0909	1.3582	1.0061	1.0270	1.0476	1.0927	0.0053	0.0062	0.0147	0.0997
	Level 9	34.6min	1.0138	1.0331	1.0646	1.2132	1.0138	1.0331	1.0646	1.2104	1.0219	1.0418	1.0868	1.3544	1.0047	1.0226	1.0444	1.0905	0.0055	0.0068	0.0148	0.0950
	Level 1	4.6sec	1.4851	1.5634	1.6495	1.9714	1.4853	1.5634	1.6496	1.9726	1.5235	1.6117	1.6988	2.8232	1.3646	1.5393	1.6134	1.7032	0.0437	0.0197	0.0265	0.3712
	Level 2	9.2sec	1.2589	1.3527	1.4288	1.8097	1.2592	1.3527	1.4283	1.8181	1.3230	1.3758	1.5124	3.1854	1.1654	1.3231	1.3803	1.5125	0.0428	0.0171	0.0402	0.4331
	Level 3	18.4sec	1.1403	1.2207	1.3050	1.6296	1.1403	1.2207	1.3049	1.6281	1.1872	1.2514	1.3668	2.3340	1.0850	1.1917	1.2575	1.3852	0.0295	0.0183	0.0305	0.2673
3	**Level 4**	36.8sec	1.0820	1.1444	1.2145	1.4538	1.0821	1.1444	1.2146	1.4526	1.1134	1.1742	1.2562	1.9000	1.0503	1.1142	1.1766	1.2588	0.0179	0.0168	0.0263	0.2059
months	**Level 5**	1.2min	1.0495	1.1000	1.1532	1.3294	1.0496	1.1000	1.1532	1.3288	1.0727	1.1203	1.1840	1.6263	1.0270	1.0797	1.1207	1.1859	0.0122	0.0145	0.0199	0.1437
before	**Level 6**	2.5min	1.0307	1.0713	1.1092	1.2470	1.0308	1.0713	1.1093	1.2453	1.0432	1.0881	1.1302	1.4316	1.0139	1.0528	1.0892	1.1307	0.0083	0.0110	0.0154	0.1113
	Level 7	4.9min	1.0202	1.0495	1.0779	1.1978	1.0202	1.0495	1.0777	1.1976	1.0301	1.0581	1.1014	1.3860	1.0088	1.0333	1.0596	1.1018	0.0059	0.0075	0.0127	0.1069
	Level 8	9.8min	1.0149	1.0361	1.0581	1.1663	1.0149	1.0361	1.0580	1.1664	1.0211	1.0426	1.0769	1.3582	1.0061	1.0221	1.0434	1.0780	0.0043	0.0059	0.0110	0.0991
	Level 9	19.6min	1.0134	1.0310	1.0518	1.1683	1.0134	1.0310	1.0518	1.1679	1.0186	1.0386	1.0665	1.3544	1.0047	1.0219	1.0394	1.0751	0.0042	0.0051	0.0092	0.0985
	Level 1	2.5sec	1.4796	1.5399	1.5906	1.7578	1.4794	1.5399	1.5905	1.7571	1.5195	1.5631	1.6231	2.8232	1.3646	1.5203	1.5652	1.6247	0.0306	0.0121	0.0183	0.2268
	Level 2	5sec	1.2467	1.3096	1.3628	1.5470	1.2468	1.3096	1.3628	1.5469	1.2813	1.3388	1.3909	3.1854	1.1654	1.2824	1.3389	1.3911	0.0258	0.0176	0.0148	0.2673
	Level 3	10sec	1.1385	1.1944	1.2379	1.3952	1.1385	1.1943	1.2380	1.3950	1.1702	1.2200	1.2651	2.3340	1.0826	1.1705	1.2200	1.2655	0.0209	0.0158	0.0126	0.1912
1	**Level 4**	20sec	1.0852	1.1314	1.1667	1.2854	1.0853	1.1313	1.1667	1.2850	1.1118	1.1527	1.1849	1.9000	1.0376	1.1123	1.1532	1.1876	0.0163	0.0117	0.0100	0.1438
Year	**Level 5**	40sec	1.0561	1.0914	1.1195	1.2083	1.0560	1.0914	1.1195	1.2088	1.0774	1.1061	1.1355	1.6263	1.0214	1.0776	1.1066	1.1358	0.0131	0.0082	0.0086	0.1029
before	**Level 6**	1.3min	1.0373	1.0636	1.0851	1.1546	1.0374	1.0635	1.0851	1.1539	1.0510	1.0744	1.0991	1.4316	1.0134	1.0528	1.0748	1.0994	0.0097	0.0062	0.0072	0.0796
	Level 7	2.7min	1.0253	1.0444	1.0599	1.1172	1.0253	1.0444	1.0599	1.1170	1.0358	1.0520	1.0705	1.3860	1.0086	1.0364	1.0522	1.0708	0.0070	0.0049	0.0058	0.0736
	Level 8	5.3min	1.0180	1.0320	1.0437	1.0941	1.0180	1.0320	1.0437	1.0947	1.0255	1.0375	1.0513	1.3582	1.0061	1.0258	1.0377	1.0518	0.0049	0.0036	0.0041	0.0726
	Level 9	10.7min	1.0153	1.0272	1.0377	1.0941	1.0154	1.0271	1.0376	1.0945	1.0219	1.0317	1.0448	1.4527	1.0047	1.0221	1.0319	1.0454	0.0041	0.0029	0.0040	0.0917

Table A.47: EDU6 Other Results Table –Continued

EDU6 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	20.5sec	1.4603	1.5834	1.7681	2.5301	1.4588	1.5825	1.7707	2.5274	1.5154	1.6475	1.8761	2.9656	1.3791	1.5306	1.6596	1.9764	0.0534	0.0574	0.0831	0.4678
	Level 2	41.1sec	1.2667	1.4083	1.6839	2.4278	1.2661	1.4091	1.6858	2.4169	1.3339	1.4893	1.8035	3.2280	1.1812	1.3470	1.5288	1.8290	0.0654	0.0590	0.1123	0.5992
	Level 3	1.4min	1.1574	1.2942	1.5474	2.0875	1.1566	1.2934	1.5492	2.0907	1.2045	1.3472	1.8441	2.4335	1.1028	1.2229	1.3618	1.9209	0.0503	0.0517	0.2079	0.2379
30	**Level 4**	2.7min	1.0940	1.1963	1.3783	1.8603	1.0941	1.1957	1.3760	1.8558	1.1265	1.2417	1.5666	2.0599	1.0568	1.1293	1.2546	1.6217	0.0291	0.0478	0.1350	0.1865
days	**Level 5**	5.5min	1.0582	1.1353	1.2944	1.6249	1.0578	1.1356	1.2931	1.6240	1.0807	1.1656	1.3875	1.7320	1.0363	1.0912	1.1808	1.4612	0.0198	0.0324	0.0945	0.1159
before	**Level 6**	10.9min	1.0384	1.1001	1.2405	1.4436	1.0381	1.0998	1.2398	1.4451	1.0566	1.1226	1.3465	1.5504	1.0258	1.0678	1.1298	1.3513	0.0162	0.0232	0.0940	0.0815
	Level 7	21.9min	1.0297	1.0794	1.1999	1.3628	1.0294	1.0792	1.1987	1.3642	1.0498	1.0987	1.2890	1.4603	1.0162	1.0533	1.1060	1.3149	0.0161	0.0189	0.0760	0.0657
	Level 8	43.8min	1.0251	1.0691	1.1735	1.3260	1.0254	1.0690	1.1739	1.3272	1.0443	1.0804	1.2695	1.4118	1.0133	1.0527	1.0902	1.2912	0.0139	0.0121	0.0668	0.0569
	Level 9	87.6min	1.0263	1.0758	1.1677	1.3588	1.0263	1.0759	1.1675	1.3586	1.0473	1.0857	1.2475	1.4104	1.0140	1.0629	1.0876	1.3207	0.0140	0.0116	0.0596	0.0416
	Level 1	8.1sec	1.4810	1.5766	1.6820	2.1345	1.4818	1.5762	1.6822	2.1349	1.5306	1.6475	1.7217	2.9656	1.3791	1.5333	1.6494	1.7743	0.0504	0.0373	0.0232	0.4511
	Level 2	16.2sec	1.2657	1.3563	1.4572	1.9987	1.2657	1.3563	1.4575	2.0005	1.3229	1.3974	1.5288	3.2280	1.1812	1.3304	1.3991	1.6127	0.0520	0.0224	0.0452	0.5028
	Level 3	32.4sec	1.1435	1.2159	1.3267	1.7812	1.1435	1.2159	1.3274	1.7770	1.1891	1.2418	1.3840	2.4335	1.1028	1.1947	1.2841	1.4190	0.0329	0.0147	0.0380	0.3282
60	**Level 4**	1.1min	1.0806	1.1419	1.2314	1.5783	1.0805	1.1421	1.2311	1.5765	1.1088	1.1720	1.2804	2.0599	1.0568	1.1169	1.1986	1.2925	0.0190	0.0166	0.0277	0.2751
days	**Level 5**	2.2min	1.0471	1.1027	1.1661	1.4283	1.0472	1.1026	1.1660	1.4287	1.0766	1.1335	1.2150	1.7320	1.0274	1.0807	1.1387	1.2165	0.0139	0.0177	0.0243	0.1895
before	**Level 6**	4.3min	1.0292	1.0730	1.1168	1.3190	1.0292	1.0730	1.1168	1.3192	1.0544	1.0974	1.1442	1.5504	1.0142	1.0551	1.0974	1.1532	0.0114	0.0164	0.0159	0.1326
	Level 7	8.6min	1.0188	1.0515	1.0857	1.2564	1.0187	1.0517	1.0859	1.2576	1.0332	1.0661	1.1060	1.4603	1.0089	1.0390	1.0681	1.1103	0.0071	0.0095	0.0127	0.1135
	Level 8	17.3min	1.0139	1.0382	1.0650	1.2275	1.0139	1.0382	1.0651	1.2266	1.0217	1.0464	1.0819	1.4118	1.0061	1.0269	1.0511	1.0875	0.0050	0.0070	0.0114	0.1061
	Level 9	34.6min	1.0129	1.0329	1.0610	1.2348	1.0130	1.0329	1.0612	1.2358	1.0206	1.0430	1.0855	1.4104	1.0047	1.0222	1.0435	1.0857	0.0051	0.0069	0.0132	0.1182
	Level 1	4.6sec	1.4863	1.5650	1.6482	1.9932	1.4862	1.5652	1.6485	1.9941	1.5286	1.6111	1.6923	2.9656	1.3791	1.5306	1.6128	1.6933	0.0413	0.0242	0.0258	0.4165
	Level 2	9.2sec	1.2587	1.3545	1.4278	1.8538	1.2584	1.3544	1.4279	1.8526	1.3175	1.3817	1.4883	3.2280	1.1812	1.3229	1.3823	1.4893	0.0392	0.0198	0.0340	0.4602
	Level 3	18.4sec	1.1402	1.2207	1.3075	1.6583	1.1402	1.2207	1.3075	1.6623	1.1800	1.2423	1.3568	2.4335	1.1028	1.1891	1.2428	1.3618	0.0260	0.0174	0.0294	0.3172
3	**Level 4**	36.8sec	1.0820	1.1450	1.2179	1.4835	1.0821	1.1448	1.2174	1.4847	1.1088	1.1720	1.2610	2.0599	1.0568	1.1169	1.1810	1.2612	0.0171	0.0155	0.0256	0.2604
months	**Level 5**	1.2min	1.0498	1.1012	1.1546	1.3578	1.0497	1.1010	1.1545	1.3573	1.0754	1.1192	1.1841	1.7320	1.0274	1.0766	1.1270	1.1848	0.0131	0.0140	0.0186	0.1856
before	**Level 6**	2.5min	1.0304	1.0701	1.1093	1.2610	1.0304	1.0701	1.1094	1.2623	1.0467	1.0889	1.1298	1.5504	1.0142	1.0544	1.0949	1.1300	0.0090	0.0109	0.0128	0.1357
	Level 7	4.9min	1.0197	1.0485	1.0768	1.2062	1.0197	1.0485	1.0768	1.2074	1.0290	1.0599	1.0987	1.4603	1.0089	1.0332	1.0618	1.1009	0.0060	0.0068	0.0104	0.1171
	Level 8	9.8min	1.0143	1.0352	1.0564	1.1780	1.0143	1.0352	1.0563	1.1777	1.0200	1.0435	1.0712	1.4118	1.0061	1.0217	1.0443	1.0727	0.0041	0.0057	0.0087	0.1112
	Level 9	19.6min	1.0127	1.0300	1.0492	1.1823	1.0127	1.0300	1.0492	1.1823	1.0182	1.0380	1.0629	1.4104	1.0047	1.0206	1.0384	1.0694	0.0038	0.0048	0.0080	0.1229
	Level 1	2.5sec	1.4799	1.5402	1.5917	1.7609	1.4799	1.5402	1.5918	1.7601	1.5189	1.5641	1.6232	2.9656	1.3791	1.5194	1.5642	1.6233	0.0300	0.0119	0.0176	0.2486
	Level 2	5sec	1.2471	1.3106	1.3640	1.5546	1.2470	1.3106	1.3640	1.5545	1.2804	1.3379	1.3920	3.2280	1.1812	1.2807	1.3384	1.3923	0.0240	0.0170	0.0155	0.2866
	Level 3	10sec	1.1389	1.1944	1.2383	1.4027	1.1388	1.1943	1.2383	1.4041	1.1674	1.2229	1.2605	2.4335	1.0826	1.1677	1.2230	1.2640	0.0201	0.0168	0.0107	0.2180
1	**Level 4**	20sec	1.0857	1.1309	1.1672	1.2940	1.0856	1.1309	1.1671	1.2940	1.1129	1.1501	1.1902	2.0599	1.0371	1.1138	1.1503	1.1907	0.0167	0.0108	0.0114	0.1709
Year	**Level 5**	40sec	1.0564	1.0919	1.1202	1.2163	1.0563	1.0919	1.1202	1.2160	1.0777	1.1049	1.1388	1.7320	1.0210	1.0779	1.1058	1.1388	0.0136	0.0076	0.0094	0.1244
before	**Level 6**	1.3min	1.0374	1.0635	1.0853	1.1557	1.0374	1.0635	1.0853	1.1566	1.0533	1.0737	1.0978	1.5504	1.0136	1.0537	1.0740	1.0984	0.0101	0.0062	0.0079	0.0915
	Level 7	2.7min	1.0252	1.0440	1.0595	1.1162	1.0252	1.0440	1.0594	1.1160	1.0347	1.0510	1.0699	1.4603	1.0085	1.0352	1.0511	1.0706	0.0070	0.0045	0.0058	0.0781
	Level 8	5.3min	1.0177	1.0319	1.0428	1.0915	1.0177	1.0319	1.0428	1.0912	1.0246	1.0368	1.0504	1.4118	1.0060	1.0250	1.0369	1.0504	0.0049	0.0034	0.0044	0.0735
	Level 9	10.7min	1.0151	1.0270	1.0367	1.0858	1.0151	1.0270	1.0367	1.0860	1.0217	1.0316	1.0434	1.4104	1.0047	1.0219	1.0316	1.0435	0.0041	0.0029	0.0037	0.0812

Table A.47: EDU6 Other Results Table –Continued

EDU6 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	20.5sec	1.4535	1.5823	1.7545	2.4829	1.4538	1.5814	1.7547	2.4838	1.5054	1.6450	1.8536	2.8912	1.3705	1.5231	1.6647	1.9405	0.0543	0.0565	0.0876	0.4368
	Level 2	41.1sec	1.2645	1.4045	1.6476	2.3725	1.2653	1.4048	1.6470	2.3658	1.3313	1.5023	1.7464	3.1958	1.1714	1.3477	1.5119	1.7960	0.0692	0.0678	0.0863	0.5972
	Level 3	1.4min	1.1531	1.2849	1.5223	1.9981	1.1533	1.2846	1.5242	1.9967	1.2018	1.3487	1.7109	2.3541	1.0912	1.2290	1.3596	1.8047	0.0526	0.0492	0.1677	0.2526
30	**Level 4**	2.7min	1.0904	1.1830	1.3527	1.7375	1.0905	1.1830	1.3533	1.7356	1.1212	1.2142	1.4963	1.9571	1.0491	1.1239	1.2362	1.5260	0.0299	0.0419	0.1231	0.1998
days	**Level 5**	5.5min	1.0551	1.1191	1.2534	1.5128	1.0546	1.1194	1.2546	1.5115	1.0757	1.1436	1.3328	1.6420	1.0328	1.0786	1.1576	1.3625	0.0191	0.0285	0.0781	0.1215
before	**Level 6**	11min	1.0347	1.0818	1.1803	1.3696	1.0348	1.0820	1.1804	1.3696	1.0527	1.1017	1.2539	1.4002	1.0220	1.0550	1.1108	1.3233	0.0149	0.0205	0.0585	0.0327
	Level 7	21.9min	1.0232	1.0605	1.1347	1.2852	1.0231	1.0606	1.1352	1.2850	1.0366	1.0789	1.2067	1.3099	1.0135	1.0386	1.0826	1.2690	0.0116	0.0172	0.0469	0.0175
	Level 8	43.8min	1.0174	1.0470	1.1036	1.2199	1.0174	1.0470	1.1038	1.2202	1.0277	1.0576	1.1569	1.2501	1.0093	1.0297	1.0654	1.2042	0.0081	0.0121	0.0334	0.0208
	Level 9	87.6min	1.0164	1.0444	1.0921	1.1940	1.0163	1.0445	1.0925	1.1942	1.0232	1.0533	1.1226	1.2241	1.0083	1.0267	1.0564	1.1538	0.0064	0.0123	0.0263	0.0293
	Level 1	8.1sec	1.4783	1.5756	1.6794	2.1158	1.4783	1.5756	1.6796	2.1131	1.5231	1.6450	1.7169	2.8912	1.3705	1.5356	1.6459	1.7592	0.0511	0.0364	0.0217	0.4266
	Level 2	16.2sec	1.2645	1.3522	1.4560	1.9582	1.2647	1.3521	1.4567	1.9587	1.3238	1.3796	1.5119	3.1958	1.1714	1.3279	1.3948	1.6010	0.0542	0.0199	0.0467	0.4946
	Level 3	32.4sec	1.1414	1.2130	1.3211	1.7285	1.1419	1.2133	1.3207	1.7252	1.1900	1.2341	1.3808	2.3541	1.0912	1.1916	1.2762	1.4033	0.0354	0.0153	0.0425	0.2926
60	**Level 4**	1.1min	1.0782	1.1366	1.2188	1.5215	1.0783	1.1364	1.2186	1.5189	1.1063	1.1643	1.2577	1.9571	1.0491	1.1120	1.1829	1.2843	0.0195	0.0166	0.0248	0.2293
days	**Level 5**	2.2min	1.0451	1.0936	1.1503	1.3658	1.0450	1.0939	1.1507	1.3657	1.0731	1.1224	1.1881	1.6420	1.0270	1.0757	1.1267	1.2044	0.0131	0.0166	0.0213	0.1492
before	**Level 6**	4.3min	1.0268	1.0629	1.1029	1.2584	1.0268	1.0630	1.1030	1.2581	1.0484	1.0797	1.1311	1.4002	1.0136	1.0491	1.0838	1.1314	0.0099	0.0117	0.0150	0.1033
	Level 7	8.6min	1.0160	1.0421	1.0702	1.1938	1.0161	1.0421	1.0703	1.1934	1.0283	1.0536	1.0886	1.3099	1.0084	1.0336	1.0571	1.0948	0.0059	0.0082	0.0106	0.0852
	Level 8	17.3min	1.0110	1.0283	1.0490	1.1478	1.0110	1.0282	1.0490	1.1471	1.0171	1.0356	1.0654	1.2501	1.0055	1.0215	1.0377	1.0654	0.0037	0.0047	0.0084	0.0685
	Level 9	34.6min	1.0093	1.0222	1.0407	1.1299	1.0092	1.0222	1.0407	1.1294	1.0154	1.0269	1.0533	1.2241	1.0040	1.0159	1.0277	1.0549	0.0036	0.0038	0.0097	0.0619
	Level 1	4.6sec	1.4844	1.5633	1.6460	1.9836	1.4843	1.5629	1.6458	1.9803	1.5231	1.6112	1.6780	2.8912	1.3705	1.5350	1.6113	1.6955	0.0424	0.0216	0.0235	0.3937
	Level 2	9.2sec	1.2580	1.3509	1.4242	1.8229	1.2576	1.3509	1.4239	1.8244	1.3176	1.3750	1.4971	3.1958	1.1714	1.3238	1.3755	1.5023	0.0409	0.0176	0.0382	0.4456
	Level 3	18.4sec	1.1383	1.2164	1.2995	1.6283	1.1383	1.2165	1.2994	1.6260	1.1796	1.2361	1.3495	2.3541	1.0912	1.1900	1.2488	1.3596	0.0272	0.0159	0.0283	0.2815
3	**Level 4**	36.8sec	1.0800	1.1386	1.2055	1.4394	1.0799	1.1389	1.2054	1.4419	1.1063	1.1643	1.2413	1.9571	1.0491	1.1120	1.1701	1.2486	0.0173	0.0159	0.0229	0.2184
months	**Level 5**	1.2min	1.0471	1.0932	1.1402	1.3087	1.0472	1.0934	1.1403	1.3098	1.0695	1.1124	1.1693	1.6420	1.0270	1.0731	1.1171	1.1746	0.0121	0.0134	0.0162	0.1463
before	**Level 6**	2.5min	1.0278	1.0630	1.0951	1.2166	1.0278	1.0630	1.0952	1.2161	1.0423	1.0777	1.1143	1.4002	1.0136	1.0484	1.0791	1.1160	0.0077	0.0100	0.0121	0.1038
	Level 7	4.9min	1.0171	1.0408	1.0635	1.1590	1.0171	1.0409	1.0636	1.1584	1.0244	1.0510	1.0789	1.3099	1.0084	1.0283	1.0523	1.0826	0.0049	0.0064	0.0084	0.0855
	Level 8	9.8min	1.0115	1.0273	1.0430	1.1182	1.0115	1.0273	1.0431	1.1184	1.0155	1.0317	1.0532	1.2501	1.0055	1.0171	1.0321	1.0539	0.0032	0.0042	0.0067	0.0692
	Level 9	19.6min	1.0091	1.0212	1.0335	1.1040	1.0091	1.0212	1.0334	1.1038	1.0124	1.0255	1.0457	1.2241	1.0040	1.0154	1.0262	1.0473	0.0026	0.0029	0.0059	0.0622
	Level 1	2.5sec	1.4786	1.5389	1.5897	1.7575	1.4785	1.5388	1.5897	1.7559	1.5182	1.5635	1.6213	2.8912	1.3705	1.5199	1.5635	1.6227	0.0301	0.0116	0.0178	0.2372
	Level 2	5sec	1.2451	1.3074	1.3599	1.5443	1.2453	1.3074	1.3599	1.5448	1.2795	1.3368	1.3882	3.1958	1.1714	1.2799	1.3372	1.3885	0.0247	0.0171	0.0146	0.2745
	Level 3	10sec	1.1362	1.1901	1.2325	1.3893	1.1361	1.1902	1.2325	1.3890	1.1659	1.2166	1.2588	2.3541	1.0823	1.1662	1.2167	1.2597	0.0203	0.0158	0.0116	0.1972
1	**Level 4**	20sec	1.0822	1.1253	1.1594	1.2747	1.0820	1.1253	1.1594	1.2744	1.1081	1.1461	1.1793	1.9571	1.0368	1.1083	1.1463	1.1804	0.0161	0.0106	0.0095	0.1472
Year	**Level 5**	40sec	1.0520	1.0850	1.1109	1.1932	1.0520	1.0850	1.1109	1.1931	1.0695	1.0968	1.1261	1.6420	1.0202	1.0723	1.0970	1.1263	0.0121	0.0074	0.0080	0.1011
before	**Level 6**	1.3min	1.0331	1.0561	1.0754	1.1339	1.0331	1.0561	1.0754	1.1337	1.0453	1.0650	1.0862	1.4002	1.0120	1.0454	1.0651	1.0863	0.0085	0.0056	0.0059	0.0713
	Level 7	2.7min	1.0210	1.0367	1.0500	1.0926	1.0210	1.0367	1.0500	1.0925	1.0290	1.0424	1.0579	1.3099	1.0071	1.0298	1.0428	1.0580	0.0056	0.0038	0.0045	0.0570
	Level 8	5.3min	1.0137	1.0244	1.0331	1.0644	1.0137	1.0244	1.0331	1.0647	1.0189	1.0286	1.0390	1.2501	1.0047	1.0190	1.0287	1.0392	0.0037	0.0027	0.0031	0.0457
	Level 9	10.7min	1.0103	1.0187	1.0250	1.0523	1.0103	1.0187	1.0250	1.0522	1.0146	1.0215	1.0294	1.2241	1.0039	1.0146	1.0215	1.0294	0.0028	0.0020	0.0022	0.0422

Table A.47: EDU6 Other Results Table –Continued

EDU6 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	20.5sec	0.4314	0.5741	0.6376	0.6923	0.4319	0.5740	0.6380	0.6928	0.5330	0.6026	0.6599	0.7251	0.3372	0.5526	0.6070	0.6668	0.0887	0.0225	0.0233	0.0241
	Level 2	41.1sec	0.4566	0.6053	0.7183	0.8017	0.4565	0.6055	0.7184	0.8020	0.5545	0.6541	0.7497	0.8466	0.3098	0.5599	0.6715	0.7665	0.1023	0.0385	0.0308	0.0398
	Level 3	1.4min	0.4951	0.6836	0.7854	0.8748	0.4945	0.6824	0.7853	0.8748	0.5423	0.7343	0.8302	0.9068	0.4109	0.5917	0.7423	0.8309	0.0513	0.0624	0.0371	0.0372
30	**Level 4**	2.7min	0.5638	0.7555	0.8472	0.9207	0.5621	0.7556	0.8475	0.9212	0.6383	0.7971	0.8877	0.9463	0.4855	0.6813	0.8053	0.9019	0.0647	0.0515	0.0373	0.0224
days	**Level 5**	5.5min	0.6380	0.7902	0.8903	0.9509	0.6387	0.7906	0.8900	0.9507	0.7207	0.8469	0.9254	0.9649	0.5774	0.7224	0.8580	0.9289	0.0609	0.0553	0.0297	0.0156
before	**Level 6**	11min	0.7036	0.8290	0.9172	0.9675	0.7034	0.8273	0.9169	0.9677	0.7427	0.8851	0.9464	0.9748	0.6450	0.7706	0.8908	0.9478	0.0401	0.0573	0.0236	0.0133
	Level 7	21.9min	0.7431	0.8521	0.9320	0.9765	0.7426	0.8522	0.9320	0.9764	0.7758	0.9042	0.9526	0.9840	0.6848	0.8033	0.9101	0.9581	0.0348	0.0476	0.0183	0.0123
	Level 8	43.8min	0.7611	0.8708	0.9401	0.9799	0.7611	0.8706	0.9400	0.9798	0.7877	0.9173	0.9576	0.9869	0.7083	0.8370	0.9256	0.9653	0.0308	0.0356	0.0135	0.0100
	Level 9	87.6min	0.7502	0.8725	0.9343	0.9795	0.7496	0.8725	0.9346	0.9795	0.8016	0.9195	0.9548	0.9862	0.7090	0.8453	0.9210	0.9675	0.0350	0.0353	0.0142	0.0084
	Level 1	8.1sec	0.4853	0.5946	0.6348	0.6754	0.4849	0.5946	0.6347	0.6756	0.5636	0.6063	0.6522	0.7251	0.3372	0.5808	0.6070	0.6533	0.0876	0.0082	0.0148	0.0237
	Level 2	16.2sec	0.5221	0.6867	0.7377	0.7910	0.5219	0.6867	0.7375	0.7913	0.6201	0.7147	0.7517	0.8466	0.3098	0.6541	0.7156	0.7559	0.0992	0.0213	0.0121	0.0331
	Level 3	32.4sec	0.5796	0.7539	0.8225	0.8751	0.5793	0.7539	0.8225	0.8752	0.7047	0.7788	0.8370	0.9068	0.4109	0.7226	0.8053	0.8410	0.1007	0.0213	0.0099	0.0252
60	**Level 4**	1.1min	0.6511	0.8127	0.8756	0.9256	0.6508	0.8127	0.8758	0.9258	0.7737	0.8343	0.8953	0.9463	0.4855	0.7810	0.8533	0.9019	0.1058	0.0181	0.0127	0.0162
days	**Level 5**	2.2min	0.7099	0.8579	0.9072	0.9549	0.7106	0.8580	0.9072	0.9551	0.8220	0.8782	0.9254	0.9733	0.5774	0.8230	0.8822	0.9289	0.0903	0.0177	0.0145	0.0125
before	**Level 6**	4.3min	0.7655	0.8953	0.9321	0.9718	0.7649	0.8955	0.9321	0.9717	0.8672	0.9112	0.9478	0.9860	0.6450	0.8739	0.9113	0.9484	0.0761	0.0127	0.0142	0.0106
	Level 7	8.6min	0.8016	0.9210	0.9510	0.9816	0.8010	0.9210	0.9509	0.9816	0.9007	0.9363	0.9624	0.9912	0.6848	0.9042	0.9380	0.9678	0.0720	0.0107	0.0086	0.0068
	Level 8	17.3min	0.8220	0.9389	0.9632	0.9862	0.8208	0.9390	0.9633	0.9863	0.9196	0.9514	0.9738	0.9940	0.7083	0.9243	0.9557	0.9787	0.0708	0.0101	0.0065	0.0048
	Level 9	34.6min	0.8165	0.9425	0.9682	0.9872	0.8159	0.9425	0.9682	0.9872	0.9210	0.9583	0.9783	0.9954	0.7090	0.9213	0.9588	0.9798	0.0778	0.0117	0.0065	0.0049
	Level 1	4.6sec	0.5183	0.6075	0.6403	0.6735	0.5180	0.6076	0.6403	0.6733	0.5906	0.6207	0.6533	0.7251	0.3372	0.5909	0.6231	0.6542	0.0854	0.0098	0.0088	0.0194
	Level 2	9.2sec	0.5618	0.7022	0.7396	0.7954	0.5626	0.7021	0.7395	0.7954	0.6715	0.7238	0.7559	0.8466	0.3098	0.6719	0.7240	0.7590	0.1012	0.0170	0.0104	0.0251
	Level 3	18.4sec	0.6194	0.7678	0.8202	0.8776	0.6197	0.7677	0.8204	0.8775	0.7343	0.8049	0.8410	0.9068	0.4109	0.7370	0.8053	0.8474	0.1033	0.0195	0.0115	0.0201
3	**Level 4**	36.8sec	0.6902	0.8238	0.8751	0.9244	0.6905	0.8237	0.8750	0.9243	0.7929	0.8533	0.8953	0.9463	0.4855	0.7930	0.8605	0.9019	0.1045	0.0184	0.0109	0.0146
months	**Level 5**	1.2min	0.7491	0.8682	0.9094	0.9529	0.7485	0.8681	0.9094	0.9528	0.8440	0.8935	0.9289	0.9733	0.5774	0.8445	0.8949	0.9299	0.0921	0.0151	0.0113	0.0119
before	**Level 6**	2.5min	0.7999	0.9026	0.9357	0.9707	0.8003	0.9026	0.9357	0.9706	0.8849	0.9183	0.9484	0.9860	0.6450	0.8851	0.9221	0.9554	0.0806	0.0108	0.0087	0.0085
	Level 7	4.9min	0.8364	0.9296	0.9544	0.9806	0.8351	0.9297	0.9544	0.9807	0.9083	0.9435	0.9678	0.9912	0.6848	0.9101	0.9486	0.9718	0.0765	0.0094	0.0058	0.0057
	Level 8	9.8min	0.8559	0.9475	0.9666	0.9859	0.8559	0.9475	0.9666	0.9859	0.9322	0.9583	0.9787	0.9940	0.7083	0.9336	0.9600	0.9804	0.0766	0.0080	0.0051	0.0040
	Level 9	19.6min	0.8535	0.9537	0.9714	0.9875	0.8539	0.9538	0.9714	0.9875	0.9351	0.9634	0.9798	0.9954	0.7090	0.9409	0.9658	0.9822	0.0837	0.0074	0.0042	0.0037
	Level 1	2.5sec	0.5760	0.6285	0.6495	0.6759	0.5759	0.6285	0.6495	0.6760	0.6160	0.6394	0.6581	0.7251	0.3372	0.6161	0.6400	0.6584	0.0567	0.0070	0.0049	0.0139
	Level 2	5sec	0.6569	0.7335	0.7635	0.8022	0.6569	0.7335	0.7634	0.8022	0.7183	0.7475	0.7808	0.8466	0.3098	0.7184	0.7477	0.7810	0.0781	0.0085	0.0098	0.0156
	Level 3	10sec	0.7240	0.8078	0.8378	0.8784	0.7246	0.8078	0.8378	0.8784	0.7911	0.8177	0.8564	0.9237	0.4109	0.7933	0.8181	0.8566	0.0826	0.0070	0.0116	0.0157
1	**Level 4**	20sec	0.7824	0.8571	0.8846	0.9213	0.7827	0.8571	0.8846	0.9214	0.8398	0.8695	0.8978	0.9642	0.4855	0.8402	0.8700	0.8986	0.0771	0.0084	0.0083	0.0142
Year	**Level 5**	40sec	0.8288	0.8930	0.9161	0.9468	0.8291	0.8930	0.9161	0.9468	0.8781	0.9051	0.9277	0.9794	0.5774	0.8782	0.9053	0.9279	0.0676	0.0076	0.0063	0.0122
before	**Level 6**	1.3min	0.8691	0.9216	0.9405	0.9640	0.8691	0.9216	0.9405	0.9641	0.9104	0.9313	0.9490	0.9866	0.6450	0.9109	0.9314	0.9494	0.0577	0.0067	0.0054	0.0094
	Level 7	2.7min	0.8997	0.9440	0.9580	0.9755	0.8997	0.9440	0.9580	0.9755	0.9341	0.9515	0.9660	0.9916	0.6848	0.9346	0.9515	0.9664	0.0534	0.0052	0.0040	0.0067
	Level 8	5.3min	0.9200	0.9591	0.9692	0.9827	0.9199	0.9591	0.9692	0.9826	0.9520	0.9645	0.9756	0.9940	0.7083	0.9520	0.9646	0.9760	0.0527	0.0040	0.0032	0.0047
	Level 9	10.7min	0.9250	0.9647	0.9738	0.9851	0.9251	0.9647	0.9738	0.9851	0.9583	0.9694	0.9786	0.9954	0.7090	0.9584	0.9694	0.9787	0.0578	0.0035	0.0028	0.0040

Table A.48: EDU7 Other Results Table

EDU7 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.7sec	1.4821	1.6007	1.7346	2.0490	1.4823	1.6016	1.7351	2.0472	1.5047	1.6790	1.7810	2.2482	1.4411	1.5354	1.6792	1.8110	0.0245	0.0570	0.0366	0.1603
	Level 2	29.4sec	1.2547	1.3929	1.4851	1.6696	1.2547	1.3927	1.4848	1.6697	1.2812	1.4344	1.5190	1.6988	1.2367	1.3164	1.4496	1.5826	0.0168	0.0482	0.0309	0.0498
	Level 3	58.8sec	1.1313	1.1984	1.2897	1.3710	1.1312	1.1984	1.2895	1.3704	1.1560	1.2404	1.3211	1.4124	1.1092	1.1564	1.2604	1.3337	0.0166	0.0376	0.0244	0.0331
30	**Level 4**	2min	1.0621	1.0928	1.1588	1.2197	1.0620	1.0928	1.1588	1.2199	1.0731	1.1169	1.1842	1.3076	1.0528	1.0765	1.1231	1.1862	0.0086	0.0158	0.0232	0.0506
days	**Level 5**	3.9min	1.0301	1.0458	1.0886	1.1376	1.0301	1.0459	1.0886	1.1382	1.0382	1.0573	1.1009	1.2156	1.0262	1.0399	1.0666	1.1134	0.0050	0.0077	0.0163	0.0436
before	**Level 6**	7.8min	1.0162	1.0262	1.0544	1.0864	1.0162	1.0262	1.0542	1.0867	1.0213	1.0315	1.0660	1.1152	1.0135	1.0215	1.0422	1.0663	0.0032	0.0042	0.0111	0.0206
	Level 7	15.7min	1.0104	1.0193	1.0377	1.0601	1.0104	1.0193	1.0377	1.0603	1.0132	1.0251	1.0470	1.0864	1.0087	1.0138	1.0295	1.0485	0.0018	0.0044	0.0083	0.0155
	Level 8	31.4min	1.0085	1.0168	1.0335	1.0531	1.0085	1.0168	1.0334	1.0534	1.0103	1.0246	1.0401	1.0829	1.0071	1.0112	1.0250	1.0425	0.0013	0.0050	0.0075	0.0171
	Level 9	62.8min	1.0090	1.0174	1.0366	1.0642	1.0090	1.0175	1.0366	1.0643	1.0103	1.0227	1.0477	1.0974	1.0074	1.0127	1.0260	1.0481	0.0013	0.0044	0.0100	0.0193
	Level 1	6.3sec	1.4948	1.5778	1.6930	2.0699	1.4953	1.5774	1.6926	2.0680	1.5392	1.6255	1.7810	2.6147	1.4411	1.5506	1.6285	1.7909	0.0268	0.0275	0.0525	0.2511
	Level 2	12.7sec	1.2712	1.3475	1.4474	1.8961	1.2719	1.3474	1.4474	1.8967	1.3164	1.3606	1.5045	2.8004	1.2367	1.3203	1.3860	1.5190	0.0223	0.0133	0.0401	0.4650
	Level 3	25.3sec	1.1434	1.1986	1.2724	1.6676	1.1434	1.1987	1.2724	1.6685	1.1574	1.2392	1.3211	2.7364	1.1092	1.1746	1.2404	1.3337	0.0165	0.0232	0.0279	0.4817
60	**Level 4**	50.6sec	1.0713	1.1098	1.1679	1.4609	1.0713	1.1100	1.1678	1.4604	1.0868	1.1319	1.1899	2.3027	1.0528	1.0909	1.1363	1.1938	0.0117	0.0130	0.0181	0.3426
days	**Level 5**	1.7min	1.0352	1.0659	1.1033	1.3153	1.0351	1.0658	1.1033	1.3165	1.0426	1.0796	1.1171	1.7944	1.0262	1.0516	1.0882	1.1212	0.0062	0.0092	0.0094	0.2118
before	**Level 6**	3.4min	1.0198	1.0423	1.0674	1.2601	1.0199	1.0424	1.0674	1.2618	1.0256	1.0525	1.0811	1.9765	1.0135	1.0310	1.0595	1.0838	0.0042	0.0075	0.0069	0.2653
	Level 7	6.8min	1.0137	1.0300	1.0457	1.2932	1.0138	1.0300	1.0457	1.2888	1.0197	1.0356	1.0538	2.9053	1.0087	1.0227	1.0374	1.0562	0.0039	0.0045	0.0047	0.5420
	Level 8	13.5min	1.0113	1.0235	1.0364	1.4224	1.0113	1.0236	1.0365	1.4311	1.0176	1.0277	1.0427	4.7852	1.0071	1.0177	1.0278	1.0433	0.0033	0.0030	0.0052	1.1139
	Level 9	27min	1.0120	1.0225	1.0363	1.7495	1.0120	1.0225	1.0363	1.7645	1.0169	1.0259	1.0477	8.5566	1.0074	1.0173	1.0260	1.0481	0.0034	0.0030	0.0077	2.2530
	Level 1	4sec	1.5068	1.6063	1.7386	2.0365	1.5071	1.6062	1.7383	2.0364	1.5603	1.6527	1.7970	2.6147	1.4411	1.5603	1.6558	1.7982	0.0376	0.0338	0.0507	0.2165
	Level 2	7.9sec	1.2903	1.3822	1.5061	1.8919	1.2905	1.3823	1.5062	1.8954	1.3380	1.4344	1.5912	2.8004	1.2367	1.3466	1.4353	1.6209	0.0340	0.0313	0.0496	0.3689
	Level 3	15.8sec	1.1548	1.2389	1.3336	1.7008	1.1547	1.2384	1.3337	1.7007	1.1890	1.2807	1.3977	2.7364	1.1092	1.1968	1.2817	1.4043	0.0222	0.0275	0.0337	0.3706
3	**Level 4**	31.7sec	1.0802	1.1433	1.2181	1.5132	1.0800	1.1432	1.2181	1.5139	1.1056	1.1772	1.2801	2.3027	1.0528	1.1077	1.1835	1.3076	0.0169	0.0244	0.0335	0.2489
months	**Level 5**	1.1min	1.0419	1.0890	1.1434	1.3648	1.0422	1.0889	1.1435	1.3649	1.0666	1.1129	1.2047	1.7944	1.0262	1.0676	1.1134	1.2096	0.0122	0.0146	0.0291	0.1453
before	**Level 6**	2.1min	1.0250	1.0576	1.0967	1.2837	1.0249	1.0578	1.0965	1.2815	1.0425	1.0714	1.1199	1.9765	1.0135	1.0428	1.0767	1.1371	0.0090	0.0095	0.0164	0.2027
	Level 7	4.2min	1.0176	1.0395	1.0642	1.2655	1.0176	1.0395	1.0644	1.2676	1.0296	1.0485	1.0864	2.9053	1.0087	1.0304	1.0490	1.0887	0.0069	0.0063	0.0124	0.4402
	Level 8	8.5min	1.0144	1.0302	1.0474	1.3429	1.0144	1.0302	1.0474	1.3448	1.0246	1.0388	1.0574	4.7852	1.0071	1.0246	1.0390	1.0653	0.0056	0.0047	0.0066	0.9182
	Level 9	16.9min	1.0145	1.0276	1.0462	1.5529	1.0144	1.0276	1.0462	1.5650	1.0227	1.0372	1.0593	8.5566	1.0074	1.0238	1.0373	1.0628	0.0049	0.0039	0.0070	1.8647
	Level 1	2.3sec	1.4704	1.5468	1.6296	1.8460	1.4704	1.5469	1.6295	1.8456	1.5108	1.5767	1.6811	2.6147	1.3330	1.5118	1.5770	1.6819	0.0302	0.0192	0.0297	0.1795
	Level 2	4.7sec	1.2382	1.3094	1.3945	1.6430	1.2382	1.3095	1.3947	1.6451	1.2773	1.3502	1.4496	2.8004	1.1216	1.2778	1.3505	1.4516	0.0295	0.0226	0.0310	0.2570
	Level 3	9.3sec	1.1291	1.1820	1.2572	1.4728	1.1291	1.1820	1.2572	1.4716	1.1560	1.2099	1.3041	2.7364	1.0583	1.1560	1.2110	1.3044	0.0206	0.0168	0.0292	0.2377
1	**Level 4**	18.7sec	1.0746	1.1175	1.1711	1.3468	1.0747	1.1175	1.1711	1.3478	1.1002	1.1359	1.2114	2.3027	1.0306	1.1006	1.1363	1.2122	0.0163	0.0101	0.0219	0.1767
Year	**Level 5**	37.4sec	1.0461	1.0814	1.1182	1.2658	1.0461	1.0814	1.1182	1.2669	1.0667	1.0944	1.1551	2.4260	1.0180	1.0669	1.0952	1.1565	0.0141	0.0082	0.0172	0.1834
before	**Level 6**	1.2min	1.0300	1.0568	1.0843	1.2265	1.0300	1.0568	1.0842	1.2270	1.0460	1.0668	1.1116	3.7694	1.0118	1.0460	1.0680	1.1119	0.0113	0.0065	0.0123	0.3466
	Level 7	2.5min	1.0206	1.0396	1.0590	1.2371	1.0206	1.0396	1.0590	1.2361	1.0324	1.0470	1.0769	6.4954	1.0062	1.0324	1.0472	1.0772	0.0083	0.0049	0.0084	0.7111
	Level 8	5min	1.0151	1.0291	1.0435	1.3198	1.0151	1.0291	1.0435	1.3238	1.0241	1.0348	1.0558	11.9603	1.0036	1.0241	1.0356	1.0562	0.0060	0.0036	0.0061	1.4395
	Level 9	10min	1.0133	1.0255	1.0389	1.5306	1.0133	1.0255	1.0389	1.5515	1.0204	1.0315	1.0514	22.9002	1.0027	1.0204	1.0316	1.0520	0.0051	0.0031	0.0061	2.8911

Table A.48: EDU7 Other Results Table –Continued

EDU7 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.7sec	1.4799	1.5952	1.7423	2.0394	1.4797	1.5950	1.7427	2.0411	1.5050	1.6661	1.8145	2.2436	1.4392	1.5323	1.6859	1.8225	0.0251	0.0589	0.0465	0.1548
	Level 2	29.4sec	1.2552	1.3830	1.4914	1.6562	1.2554	1.3835	1.4906	1.6563	1.2770	1.4430	1.5309	1.6976	1.2383	1.3110	1.4551	1.5794	0.0141	0.0507	0.0358	0.0451
	Level 3	58.8sec	1.1277	1.2018	1.2800	1.3460	1.1278	1.2017	1.2800	1.3459	1.1475	1.2445	1.3104	1.3935	1.1095	1.1619	1.2615	1.3222	0.0135	0.0353	0.0201	0.0277
30	**Level 4**	2min	1.0615	1.0923	1.1546	1.1977	1.0615	1.0922	1.1550	1.1977	1.0702	1.1137	1.1837	1.2196	1.0526	1.0707	1.1250	1.1842	0.0083	0.0167	0.0216	0.0138
days	**Level 5**	3.9min	1.0299	1.0448	1.0830	1.1200	1.0298	1.0447	1.0832	1.1200	1.0374	1.0546	1.1021	1.1286	1.0256	1.0374	1.0680	1.1114	0.0047	0.0079	0.0160	0.0062
before	**Level 6**	7.8min	1.0155	1.0256	1.0469	1.0803	1.0155	1.0257	1.0471	1.0803	1.0196	1.0316	1.0631	1.1035	1.0129	1.0214	1.0321	1.0662	0.0026	0.0043	0.0123	0.0151
	Level 7	15.7min	1.0101	1.0174	1.0326	1.0602	1.0101	1.0175	1.0327	1.0600	1.0130	1.0209	1.0454	1.0846	1.0080	1.0133	1.0225	1.0475	0.0019	0.0030	0.0085	0.0150
	Level 8	31.4min	1.0082	1.0149	1.0281	1.0538	1.0082	1.0149	1.0282	1.0539	1.0101	1.0190	1.0371	1.0803	1.0064	1.0113	1.0254	1.0425	0.0015	0.0030	0.0050	0.0155
	Level 9	62.7min	1.0086	1.0160	1.0324	1.0603	1.0087	1.0160	1.0323	1.0604	1.0100	1.0212	1.0401	1.0898	1.0068	1.0118	1.0271	1.0490	0.0014	0.0034	0.0068	0.0170
	Level 1	6.3sec	1.4909	1.5745	1.6900	2.0850	1.4913	1.5746	1.6895	2.0836	1.5323	1.6245	1.7543	2.5181	1.4392	1.5362	1.6263	1.7889	0.0261	0.0313	0.0480	0.2453
	Level 2	12.7sec	1.2685	1.3444	1.4428	1.8971	1.2687	1.3445	1.4434	1.8999	1.2922	1.3657	1.5249	3.0347	1.2383	1.3110	1.3693	1.5309	0.0167	0.0175	0.0482	0.4798
	Level 3	25.3sec	1.1407	1.1922	1.2659	1.6909	1.1408	1.1925	1.2660	1.6818	1.1622	1.2387	1.3104	3.0510	1.1095	1.1687	1.2436	1.3222	0.0173	0.0212	0.0226	0.5417
60	**Level 4**	50.6sec	1.0688	1.1060	1.1613	1.4628	1.0689	1.1061	1.1615	1.4651	1.0893	1.1250	1.1854	2.5104	1.0526	1.0894	1.1377	1.1874	0.0109	0.0115	0.0183	0.4053
days	**Level 5**	1.7min	1.0341	1.0625	1.0977	1.2930	1.0341	1.0625	1.0979	1.2948	1.0407	1.0742	1.1189	1.9611	1.0256	1.0430	1.0762	1.1196	0.0053	0.0104	0.0134	0.2549
before	**Level 6**	3.4min	1.0192	1.0385	1.0626	1.1941	1.0192	1.0385	1.0625	1.1930	1.0241	1.0498	1.0759	1.5756	1.0129	1.0250	1.0502	1.0783	0.0041	0.0085	0.0086	0.1534
	Level 7	6.7min	1.0131	1.0269	1.0433	1.1303	1.0130	1.0269	1.0431	1.1303	1.0187	1.0343	1.0523	1.4018	1.0080	1.0187	1.0343	1.0544	0.0034	0.0062	0.0068	0.1042
	Level 8	13.5min	1.0105	1.0220	1.0336	1.0934	1.0105	1.0220	1.0336	1.0932	1.0146	1.0264	1.0425	1.2723	1.0064	1.0160	1.0265	1.0433	0.0026	0.0041	0.0062	0.0684
	Level 9	27min	1.0110	1.0215	1.0338	1.0834	1.0110	1.0214	1.0339	1.0836	1.0158	1.0271	1.0401	1.2143	1.0068	1.0159	1.0271	1.0478	0.0026	0.0039	0.0053	0.0504
	Level 1	4sec	1.5023	1.6118	1.7376	2.0476	1.5023	1.6119	1.7379	2.0476	1.5559	1.6643	1.8105	2.5181	1.4392	1.5602	1.6661	1.8145	0.0357	0.0353	0.0483	0.2119
	Level 2	7.9sec	1.2865	1.3784	1.5123	1.9069	1.2864	1.3784	1.5124	1.9045	1.3365	1.4317	1.6006	3.0347	1.2383	1.3392	1.4354	1.6398	0.0308	0.0301	0.0500	0.3773
	Level 3	15.8sec	1.1516	1.2344	1.3292	1.7246	1.1515	1.2343	1.3292	1.7247	1.1855	1.2785	1.3935	3.0510	1.1095	1.1863	1.2805	1.4022	0.0219	0.0277	0.0337	0.4147
3	**Level 4**	31.7sec	1.0774	1.1378	1.2112	1.5411	1.0774	1.1379	1.2112	1.5385	1.1064	1.1721	1.2797	2.5104	1.0526	1.1072	1.1791	1.2929	0.0163	0.0234	0.0336	0.2929
months	**Level 5**	1.1min	1.0398	1.0844	1.1381	1.3692	1.0398	1.0843	1.1380	1.3696	1.0569	1.1067	1.1990	1.9611	1.0256	1.0674	1.1087	1.2144	0.0102	0.0151	0.0304	0.1796
before	**Level 6**	2.1min	1.0227	1.0538	1.0916	1.2461	1.0227	1.0538	1.0917	1.2461	1.0333	1.0693	1.1221	1.5756	1.0129	1.0402	1.0724	1.1233	0.0066	0.0099	0.0170	0.1084
	Level 7	4.2min	1.0154	1.0372	1.0616	1.1652	1.0154	1.0372	1.0617	1.1653	1.0228	1.0493	1.0784	1.4018	1.0080	1.0287	1.0501	1.0846	0.0047	0.0067	0.0095	0.0751
	Level 8	8.4min	1.0128	1.0287	1.0452	1.1154	1.0128	1.0287	1.0452	1.1156	1.0211	1.0377	1.0550	1.2723	1.0064	1.0249	1.0384	1.0560	0.0043	0.0045	0.0058	0.0496
	Level 9	16.9min	1.0131	1.0271	1.0424	1.0983	1.0131	1.0271	1.0424	1.0988	1.0212	1.0341	1.0522	1.2143	1.0068	1.0218	1.0350	1.0551	0.0040	0.0035	0.0063	0.0381
	Level 1	2.3sec	1.4700	1.5467	1.6299	1.8504	1.4698	1.5467	1.6300	1.8498	1.5119	1.5855	1.6820	2.5181	1.3332	1.5122	1.5859	1.6839	0.0303	0.0210	0.0284	0.1782
	Level 2	4.7sec	1.2383	1.3075	1.3921	1.6476	1.2382	1.3075	1.3919	1.6498	1.2770	1.3448	1.4551	3.0347	1.1228	1.2771	1.3467	1.4584	0.0292	0.0216	0.0324	0.2593
	Level 3	9.3sec	1.1280	1.1805	1.2540	1.4767	1.1281	1.1804	1.2541	1.4758	1.1541	1.2104	1.3104	3.0510	1.0589	1.1554	1.2111	1.3121	0.0196	0.0155	0.0289	0.2611
1	**Level 4**	18.7sec	1.0738	1.1160	1.1686	1.3473	1.0739	1.1160	1.1687	1.3455	1.0990	1.1334	1.2043	2.5104	1.0312	1.0990	1.1335	1.2062	0.0160	0.0098	0.0207	0.1933
Year	**Level 5**	37.4sec	1.0450	1.0802	1.1166	1.2490	1.0450	1.0801	1.1165	1.2493	1.0654	1.0933	1.1513	1.9611	1.0185	1.0674	1.0933	1.1520	0.0135	0.0080	0.0160	0.1227
before	**Level 6**	1.2min	1.0289	1.0555	1.0830	1.1761	1.0290	1.0555	1.0830	1.1756	1.0444	1.0665	1.1115	1.5756	1.0116	1.0446	1.0670	1.1118	0.0108	0.0067	0.0117	0.0759
	Level 7	2.5min	1.0198	1.0387	1.0589	1.1215	1.0197	1.0387	1.0589	1.1213	1.0314	1.0475	1.0759	1.4018	1.0063	1.0314	1.0475	1.0769	0.0078	0.0048	0.0080	0.0506
	Level 8	5min	1.0146	1.0282	1.0431	1.0877	1.0146	1.0282	1.0431	1.0876	1.0233	1.0352	1.0545	1.2723	1.0038	1.0234	1.0354	1.0550	0.0057	0.0035	0.0056	0.0341
	Level 9	10min	1.0129	1.0249	1.0381	1.0770	1.0128	1.0249	1.0381	1.0771	1.0199	1.0308	1.0490	1.2143	1.0029	1.0199	1.0311	1.0495	0.0048	0.0032	0.0057	0.0290

Table A.48: EDU7 Other Results Table –Continued

EDU7 Bid Ask		Covariance	Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.7sec	1.4812	1.5982	1.7384	2.0420	1.4808	1.5975	1.7387	2.0437	1.5047	1.6719	1.7978	2.2455	1.4401	1.5357	1.6822	1.8167	0.0247	0.0580	0.0413	0.1575
	Level 2	29.4sec	1.2545	1.3858	1.4872	1.6614	1.2547	1.3860	1.4870	1.6614	1.2788	1.4375	1.5247	1.6971	1.2372	1.3132	1.4520	1.5797	0.0153	0.0463	0.0326	0.0468
	Level 3	58.8sec	1.1289	1.1989	1.2885	1.3463	1.1289	1.1991	1.2887	1.3455	1.1508	1.2412	1.3199	1.3928	1.1088	1.1583	1.2599	1.3202	0.0149	0.0365	0.0239	0.0281
30	**Level 4**	2min	1.0611	1.0911	1.1560	1.1946	1.0609	1.0910	1.1561	1.1944	1.0708	1.1141	1.1806	1.2144	1.0519	1.0714	1.1210	1.1807	0.0082	0.0164	0.0225	0.0135
days	**Level 5**	3.9min	1.0286	1.0433	1.0836	1.1111	1.0286	1.0434	1.0834	1.1111	1.0367	1.0539	1.0958	1.1204	1.0248	1.0370	1.0631	1.1050	0.0048	0.0079	0.0143	0.0059
before	**Level 6**	7.8min	1.0140	1.0234	1.0446	1.0679	1.0140	1.0234	1.0448	1.0679	1.0180	1.0289	1.0547	1.0902	1.0117	1.0191	1.0365	1.0549	0.0024	0.0042	0.0074	0.0144
	Level 7	15.7min	1.0082	1.0152	1.0261	1.0471	1.0081	1.0153	1.0261	1.0468	1.0103	1.0184	1.0352	1.0695	1.0066	1.0106	1.0191	1.0373	0.0014	0.0033	0.0059	0.0134
	Level 8	31.4min	1.0058	1.0111	1.0209	1.0382	1.0058	1.0111	1.0209	1.0380	1.0071	1.0148	1.0274	1.0606	1.0047	1.0077	1.0171	1.0290	0.0010	0.0028	0.0042	0.0130
	Level 9	62.7min	1.0055	1.0101	1.0209	1.0398	1.0055	1.0101	1.0209	1.0397	1.0065	1.0147	1.0275	1.0612	1.0044	1.0075	1.0148	1.0313	0.0008	0.0029	0.0061	0.0122
	Level 1	6.3sec	1.4928	1.5740	1.6913	2.0763	1.4928	1.5741	1.6909	2.0731	1.5357	1.6248	1.7719	2.5202	1.4401	1.5396	1.6270	1.7926	0.0263	0.0301	0.0511	0.2426
	Level 2	12.7sec	1.2686	1.3432	1.4426	1.8909	1.2687	1.3431	1.4424	1.8918	1.2954	1.3604	1.5129	2.9062	1.2372	1.3132	1.3770	1.5247	0.0176	0.0166	0.0455	0.4651
	Level 3	25.3sec	1.1402	1.1892	1.2686	1.6498	1.1402	1.1891	1.2681	1.6556	1.1587	1.2350	1.3199	2.8469	1.1088	1.1616	1.2388	1.3202	0.0159	0.0212	0.0286	0.4974
60	**Level 4**	50.6sec	1.0681	1.1025	1.1584	1.4241	1.0682	1.1026	1.1584	1.4294	1.0853	1.1210	1.1807	2.3200	1.0519	1.0864	1.1250	1.1821	0.0103	0.0117	0.0186	0.3550
days	**Level 5**	1.7min	1.0327	1.0587	1.0933	1.2550	1.0327	1.0587	1.0934	1.2530	1.0384	1.0704	1.1074	1.7882	1.0248	1.0411	1.0738	1.1107	0.0053	0.0092	0.0096	0.2093
before	**Level 6**	3.4min	1.0173	1.0358	1.0547	1.1577	1.0173	1.0358	1.0547	1.1573	1.0225	1.0443	1.0647	1.4602	1.0117	1.0256	1.0443	1.0662	0.0038	0.0065	0.0069	0.1230
	Level 7	6.8min	1.0106	1.0225	1.0351	1.0975	1.0106	1.0224	1.0351	1.0981	1.0161	1.0277	1.0415	1.2920	1.0066	1.0167	1.0279	1.0425	0.0029	0.0041	0.0053	0.0753
	Level 8	13.5min	1.0072	1.0162	1.0255	1.0659	1.0072	1.0162	1.0254	1.0665	1.0109	1.0189	1.0300	1.1950	1.0047	1.0110	1.0195	1.0303	0.0018	0.0026	0.0042	0.0481
	Level 9	27min	1.0057	1.0138	1.0226	1.0520	1.0056	1.0138	1.0225	1.0522	1.0080	1.0167	1.0275	1.1410	0.9970	1.0106	1.0171	1.0313	0.0031	0.0021	0.0042	0.0323
	Level 1	4sec	1.5035	1.6075	1.7363	2.0377	1.5035	1.6074	1.7361	2.0379	1.5526	1.6578	1.7978	2.5202	1.4401	1.5599	1.6594	1.8059	0.0355	0.0333	0.0496	0.2101
	Level 2	7.9sec	1.2861	1.3761	1.5049	1.8877	1.2862	1.3761	1.5043	1.8891	1.3330	1.4247	1.5797	2.9062	1.2372	1.3368	1.4279	1.6297	0.0308	0.0285	0.0471	0.3682
	Level 3	15.8sec	1.1499	1.2308	1.3234	1.6844	1.1501	1.2308	1.3236	1.6884	1.1835	1.2726	1.3877	2.8469	1.1088	1.1863	1.2732	1.3928	0.0203	0.0288	0.0290	0.3819
3	**Level 4**	31.7sec	1.0756	1.1348	1.1995	1.4878	1.0756	1.1349	1.1995	1.4887	1.0982	1.1706	1.2524	2.3200	1.0519	1.1021	1.1734	1.2610	0.0145	0.0246	0.0256	0.2563
months	**Level 5**	1.1min	1.0382	1.0797	1.1234	1.3168	1.0382	1.0798	1.1233	1.3171	1.0541	1.0978	1.1669	1.7882	1.0248	1.0610	1.1050	1.1705	0.0099	0.0141	0.0210	0.1456
before	**Level 6**	2.1min	1.0212	1.0479	1.0786	1.1985	1.0212	1.0479	1.0785	1.2003	1.0365	1.0615	1.1017	1.4602	1.0117	1.0375	1.0647	1.1138	0.0071	0.0082	0.0138	0.0857
	Level 7	4.2min	1.0129	1.0305	1.0495	1.1259	1.0130	1.0306	1.0495	1.1253	1.0193	1.0397	1.0619	1.2920	1.0066	1.0236	1.0399	1.0695	0.0044	0.0058	0.0086	0.0535
	Level 8	8.4min	1.0093	1.0215	1.0332	1.0827	1.0093	1.0216	1.0332	1.0823	1.0167	1.0274	1.0395	1.1950	1.0047	1.0171	1.0284	1.0449	0.0037	0.0036	0.0040	0.0344
	Level 9	16.9min	1.0076	1.0177	1.0275	1.0622	1.0076	1.0177	1.0275	1.0618	1.0137	1.0223	1.0334	1.1410	0.9970	1.0140	1.0229	1.0360	0.0040	0.0026	0.0033	0.0248
	Level 1	2.3sec	1.4695	1.5455	1.6273	1.8438	1.4694	1.5456	1.6271	1.8445	1.5101	1.5784	1.6748	2.5202	1.3329	1.5107	1.5790	1.6782	0.0300	0.0199	0.0287	0.1770
	Level 2	4.7sec	1.2368	1.3057	1.3881	1.6397	1.2367	1.3056	1.3881	1.6386	1.2748	1.3431	1.4475	2.9062	1.1219	1.2759	1.3445	1.4480	0.0289	0.0213	0.0305	0.2553
	Level 3	9.3sec	1.1265	1.1766	1.2485	1.4563	1.1264	1.1765	1.2484	1.4560	1.1519	1.2053	1.2982	2.8469	1.0581	1.1524	1.2067	1.2988	0.0193	0.0157	0.0279	0.2420
1	**Level 4**	18.7sec	1.0716	1.1109	1.1609	1.3183	1.0716	1.1109	1.1609	1.3176	1.0954	1.1277	1.1962	2.3200	1.0302	1.0958	1.1294	1.1977	0.0150	0.0092	0.0199	0.1702
Year	**Level 5**	37.4sec	1.0425	1.0742	1.1058	1.2171	1.0425	1.0742	1.1058	1.2173	1.0620	1.0867	1.1372	1.7882	1.0173	1.0626	1.0869	1.1402	0.0124	0.0074	0.0136	0.1011
before	**Level 6**	1.2min	1.0261	1.0490	1.0709	1.1452	1.0261	1.0491	1.0709	1.1450	1.0394	1.0582	1.0939	1.4602	1.0110	1.0395	1.0583	1.0949	0.0095	0.0060	0.0093	0.0603
	Level 7	2.5min	1.0165	1.0321	1.0468	1.0928	1.0164	1.0321	1.0468	1.0926	1.0257	1.0391	1.0606	1.2920	1.0057	1.0258	1.0391	1.0607	0.0064	0.0043	0.0063	0.0364
	Level 8	5min	1.0108	1.0212	1.0309	1.0604	1.0108	1.0212	1.0309	1.0603	1.0171	1.0258	1.0385	1.1950	1.0021	1.0172	1.0259	1.0385	0.0045	0.0028	0.0038	0.0235
	Level 9	10min	1.0078	1.0161	1.0237	1.0452	1.0078	1.0161	1.0237	1.0453	1.0126	1.0195	1.0304	1.1410	0.9866	1.0127	1.0199	1.0308	0.0044	0.0020	0.0031	0.0172

Table A.48: EDU7 Other Results Table –Continued

EDU7 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.7sec	0.4925	0.5784	0.6335	0.6762	0.4922	0.5785	0.6332	0.6760	0.5487	0.6002	0.6526	0.6948	0.4457	0.5511	0.6070	0.6644	0.0380	0.0172	0.0210	0.0116
	Level 2	29.4sec	0.6042	0.6747	0.7301	0.7967	0.6041	0.6748	0.7298	0.7966	0.6331	0.6930	0.7628	0.8076	0.5891	0.6532	0.7009	0.7831	0.0169	0.0169	0.0247	0.0089
	Level 3	58.8sec	0.7431	0.7849	0.8389	0.8870	0.7432	0.7851	0.8386	0.8868	0.7563	0.8035	0.8607	0.9013	0.7176	0.7631	0.8073	0.8715	0.0150	0.0142	0.0221	0.0106
30	**Level 4**	2min	0.8349	0.8711	0.9193	0.9421	0.8350	0.8714	0.9193	0.9421	0.8445	0.8979	0.9340	0.9500	0.8199	0.8448	0.9010	0.9344	0.0095	0.0195	0.0122	0.0074
days	**Level 5**	3.9min	0.8929	0.9274	0.9591	0.9710	0.8929	0.9275	0.9590	0.9710	0.8998	0.9482	0.9639	0.9750	0.8860	0.9073	0.9483	0.9640	0.0049	0.0158	0.0063	0.0044
before	**Level 6**	7.8min	0.9257	0.9575	0.9762	0.9848	0.9258	0.9575	0.9761	0.9848	0.9379	0.9694	0.9790	0.9873	0.9062	0.9406	0.9706	0.9808	0.0128	0.0116	0.0034	0.0025
	Level 7	15.7min	0.9435	0.9702	0.9835	0.9900	0.9435	0.9703	0.9835	0.9900	0.9547	0.9796	0.9869	0.9920	0.9220	0.9566	0.9814	0.9871	0.0132	0.0085	0.0027	0.0019
	Level 8	31.4min	0.9488	0.9741	0.9861	0.9919	0.9490	0.9741	0.9861	0.9919	0.9592	0.9814	0.9888	0.9936	0.9257	0.9642	0.9834	0.9900	0.0138	0.0055	0.0024	0.0015
	Level 9	62.7min	0.9434	0.9704	0.9853	0.9914	0.9432	0.9705	0.9853	0.9914	0.9533	0.9793	0.9883	0.9933	0.9176	0.9615	0.9829	0.9901	0.0148	0.0071	0.0024	0.0013
	Level 1	6.3sec	0.4855	0.5944	0.6372	0.6709	0.4858	0.5944	0.6373	0.6708	0.5590	0.6156	0.6510	0.6948	0.3971	0.5700	0.6166	0.6526	0.0552	0.0174	0.0113	0.0118
	Level 2	12.7sec	0.5506	0.6972	0.7450	0.7883	0.5504	0.6970	0.7451	0.7884	0.6532	0.7322	0.7628	0.8076	0.3295	0.6558	0.7347	0.7739	0.1062	0.0249	0.0095	0.0105
	Level 3	25.3sec	0.6355	0.7917	0.8421	0.8769	0.6363	0.7917	0.8420	0.8768	0.7563	0.8073	0.8556	0.9013	0.3278	0.7631	0.8257	0.8605	0.1462	0.0142	0.0109	0.0133
60	**Level 4**	50.6sec	0.7180	0.8636	0.9057	0.9355	0.7186	0.8636	0.9057	0.9357	0.8422	0.8889	0.9179	0.9500	0.3983	0.8436	0.8938	0.9180	0.1470	0.0153	0.0084	0.0095
days	**Level 5**	1.7min	0.7934	0.9129	0.9423	0.9670	0.7939	0.9127	0.9423	0.9671	0.8931	0.9309	0.9587	0.9750	0.5099	0.8937	0.9329	0.9609	0.1225	0.0122	0.0091	0.0050
before	**Level 6**	3.4min	0.8494	0.9422	0.9641	0.9812	0.8490	0.9423	0.9640	0.9812	0.9274	0.9525	0.9756	0.9873	0.6347	0.9295	0.9537	0.9764	0.0931	0.0080	0.0074	0.0039
	Level 7	6.8min	0.8923	0.9594	0.9746	0.9871	0.8907	0.9594	0.9746	0.9871	0.9484	0.9669	0.9816	0.9920	0.7134	0.9503	0.9670	0.9817	0.0717	0.0064	0.0057	0.0033
	Level 8	13.5min	0.9176	0.9681	0.9789	0.9896	0.9177	0.9681	0.9789	0.9896	0.9585	0.9742	0.9843	0.9936	0.7860	0.9592	0.9751	0.9856	0.0521	0.0058	0.0038	0.0025
	Level 9	27min	0.9245	0.9678	0.9795	0.9892	0.9245	0.9678	0.9796	0.9892	0.9544	0.9737	0.9844	0.9933	0.8235	0.9615	0.9758	0.9844	0.0399	0.0051	0.0034	0.0025
	Level 1	4sec	0.4929	0.5758	0.6207	0.6659	0.4930	0.5758	0.6207	0.6660	0.5511	0.6002	0.6409	0.6948	0.3971	0.5523	0.6008	0.6427	0.0476	0.0160	0.0136	0.0159
	Level 2	7.9sec	0.5397	0.6619	0.7257	0.7778	0.5396	0.6619	0.7258	0.7778	0.6098	0.6967	0.7467	0.8076	0.3295	0.6247	0.6985	0.7482	0.0795	0.0219	0.0157	0.0185
	Level 3	15.8sec	0.6013	0.7524	0.8106	0.8686	0.6025	0.7528	0.8106	0.8687	0.7132	0.7809	0.8429	0.9013	0.3278	0.7176	0.7822	0.8435	0.1040	0.0191	0.0183	0.0166
3	**Level 4**	31.7sec	0.6675	0.8264	0.8792	0.9285	0.6662	0.8262	0.8792	0.9283	0.7734	0.8481	0.9032	0.9500	0.3983	0.7815	0.8531	0.9038	0.0933	0.0224	0.0180	0.0140
months	**Level 5**	1.1min	0.7404	0.8792	0.9224	0.9619	0.7396	0.8793	0.9224	0.9618	0.8235	0.9020	0.9369	0.9750	0.5099	0.8340	0.9036	0.9462	0.0779	0.0228	0.0128	0.0094
before	**Level 6**	2.1min	0.8084	0.9162	0.9491	0.9778	0.8076	0.9162	0.9491	0.9778	0.8902	0.9325	0.9614	0.9873	0.6347	0.8912	0.9352	0.9678	0.0621	0.0142	0.0089	0.0063
	Level 7	4.2min	0.8612	0.9420	0.9642	0.9848	0.8611	0.9420	0.9642	0.9848	0.9220	0.9523	0.9721	0.9920	0.7134	0.9273	0.9531	0.9777	0.0500	0.0084	0.0062	0.0046
	Level 8	8.4min	0.8982	0.9568	0.9722	0.9873	0.8979	0.9568	0.9722	0.9873	0.9470	0.9630	0.9757	0.9936	0.7860	0.9479	0.9637	0.9793	0.0371	0.0053	0.0043	0.0042
	Level 9	16.9min	0.9113	0.9593	0.9736	0.9871	0.9111	0.9593	0.9737	0.9871	0.9478	0.9662	0.9787	0.9933	0.8235	0.9504	0.9670	0.9793	0.0300	0.0058	0.0033	0.0039
	Level 1	2.3sec	0.5449	0.6139	0.6469	0.6807	0.5449	0.6140	0.6469	0.6806	0.5939	0.6307	0.6613	0.7501	0.3971	0.5945	0.6313	0.6614	0.0458	0.0108	0.0086	0.0145
	Level 2	4.7sec	0.6169	0.7192	0.7654	0.8081	0.6167	0.7192	0.7654	0.8081	0.6857	0.7436	0.7830	0.8907	0.3295	0.6872	0.7439	0.7831	0.0702	0.0168	0.0124	0.0196
	Level 3	9.3sec	0.6909	0.7983	0.8476	0.8867	0.6910	0.7983	0.8476	0.8867	0.7621	0.8262	0.8655	0.9444	0.3278	0.7631	0.8284	0.8665	0.0804	0.0185	0.0109	0.0157
1	**Level 4**	18.7sec	0.7536	0.8562	0.8963	0.9313	0.7537	0.8563	0.8963	0.9314	0.8290	0.8823	0.9099	0.9698	0.3983	0.8304	0.8823	0.9099	0.0767	0.0154	0.0077	0.0140
Year	**Level 5**	37.4sec	0.8065	0.8962	0.9260	0.9571	0.8064	0.8961	0.9261	0.9571	0.8680	0.9147	0.9369	0.9819	0.5099	0.8686	0.9151	0.9386	0.0625	0.0128	0.0068	0.0124
before	**Level 6**	1.2min	0.8535	0.9236	0.9476	0.9720	0.8536	0.9237	0.9476	0.9720	0.8995	0.9376	0.9573	0.9886	0.6347	0.8997	0.9379	0.9575	0.0479	0.0100	0.0059	0.0102
	Level 7	2.5min	0.8933	0.9446	0.9629	0.9807	0.8934	0.9446	0.9629	0.9807	0.9286	0.9547	0.9695	0.9937	0.7134	0.9295	0.9550	0.9696	0.0361	0.0072	0.0044	0.0075
	Level 8	5min	0.9203	0.9588	0.9727	0.9857	0.9203	0.9588	0.9727	0.9857	0.9479	0.9660	0.9771	0.9962	0.7860	0.9483	0.9660	0.9773	0.0268	0.0052	0.0032	0.0056
	Level 9	10min	0.9290	0.9635	0.9758	0.9873	0.9290	0.9635	0.9758	0.9873	0.9528	0.9701	0.9805	0.9971	0.8235	0.9533	0.9703	0.9805	0.0238	0.0053	0.0030	0.0047

Table A.49: EDU8 Other Results Table

EDU8 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	7.5sec	1.5344	1.6328	1.7202	1.8953	1.5339	1.6326	1.7198	1.8947	1.5821	1.6674	1.7639	1.9723	1.4802	1.5964	1.6822	1.8354	0.0456	0.0281	0.0304	0.0597
	Level 2	14.9sec	1.3223	1.4262	1.4752	1.7009	1.3221	1.4264	1.4750	1.7005	1.3621	1.4525	1.4911	1.8601	1.2719	1.4001	1.4530	1.4970	0.0329	0.0204	0.0159	0.1368
	Level 3	29.8sec	1.2025	1.2795	1.3331	1.5199	1.2025	1.2795	1.3329	1.5201	1.2461	1.3113	1.3556	1.6179	1.1722	1.2537	1.3195	1.3691	0.0295	0.0268	0.0151	0.1013
30	**Level 4**	59.6sec	1.1315	1.1913	1.2411	1.4178	1.1317	1.1914	1.2411	1.4194	1.1548	1.2079	1.2685	1.5268	1.1099	1.1765	1.2197	1.2726	0.0191	0.0141	0.0187	0.1061
days	**Level 5**	2min	1.0931	1.1302	1.1695	1.3304	1.0933	1.1303	1.1696	1.3319	1.1194	1.1379	1.1889	1.4061	1.0708	1.1214	1.1443	1.2273	0.0187	0.0070	0.0161	0.0868
before	**Level 6**	4min	1.0650	1.0942	1.1206	1.2617	1.0652	1.0942	1.1207	1.2622	1.0778	1.1027	1.1398	1.3393	1.0494	1.0803	1.1029	1.1787	0.0120	0.0092	0.0131	0.0680
	Level 7	8min	1.0475	1.0688	1.0896	1.2070	1.0475	1.0686	1.0896	1.2068	1.0558	1.0772	1.1026	1.2867	1.0378	1.0573	1.0811	1.1414	0.0074	0.0082	0.0083	0.0597
	Level 8	15.9min	1.0380	1.0572	1.0744	1.1796	1.0380	1.0572	1.0745	1.1794	1.0418	1.0660	1.0896	1.2839	1.0330	1.0476	1.0674	1.1109	0.0039	0.0069	0.0098	0.0668
	Level 9	31.8min	1.0394	1.0628	1.0821	1.1954	1.0395	1.0628	1.0819	1.1964	1.0471	1.0695	1.1047	1.3330	1.0347	1.0511	1.0706	1.1147	0.0049	0.0064	0.0138	0.0824
	Level 1	3sec	1.5237	1.5972	1.6821	1.8529	1.5235	1.5972	1.6823	1.8527	1.5551	1.6303	1.7409	2.0044	1.4802	1.5721	1.6334	1.7497	0.0249	0.0206	0.0390	0.0870
	Level 2	5.9sec	1.2943	1.3727	1.4593	1.6333	1.2945	1.3723	1.4590	1.6330	1.3264	1.4216	1.4890	1.8601	1.2646	1.3288	1.4250	1.4911	0.0225	0.0337	0.0218	0.1261
	Level 3	11.9sec	1.1789	1.2360	1.3139	1.4508	1.1788	1.2360	1.3140	1.4491	1.2050	1.2587	1.3334	1.6179	1.1353	1.2070	1.2909	1.3406	0.0234	0.0191	0.0152	0.0997
60	**Level 4**	23.8sec	1.1160	1.1607	1.2109	1.3385	1.1161	1.1607	1.2110	1.3378	1.1400	1.1808	1.2355	1.5268	1.0865	1.1447	1.1876	1.2378	0.0200	0.0140	0.0145	0.1049
days	**Level 5**	47.6sec	1.0770	1.1135	1.1439	1.2558	1.0768	1.1134	1.1439	1.2553	1.0949	1.1256	1.1700	1.4061	1.0423	1.0951	1.1279	1.1710	0.0169	0.0112	0.0122	0.0935
before	**Level 6**	1.6min	1.0516	1.0792	1.1037	1.1951	1.0515	1.0793	1.1036	1.1946	1.0666	1.0914	1.1192	1.3393	1.0217	1.0675	1.0920	1.1197	0.0136	0.0078	0.0081	0.0801
	Level 7	3.2min	1.0359	1.0565	1.0750	1.1498	1.0361	1.0565	1.0750	1.1488	1.0456	1.0675	1.0842	1.2867	1.0129	1.0484	1.0684	1.0858	0.0103	0.0062	0.0062	0.0689
	Level 8	6.3min	1.0275	1.0440	1.0598	1.1255	1.0275	1.0440	1.0597	1.1254	1.0353	1.0523	1.0674	1.2839	1.0093	1.0359	1.0530	1.0675	0.0081	0.0056	0.0050	0.0677
	Level 9	12.7min	1.0254	1.0429	1.0603	1.1366	1.0254	1.0429	1.0603	1.1372	1.0347	1.0510	1.0695	1.3330	1.0085	1.0356	1.0511	1.0706	0.0077	0.0052	0.0065	0.0782
	Level 1	1.7sec	1.5085	1.5808	1.6543	1.8191	1.5086	1.5806	1.6544	1.8193	1.5488	1.6174	1.7035	2.0044	1.4730	1.5539	1.6204	1.7215	0.0237	0.0203	0.0244	0.0883
	Level 2	3.4sec	1.2814	1.3459	1.4243	1.5906	1.2815	1.3459	1.4241	1.5905	1.3157	1.3777	1.4668	1.8601	1.2187	1.3168	1.3837	1.4704	0.0272	0.0221	0.0248	0.1236
	Level 3	6.8sec	1.1646	1.2150	1.2723	1.4169	1.1651	1.2150	1.2721	1.4149	1.1949	1.2336	1.3195	1.6179	1.1050	1.2008	1.2411	1.3220	0.0270	0.0121	0.0270	0.0977
3	**Level 4**	13.6sec	1.1005	1.1421	1.1822	1.3052	1.1008	1.1421	1.1821	1.3046	1.1225	1.1548	1.2085	1.5268	1.0520	1.1275	1.1609	1.2122	0.0198	0.0076	0.0176	0.1001
months	**Level 5**	27.2sec	1.0650	1.0941	1.1261	1.2257	1.0648	1.0941	1.1260	1.2254	1.0835	1.1076	1.1443	1.4061	1.0288	1.0840	1.1121	1.1448	0.0155	0.0069	0.0094	0.0893
before	**Level 6**	54.3sec	1.0423	1.0645	1.0894	1.1687	1.0424	1.0645	1.0894	1.1690	1.0558	1.0752	1.1027	1.3393	1.0176	1.0567	1.0769	1.1029	0.0108	0.0061	0.0085	0.0763
	Level 7	1.8min	1.0292	1.0455	1.0646	1.1272	1.0292	1.0455	1.0646	1.1277	1.0397	1.0531	1.0771	1.2867	1.0116	1.0402	1.0550	1.0772	0.0080	0.0042	0.0063	0.0649
	Level 8	3.6min	1.0220	1.0348	1.0507	1.1067	1.0219	1.0348	1.0507	1.1064	1.0306	1.0416	1.0593	1.2839	1.0084	1.0310	1.0417	1.0629	0.0063	0.0034	0.0057	0.0625
	Level 9	7.2min	1.0201	1.0328	1.0494	1.1147	1.0201	1.0327	1.0493	1.1147	1.0279	1.0399	1.0619	1.3330	1.0074	1.0281	1.0402	1.0623	0.0058	0.0039	0.0066	0.0726
	Level 1	1.1sec	1.4703	1.5195	1.5626	1.7064	1.4702	1.5196	1.5626	1.7070	1.4997	1.5371	1.5941	3.0640	1.3816	1.5001	1.5375	1.5964	0.0233	0.0107	0.0155	0.1959
	Level 2	2.2sec	1.2273	1.2702	1.3111	1.4639	1.2274	1.2703	1.3112	1.4650	1.2553	1.2871	1.3353	2.7379	1.1732	1.2567	1.2878	1.3356	0.0178	0.0085	0.0137	0.1948
	Level 3	4.3sec	1.1153	1.1430	1.1748	1.2935	1.1153	1.1430	1.1748	1.2936	1.1304	1.1568	1.2011	1.9384	1.0846	1.1305	1.1577	1.2032	0.0102	0.0071	0.0125	0.1249
1	**Level 4**	8.6sec	1.0622	1.0813	1.1015	1.1968	1.0622	1.0813	1.1016	1.1964	1.0735	1.0890	1.1203	1.5268	1.0425	1.0737	1.0892	1.1218	0.0078	0.0048	0.0094	0.0934
Year	**Level 5**	17.3sec	1.0361	1.0503	1.0648	1.1368	1.0361	1.0503	1.0648	1.1368	1.0440	1.0556	1.0808	1.4061	1.0211	1.0442	1.0556	1.0808	0.0063	0.0037	0.0067	0.0742
before	**Level 6**	34.5sec	1.0226	1.0342	1.0441	1.0979	1.0226	1.0342	1.0441	1.0982	1.0293	1.0380	1.0533	1.3393	1.0118	1.0294	1.0384	1.0533	0.0045	0.0026	0.0044	0.0588
	Level 7	1.2min	1.0155	1.0241	1.0313	1.0729	1.0155	1.0241	1.0313	1.0730	1.0207	1.0270	1.0378	1.2867	1.0081	1.0209	1.0270	1.0378	0.0034	0.0018	0.0032	0.0483
	Level 8	2.3min	1.0114	1.0178	1.0235	1.0603	1.0114	1.0178	1.0235	1.0604	1.0153	1.0200	1.0283	1.2839	1.0061	1.0153	1.0201	1.0295	0.0025	0.0013	0.0025	0.0500
	Level 9	4.6min	1.0100	1.0156	1.0210	1.0642	1.0100	1.0155	1.0210	1.0645	1.0135	1.0176	1.0263	1.5039	1.0052	1.0135	1.0177	1.0269	0.0023	0.0013	0.0024	0.0746

Table A.49: EDU8 Other Results Table –Continued

EDU8 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	7.5sec	1.5460	1.6328	1.7105	2.0137	1.5458	1.6330	1.7103	2.0123	1.5921	1.6486	1.7516	2.3528	1.4777	1.5945	1.6964	1.7530	0.0479	0.0202	0.0234	0.2168
	Level 2	14.9sec	1.3406	1.4423	1.5244	1.8010	1.3411	1.4427	1.5244	1.8043	1.4156	1.4869	1.5695	2.2019	1.2820	1.4198	1.4890	1.5858	0.0537	0.0245	0.0344	0.2478
	Level 3	29.8sec	1.2194	1.2987	1.3831	1.6332	1.2189	1.2988	1.3827	1.6291	1.2540	1.3303	1.4179	2.0486	1.1720	1.2741	1.3328	1.4489	0.0380	0.0205	0.0343	0.2476
30	**Level 4**	59.6sec	1.1476	1.2003	1.2495	1.5054	1.1478	1.2003	1.2498	1.5035	1.1821	1.2139	1.2912	1.8272	1.1166	1.1885	1.2262	1.3507	0.0267	0.0098	0.0249	0.1883
days	**Level 5**	2min	1.0997	1.1388	1.1670	1.3808	1.0996	1.1389	1.1672	1.3829	1.1149	1.1525	1.1941	1.6290	1.0734	1.1319	1.1552	1.2684	0.0170	0.0077	0.0159	0.1448
before	**Level 6**	4min	1.0674	1.0979	1.1211	1.2930	1.0675	1.0980	1.1210	1.2930	1.0782	1.1054	1.1351	1.4795	1.0517	1.0894	1.1074	1.1931	0.0103	0.0056	0.0109	0.1098
	Level 7	8min	1.0499	1.0699	1.0926	1.2290	1.0499	1.0701	1.0925	1.2310	1.0548	1.0763	1.1049	1.4075	1.0398	1.0606	1.0830	1.1523	0.0061	0.0062	0.0088	0.1014
	Level 8	15.9min	1.0389	1.0593	1.0773	1.2063	1.0390	1.0594	1.0772	1.2055	1.0439	1.0692	1.0817	1.3925	1.0334	1.0529	1.0719	1.1313	0.0043	0.0061	0.0044	0.1076
	Level 9	31.8min	1.0381	1.0630	1.0835	1.2270	1.0382	1.0631	1.0835	1.2292	1.0445	1.0757	1.0957	1.4446	1.0322	1.0532	1.0765	1.1446	0.0049	0.0083	0.0089	0.1232
	Level 1	3sec	1.5311	1.6017	1.6730	1.8957	1.5315	1.6015	1.6726	1.8968	1.5627	1.6292	1.7066	2.3528	1.4777	1.5690	1.6353	1.7498	0.0272	0.0181	0.0288	0.1795
	Level 2	5.9sec	1.2981	1.3810	1.4791	1.6929	1.2980	1.3814	1.4787	1.6937	1.3353	1.4348	1.5224	2.2019	1.2593	1.3382	1.4352	1.5472	0.0228	0.0369	0.0275	0.1943
	Level 3	11.9sec	1.1813	1.2484	1.3304	1.5171	1.1811	1.2482	1.3306	1.5172	1.2069	1.3016	1.3655	2.0486	1.1357	1.2177	1.3024	1.3675	0.0246	0.0273	0.0242	0.1927
60	**Level 4**	23.8sec	1.1198	1.1691	1.2184	1.3816	1.1197	1.1691	1.2186	1.3810	1.1450	1.1913	1.2383	1.8272	1.0815	1.1477	1.1998	1.2428	0.0227	0.0161	0.0134	0.1692
days	**Level 5**	47.6sec	1.0793	1.1182	1.1502	1.2809	1.0792	1.1183	1.1503	1.2815	1.0989	1.1334	1.1625	1.6290	1.0434	1.1045	1.1344	1.1682	0.0189	0.0107	0.0089	0.1358
before	**Level 6**	1.6min	1.0532	1.0826	1.1068	1.2126	1.0532	1.0825	1.1069	1.2106	1.0679	1.0957	1.1169	1.4795	1.0218	1.0688	1.0973	1.1214	0.0148	0.0088	0.0070	0.1069
	Level 7	3.2min	1.0375	1.0583	1.0778	1.1617	1.0376	1.0583	1.0778	1.1621	1.0492	1.0673	1.0842	1.4075	1.0129	1.0504	1.0675	1.0851	0.0113	0.0063	0.0058	0.0932
	Level 8	6.3min	1.0280	1.0450	1.0627	1.1392	1.0280	1.0450	1.0627	1.1399	1.0355	1.0529	1.0719	1.3925	1.0092	1.0365	1.0543	1.0733	0.0081	0.0058	0.0054	0.0933
	Level 9	12.7min	1.0253	1.0423	1.0630	1.1544	1.0253	1.0424	1.0629	1.1542	1.0322	1.0532	1.0765	1.4446	1.0081	1.0341	1.0543	1.0772	0.0071	0.0060	0.0083	0.1069
	Level 1	1.7sec	1.5137	1.5829	1.6539	1.8500	1.5137	1.5829	1.6540	1.8483	1.5459	1.6136	1.6978	2.3528	1.4777	1.5490	1.6174	1.6993	0.0259	0.0215	0.0245	0.1673
	Level 2	3.4sec	1.2821	1.3467	1.4371	1.6389	1.2822	1.3470	1.4369	1.6408	1.3086	1.3779	1.4869	2.2019	1.2204	1.3178	1.3921	1.4890	0.0250	0.0217	0.0280	0.1803
	Level 3	6.8sec	1.1662	1.2155	1.2839	1.4704	1.1662	1.2154	1.2840	1.4696	1.1970	1.2430	1.3328	2.0486	1.1046	1.1988	1.2521	1.3359	0.0278	0.0135	0.0288	0.1739
3	**Level 4**	13.6sec	1.1014	1.1452	1.1884	1.3371	1.1011	1.1452	1.1883	1.3371	1.1260	1.1608	1.2218	1.8272	1.0505	1.1284	1.1617	1.2228	0.0205	0.0089	0.0204	0.1540
months	**Level 5**	27.2sec	1.0640	1.0973	1.1307	1.2453	1.0640	1.0973	1.1305	1.2448	1.0825	1.1101	1.1525	1.6290	1.0276	1.0834	1.1123	1.1552	0.0152	0.0082	0.0143	0.1245
before	**Level 6**	54.3sec	1.0420	1.0660	1.0921	1.1801	1.0421	1.0660	1.0921	1.1808	1.0559	1.0772	1.1074	1.4795	1.0171	1.0564	1.0782	1.1078	0.0108	0.0068	0.0097	0.0985
	Level 7	1.8min	1.0293	1.0465	1.0667	1.1376	1.0292	1.0466	1.0667	1.1374	1.0395	1.0548	1.0814	1.4075	1.0127	1.0398	1.0580	1.0817	0.0077	0.0049	0.0072	0.0850
	Level 8	3.6min	1.0220	1.0348	1.0525	1.1164	1.0221	1.0348	1.0525	1.1171	1.0295	1.0424	1.0621	1.3925	1.0092	1.0302	1.0439	1.0637	0.0059	0.0038	0.0060	0.0838
	Level 9	7.2min	1.0205	1.0318	1.0499	1.1282	1.0205	1.0318	1.0498	1.1277	1.0274	1.0404	1.0606	1.4446	1.0081	1.0281	1.0408	1.0624	0.0058	0.0041	0.0063	0.0963
	Level 1	1.1sec	1.4701	1.5206	1.5633	1.7151	1.4702	1.5206	1.5633	1.7157	1.4996	1.5385	1.5940	3.1209	1.3779	1.4997	1.5395	1.5945	0.0236	0.0121	0.0163	0.2177
	Level 2	2.2sec	1.2276	1.2707	1.3109	1.4837	1.2276	1.2706	1.3109	1.4834	1.2554	1.2903	1.3394	2.8704	1.1752	1.2559	1.2912	1.3397	0.0176	0.0096	0.0138	0.2256
	Level 3	4.3sec	1.1153	1.1432	1.1746	1.3113	1.1154	1.1433	1.1746	1.3120	1.1305	1.1568	1.2018	2.0486	1.0891	1.1307	1.1580	1.2020	0.0100	0.0072	0.0123	0.1607
1	**Level 4**	8.6sec	1.0623	1.0814	1.1015	1.2076	1.0623	1.0814	1.1015	1.2076	1.0741	1.0893	1.1223	1.8272	1.0433	1.0742	1.0893	1.1229	0.0079	0.0048	0.0101	0.1193
Year	**Level 5**	17.3sec	1.0359	1.0504	1.0644	1.1439	1.0359	1.0504	1.0644	1.1440	1.0440	1.0554	1.0792	1.6290	1.0210	1.0442	1.0556	1.0799	0.0062	0.0034	0.0065	0.0916
before	**Level 6**	34.5sec	1.0225	1.0341	1.0442	1.1018	1.0225	1.0341	1.0442	1.1020	1.0291	1.0376	1.0536	1.4795	1.0119	1.0293	1.0376	1.0536	0.0046	0.0024	0.0044	0.0702
	Level 7	1.2min	1.0154	1.0240	1.0314	1.0747	1.0154	1.0240	1.0314	1.0747	1.0213	1.0268	1.0379	1.4075	1.0081	1.0215	1.0271	1.0380	0.0034	0.0016	0.0032	0.0574
	Level 8	2.3min	1.0113	1.0177	1.0237	1.0604	1.0113	1.0177	1.0237	1.0604	1.0156	1.0198	1.0289	1.3925	1.0063	1.0157	1.0199	1.0292	0.0026	0.0012	0.0026	0.0539
	Level 9	4.6min	1.0099	1.0154	1.0212	1.0611	1.0099	1.0154	1.0212	1.0611	1.0131	1.0177	1.0263	1.4446	1.0051	1.0132	1.0177	1.0268	0.0023	0.0013	0.0026	0.0618

Table A.49: EDU8 Other Results Table –Continued

EDU8 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	7.5sec	1.5278	1.6180	1.6899	1.9244	1.5282	1.6184	1.6902	1.9270	1.5884	1.6707	1.7259	2.1193	1.4507	1.5900	1.6754	1.7652	0.0536	0.0318	0.0206	0.1311
	Level 2	14.9sec	1.3098	1.4056	1.4800	1.6614	1.3102	1.4057	1.4799	1.6626	1.3575	1.4278	1.5067	1.8524	1.2648	1.3872	1.4400	1.5322	0.0385	0.0152	0.0253	0.1726
	Level 3	29.8sec	1.1892	1.2576	1.3056	1.4584	1.1891	1.2574	1.3057	1.4588	1.2206	1.2835	1.3380	1.6480	1.1579	1.2392	1.2842	1.3770	0.0270	0.0192	0.0243	0.1081
30	**Level 4**	59.6sec	1.1145	1.1632	1.1953	1.3331	1.1147	1.1634	1.1955	1.3332	1.1306	1.1757	1.2096	1.4629	1.1012	1.1504	1.1850	1.2820	0.0140	0.0128	0.0100	0.0753
days	**Level 5**	2min	1.0725	1.1014	1.1234	1.2293	1.0725	1.1014	1.1233	1.2287	1.0864	1.1105	1.1353	1.3046	1.0597	1.0933	1.1148	1.1675	0.0102	0.0065	0.0080	0.0521
before	**Level 6**	4min	1.0451	1.0648	1.0789	1.1565	1.0453	1.0648	1.0789	1.1568	1.0531	1.0732	1.0860	1.2106	1.0360	1.0572	1.0741	1.1060	0.0070	0.0058	0.0048	0.0375
	Level 7	8min	1.0299	1.0415	1.0524	1.1097	1.0298	1.0415	1.0524	1.1096	1.0331	1.0484	1.0570	1.1497	1.0239	1.0373	1.0488	1.0744	0.0035	0.0040	0.0040	0.0281
	Level 8	15.9min	1.0208	1.0294	1.0375	1.0851	1.0209	1.0294	1.0375	1.0842	1.0240	1.0337	1.0415	1.1341	1.0182	1.0257	1.0342	1.0510	0.0023	0.0032	0.0031	0.0311
	Level 9	31.8min	1.0190	1.0280	1.0371	1.0863	1.0190	1.0280	1.0370	1.0864	1.0221	1.0313	1.0403	1.1580	1.0159	1.0248	1.0330	1.0443	0.0025	0.0025	0.0028	0.0426
	Level 1	3sec	1.5180	1.5871	1.6640	1.8510	1.5183	1.5871	1.6642	1.8502	1.5543	1.6131	1.7153	2.1193	1.4507	1.5652	1.6240	1.7259	0.0302	0.0159	0.0300	0.1194
	Level 2	5.9sec	1.2826	1.3575	1.4488	1.6023	1.2825	1.3578	1.4485	1.6025	1.3123	1.4039	1.4894	1.8524	1.2552	1.3173	1.4075	1.4935	0.0194	0.0306	0.0308	0.1319
	Level 3	11.9sec	1.1640	1.2174	1.2860	1.4015	1.1642	1.2174	1.2860	1.4023	1.1863	1.2470	1.3106	1.6480	1.1249	1.1890	1.2584	1.3254	0.0208	0.0206	0.0138	0.0908
60	**Level 4**	23.8sec	1.1006	1.1367	1.1812	1.2698	1.1004	1.1367	1.1811	1.2702	1.1181	1.1544	1.1945	1.4629	1.0697	1.1259	1.1679	1.2010	0.0163	0.0105	0.0084	0.0781
days	**Level 5**	47.6sec	1.0608	1.0885	1.1135	1.1822	1.0609	1.0885	1.1136	1.1816	1.0737	1.0990	1.1266	1.3046	1.0379	1.0766	1.1039	1.1270	0.0125	0.0072	0.0079	0.0569
before	**Level 6**	1.6min	1.0368	1.0569	1.0728	1.1232	1.0368	1.0570	1.0728	1.1234	1.0463	1.0653	1.0814	1.2106	1.0177	1.0479	1.0654	1.0845	0.0090	0.0058	0.0052	0.0413
	Level 7	3.2min	1.0235	1.0362	1.0471	1.0837	1.0235	1.0363	1.0470	1.0839	1.0298	1.0413	1.0540	1.1497	1.0095	1.0306	1.0421	1.0552	0.0065	0.0043	0.0040	0.0313
	Level 8	6.3min	1.0153	1.0245	1.0327	1.0615	1.0153	1.0245	1.0327	1.0621	1.0190	1.0285	1.0386	1.1341	1.0060	1.0191	1.0290	1.0387	0.0042	0.0032	0.0032	0.0293
	Level 9	12.7min	1.0119	1.0209	1.0295	1.0613	1.0119	1.0209	1.0294	1.0618	1.0159	1.0235	1.0331	1.1580	1.0047	1.0169	1.0248	1.0355	0.0033	0.0024	0.0029	0.0362
	Level 1	1.7sec	1.5045	1.5730	1.6457	1.8129	1.5043	1.5730	1.6457	1.8128	1.5426	1.6018	1.6847	2.1193	1.4507	1.5512	1.6105	1.6875	0.0260	0.0173	0.0244	0.1155
	Level 2	3.4sec	1.2722	1.3336	1.4120	1.5697	1.2720	1.3334	1.4120	1.5695	1.3019	1.3725	1.4646	1.8524	1.2124	1.3020	1.3780	1.4653	0.0232	0.0220	0.0242	0.1210
	Level 3	6.8sec	1.1546	1.1976	1.2537	1.3749	1.1546	1.1977	1.2535	1.3741	1.1807	1.2180	1.2842	1.6480	1.1031	1.1817	1.2206	1.2903	0.0250	0.0118	0.0226	0.0875
3	**Level 4**	13.6sec	1.0896	1.1241	1.1563	1.2473	1.0895	1.1240	1.1562	1.2477	1.1088	1.1354	1.1845	1.4629	1.0486	1.1091	1.1377	1.1850	0.0175	0.0093	0.0165	0.0732
months	**Level 5**	27.2sec	1.0526	1.0762	1.0981	1.1652	1.0527	1.0762	1.0981	1.1644	1.0662	1.0858	1.1148	1.3046	1.0250	1.0662	1.0864	1.1190	0.0121	0.0063	0.0089	0.0537
before	**Level 6**	54.3sec	1.0316	1.0463	1.0638	1.1099	1.0316	1.0463	1.0637	1.1098	1.0406	1.0545	1.0741	1.2106	1.0140	1.0410	1.0558	1.0754	0.0079	0.0041	0.0056	0.0397
	Level 7	1.8min	1.0196	1.0292	1.0416	1.0738	1.0196	1.0292	1.0415	1.0737	1.0246	1.0344	1.0484	1.1497	1.0087	1.0251	1.0363	1.0488	0.0051	0.0027	0.0034	0.0300
	Level 8	3.6min	1.0127	1.0192	1.0282	1.0537	1.0127	1.0192	1.0282	1.0539	1.0158	1.0240	1.0337	1.1341	1.0057	1.0162	1.0252	1.0342	0.0033	0.0020	0.0024	0.0270
	Level 9	7.2min	1.0097	1.0155	1.0240	1.0525	1.0098	1.0155	1.0240	1.0524	1.0124	1.0198	1.0294	1.1580	1.0041	1.0124	1.0203	1.0294	0.0026	0.0022	0.0031	0.0329
	Level 1	1.1sec	1.4686	1.5185	1.5604	1.7002	1.4687	1.5185	1.5604	1.7024	1.4955	1.5361	1.5884	3.0843	1.3792	1.4983	1.5365	1.5900	0.0233	0.0111	0.0153	0.2017
	Level 2	2.2sec	1.2259	1.2672	1.3063	1.4543	1.2259	1.2672	1.3062	1.4548	1.2548	1.2816	1.3303	2.7843	1.1731	1.2549	1.2825	1.3304	0.0178	0.0078	0.0130	0.1980
	Level 3	4.3sec	1.1128	1.1394	1.1679	1.2743	1.1129	1.1393	1.1679	1.2741	1.1279	1.1530	1.1899	1.9545	1.0851	1.1280	1.1532	1.1901	0.0099	0.0072	0.0103	0.1185
1	**Level 4**	8.6sec	1.0590	1.0761	1.0939	1.1684	1.0590	1.0761	1.0939	1.1684	1.0694	1.0838	1.1091	1.4688	1.0419	1.0697	1.0838	1.1094	0.0070	0.0045	0.0081	0.0736
Year	**Level 5**	17.3sec	1.0322	1.0441	1.0558	1.1064	1.0322	1.0441	1.0558	1.1063	1.0388	1.0486	1.0662	1.3046	1.0195	1.0389	1.0489	1.0662	0.0050	0.0026	0.0052	0.0498
before	**Level 6**	34.5sec	1.0185	1.0274	1.0349	1.0682	1.0185	1.0274	1.0349	1.0682	1.0237	1.0301	1.0407	1.2106	1.0100	1.0237	1.0302	1.0410	0.0033	0.0019	0.0032	0.0341
	Level 7	1.2min	1.0114	1.0174	1.0221	1.0441	1.0114	1.0174	1.0221	1.0443	1.0147	1.0192	1.0252	1.1497	1.0060	1.0150	1.0192	1.0255	0.0022	0.0013	0.0018	0.0242
	Level 8	2.3min	1.0072	1.0111	1.0142	1.0303	1.0072	1.0111	1.0142	1.0304	1.0095	1.0124	1.0162	1.1341	1.0039	1.0096	1.0124	1.0163	0.0015	0.0008	0.0012	0.0197
	Level 9	4.6min	1.0052	1.0080	1.0103	1.0264	1.0052	1.0080	1.0103	1.0266	1.0069	1.0089	1.0121	1.1580	1.0028	1.0069	1.0089	1.0122	0.0011	0.0006	0.0009	0.0224

Table A.49: EDU8 Other Results Table –Continued

EDU8 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	7.5sec	0.5005	0.5885	0.6138	0.6472	0.5014	0.5884	0.6136	0.6474	0.5704	0.6066	0.6272	0.6767	0.4250	0.5709	0.6077	0.6281	0.0519	0.0113	0.0080	0.0203
	Level 2	14.9sec	0.5619	0.6589	0.6975	0.7466	0.5620	0.6590	0.6975	0.7466	0.6306	0.6726	0.7043	0.7800	0.4541	0.6372	0.6907	0.7064	0.0707	0.0148	0.0062	0.0296
	Level 3	29.8sec	0.6244	0.7280	0.7737	0.8212	0.6239	0.7283	0.7738	0.8211	0.6902	0.7517	0.7849	0.8533	0.4881	0.7053	0.7663	0.7975	0.0827	0.0199	0.0091	0.0259
30	**Level 4**	59.6sec	0.6723	0.8044	0.8351	0.8712	0.6726	0.8043	0.8351	0.8716	0.7403	0.8238	0.8414	0.8956	0.5473	0.7745	0.8284	0.8459	0.0747	0.0170	0.0056	0.0203
days	**Level 5**	2min	0.7295	0.8584	0.8803	0.9098	0.7289	0.8586	0.8802	0.9096	0.7884	0.8677	0.8835	0.9316	0.6139	0.8375	0.8757	0.8970	0.0693	0.0112	0.0033	0.0142
before	**Level 6**	4min	0.7771	0.8940	0.9120	0.9368	0.7775	0.8942	0.9120	0.9368	0.8381	0.9047	0.9179	0.9509	0.6759	0.8809	0.9069	0.9275	0.0611	0.0093	0.0040	0.0091
	Level 7	8min	0.8170	0.9176	0.9355	0.9524	0.8164	0.9176	0.9356	0.9525	0.8679	0.9291	0.9428	0.9617	0.7105	0.9051	0.9296	0.9480	0.0616	0.0087	0.0053	0.0056
	Level 8	15.9min	0.8337	0.9294	0.9457	0.9624	0.8344	0.9295	0.9457	0.9624	0.8839	0.9353	0.9498	0.9677	0.7181	0.9245	0.9401	0.9579	0.0677	0.0045	0.0038	0.0040
	Level 9	31.8min	0.8192	0.9241	0.9428	0.9632	0.8195	0.9241	0.9429	0.9632	0.8737	0.9297	0.9494	0.9688	0.6923	0.9126	0.9358	0.9574	0.0736	0.0073	0.0056	0.0045
	Level 1	3sec	0.5306	0.5997	0.6256	0.6530	0.5310	0.5995	0.6255	0.6531	0.5715	0.6138	0.6373	0.6767	0.4250	0.5860	0.6138	0.6399	0.0447	0.0109	0.0065	0.0117
	Level 2	5.9sec	0.5964	0.6783	0.7273	0.7707	0.5964	0.6783	0.7271	0.7706	0.6463	0.6970	0.7473	0.7941	0.4541	0.6569	0.7033	0.7489	0.0581	0.0135	0.0179	0.0135
	Level 3	11.9sec	0.6673	0.7535	0.8048	0.8468	0.6670	0.7533	0.8048	0.8470	0.7313	0.7683	0.8212	0.8805	0.4881	0.7323	0.7825	0.8286	0.0686	0.0139	0.0141	0.0179
60	**Level 4**	23.8sec	0.7319	0.8226	0.8571	0.8934	0.7325	0.8224	0.8571	0.8934	0.8046	0.8394	0.8713	0.9247	0.5473	0.8076	0.8402	0.8733	0.0760	0.0102	0.0110	0.0183
days	**Level 5**	47.6sec	0.7869	0.8706	0.8955	0.9269	0.7873	0.8705	0.8955	0.9269	0.8560	0.8823	0.9054	0.9584	0.6139	0.8602	0.8835	0.9100	0.0731	0.0075	0.0080	0.0164
before	**Level 6**	1.6min	0.8317	0.9043	0.9249	0.9495	0.8313	0.9043	0.9250	0.9496	0.8917	0.9127	0.9356	0.9787	0.6759	0.8953	0.9158	0.9364	0.0660	0.0061	0.0069	0.0135
	Level 7	3.2min	0.8656	0.9287	0.9459	0.9638	0.8650	0.9287	0.9458	0.9639	0.9216	0.9369	0.9520	0.9873	0.7105	0.9223	0.9376	0.9531	0.0618	0.0055	0.0052	0.0106
	Level 8	6.3min	0.8824	0.9419	0.9578	0.9729	0.8820	0.9418	0.9577	0.9728	0.9317	0.9498	0.9648	0.9908	0.7181	0.9329	0.9503	0.9657	0.0632	0.0053	0.0051	0.0078
	Level 9	12.7min	0.8724	0.9416	0.9604	0.9755	0.8723	0.9417	0.9604	0.9754	0.9284	0.9494	0.9670	0.9920	0.6923	0.9289	0.9539	0.9688	0.0697	0.0074	0.0046	0.0068
	Level 1	1.7sec	0.5447	0.6047	0.6319	0.6609	0.5447	0.6047	0.6319	0.6608	0.5885	0.6183	0.6456	0.6767	0.4250	0.5890	0.6198	0.6469	0.0432	0.0089	0.0086	0.0114
	Level 2	3.4sec	0.6156	0.6962	0.7426	0.7800	0.6152	0.6962	0.7426	0.7802	0.6716	0.7183	0.7589	0.8194	0.4541	0.6726	0.7257	0.7642	0.0566	0.0134	0.0120	0.0156
	Level 3	6.8sec	0.6875	0.7791	0.8230	0.8580	0.6876	0.7792	0.8229	0.8579	0.7485	0.7987	0.8342	0.9053	0.4881	0.7503	0.8045	0.8354	0.0647	0.0173	0.0091	0.0209
3	**Level 4**	13.6sec	0.7546	0.8418	0.8732	0.9087	0.7556	0.8418	0.8733	0.9085	0.8178	0.8608	0.8862	0.9519	0.5473	0.8185	0.8615	0.8881	0.0718	0.0144	0.0068	0.0172
months	**Level 5**	27.2sec	0.8102	0.8848	0.9114	0.9401	0.8098	0.8847	0.9114	0.9401	0.8656	0.8990	0.9230	0.9731	0.6139	0.8677	0.9008	0.9238	0.0691	0.0112	0.0068	0.0135
before	**Level 6**	54.3sec	0.8518	0.9158	0.9382	0.9599	0.8517	0.9157	0.9381	0.9597	0.9027	0.9275	0.9466	0.9831	0.6759	0.9030	0.9284	0.9471	0.0623	0.0081	0.0060	0.0100
	Level 7	1.8min	0.8837	0.9376	0.9555	0.9717	0.8832	0.9375	0.9555	0.9716	0.9245	0.9452	0.9617	0.9874	0.7105	0.9247	0.9480	0.9620	0.0577	0.0063	0.0045	0.0073
	Level 8	3.6min	0.8989	0.9502	0.9664	0.9783	0.8992	0.9501	0.9663	0.9784	0.9401	0.9579	0.9707	0.9908	0.7181	0.9416	0.9593	0.9714	0.0580	0.0054	0.0036	0.0057
	Level 9	7.2min	0.8922	0.9525	0.9692	0.9800	0.8919	0.9526	0.9692	0.9799	0.9413	0.9608	0.9727	0.9920	0.6923	0.9429	0.9612	0.9734	0.0644	0.0057	0.0038	0.0056
	Level 1	1.1sec	0.5890	0.6399	0.6578	0.6803	0.5889	0.6399	0.6578	0.6803	0.6272	0.6500	0.6668	0.7258	0.3204	0.6274	0.6505	0.6668	0.0501	0.0067	0.0052	0.0112
	Level 2	2.2sec	0.6843	0.7631	0.7873	0.8147	0.6841	0.7631	0.7872	0.8148	0.7464	0.7750	0.7963	0.8510	0.3484	0.7466	0.7751	0.7965	0.0690	0.0081	0.0058	0.0118
	Level 3	4.3sec	0.7707	0.8517	0.8749	0.8966	0.7707	0.8516	0.8749	0.8966	0.8319	0.8644	0.8844	0.9182	0.4881	0.8321	0.8651	0.8846	0.0722	0.0090	0.0054	0.0081
1	**Level 4**	8.6sec	0.8343	0.9081	0.9249	0.9415	0.8344	0.9081	0.9249	0.9414	0.8906	0.9180	0.9309	0.9585	0.5473	0.8910	0.9183	0.9310	0.0661	0.0083	0.0041	0.0071
Year	**Level 5**	17.3sec	0.8791	0.9396	0.9521	0.9654	0.8787	0.9397	0.9521	0.9654	0.9260	0.9475	0.9577	0.9795	0.6139	0.9266	0.9476	0.9579	0.0581	0.0057	0.0031	0.0058
before	**Level 6**	34.5sec	0.9107	0.9579	0.9671	0.9780	0.9105	0.9578	0.9670	0.9780	0.9491	0.9638	0.9716	0.9883	0.6759	0.9491	0.9638	0.9717	0.0493	0.0041	0.0023	0.0044
	Level 7	1.2min	0.9329	0.9696	0.9766	0.9848	0.9327	0.9697	0.9766	0.9848	0.9634	0.9739	0.9790	0.9919	0.7105	0.9635	0.9740	0.9792	0.0425	0.0030	0.0015	0.0033
	Level 8	2.3min	0.9452	0.9770	0.9826	0.9888	0.9450	0.9770	0.9826	0.9888	0.9716	0.9806	0.9845	0.9938	0.7181	0.9719	0.9806	0.9847	0.0403	0.0025	0.0012	0.0025
	Level 9	4.6min	0.9449	0.9793	0.9848	0.9902	0.9449	0.9793	0.9848	0.9902	0.9739	0.9826	0.9870	0.9949	0.6923	0.9744	0.9826	0.9871	0.0452	0.0025	0.0013	0.0022

Table A.50: EDU9 Other Results Table

EDU9 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	5.4sec	1.4942	1.5678	1.6621	1.8258	1.4942	1.5678	1.6623	1.8259	1.5239	1.6141	1.6742	2.1320	1.4614	1.5276	1.6369	1.6900	0.0293	0.0307	0.0153	0.1745
	Level 2	10.9sec	1.2427	1.3368	1.4135	1.6489	1.2425	1.3370	1.4137	1.6522	1.2693	1.3639	1.4587	2.1214	1.2289	1.3107	1.3708	1.4990	0.0164	0.0208	0.0317	0.2638
	Level 3	21.7sec	1.1393	1.1969	1.3006	1.5212	1.1389	1.1973	1.3005	1.5229	1.1680	1.2189	1.3325	2.1277	1.1256	1.1730	1.2559	1.3337	0.0167	0.0220	0.0287	0.3399
30	**Level 4**	43.5sec	1.0880	1.1210	1.2051	1.3746	1.0884	1.1210	1.2051	1.3788	1.1033	1.1361	1.2254	1.8598	1.0692	1.1061	1.1759	1.2328	0.0123	0.0126	0.0198	0.2705
days	**Level 5**	1.4min	1.0580	1.0759	1.1356	1.2703	1.0576	1.0759	1.1354	1.2725	1.0661	1.0976	1.1528	1.6014	1.0345	1.0663	1.1135	1.1624	0.0132	0.0122	0.0170	0.1857
before	**Level 6**	2.9min	1.0378	1.0547	1.0941	1.1900	1.0377	1.0548	1.0944	1.1913	1.0468	1.0677	1.1204	1.3955	1.0194	1.0470	1.0800	1.1258	0.0109	0.0075	0.0156	0.1161
	Level 7	5.8min	1.0268	1.0403	1.0700	1.1420	1.0269	1.0404	1.0697	1.1411	1.0352	1.0490	1.0882	1.2892	1.0136	1.0353	1.0627	1.0908	0.0086	0.0054	0.0106	0.0847
	Level 8	11.6min	1.0197	1.0327	1.0534	1.1096	1.0197	1.0327	1.0534	1.1100	1.0270	1.0404	1.0631	1.2257	1.0111	1.0283	1.0477	1.0678	0.0060	0.0049	0.0069	0.0667
	Level 9	23.2min	1.0190	1.0330	1.0505	1.1065	1.0189	1.0330	1.0503	1.1058	1.0255	1.0432	1.0626	1.2207	1.0110	1.0258	1.0437	1.0628	0.0062	0.0061	0.0091	0.0674
	Level 1	2.4sec	1.5188	1.6098	1.6722	1.7945	1.5189	1.6098	1.6722	1.7949	1.5591	1.6561	1.6900	2.1320	1.4614	1.5689	1.6582	1.6908	0.0332	0.0310	0.0096	0.1238
	Level 2	4.9sec	1.2825	1.3792	1.4791	1.6249	1.2822	1.3792	1.4792	1.6235	1.3277	1.4193	1.5181	2.1214	1.2289	1.3319	1.4368	1.5251	0.0401	0.0306	0.0307	0.1752
	Level 3	9.8sec	1.1588	1.2594	1.3338	1.4798	1.1586	1.2594	1.3335	1.4804	1.1923	1.3123	1.3594	2.1277	1.1256	1.2144	1.3134	1.3655	0.0238	0.0352	0.0164	0.2217
60	**Level 4**	19.5sec	1.0987	1.1661	1.2323	1.3528	1.0988	1.1661	1.2324	1.3536	1.1210	1.2076	1.2498	1.8598	1.0692	1.1275	1.2196	1.2562	0.0149	0.0268	0.0116	0.1740
days	**Level 5**	39sec	1.0630	1.1068	1.1579	1.2542	1.0632	1.1071	1.1578	1.2546	1.0723	1.1311	1.1779	1.6014	1.0345	1.0825	1.1383	1.1823	0.0101	0.0157	0.0107	0.1199
before	**Level 6**	1.3min	1.0433	1.0730	1.1075	1.1740	1.0432	1.0729	1.1077	1.1755	1.0542	1.0907	1.1204	1.3955	1.0194	1.0586	1.0910	1.1258	0.0094	0.0099	0.0113	0.0768
	Level 7	2.6min	1.0305	1.0506	1.0751	1.1254	1.0305	1.0506	1.0751	1.1253	1.0407	1.0630	1.0882	1.2892	1.0136	1.0414	1.0647	1.0901	0.0078	0.0079	0.0082	0.0567
	Level 8	5.2min	1.0232	1.0369	1.0550	1.0964	1.0231	1.0369	1.0549	1.0966	1.0299	1.0477	1.0631	1.2257	1.0111	1.0300	1.0478	1.0678	0.0062	0.0060	0.0056	0.0450
	Level 9	10.4min	1.0207	1.0335	1.0492	1.0928	1.0208	1.0335	1.0492	1.0932	1.0281	1.0420	1.0576	1.2207	1.0110	1.0283	1.0432	1.0626	0.0059	0.0048	0.0060	0.0456
	Level 1	1.6sec	1.5161	1.5838	1.6593	1.7755	1.5161	1.5837	1.6593	1.7755	1.5517	1.6178	1.6796	2.1320	1.4614	1.5548	1.6268	1.6900	0.0313	0.0210	0.0174	0.1088
	Level 2	3.2sec	1.2766	1.3616	1.4370	1.5980	1.2767	1.3616	1.4372	1.5962	1.3210	1.3841	1.4952	2.1214	1.2215	1.3238	1.3847	1.4990	0.0341	0.0193	0.0361	0.1517
	Level 3	6.4sec	1.1583	1.2366	1.3092	1.4471	1.1582	1.2367	1.3090	1.4456	1.1891	1.2736	1.3344	2.1277	1.1184	1.1923	1.2788	1.3373	0.0226	0.0205	0.0188	0.1901
3	**Level 4**	12.8sec	1.0992	1.1565	1.2163	1.3238	1.0992	1.1564	1.2162	1.3251	1.1219	1.1759	1.2347	1.8598	1.0692	1.1266	1.1860	1.2419	0.0149	0.0169	0.0142	0.1500
months	**Level 5**	25.6sec	1.0644	1.1042	1.1481	1.2327	1.0643	1.1042	1.1482	1.2332	1.0788	1.1158	1.1649	1.6014	1.0345	1.0825	1.1228	1.1685	0.0103	0.0110	0.0136	0.1047
before	**Level 6**	51.3sec	1.0438	1.0699	1.1004	1.1611	1.0437	1.0700	1.1004	1.1615	1.0542	1.0812	1.1185	1.3955	1.0194	1.0586	1.0824	1.1197	0.0089	0.0072	0.0112	0.0673
	Level 7	1.7min	1.0304	1.0476	1.0699	1.1152	1.0304	1.0477	1.0700	1.1146	1.0366	1.0573	1.0804	1.2892	1.0136	1.0407	1.0606	1.0825	0.0067	0.0049	0.0070	0.0495
	Level 8	3.4min	1.0227	1.0346	1.0507	1.0876	1.0227	1.0346	1.0506	1.0875	1.0293	1.0404	1.0583	1.2257	1.0111	1.0299	1.0423	1.0619	0.0052	0.0036	0.0050	0.0396
	Level 9	6.8min	1.0203	1.0310	1.0446	1.0830	1.0203	1.0310	1.0446	1.0829	1.0256	1.0380	1.0533	1.2207	1.0110	1.0258	1.0381	1.0547	0.0049	0.0037	0.0047	0.0406
	Level 1	1.2sec	1.4779	1.5340	1.5846	1.6936	1.4780	1.5341	1.5846	1.6937	1.5131	1.5576	1.6141	2.1320	1.3993	1.5149	1.5589	1.6159	0.0266	0.0131	0.0170	0.0856
	Level 2	2.3sec	1.2361	1.2873	1.3358	1.4766	1.2361	1.2872	1.3358	1.4771	1.2678	1.3087	1.3698	2.1214	1.1755	1.2683	1.3095	1.3708	0.0241	0.0116	0.0173	0.1331
	Level 3	4.7sec	1.1195	1.1571	1.2000	1.3399	1.1195	1.1572	1.2000	1.3399	1.1398	1.1752	1.2339	2.1277	1.0690	1.1403	1.1753	1.2354	0.0147	0.0099	0.0162	0.1501
1	**Level 4**	9.3sec	1.0633	1.0916	1.1287	1.2367	1.0634	1.0916	1.1287	1.2365	1.0773	1.1081	1.1553	1.8598	1.0302	1.0775	1.1081	1.1557	0.0105	0.0095	0.0125	0.1091
Year	**Level 5**	18.7sec	1.0352	1.0579	1.0860	1.1625	1.0352	1.0579	1.0859	1.1625	1.0458	1.0703	1.1053	1.6014	1.0150	1.0465	1.0708	1.1054	0.0070	0.0074	0.0098	0.0753
before	**Level 6**	37.3sec	1.0215	1.0381	1.0582	1.1109	1.0215	1.0381	1.0582	1.1109	1.0293	1.0484	1.0703	1.3955	1.0076	1.0299	1.0484	1.0708	0.0050	0.0058	0.0062	0.0510
	Level 7	1.2min	1.0144	1.0260	1.0400	1.0773	1.0144	1.0260	1.0400	1.0774	1.0197	1.0333	1.0478	1.2892	1.0043	1.0197	1.0334	1.0481	0.0036	0.0042	0.0042	0.0374
	Level 8	2.5min	1.0106	1.0190	1.0292	1.0577	1.0106	1.0190	1.0293	1.0576	1.0147	1.0243	1.0349	1.2257	1.0029	1.0147	1.0244	1.0349	0.0026	0.0029	0.0031	0.0298
	Level 9	5min	1.0095	1.0165	1.0257	1.0528	1.0095	1.0165	1.0257	1.0528	1.0128	1.0208	1.0305	1.2207	1.0024	1.0128	1.0210	1.0306	0.0024	0.0024	0.0027	0.0312

Table A.50: EDU9 Other Results Table –Continued

EDU9 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	5.4sec	1.4901	1.5699	1.6537	1.8139	1.4899	1.5702	1.6538	1.8116	1.5157	1.5931	1.6691	2.1100	1.4587	1.5282	1.6404	1.6847	0.0256	0.0242	0.0123	0.1745
	Level 2	10.9sec	1.2459	1.3343	1.3910	1.6409	1.2467	1.3340	1.3910	1.6434	1.2849	1.3575	1.4088	1.9924	1.2269	1.3040	1.3577	1.4944	0.0245	0.0196	0.0211	0.1989
	Level 3	21.7sec	1.1370	1.1948	1.2863	1.5043	1.1373	1.1948	1.2861	1.5035	1.1731	1.2141	1.3064	1.9494	1.1185	1.1781	1.2656	1.3108	0.0218	0.0137	0.0186	0.2537
30	**Level 4**	43.5sec	1.0859	1.1178	1.1995	1.3565	1.0860	1.1179	1.1996	1.3557	1.1026	1.1234	1.2115	1.6709	1.0721	1.1126	1.1851	1.2226	0.0110	0.0047	0.0118	0.1793
days	**Level 5**	1.4min	1.0556	1.0752	1.1340	1.2539	1.0557	1.0753	1.1345	1.2560	1.0655	1.0807	1.1570	1.4804	1.0357	1.0681	1.1174	1.1678	0.0121	0.0058	0.0182	0.1280
before	**Level 6**	2.9min	1.0364	1.0548	1.0962	1.1913	1.0362	1.0549	1.0961	1.1926	1.0434	1.0608	1.1181	1.3728	1.0206	1.0463	1.0771	1.1252	0.0093	0.0066	0.0194	0.1036
	Level 7	5.8min	1.0249	1.0414	1.0713	1.1612	1.0250	1.0414	1.0711	1.1596	1.0327	1.0509	1.0931	1.3633	1.0140	1.0332	1.0538	1.0964	0.0070	0.0070	0.0163	0.1150
	Level 8	11.6min	1.0185	1.0335	1.0557	1.1286	1.0185	1.0335	1.0557	1.1279	1.0254	1.0419	1.0699	1.3155	1.0111	1.0257	1.0426	1.0741	0.0052	0.0063	0.0117	0.1052
	Level 9	23.2min	1.0173	1.0320	1.0526	1.1973	1.0172	1.0319	1.0527	1.1955	1.0234	1.0404	1.0620	1.7024	1.0105	1.0250	1.0411	1.0622	0.0047	0.0062	0.0092	0.2834
	Level 1	2.4sec	1.5191	1.6130	1.6709	1.7881	1.5192	1.6127	1.6706	1.7879	1.5684	1.6481	1.6892	2.1100	1.4587	1.5780	1.6488	1.6917	0.0364	0.0273	0.0146	0.1246
	Level 2	4.9sec	1.2850	1.3710	1.4650	1.6179	1.2851	1.3711	1.4646	1.6185	1.3303	1.4088	1.4955	1.9924	1.2269	1.3332	1.4135	1.5117	0.0412	0.0275	0.0324	0.1413
	Level 3	9.8sec	1.1598	1.2500	1.3167	1.4648	1.1596	1.2500	1.3168	1.4672	1.1990	1.2987	1.3480	1.9494	1.1185	1.2023	1.3019	1.3571	0.0277	0.0335	0.0141	0.1706
60	**Level 4**	19.5sec	1.0987	1.1592	1.2295	1.3344	1.0986	1.1596	1.2291	1.3341	1.1205	1.2006	1.2574	1.6709	1.0721	1.1221	1.2097	1.2575	0.0157	0.0275	0.0185	0.1213
days	**Level 5**	39sec	1.0644	1.1031	1.1615	1.2453	1.0644	1.1033	1.1615	1.2440	1.0785	1.1251	1.1774	1.4804	1.0357	1.0803	1.1466	1.1789	0.0118	0.0166	0.0108	0.0880
before	**Level 6**	1.3min	1.0436	1.0701	1.1116	1.1749	1.0436	1.0702	1.1115	1.1750	1.0586	1.0870	1.1236	1.3728	1.0206	1.0597	1.0942	1.1240	0.0100	0.0093	0.0117	0.0720
	Level 7	2.6min	1.0303	1.0489	1.0760	1.1317	1.0303	1.0489	1.0760	1.1320	1.0394	1.0603	1.0864	1.3633	1.0140	1.0396	1.0628	1.0913	0.0072	0.0066	0.0090	0.0785
	Level 8	5.2min	1.0225	1.0365	1.0548	1.1026	1.0226	1.0365	1.0546	1.1016	1.0290	1.0447	1.0646	1.3155	1.0111	1.0296	1.0460	1.0699	0.0056	0.0056	0.0066	0.0716
	Level 9	10.4min	1.0198	1.0328	1.0490	1.1260	1.0198	1.0328	1.0491	1.1273	1.0250	1.0404	1.0595	1.7024	1.0105	1.0251	1.0411	1.0614	0.0048	0.0053	0.0056	0.1909
	Level 1	1.6sec	1.5159	1.5848	1.6580	1.7706	1.5158	1.5849	1.6582	1.7698	1.5568	1.6146	1.6865	2.1100	1.4587	1.5570	1.6192	1.6892	0.0322	0.0160	0.0184	0.1074
	Level 2	3.2sec	1.2783	1.3577	1.4302	1.5842	1.2786	1.3579	1.4302	1.5852	1.3290	1.3823	1.4843	1.9924	1.2269	1.3291	1.3829	1.4856	0.0336	0.0177	0.0343	0.1281
	Level 3	6.4sec	1.1591	1.2335	1.2997	1.4300	1.1590	1.2337	1.2998	1.4316	1.1892	1.2656	1.3180	1.9494	1.1185	1.1990	1.2666	1.3247	0.0246	0.0216	0.0156	0.1517
3	**Level 4**	12.8sec	1.0990	1.1528	1.2140	1.3127	1.0992	1.1529	1.2139	1.3126	1.1208	1.1759	1.2425	1.6709	1.0721	1.1221	1.1851	1.2434	0.0153	0.0172	0.0174	0.1059
months	**Level 5**	25.6sec	1.0651	1.1022	1.1493	1.2264	1.0651	1.1021	1.1492	1.2279	1.0803	1.1174	1.1690	1.4804	1.0357	1.0803	1.1220	1.1741	0.0114	0.0121	0.0176	0.0774
before	**Level 6**	51.3sec	1.0436	1.0682	1.1023	1.1621	1.0438	1.0682	1.1025	1.1617	1.0586	1.0796	1.1207	1.3728	1.0206	1.0597	1.0823	1.1219	0.0093	0.0064	0.0133	0.0629
	Level 7	1.7min	1.0303	1.0465	1.0704	1.1208	1.0303	1.0465	1.0704	1.1203	1.0386	1.0558	1.0821	1.3633	1.0140	1.0394	1.0564	1.0825	0.0067	0.0047	0.0083	0.0669
	Level 8	3.4min	1.0222	1.0341	1.0512	1.0936	1.0222	1.0341	1.0512	1.0938	1.0281	1.0416	1.0603	1.3155	1.0111	1.0290	1.0419	1.0608	0.0052	0.0040	0.0058	0.0605
	Level 9	6.8min	1.0190	1.0303	1.0457	1.1137	1.0190	1.0303	1.0457	1.1135	1.0246	1.0379	1.0533	1.7024	1.0105	1.0250	1.0384	1.0563	0.0043	0.0045	0.0047	0.1587
	Level 1	1.2sec	1.4773	1.5336	1.5858	1.6943	1.4774	1.5336	1.5858	1.6944	1.5079	1.5565	1.6138	2.1100	1.4010	1.5084	1.5568	1.6140	0.0246	0.0135	0.0178	0.0892
	Level 2	2.3sec	1.2362	1.2874	1.3343	1.4777	1.2362	1.2874	1.3343	1.4784	1.2669	1.3075	1.3644	2.1204	1.1726	1.2674	1.3078	1.3667	0.0231	0.0115	0.0155	0.1478
	Level 3	4.7sec	1.1194	1.1573	1.1998	1.3376	1.1193	1.1573	1.1998	1.3377	1.1404	1.1773	1.2306	2.0067	1.0738	1.1411	1.1781	1.2313	0.0146	0.0103	0.0146	0.1552
1	**Level 4**	9.3sec	1.0637	1.0915	1.1276	1.2349	1.0636	1.0916	1.1275	1.2352	1.0788	1.1080	1.1510	1.6709	1.0320	1.0790	1.1080	1.1524	0.0108	0.0091	0.0117	0.1086
Year	**Level 5**	18.7sec	1.0356	1.0580	1.0854	1.1634	1.0356	1.0580	1.0853	1.1632	1.0468	1.0702	1.1040	1.4804	1.0157	1.0473	1.0711	1.1046	0.0075	0.0072	0.0095	0.0744
before	**Level 6**	37.3sec	1.0217	1.0384	1.0577	1.1127	1.0217	1.0384	1.0577	1.1131	1.0292	1.0476	1.0694	1.3728	1.0078	1.0292	1.0476	1.0707	0.0052	0.0057	0.0061	0.0561
	Level 7	1.2min	1.0144	1.0262	1.0396	1.0803	1.0145	1.0262	1.0397	1.0800	1.0195	1.0331	1.0461	1.3633	1.0042	1.0198	1.0332	1.0464	0.0036	0.0041	0.0041	0.0472
	Level 8	2.5min	1.0106	1.0190	1.0290	1.0606	1.0107	1.0190	1.0290	1.0606	1.0142	1.0241	1.0344	1.3155	1.0027	1.0145	1.0243	1.0346	0.0027	0.0029	0.0031	0.0401
	Level 9	5min	1.0095	1.0164	1.0253	1.0634	1.0095	1.0164	1.0253	1.0638	1.0124	1.0205	1.0305	1.7024	1.0024	1.0125	1.0206	1.0307	0.0023	0.0025	0.0028	0.0879

Table A.50: EDU9 Other Results Table –Continued

EDU9 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	5.4sec	1.4888	1.5657	1.6549	1.8104	1.4887	1.5654	1.6549	1.8088	1.5178	1.5905	1.6647	2.1106	1.4579	1.5264	1.6318	1.6685	0.0283	0.0241	0.0134	0.1743
	Level 2	10.9sec	1.2393	1.3284	1.3916	1.6210	1.2391	1.3281	1.3918	1.6250	1.2649	1.3463	1.4193	2.0271	1.2233	1.3030	1.3590	1.4609	0.0172	0.0163	0.0235	0.2284
	Level 3	21.7sec	1.1322	1.1853	1.2748	1.4789	1.1321	1.1854	1.2747	1.4802	1.1663	1.2128	1.2890	1.9753	1.1152	1.1665	1.2505	1.2932	0.0206	0.0178	0.0151	0.2797
30	**Level 4**	43.5sec	1.0784	1.1081	1.1815	1.3287	1.0783	1.1082	1.1815	1.3222	1.0946	1.1209	1.1895	1.6641	1.0669	1.0970	1.1681	1.2006	0.0101	0.0079	0.0080	0.1930
days	**Level 5**	1.4min	1.0466	1.0638	1.1129	1.2188	1.0464	1.0638	1.1128	1.2160	1.0532	1.0705	1.1247	1.4225	1.0301	1.0597	1.1020	1.1407	0.0095	0.0038	0.0090	0.1174
before	**Level 6**	2.9min	1.0276	1.0414	1.0736	1.1428	1.0277	1.0414	1.0736	1.1417	1.0329	1.0468	1.0898	1.2600	1.0153	1.0359	1.0649	1.0960	0.0073	0.0040	0.0102	0.0690
	Level 7	5.8min	1.0173	1.0274	1.0482	1.0940	1.0174	1.0274	1.0483	1.0936	1.0220	1.0319	1.0625	1.1690	1.0094	1.0241	1.0411	1.0648	0.0050	0.0034	0.0087	0.0442
	Level 8	11.6min	1.0111	1.0190	1.0316	1.0630	1.0111	1.0190	1.0315	1.0624	1.0136	1.0221	1.0389	1.1171	1.0070	1.0167	1.0263	1.0430	0.0027	0.0022	0.0053	0.0315
	Level 9	23.2min	1.0092	1.0159	1.0240	1.0474	1.0092	1.0159	1.0239	1.0471	1.0116	1.0190	1.0307	1.0945	1.0059	1.0145	1.0190	1.0308	0.0022	0.0018	0.0048	0.0267
	Level 1	2.4sec	1.5163	1.6074	1.6654	1.7853	1.5161	1.6074	1.6653	1.7840	1.5579	1.6467	1.6862	2.1106	1.4579	1.5729	1.6552	1.6960	0.0353	0.0290	0.0088	0.1239
	Level 2	4.9sec	1.2790	1.3665	1.4589	1.6069	1.2792	1.3665	1.4589	1.6040	1.3269	1.4086	1.4975	2.0271	1.2233	1.3275	1.4193	1.4979	0.0411	0.0298	0.0322	0.1561
	Level 3	9.8sec	1.1526	1.2428	1.3046	1.4513	1.1523	1.2431	1.3049	1.4502	1.1857	1.2798	1.3379	1.9753	1.1152	1.1862	1.2855	1.3513	0.0249	0.0333	0.0188	0.1839
60	**Level 4**	19.5sec	1.0899	1.1494	1.2086	1.3109	1.0901	1.1496	1.2087	1.3096	1.1097	1.1843	1.2344	1.6641	1.0669	1.1102	1.1844	1.2373	0.0143	0.0258	0.0182	0.1267
days	**Level 5**	39sec	1.0545	1.0910	1.1368	1.2114	1.0547	1.0912	1.1368	1.2116	1.0636	1.1094	1.1537	1.4225	1.0301	1.0654	1.1188	1.1583	0.0100	0.0156	0.0117	0.0783
before	**Level 6**	1.3min	1.0335	1.0584	1.0875	1.1364	1.0335	1.0583	1.0874	1.1368	1.0409	1.0715	1.0992	1.2600	1.0153	1.0454	1.0762	1.1012	0.0074	0.0083	0.0079	0.0469
	Level 7	2.6min	1.0211	1.0372	1.0553	1.0871	1.0211	1.0372	1.0553	1.0866	1.0266	1.0480	1.0648	1.1690	1.0094	1.0312	1.0484	1.0650	0.0050	0.0052	0.0064	0.0308
	Level 8	5.2min	1.0142	1.0237	1.0342	1.0564	1.0141	1.0237	1.0342	1.0563	1.0185	1.0293	1.0389	1.1171	1.0070	1.0205	1.0298	1.0419	0.0038	0.0028	0.0034	0.0222
	Level 9	10.4min	1.0113	1.0175	1.0243	1.0418	1.0113	1.0175	1.0243	1.0419	1.0153	1.0198	1.0295	1.0945	1.0059	1.0154	1.0199	1.0306	0.0033	0.0016	0.0035	0.0187
	Level 1	1.6sec	1.5132	1.5807	1.6533	1.7656	1.5137	1.5807	1.6535	1.7659	1.5535	1.6131	1.6707	2.1106	1.4579	1.5541	1.6196	1.6862	0.0326	0.0174	0.0148	0.1069
	Level 2	3.2sec	1.2733	1.3531	1.4211	1.5734	1.2737	1.3530	1.4216	1.5756	1.3218	1.3750	1.4823	2.0271	1.2233	1.3227	1.3811	1.4851	0.0342	0.0181	0.0299	0.1365
	Level 3	6.4sec	1.1528	1.2262	1.2860	1.4196	1.1529	1.2260	1.2860	1.4160	1.1857	1.2568	1.3065	1.9753	1.1152	1.1860	1.2625	1.3085	0.0233	0.0221	0.0142	0.1603
3	**Level 4**	12.8sec	1.0912	1.1441	1.1945	1.2873	1.0912	1.1442	1.1942	1.2883	1.1102	1.1645	1.2138	1.6641	1.0669	1.1135	1.1681	1.2165	0.0137	0.0166	0.0129	0.1096
months	**Level 5**	25.6sec	1.0562	1.0918	1.1276	1.1974	1.0561	1.0917	1.1277	1.1967	1.0705	1.1033	1.1466	1.4225	1.0301	1.0718	1.1050	1.1495	0.0097	0.0110	0.0128	0.0691
before	**Level 6**	51.3sec	1.0351	1.0578	1.0811	1.1268	1.0349	1.0578	1.0812	1.1267	1.0456	1.0653	1.0958	1.2600	1.0153	1.0468	1.0656	1.0960	0.0075	0.0060	0.0086	0.0419
	Level 7	1.7min	1.0221	1.0363	1.0518	1.0802	1.0221	1.0362	1.0517	1.0805	1.0300	1.0412	1.0613	1.1690	1.0094	1.0310	1.0412	1.0625	0.0053	0.0036	0.0060	0.0270
	Level 8	3.4min	1.0146	1.0232	1.0321	1.0529	1.0146	1.0232	1.0322	1.0531	1.0188	1.0269	1.0380	1.1171	1.0070	1.0201	1.0270	1.0389	0.0036	0.0021	0.0034	0.0191
	Level 9	6.8min	1.0113	1.0170	1.0231	1.0396	1.0114	1.0169	1.0231	1.0396	1.0149	1.0198	1.0285	1.0945	1.0059	1.0149	1.0198	1.0289	0.0030	0.0015	0.0026	0.0159
	Level 1	1.2sec	1.4764	1.5317	1.5822	1.6909	1.4763	1.5316	1.5822	1.6905	1.5085	1.5541	1.6105	2.1106	1.3993	1.5091	1.5549	1.6109	0.0254	0.0134	0.0170	0.0879
	Level 2	2.3sec	1.2340	1.2831	1.3288	1.4697	1.2340	1.2831	1.3287	1.4692	1.2649	1.3038	1.3613	2.0671	1.1731	1.2649	1.3046	1.3633	0.0235	0.0113	0.0147	0.1447
	Level 3	4.7sec	1.1160	1.1521	1.1905	1.3235	1.1160	1.1522	1.1904	1.3244	1.1358	1.1676	1.2224	1.9911	1.0705	1.1362	1.1681	1.2230	0.0139	0.0092	0.0146	0.1536
1	**Level 4**	9.3sec	1.0592	1.0848	1.1168	1.2156	1.0592	1.0848	1.1167	1.2157	1.0719	1.0996	1.1381	1.6641	1.0302	1.0720	1.0997	1.1415	0.0095	0.0082	0.0107	0.0994
Year	**Level 5**	18.7sec	1.0306	1.0499	1.0731	1.1405	1.0307	1.0499	1.0731	1.1408	1.0395	1.0606	1.0896	1.4225	1.0145	1.0395	1.0607	1.0900	0.0060	0.0064	0.0083	0.0621
before	**Level 6**	37.3sec	1.0167	1.0297	1.0458	1.0897	1.0167	1.0297	1.0458	1.0896	1.0225	1.0373	1.0559	1.2600	1.0067	1.0226	1.0373	1.0563	0.0039	0.0046	0.0051	0.0397
	Level 7	1.2min	1.0095	1.0180	1.0286	1.0561	1.0095	1.0180	1.0286	1.0561	1.0130	1.0234	1.0347	1.1690	1.0020	1.0131	1.0235	1.0348	0.0024	0.0032	0.0032	0.0231
	Level 8	2.5min	1.0057	1.0113	1.0185	1.0357	1.0057	1.0113	1.0185	1.0356	1.0080	1.0148	1.0226	1.1171	0.9988	1.0080	1.0148	1.0228	0.0016	0.0021	0.0021	0.0148
	Level 9	5min	1.0041	1.0082	1.0137	1.0262	1.0041	1.0082	1.0137	1.0263	1.0058	1.0109	1.0162	1.0945	1.0008	1.0059	1.0109	1.0165	0.0011	0.0016	0.0016	0.0115

Table A.50: EDU9 Other Results Table –Continued

EDU9 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	5.4sec	0.5558	0.6084	0.6387	0.6713	0.5558	0.6085	0.6388	0.6713	0.5936	0.6277	0.6544	0.6855	0.4739	0.5991	0.6279	0.6598	0.0487	0.0102	0.0099	0.0116
	Level 2	10.9sec	0.6151	0.7218	0.7525	0.8025	0.6148	0.7220	0.7524	0.8024	0.6692	0.7367	0.7668	0.8150	0.5019	0.7098	0.7385	0.7782	0.0652	0.0122	0.0100	0.0156
	Level 3	21.7sec	0.6797	0.7853	0.8400	0.8793	0.6780	0.7853	0.8397	0.8795	0.7629	0.8236	0.8489	0.8941	0.5130	0.7655	0.8314	0.8525	0.0956	0.0213	0.0078	0.0166
30	**Level 4**	43.5sec	0.7474	0.8429	0.8955	0.9208	0.7467	0.8431	0.8954	0.9209	0.8179	0.8902	0.8988	0.9327	0.5985	0.8254	0.8912	0.9069	0.0854	0.0242	0.0035	0.0093
days	**Level 5**	1.4min	0.8022	0.8893	0.9309	0.9473	0.8021	0.8889	0.9309	0.9474	0.8563	0.9253	0.9363	0.9656	0.6755	0.8643	0.9257	0.9386	0.0730	0.0218	0.0050	0.0110
before	**Level 6**	2.9min	0.8438	0.9180	0.9489	0.9651	0.8432	0.9176	0.9490	0.9651	0.8887	0.9427	0.9558	0.9798	0.7284	0.8944	0.9431	0.9584	0.0666	0.0189	0.0060	0.0088
	Level 7	5.8min	0.8682	0.9368	0.9621	0.9757	0.8684	0.9367	0.9620	0.9757	0.9121	0.9516	0.9678	0.9862	0.7335	0.9148	0.9562	0.9683	0.0765	0.0146	0.0054	0.0066
	Level 8	11.6min	0.8915	0.9493	0.9693	0.9819	0.8921	0.9494	0.9692	0.9818	0.9310	0.9598	0.9750	0.9890	0.7601	0.9347	0.9629	0.9752	0.0741	0.0107	0.0049	0.0050
	Level 9	23.2min	0.8673	0.9518	0.9708	0.9832	0.8660	0.9519	0.9707	0.9831	0.9415	0.9612	0.9756	0.9896	0.5874	0.9416	0.9642	0.9771	0.1558	0.0087	0.0049	0.0045
	Level 1	2.4sec	0.5619	0.5993	0.6217	0.6585	0.5616	0.5994	0.6216	0.6586	0.5911	0.6068	0.6337	0.6855	0.4739	0.5920	0.6071	0.6376	0.0354	0.0055	0.0100	0.0159
	Level 2	4.9sec	0.6219	0.6853	0.7314	0.7792	0.6216	0.6855	0.7316	0.7789	0.6615	0.7098	0.7501	0.8150	0.5019	0.6687	0.7119	0.7517	0.0474	0.0166	0.0138	0.0252
	Level 3	9.8sec	0.6882	0.7605	0.8037	0.8627	0.6883	0.7605	0.8036	0.8628	0.7368	0.7700	0.8318	0.8941	0.5130	0.7418	0.7763	0.8340	0.0643	0.0083	0.0201	0.0207
60	**Level 4**	19.5sec	0.7548	0.8156	0.8658	0.9104	0.7543	0.8155	0.8658	0.9104	0.7952	0.8329	0.8912	0.9327	0.5985	0.7953	0.8400	0.8925	0.0579	0.0129	0.0190	0.0131
days	**Level 5**	39sec	0.8075	0.8635	0.9083	0.9395	0.8071	0.8635	0.9084	0.9396	0.8483	0.8888	0.9257	0.9656	0.6755	0.8493	0.8913	0.9272	0.0508	0.0113	0.0130	0.0106
before	**Level 6**	1.3min	0.8538	0.9016	0.9360	0.9583	0.8537	0.9016	0.9360	0.9583	0.8897	0.9199	0.9437	0.9798	0.7284	0.8900	0.9240	0.9446	0.0469	0.0109	0.0068	0.0093
	Level 7	2.6min	0.8868	0.9308	0.9545	0.9707	0.8867	0.9307	0.9545	0.9706	0.9164	0.9431	0.9619	0.9862	0.7335	0.9204	0.9445	0.9621	0.0525	0.0085	0.0052	0.0069
	Level 8	5.2min	0.9113	0.9491	0.9655	0.9780	0.9108	0.9491	0.9655	0.9779	0.9347	0.9572	0.9712	0.9890	0.7601	0.9393	0.9592	0.9719	0.0506	0.0062	0.0048	0.0054
	Level 9	10.4min	0.9014	0.9538	0.9689	0.9806	0.9032	0.9539	0.9689	0.9806	0.9422	0.9612	0.9755	0.9896	0.5874	0.9438	0.9630	0.9756	0.1050	0.0054	0.0046	0.0046
	Level 1	1.6sec	0.5667	0.6041	0.6318	0.6599	0.5668	0.6041	0.6318	0.6600	0.5920	0.6194	0.6423	0.6855	0.4739	0.5929	0.6225	0.6423	0.0307	0.0076	0.0058	0.0141
	Level 2	3.2sec	0.6347	0.7008	0.7374	0.7825	0.6342	0.7010	0.7374	0.7826	0.6731	0.7234	0.7524	0.8150	0.5019	0.6737	0.7260	0.7525	0.0442	0.0171	0.0093	0.0208
	Level 3	6.4sec	0.7050	0.7706	0.8119	0.8635	0.7044	0.7706	0.8121	0.8632	0.7549	0.7901	0.8340	0.8941	0.5130	0.7587	0.7907	0.8409	0.0594	0.0104	0.0136	0.0185
3	**Level 4**	12.8sec	0.7662	0.8254	0.8689	0.9098	0.7658	0.8255	0.8686	0.9099	0.8042	0.8504	0.8912	0.9327	0.5985	0.8048	0.8553	0.8922	0.0516	0.0131	0.0127	0.0127
months	**Level 5**	25.6sec	0.8168	0.8718	0.9083	0.9392	0.8171	0.8718	0.9082	0.9390	0.8517	0.8950	0.9257	0.9656	0.6755	0.8555	0.8966	0.9257	0.0453	0.0143	0.0098	0.0102
before	**Level 6**	51.3sec	0.8631	0.9084	0.9367	0.9581	0.8629	0.9083	0.9368	0.9581	0.8913	0.9263	0.9437	0.9798	0.7284	0.8923	0.9284	0.9446	0.0414	0.0116	0.0051	0.0086
	Level 7	1.7min	0.8954	0.9350	0.9561	0.9706	0.8952	0.9350	0.9561	0.9706	0.9238	0.9471	0.9621	0.9862	0.7335	0.9241	0.9489	0.9628	0.0452	0.0077	0.0038	0.0063
	Level 8	3.4min	0.9167	0.9519	0.9675	0.9783	0.9164	0.9519	0.9675	0.9783	0.9427	0.9600	0.9719	0.9890	0.7601	0.9432	0.9601	0.9727	0.0431	0.0055	0.0034	0.0050
	Level 9	6.8min	0.9092	0.9568	0.9710	0.9814	0.9098	0.9567	0.9711	0.9814	0.9467	0.9635	0.9756	0.9896	0.5874	0.9494	0.9639	0.9760	0.0880	0.0045	0.0039	0.0042
	Level 1	1.2sec	0.5922	0.6308	0.6523	0.6773	0.5921	0.6308	0.6523	0.6773	0.6197	0.6423	0.6632	0.7138	0.4739	0.6199	0.6425	0.6632	0.0279	0.0070	0.0058	0.0114
	Level 2	2.3sec	0.6826	0.7498	0.7770	0.8095	0.6826	0.7498	0.7770	0.8095	0.7329	0.7646	0.7893	0.8528	0.4716	0.7329	0.7648	0.7893	0.0551	0.0085	0.0071	0.0152
	Level 3	4.7sec	0.7560	0.8340	0.8644	0.8938	0.7559	0.8340	0.8643	0.8938	0.8126	0.8489	0.8769	0.9313	0.4983	0.8128	0.8494	0.8778	0.0660	0.0099	0.0078	0.0117
1	**Level 4**	9.3sec	0.8154	0.8873	0.9163	0.9405	0.8155	0.8873	0.9163	0.9405	0.8688	0.9025	0.9270	0.9690	0.5985	0.8692	0.9026	0.9272	0.0586	0.0089	0.0077	0.0096
Year	**Level 5**	18.7sec	0.8637	0.9217	0.9454	0.9658	0.8634	0.9217	0.9454	0.9658	0.9058	0.9336	0.9553	0.9845	0.6755	0.9060	0.9344	0.9554	0.0483	0.0078	0.0065	0.0069
before	**Level 6**	37.3sec	0.9011	0.9457	0.9632	0.9789	0.9009	0.9457	0.9632	0.9789	0.9351	0.9546	0.9716	0.9923	0.7284	0.9365	0.9546	0.9720	0.0401	0.0053	0.0054	0.0049
	Level 7	1.2min	0.9279	0.9620	0.9745	0.9858	0.9278	0.9620	0.9746	0.9858	0.9560	0.9679	0.9809	0.9958	0.7335	0.9560	0.9679	0.9809	0.0348	0.0038	0.0039	0.0035
	Level 8	2.5min	0.9444	0.9719	0.9815	0.9895	0.9444	0.9719	0.9815	0.9895	0.9667	0.9763	0.9860	0.9973	0.7601	0.9670	0.9764	0.9860	0.0307	0.0028	0.0028	0.0026
	Level 9	5min	0.9445	0.9754	0.9839	0.9906	0.9447	0.9754	0.9839	0.9907	0.9704	0.9798	0.9877	0.9976	0.5874	0.9704	0.9799	0.9879	0.0526	0.0026	0.0024	0.0022

Table A.51: EDZ0 Other Results Table

EDZ0	Ask Variance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.8sec	1.5028	1.6033	1.6406	1.9354	1.5025	1.6029	1.6409	1.9328	1.5593	1.6255	1.6774	2.7282	1.4668	1.5605	1.6272	1.6844	0.0391	0.0252	0.0187	0.4462
	Level 2	17.6sec	1.2663	1.3321	1.4130	1.6367	1.2666	1.3319	1.4132	1.6387	1.3045	1.3537	1.4487	1.9079	1.2171	1.3062	1.3560	1.4533	0.0382	0.0174	0.0355	0.2047
	Level 3	35.2sec	1.1429	1.2011	1.2665	1.4346	1.1421	1.2011	1.2669	1.4329	1.1806	1.2185	1.3173	1.5499	1.1051	1.1808	1.2332	1.3274	0.0296	0.0157	0.0366	0.0967
30	**Level 4**	1.2min	1.0822	1.1330	1.1952	1.3162	1.0822	1.1328	1.1958	1.3175	1.1078	1.1403	1.2278	1.4714	1.0545	1.1151	1.1492	1.2461	0.0208	0.0103	0.0339	0.0888
days	**Level 5**	2.3min	1.0526	1.0879	1.1336	1.2565	1.0526	1.0879	1.1336	1.2555	1.0719	1.1007	1.1546	1.3748	1.0274	1.0720	1.1134	1.1906	0.0167	0.0125	0.0135	0.0776
before	**Level 6**	4.7min	1.0348	1.0598	1.0922	1.1904	1.0347	1.0598	1.0922	1.1912	1.0471	1.0722	1.0995	1.2555	1.0150	1.0473	1.0780	1.1349	0.0123	0.0095	0.0092	0.0495
	Level 7	9.4min	1.0234	1.0413	1.0644	1.1402	1.0233	1.0412	1.0644	1.1403	1.0334	1.0520	1.0765	1.1865	1.0094	1.0344	1.0553	1.0998	0.0086	0.0066	0.0086	0.0344
	Level 8	18.7min	1.0164	1.0294	1.0463	1.1033	1.0164	1.0293	1.0462	1.1033	1.0246	1.0338	1.0593	1.1607	1.0065	1.0249	1.0354	1.0628	0.0063	0.0036	0.0082	0.0370
	Level 9	37.5min	1.0125	1.0232	1.0375	1.0891	1.0125	1.0232	1.0376	1.0882	1.0182	1.0255	1.0448	1.1562	1.0050	1.0191	1.0284	1.0521	0.0046	0.0030	0.0063	0.0403
	Level 1	4.2sec	1.5031	1.6028	1.6506	2.0705	1.5033	1.6028	1.6507	2.0673	1.5593	1.6272	1.6774	3.0034	1.4469	1.5605	1.6293	1.6844	0.0353	0.0237	0.0161	0.4477
	Level 2	8.3sec	1.2681	1.3534	1.4426	2.0307	1.2678	1.3535	1.4428	2.0249	1.3062	1.3935	1.4917	4.7455	1.2167	1.3093	1.4035	1.4932	0.0352	0.0303	0.0257	0.9375
	Level 3	16.7sec	1.1452	1.2273	1.3171	2.0919	1.1452	1.2272	1.3170	2.0782	1.1808	1.2645	1.3535	7.1899	1.1051	1.1852	1.2672	1.3623	0.0266	0.0274	0.0303	1.7196
60	**Level 4**	33.4sec	1.0884	1.1528	1.2157	2.0377	1.0886	1.1528	1.2160	2.0151	1.1335	1.1755	1.2383	8.1912	1.0545	1.1352	1.1759	1.2461	0.0250	0.0163	0.0192	2.0574
days	**Level 5**	1.1min	1.0559	1.1037	1.1423	1.6858	1.0561	1.1037	1.1423	1.6763	1.0848	1.1202	1.1685	5.5055	1.0274	1.0906	1.1293	1.1906	0.0201	0.0098	0.0117	1.2755
before	**Level 6**	2.2min	1.0352	1.0683	1.0950	1.4445	1.0352	1.0684	1.0951	1.4374	1.0503	1.0821	1.1064	3.7954	1.0150	1.0550	1.0835	1.1200	0.0140	0.0094	0.0064	0.7858
	Level 7	4.5min	1.0226	1.0438	1.0632	1.3131	1.0225	1.0438	1.0632	1.3141	1.0334	1.0552	1.0718	3.0948	1.0085	1.0344	1.0553	1.0747	0.0095	0.0071	0.0062	0.5925
	Level 8	8.9min	1.0150	1.0287	1.0421	1.3033	1.0150	1.0287	1.0421	1.2952	1.0246	1.0354	1.0487	3.2994	1.0054	1.0246	1.0355	1.0520	0.0063	0.0038	0.0046	0.6655
	Level 9	17.8min	1.0112	1.0220	1.0333	1.2342	1.0112	1.0220	1.0332	1.2317	1.0182	1.0279	1.0425	2.7948	1.0049	1.0187	1.0280	1.0432	0.0043	0.0032	0.0048	0.5194
	Level 1	2.6sec	1.5027	1.6001	1.6590	1.9983	1.5024	1.6000	1.6593	1.9958	1.5386	1.6307	1.6973	3.0034	1.4198	1.5593	1.6333	1.7084	0.0363	0.0252	0.0192	0.3864
	Level 2	5.1sec	1.2714	1.3620	1.4445	1.8879	1.2715	1.3621	1.4451	1.8852	1.3188	1.4115	1.4917	4.7455	1.2167	1.3241	1.4151	1.4932	0.0352	0.0286	0.0257	0.7954
	Level 3	10.2sec	1.1550	1.2388	1.3144	1.8486	1.1548	1.2389	1.3143	1.8593	1.1951	1.2672	1.3511	7.1899	1.1051	1.1976	1.2723	1.3535	0.0293	0.0215	0.0264	1.4436
3	**Level 4**	20.5sec	1.0964	1.1629	1.2186	1.8038	1.0963	1.1628	1.2186	1.7922	1.1352	1.1885	1.2388	8.1912	1.0545	1.1370	1.1899	1.2461	0.0267	0.0173	0.0155	1.7146
months	**Level 5**	40.9sec	1.0617	1.1100	1.1470	1.5336	1.0617	1.1100	1.1470	1.5319	1.0908	1.1300	1.1720	5.5055	1.0274	1.0920	1.1304	1.1769	0.0208	0.0121	0.0130	1.0652
before	**Level 6**	1.4min	1.0385	1.0713	1.0983	1.3432	1.0386	1.0713	1.0983	1.3457	1.0584	1.0854	1.1153	3.7954	1.0150	1.0589	1.0857	1.1186	0.0138	0.0087	0.0082	0.6571
	Level 7	2.7min	1.0244	1.0456	1.0638	1.2442	1.0243	1.0457	1.0639	1.2448	1.0361	1.0552	1.0747	3.0948	1.0085	1.0376	1.0553	1.0751	0.0090	0.0068	0.0063	0.4954
	Level 8	5.5min	1.0159	1.0292	1.0417	1.2158	1.0159	1.0292	1.0417	1.2217	1.0246	1.0354	1.0487	3.2994	1.0054	1.0246	1.0355	1.0498	0.0058	0.0037	0.0045	0.5550
	Level 9	10.9min	1.0116	1.0225	1.0328	1.1731	1.0116	1.0225	1.0327	1.1734	1.0173	1.0278	1.0399	2.7948	1.0049	1.0182	1.0279	1.0400	0.0039	0.0032	0.0039	0.4334
	Level 1	1.7sec	1.4871	1.5472	1.6054	1.7852	1.4868	1.5473	1.6053	1.7859	1.5236	1.5722	1.6429	3.0034	1.3997	1.5238	1.5745	1.6466	0.0323	0.0144	0.0224	0.2380
	Level 2	3.3sec	1.2573	1.3253	1.3780	1.6006	1.2573	1.3253	1.3781	1.5996	1.2935	1.3518	1.4183	4.7455	1.1859	1.2951	1.3519	1.4203	0.0279	0.0158	0.0203	0.4355
	Level 3	6.6sec	1.1460	1.2034	1.2517	1.4876	1.1459	1.2034	1.2517	1.4858	1.1799	1.2249	1.2915	7.1899	1.0917	1.1801	1.2251	1.2930	0.0229	0.0134	0.0197	0.7404
1	**Level 4**	13.3sec	1.0903	1.1340	1.1769	1.3924	1.0902	1.1339	1.1768	1.3902	1.1160	1.1514	1.2067	8.1912	1.0460	1.1161	1.1520	1.2082	0.0186	0.0105	0.0158	0.8699
Year	**Level 5**	26.5sec	1.0585	1.0921	1.1233	1.2711	1.0585	1.0921	1.1233	1.2743	1.0775	1.1061	1.1427	5.5055	1.0267	1.0777	1.1066	1.1449	0.0145	0.0080	0.0109	0.5445
before	**Level 6**	53.1sec	1.0386	1.0626	1.0842	1.1955	1.0386	1.0626	1.0842	1.1928	1.0517	1.0719	1.0969	3.7954	1.0149	1.0523	1.0720	1.0984	0.0106	0.0053	0.0081	0.3519
	Level 7	1.8min	1.0256	1.0418	1.0565	1.1513	1.0256	1.0418	1.0565	1.1502	1.0348	1.0478	1.0652	3.0948	1.0083	1.0352	1.0479	1.0664	0.0073	0.0034	0.0053	0.3269
	Level 8	3.5min	1.0176	1.0286	1.0388	1.1416	1.0176	1.0286	1.0388	1.1422	1.0246	1.0324	1.0447	3.8239	1.0050	1.0246	1.0327	1.0452	0.0051	0.0024	0.0035	0.4411
	Level 9	7.1min	1.0138	1.0229	1.0311	1.1224	1.0138	1.0229	1.0311	1.1224	1.0196	1.0264	1.0362	3.8177	1.0036	1.0197	1.0266	1.0363	0.0040	0.0020	0.0028	0.4062

Table A.51: EDZ0 Other Results Table –Continued

EDZ0 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.6sec	1.5000	1.6004	1.6432	1.9337	1.5002	1.6005	1.6434	1.9372	1.5498	1.6161	1.6963	2.7265	1.4637	1.5826	1.6265	1.6967	0.0366	0.0136	0.0263	0.4423
	Level 2	17.3sec	1.2676	1.3374	1.4152	1.6189	1.2677	1.3373	1.4149	1.6228	1.3037	1.3561	1.4604	1.8818	1.2246	1.3055	1.3626	1.4751	0.0339	0.0201	0.0346	0.1986
	Level 3	34.5sec	1.1426	1.2038	1.2710	1.3964	1.1428	1.2035	1.2708	1.3959	1.1807	1.2258	1.3250	1.4991	1.1071	1.1816	1.2280	1.3297	0.0281	0.0204	0.0415	0.0860
30	**Level 4**	1.2min	1.0829	1.1344	1.1874	1.3075	1.0830	1.1345	1.1875	1.3062	1.1134	1.1499	1.2241	1.4533	1.0550	1.1195	1.1506	1.2262	0.0217	0.0109	0.0329	0.0917
days	**Level 5**	2.3min	1.0515	1.0888	1.1252	1.2492	1.0516	1.0891	1.1251	1.2487	1.0735	1.1045	1.1358	1.3821	1.0276	1.0805	1.1045	1.1666	0.0162	0.0099	0.0118	0.0875
before	**Level 6**	4.6min	1.0337	1.0607	1.0876	1.1871	1.0336	1.0606	1.0875	1.1868	1.0463	1.0695	1.1055	1.2638	1.0148	1.0495	1.0756	1.1317	0.0115	0.0079	0.0107	0.0566
	Level 7	9.2min	1.0233	1.0424	1.0645	1.1436	1.0234	1.0423	1.0647	1.1436	1.0294	1.0478	1.0837	1.1970	1.0095	1.0324	1.0549	1.1019	0.0078	0.0061	0.0104	0.0412
	Level 8	18.4min	1.0179	1.0310	1.0513	1.1174	1.0180	1.0310	1.0513	1.1176	1.0232	1.0342	1.0715	1.1776	1.0074	1.0243	1.0398	1.0788	0.0061	0.0043	0.0109	0.0380
	Level 9	36.8min	1.0164	1.0299	1.0521	1.1228	1.0165	1.0299	1.0521	1.1221	1.0214	1.0334	1.0754	1.1973	1.0071	1.0256	1.0376	1.0808	0.0056	0.0030	0.0132	0.0457
	Level 1	4.4sec	1.4974	1.6034	1.6521	2.0898	1.4980	1.6036	1.6518	2.0935	1.5498	1.6288	1.6963	3.0107	1.4479	1.5674	1.6290	1.6967	0.0336	0.0186	0.0215	0.4681
	Level 2	8.8sec	1.2678	1.3493	1.4479	2.0054	1.2678	1.3493	1.4481	2.0126	1.3055	1.3938	1.4802	4.7330	1.2214	1.3073	1.3985	1.4877	0.0316	0.0261	0.0277	0.9387
	Level 3	17.7sec	1.1446	1.2227	1.3120	2.0065	1.1450	1.2233	1.3120	2.0209	1.1807	1.2639	1.3369	7.1636	1.1071	1.1816	1.2642	1.3460	0.0253	0.0257	0.0270	1.7164
60	**Level 4**	35.3sec	1.0890	1.1479	1.2096	1.9795	1.0889	1.1479	1.2100	1.9876	1.1307	1.1636	1.2300	8.2071	1.0550	1.1315	1.1675	1.2316	0.0261	0.0113	0.0189	2.0677
days	**Level 5**	1.2min	1.0562	1.1001	1.1357	1.6344	1.0560	1.1001	1.1356	1.6335	1.0810	1.1178	1.1557	5.2355	1.0276	1.0844	1.1185	1.1636	0.0204	0.0107	0.0120	1.1995
before	**Level 6**	2.4min	1.0358	1.0673	1.0908	1.3805	1.0358	1.0674	1.0907	1.3817	1.0561	1.0812	1.1021	3.2751	1.0148	1.0567	1.0823	1.1055	0.0134	0.0086	0.0069	0.6319
	Level 7	4.7min	1.0232	1.0455	1.0620	1.2497	1.0231	1.0454	1.0620	1.2561	1.0337	1.0551	1.0705	2.4522	1.0081	1.0366	1.0560	1.0829	0.0089	0.0057	0.0044	0.3993
	Level 8	9.4min	1.0168	1.0315	1.0455	1.2180	1.0169	1.0315	1.0455	1.2178	1.0243	1.0394	1.0545	2.3554	1.0044	1.0263	1.0395	1.0564	0.0071	0.0042	0.0044	0.3790
	Level 9	18.9min	1.0147	1.0275	1.0425	1.2657	1.0146	1.0275	1.0424	1.2691	1.0224	1.0334	1.0516	2.9362	1.0029	1.0231	1.0351	1.0552	0.0068	0.0035	0.0054	0.5544
	Level 1	2.7sec	1.4987	1.5998	1.6631	2.0068	1.4987	1.6002	1.6627	2.0052	1.5385	1.6290	1.6967	3.0107	1.4341	1.5498	1.6317	1.7062	0.0332	0.0218	0.0250	0.4121
	Level 2	5.3sec	1.2716	1.3560	1.4442	1.8691	1.2715	1.3560	1.4442	1.8715	1.3073	1.3954	1.4793	4.7330	1.2214	1.3143	1.3985	1.4802	0.0313	0.0248	0.0240	0.7974
	Level 3	10.6sec	1.1527	1.2306	1.3032	1.8277	1.1526	1.2306	1.3035	1.8226	1.1865	1.2642	1.3332	7.1636	1.1071	1.1999	1.2660	1.3353	0.0265	0.0196	0.0244	1.4343
3	**Level 4**	21.3sec	1.0919	1.1555	1.2067	1.7698	1.0919	1.1557	1.2066	1.7705	1.1307	1.1778	1.2297	8.2071	1.0550	1.1315	1.1852	1.2300	0.0247	0.0143	0.0159	1.7211
months	**Level 5**	42.6sec	1.0575	1.1052	1.1385	1.5058	1.0577	1.1052	1.1382	1.5005	1.0844	1.1241	1.1589	5.2355	1.0276	1.0875	1.1263	1.1614	0.0188	0.0102	0.0104	1.0010
before	**Level 6**	1.4min	1.0379	1.0702	1.0936	1.3072	1.0378	1.0702	1.0936	1.3065	1.0567	1.0828	1.1021	3.2751	1.0148	1.0583	1.0839	1.1055	0.0124	0.0083	0.0058	0.5291
	Level 7	2.8min	1.0244	1.0471	1.0634	1.2073	1.0244	1.0471	1.0634	1.2044	1.0366	1.0566	1.0758	2.4522	1.0081	1.0386	1.0580	1.0767	0.0082	0.0063	0.0053	0.3357
	Level 8	5.7min	1.0174	1.0318	1.0456	1.1697	1.0174	1.0319	1.0456	1.1693	1.0243	1.0394	1.0545	2.3554	1.0044	1.0261	1.0395	1.0545	0.0062	0.0041	0.0046	0.3183
	Level 9	11.3min	1.0152	1.0272	1.0412	1.1981	1.0152	1.0272	1.0412	1.2014	1.0224	1.0334	1.0506	2.9362	1.0029	1.0228	1.0351	1.0507	0.0059	0.0031	0.0051	0.4644
	Level 1	1.6sec	1.4845	1.5467	1.6038	1.7893	1.4844	1.5467	1.6037	1.7897	1.5225	1.5724	1.6401	3.0107	1.3989	1.5232	1.5731	1.6411	0.0317	0.0155	0.0212	0.2536
	Level 2	3.2sec	1.2564	1.3218	1.3717	1.5895	1.2565	1.3218	1.3716	1.5893	1.2951	1.3458	1.4179	4.7330	1.1850	1.2954	1.3464	1.4186	0.0266	0.0148	0.0192	0.4347
	Level 3	6.5sec	1.1448	1.1989	1.2422	1.4604	1.1447	1.1988	1.2423	1.4608	1.1770	1.2196	1.2771	7.1636	1.0917	1.1784	1.2200	1.2776	0.0220	0.0125	0.0179	0.7331
1	**Level 4**	12.9sec	1.0879	1.1291	1.1653	1.3755	1.0878	1.1292	1.1653	1.3700	1.1102	1.1435	1.1931	8.2071	1.0461	1.1107	1.1443	1.1931	0.0169	0.0094	0.0147	0.8726
Year	**Level 5**	25.9sec	1.0563	1.0864	1.1133	1.2483	1.0563	1.0864	1.1134	1.2496	1.0734	1.0976	1.1318	5.2355	1.0264	1.0735	1.0976	1.1323	0.0137	0.0069	0.0110	0.5111
before	**Level 6**	51.8sec	1.0373	1.0585	1.0773	1.1636	1.0373	1.0584	1.0773	1.1637	1.0493	1.0653	1.0907	3.2751	1.0148	1.0495	1.0655	1.0909	0.0097	0.0046	0.0080	0.2735
	Level 7	1.7min	1.0255	1.0401	1.0537	1.1160	1.0255	1.0401	1.0537	1.1163	1.0343	1.0450	1.0622	2.4522	1.0081	1.0344	1.0451	1.0624	0.0071	0.0035	0.0055	0.1811
	Level 8	3.5min	1.0184	1.0293	1.0397	1.1015	1.0184	1.0293	1.0397	1.1006	1.0250	1.0335	1.0466	2.3554	1.0044	1.0251	1.0336	1.0469	0.0054	0.0024	0.0039	0.1961
	Level 9	6.9min	1.0161	1.0260	1.0359	1.1171	1.0160	1.0260	1.0359	1.1200	1.0224	1.0304	1.0432	2.9362	1.0029	1.0227	1.0304	1.0436	0.0049	0.0023	0.0037	0.3231

Table A.51: EDZ0 Other Results Table –Continued

EDZ0 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.7sec	1.5004	1.5997	1.6383	1.9346	1.5003	1.5996	1.6385	1.9306	1.5535	1.6176	1.6841	2.7274	1.4645	1.5654	1.6257	1.6881	0.0375	0.0206	0.0226	0.4466
	Level 2	17.4sec	1.2661	1.3306	1.4049	1.6201	1.2652	1.3305	1.4046	1.6173	1.3001	1.3408	1.4322	1.8908	1.2174	1.3035	1.3503	1.4378	0.0359	0.0155	0.0323	0.2064
	Level 3	34.8sec	1.1387	1.1955	1.2547	1.3925	1.1394	1.1951	1.2548	1.3953	1.1740	1.2178	1.2947	1.5027	1.1049	1.1746	1.2206	1.3111	0.0273	0.0153	0.0288	0.0958
30	**Level 4**	1.2min	1.0788	1.1257	1.1754	1.2861	1.0792	1.1256	1.1755	1.2865	1.1089	1.1319	1.2184	1.4374	1.0541	1.1111	1.1482	1.2329	0.0207	0.0083	0.0308	0.0859
days	**Level 5**	2.3min	1.0474	1.0808	1.1087	1.2193	1.0473	1.0808	1.1088	1.2207	1.0670	1.0947	1.1186	1.3455	1.0265	1.0709	1.0961	1.1682	0.0144	0.0099	0.0093	0.0771
before	**Level 6**	4.6min	1.0286	1.0505	1.0673	1.1494	1.0287	1.0504	1.0673	1.1495	1.0408	1.0588	1.0717	1.2167	1.0134	1.0433	1.0633	1.1114	0.0097	0.0064	0.0031	0.0475
	Level 7	9.3min	1.0171	1.0299	1.0420	1.0947	1.0171	1.0299	1.0420	1.0951	1.0243	1.0329	1.0485	1.1349	1.0073	1.0271	1.0373	1.0644	0.0060	0.0027	0.0041	0.0320
	Level 8	18.6min	1.0103	1.0175	1.0262	1.0597	1.0102	1.0175	1.0262	1.0597	1.0147	1.0191	1.0318	1.0943	1.0043	1.0158	1.0201	1.0369	0.0036	0.0015	0.0047	0.0241
	Level 9	37.2min	1.0062	1.0111	1.0193	1.0410	1.0062	1.0111	1.0193	1.0414	1.0081	1.0137	1.0234	1.0634	1.0028	1.0088	1.0147	1.0242	0.0020	0.0021	0.0037	0.0166
	Level 1	4.3sec	1.4990	1.6011	1.6472	2.0719	1.4987	1.6012	1.6471	2.0685	1.5535	1.6230	1.6841	3.0038	1.4473	1.5654	1.6257	1.6881	0.0336	0.0205	0.0204	0.4479
	Level 2	8.6sec	1.2632	1.3446	1.4360	1.9734	1.2632	1.3451	1.4354	1.9875	1.3001	1.3879	1.4728	4.7185	1.2174	1.3035	1.3965	1.4900	0.0306	0.0245	0.0235	0.9293
	Level 3	17.2sec	1.1429	1.2161	1.2960	2.0160	1.1427	1.2163	1.2958	2.0061	1.1746	1.2575	1.3268	7.1206	1.1049	1.1751	1.2601	1.3337	0.0246	0.0247	0.0254	1.7070
60	**Level 4**	34.4sec	1.0852	1.1398	1.1968	1.8972	1.0854	1.1397	1.1971	1.9423	1.1250	1.1592	1.2208	8.0668	1.0541	1.1268	1.1613	1.2253	0.0242	0.0109	0.0184	2.0351
days	**Level 5**	1.1min	1.0497	1.0927	1.1207	1.5687	1.0498	1.0928	1.1206	1.5854	1.0729	1.1066	1.1379	5.1069	1.0265	1.0789	1.1099	1.1419	0.0171	0.0088	0.0112	1.1708
before	**Level 6**	2.3min	1.0293	1.0561	1.0738	1.3362	1.0293	1.0561	1.0739	1.3314	1.0433	1.0652	1.0845	3.1609	1.0134	1.0457	1.0663	1.0855	0.0111	0.0067	0.0058	0.6089
	Level 7	4.6min	1.0174	1.0316	1.0438	1.1908	1.0173	1.0316	1.0438	1.1905	1.0271	1.0369	1.0496	2.1985	1.0073	1.0273	1.0373	1.0513	0.0070	0.0032	0.0044	0.3355
	Level 8	9.2min	1.0101	1.0177	1.0264	1.1005	1.0101	1.0177	1.0264	1.1003	1.0147	1.0201	1.0302	1.5727	1.0043	1.0158	1.0213	1.0318	0.0041	0.0014	0.0031	0.1579
	Level 9	18.3min	1.0059	1.0109	1.0175	1.0553	1.0059	1.0109	1.0175	1.0549	1.0086	1.0137	1.0211	1.2498	1.0028	1.0088	1.0143	1.0214	0.0021	0.0017	0.0023	0.0662
	Level 1	2.6sec	1.4984	1.5979	1.6570	1.9888	1.4984	1.5979	1.6567	1.9898	1.5351	1.6257	1.6942	3.0038	1.4264	1.5535	1.6265	1.6954	0.0334	0.0223	0.0216	0.3914
	Level 2	5.2sec	1.2676	1.3519	1.4345	1.8540	1.2671	1.3517	1.4344	1.8518	1.3107	1.3879	1.4728	4.7185	1.2174	1.3174	1.3965	1.4760	0.0309	0.0223	0.0215	0.7877
	Level 3	10.4sec	1.1509	1.2223	1.2900	1.8128	1.1508	1.2225	1.2900	1.8061	1.1921	1.2575	1.3227	7.1206	1.1049	1.1922	1.2589	1.3265	0.0271	0.0193	0.0226	1.4272
3	**Level 4**	20.9sec	1.0895	1.1457	1.1934	1.7025	1.0894	1.1457	1.1933	1.7354	1.1250	1.1662	1.2184	8.0668	1.0541	1.1268	1.1689	1.2208	0.0229	0.0126	0.0151	1.6921
months	**Level 5**	41.7sec	1.0530	1.0957	1.1226	1.4556	1.0529	1.0958	1.1225	1.4621	1.0789	1.1099	1.1387	5.1069	1.0265	1.0832	1.1099	1.1405	0.0162	0.0081	0.0103	0.9752
before	**Level 6**	1.4min	1.0317	1.0583	1.0759	1.2620	1.0317	1.0583	1.0760	1.2658	1.0457	1.0663	1.0845	3.1609	1.0134	1.0482	1.0668	1.0855	0.0102	0.0060	0.0058	0.5078
	Level 7	2.8min	1.0188	1.0328	1.0456	1.1538	1.0188	1.0329	1.0456	1.1532	1.0273	1.0389	1.0522	2.1985	1.0073	1.0275	1.0395	1.0531	0.0064	0.0035	0.0036	0.2801
	Level 8	5.6min	1.0106	1.0182	1.0267	1.0824	1.0107	1.0182	1.0267	1.0816	1.0149	1.0219	1.0312	1.5727	1.0043	1.0150	1.0219	1.0317	0.0036	0.0021	0.0030	0.1323
	Level 9	11.1min	1.0062	1.0108	1.0170	1.0446	1.0062	1.0108	1.0170	1.0454	1.0081	1.0137	1.0199	1.2498	1.0028	1.0083	1.0140	1.0202	0.0018	0.0017	0.0018	0.0561
	Level 1	1.6sec	1.4830	1.5418	1.5998	1.7795	1.4831	1.5419	1.5997	1.7794	1.5202	1.5660	1.6368	3.0038	1.3987	1.5204	1.5667	1.6373	0.0317	0.0138	0.0214	0.2405
	Level 2	3.3sec	1.2524	1.3166	1.3640	1.5747	1.2525	1.3166	1.3639	1.5747	1.2863	1.3403	1.4064	4.7185	1.1850	1.2878	1.3405	1.4092	0.0264	0.0149	0.0173	0.4281
	Level 3	6.6sec	1.1396	1.1922	1.2321	1.4417	1.1397	1.1921	1.2320	1.4440	1.1686	1.2088	1.2669	7.1206	1.0877	1.1709	1.2090	1.2682	0.0209	0.0118	0.0174	0.7296
1	**Level 4**	13.1sec	1.0826	1.1198	1.1537	1.3464	1.0826	1.1198	1.1538	1.3446	1.1034	1.1345	1.1790	8.0668	1.0436	1.1038	1.1347	1.1805	0.0160	0.0089	0.0132	0.8570
Year	**Level 5**	26.2sec	1.0504	1.0765	1.1005	1.2208	1.0503	1.0765	1.1005	1.2212	1.0654	1.0874	1.1161	5.1069	1.0238	1.0655	1.0876	1.1177	0.0121	0.0066	0.0083	0.4967
before	**Level 6**	52.4sec	1.0308	1.0481	1.0634	1.1313	1.0308	1.0481	1.0634	1.1321	1.0409	1.0547	1.0730	3.1609	1.0134	1.0412	1.0548	1.0734	0.0080	0.0039	0.0056	0.2601
	Level 7	1.7min	1.0186	1.0293	1.0387	1.0774	1.0186	1.0293	1.0387	1.0782	1.0248	1.0334	1.0437	2.1985	1.0072	1.0248	1.0334	1.0437	0.0050	0.0022	0.0033	0.1438
	Level 8	3.5min	1.0110	1.0175	1.0231	1.0447	1.0111	1.0175	1.0231	1.0446	1.0150	1.0200	1.0263	1.5727	1.0039	1.0150	1.0200	1.0266	0.0030	0.0014	0.0019	0.0682
	Level 9	7min	1.0068	1.0110	1.0146	1.0267	1.0068	1.0110	1.0146	1.0267	1.0092	1.0125	1.0169	1.2498	1.0025	1.0093	1.0126	1.0169	0.0018	0.0008	0.0012	0.0296

Table A.51: EDZ0 Other Results Table –Continued

EDZ0 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.7sec	0.5427	0.6124	0.6280	0.6712	0.5427	0.6124	0.6282	0.6712	0.5895	0.6148	0.6452	0.6832	0.3668	0.6097	0.6188	0.6529	0.0869	0.0020	0.0096	0.0137
	Level 2	17.4sec	0.6327	0.7115	0.7513	0.7936	0.6335	0.7116	0.7511	0.7938	0.6847	0.7339	0.7671	0.8166	0.5314	0.6998	0.7374	0.7705	0.0696	0.0151	0.0128	0.0205
	Level 3	34.8sec	0.7249	0.7939	0.8337	0.8812	0.7246	0.7942	0.8337	0.8812	0.7547	0.8143	0.8469	0.9033	0.6671	0.7590	0.8158	0.8574	0.0414	0.0220	0.0141	0.0183
30	**Level 4**	1.2min	0.7768	0.8478	0.8843	0.9289	0.7765	0.8478	0.8843	0.9288	0.8169	0.8691	0.8982	0.9479	0.6881	0.8222	0.8696	0.9108	0.0499	0.0220	0.0102	0.0152
days	**Level 5**	2.3min	0.8170	0.8906	0.9205	0.9549	0.8166	0.8906	0.9204	0.9550	0.8804	0.9054	0.9315	0.9731	0.7235	0.8836	0.9054	0.9425	0.0576	0.0094	0.0092	0.0124
before	**Level 6**	4.6min	0.8538	0.9226	0.9448	0.9699	0.8542	0.9226	0.9451	0.9699	0.9045	0.9297	0.9558	0.9854	0.7912	0.9156	0.9350	0.9606	0.0432	0.0057	0.0082	0.0102
	Level 7	9.3min	0.8831	0.9426	0.9616	0.9783	0.8833	0.9426	0.9614	0.9784	0.9228	0.9480	0.9715	0.9905	0.8355	0.9372	0.9544	0.9722	0.0340	0.0045	0.0071	0.0077
	Level 8	18.6min	0.9017	0.9549	0.9711	0.9832	0.9019	0.9548	0.9712	0.9833	0.9333	0.9617	0.9774	0.9927	0.8492	0.9483	0.9669	0.9782	0.0308	0.0048	0.0047	0.0061
	Level 9	37.2min	0.8979	0.9547	0.9724	0.9847	0.8986	0.9548	0.9724	0.9848	0.9299	0.9638	0.9790	0.9930	0.8352	0.9476	0.9677	0.9804	0.0350	0.0067	0.0041	0.0055
	Level 1	4.3sec	0.4967	0.6056	0.6237	0.6675	0.4967	0.6055	0.6237	0.6679	0.5894	0.6139	0.6380	0.6907	0.3321	0.5895	0.6139	0.6452	0.0947	0.0078	0.0073	0.0150
	Level 2	8.6sec	0.5487	0.6909	0.7415	0.7894	0.5520	0.6908	0.7414	0.7892	0.6722	0.7151	0.7649	0.8187	0.2113	0.6756	0.7175	0.7660	0.1375	0.0133	0.0143	0.0199
	Level 3	17.2sec	0.6252	0.7623	0.8178	0.8740	0.6248	0.7625	0.8178	0.8737	0.7430	0.7910	0.8463	0.9033	0.1396	0.7480	0.7912	0.8469	0.1777	0.0159	0.0172	0.0192
60	**Level 4**	34.4sec	0.6827	0.8268	0.8711	0.9186	0.6835	0.8266	0.8712	0.9189	0.8119	0.8565	0.8838	0.9479	0.1218	0.8130	0.8594	0.8844	0.1993	0.0131	0.0086	0.0220
days	**Level 5**	1.1min	0.7391	0.8808	0.9090	0.9471	0.7362	0.8807	0.9091	0.9473	0.8594	0.8941	0.9222	0.9731	0.1910	0.8653	0.8946	0.9251	0.1914	0.0093	0.0088	0.0183
before	**Level 6**	2.3min	0.7954	0.9169	0.9369	0.9652	0.7927	0.9168	0.9369	0.9656	0.9045	0.9240	0.9463	0.9854	0.3053	0.9073	0.9249	0.9468	0.1685	0.0058	0.0076	0.0125
	Level 7	4.6min	0.8391	0.9416	0.9566	0.9776	0.8382	0.9416	0.9566	0.9775	0.9235	0.9469	0.9647	0.9920	0.4078	0.9341	0.9478	0.9674	0.1468	0.0039	0.0052	0.0085
	Level 8	9.2min	0.8644	0.9566	0.9695	0.9834	0.8629	0.9565	0.9695	0.9835	0.9466	0.9620	0.9744	0.9956	0.4246	0.9483	0.9621	0.9763	0.1483	0.0040	0.0039	0.0069
	Level 9	18.3min	0.8578	0.9593	0.9733	0.9856	0.8567	0.9593	0.9733	0.9856	0.9476	0.9660	0.9774	0.9971	0.3406	0.9510	0.9677	0.9781	0.1741	0.0050	0.0033	0.0066
	Level 1	2.6sec	0.5151	0.6023	0.6256	0.6676	0.5149	0.6023	0.6257	0.6675	0.5861	0.6139	0.6452	0.6973	0.3321	0.5894	0.6139	0.6500	0.0847	0.0092	0.0083	0.0150
	Level 2	5.2sec	0.5787	0.6941	0.7390	0.7869	0.5801	0.6940	0.7390	0.7869	0.6756	0.7166	0.7608	0.8187	0.2113	0.6760	0.7175	0.7649	0.1214	0.0126	0.0127	0.0196
	Level 3	10.4sec	0.6560	0.7689	0.8142	0.8679	0.6553	0.7688	0.8141	0.8680	0.7489	0.7910	0.8334	0.9033	0.1396	0.7501	0.7912	0.8428	0.1532	0.0151	0.0120	0.0200
3	**Level 4**	20.9sec	0.7129	0.8302	0.8663	0.9165	0.7121	0.8301	0.8664	0.9163	0.8130	0.8490	0.8838	0.9479	0.1218	0.8132	0.8524	0.8844	0.1698	0.0116	0.0102	0.0207
months	**Level 5**	41.7sec	0.7649	0.8793	0.9058	0.9454	0.7654	0.8793	0.9058	0.9458	0.8610	0.8896	0.9196	0.9731	0.1910	0.8629	0.8941	0.9222	0.1642	0.0082	0.0077	0.0169
before	**Level 6**	1.4min	0.8203	0.9150	0.9351	0.9637	0.8192	0.9150	0.9352	0.9637	0.9045	0.9235	0.9449	0.9854	0.3053	0.9073	0.9240	0.9463	0.1445	0.0052	0.0069	0.0115
	Level 7	2.8min	0.8615	0.9408	0.9555	0.9763	0.8629	0.9408	0.9556	0.9763	0.9288	0.9464	0.9628	0.9920	0.4078	0.9295	0.9468	0.9647	0.1260	0.0048	0.0055	0.0078
	Level 8	5.6min	0.8866	0.9568	0.9695	0.9830	0.8873	0.9567	0.9695	0.9830	0.9483	0.9621	0.9745	0.9956	0.4246	0.9483	0.9642	0.9763	0.1268	0.0043	0.0035	0.0060
	Level 9	11.1min	0.8867	0.9609	0.9739	0.9851	0.8859	0.9609	0.9739	0.9851	0.9517	0.9677	0.9777	0.9971	0.3406	0.9519	0.9696	0.9781	0.1490	0.0049	0.0027	0.0058
	Level 1	1.6sec	0.5673	0.6239	0.6467	0.6742	0.5673	0.6239	0.6467	0.6742	0.6097	0.6357	0.6568	0.7148	0.3321	0.6111	0.6360	0.6569	0.0573	0.0081	0.0066	0.0146
	Level 2	3.3sec	0.6503	0.7296	0.7569	0.7967	0.6498	0.7296	0.7569	0.7966	0.7053	0.7427	0.7721	0.8439	0.2113	0.7073	0.7430	0.7744	0.0796	0.0097	0.0087	0.0170
	Level 3	6.6sec	0.7258	0.8054	0.8344	0.8743	0.7255	0.8055	0.8345	0.8743	0.7830	0.8197	0.8496	0.9160	0.1396	0.7835	0.8199	0.8499	0.0892	0.0113	0.0089	0.0168
1	**Level 4**	13.1sec	0.7864	0.8586	0.8859	0.9199	0.7863	0.8586	0.8859	0.9198	0.8381	0.8739	0.9007	0.9559	0.1218	0.8392	0.8745	0.9022	0.0962	0.0106	0.0075	0.0144
Year	**Level 5**	26.2sec	0.8367	0.8986	0.9207	0.9472	0.8361	0.8985	0.9207	0.9471	0.8835	0.9111	0.9316	0.9743	0.1910	0.8836	0.9111	0.9316	0.0927	0.0088	0.0060	0.0123
before	**Level 6**	52.4sec	0.8782	0.9284	0.9449	0.9643	0.8782	0.9285	0.9449	0.9643	0.9169	0.9386	0.9530	0.9854	0.3053	0.9170	0.9387	0.9536	0.0817	0.0067	0.0042	0.0091
	Level 7	1.7min	0.9082	0.9492	0.9615	0.9754	0.9081	0.9492	0.9615	0.9754	0.9415	0.9569	0.9668	0.9920	0.4078	0.9415	0.9569	0.9669	0.0756	0.0049	0.0032	0.0068
	Level 8	3.5min	0.9234	0.9620	0.9716	0.9820	0.9239	0.9620	0.9716	0.9820	0.9555	0.9675	0.9756	0.9956	0.4246	0.9557	0.9676	0.9757	0.0850	0.0036	0.0023	0.0052
	Level 9	7min	0.9237	0.9654	0.9747	0.9843	0.9235	0.9654	0.9747	0.9843	0.9586	0.9705	0.9781	0.9971	0.3406	0.9590	0.9705	0.9781	0.1063	0.0034	0.0022	0.0047

Table A.52: EDZ1 Other Results Table

EDZ1	Ask Variance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.8sec	1.5479	1.6325	1.8723	2.4323	1.5472	1.6323	1.8752	2.4340	1.6093	1.6407	2.1166	2.6805	1.4515	1.6094	1.6502	2.2052	0.0580	0.0130	0.1793	0.1851
	Level 2	27.5sec	1.3064	1.3993	1.6207	2.1427	1.3063	1.3997	1.6204	2.1440	1.3614	1.4381	1.8645	2.4122	1.2150	1.3712	1.4445	1.9391	0.0515	0.0277	0.1729	0.2452
	Level 3	55sec	1.1579	1.2372	1.3628	1.8955	1.1580	1.2370	1.3624	1.8917	1.1871	1.2790	1.5414	2.2366	1.1041	1.2007	1.2851	1.5957	0.0310	0.0312	0.1012	0.2390
30	**Level 4**	1.8min	1.0840	1.1256	1.2176	1.6903	1.0839	1.1257	1.2178	1.6905	1.1061	1.1511	1.3624	2.2077	1.0559	1.1116	1.1530	1.3872	0.0182	0.0157	0.0810	0.3139
days	**Level 5**	3.7min	1.0440	1.0733	1.1416	1.5081	1.0441	1.0733	1.1416	1.5136	1.0549	1.0863	1.2234	2.0196	1.0329	1.0563	1.0870	1.2253	0.0080	0.0110	0.0513	0.3030
before	**Level 6**	7.3min	1.0260	1.0499	1.0973	1.3613	1.0260	1.0497	1.0973	1.3666	1.0353	1.0560	1.1351	1.7500	1.0168	1.0355	1.0608	1.1457	0.0061	0.0081	0.0291	0.2321
	Level 7	14.7min	1.0164	1.0347	1.0674	1.2450	1.0164	1.0349	1.0674	1.2461	1.0235	1.0396	1.0858	1.5148	1.0079	1.0245	1.0446	1.0971	0.0050	0.0060	0.0163	0.1614
	Level 8	29.3min	1.0108	1.0237	1.0476	1.1701	1.0108	1.0237	1.0474	1.1713	1.0159	1.0264	1.0581	1.3937	1.0049	1.0169	1.0334	1.0667	0.0035	0.0039	0.0103	0.1293
	Level 9	58.7min	1.0083	1.0186	1.0374	1.1790	1.0082	1.0185	1.0375	1.1784	1.0126	1.0209	1.0468	1.5641	1.0036	1.0136	1.0287	1.0504	0.0029	0.0030	0.0076	0.2169
	Level 1	6.8sec	1.5148	1.6155	1.6786	2.1891	1.5144	1.6155	1.6785	2.1871	1.5795	1.6389	1.7339	2.6805	1.4444	1.5832	1.6407	1.7800	0.0467	0.0198	0.0322	0.2935
	Level 2	13.6sec	1.2887	1.3713	1.4543	1.9364	1.2885	1.3712	1.4546	1.9340	1.3279	1.4075	1.5209	2.4122	1.2150	1.3380	1.4076	1.5665	0.0395	0.0251	0.0389	0.2932
	Level 3	27.2sec	1.1640	1.2212	1.3131	1.6795	1.1644	1.2211	1.3134	1.6773	1.1969	1.2523	1.3622	2.2366	1.1041	1.1991	1.2790	1.4035	0.0278	0.0174	0.0263	0.2705
60	**Level 4**	54.3sec	1.0938	1.1394	1.2105	1.5071	1.0939	1.1394	1.2106	1.5069	1.1178	1.1530	1.2667	2.2077	1.0559	1.1241	1.1551	1.2768	0.0193	0.0098	0.0412	0.2708
days	**Level 5**	1.8min	1.0539	1.0912	1.1489	1.3748	1.0538	1.0913	1.1486	1.3722	1.0764	1.1034	1.1971	2.0196	1.0329	1.0767	1.1051	1.2086	0.0135	0.0073	0.0311	0.2374
before	**Level 6**	3.6min	1.0349	1.0620	1.1012	1.2626	1.0348	1.0619	1.1014	1.2604	1.0520	1.0726	1.1351	1.7500	1.0168	1.0536	1.0749	1.1386	0.0118	0.0067	0.0206	0.1800
	Level 7	7.2min	1.0228	1.0408	1.0669	1.1698	1.0229	1.0408	1.0668	1.1700	1.0349	1.0458	1.0858	1.5148	1.0079	1.0367	1.0512	1.0881	0.0087	0.0033	0.0121	0.1261
	Level 8	14.5min	1.0151	1.0266	1.0445	1.1153	1.0151	1.0266	1.0444	1.1160	1.0240	1.0317	1.0557	1.3937	1.0049	1.0241	1.0334	1.0578	0.0059	0.0022	0.0077	0.0979
	Level 9	29min	1.0113	1.0203	1.0339	1.1110	1.0113	1.0202	1.0339	1.1104	1.0178	1.0251	1.0421	1.5641	1.0036	1.0182	1.0277	1.0436	0.0043	0.0020	0.0047	0.1520
	Level 1	4.2sec	1.5093	1.6085	1.6683	2.0734	1.5091	1.6087	1.6681	2.0752	1.5620	1.6365	1.7194	2.6805	1.4307	1.5675	1.6382	1.7339	0.0437	0.0210	0.0284	0.2985
	Level 2	8.5sec	1.2887	1.3632	1.4390	1.8423	1.2888	1.3632	1.4390	1.8439	1.3293	1.3999	1.4914	2.4122	1.1984	1.3356	1.4005	1.5195	0.0426	0.0205	0.0315	0.2882
	Level 3	17sec	1.1650	1.2195	1.3044	1.6124	1.1648	1.2193	1.3044	1.6121	1.1969	1.2523	1.3540	2.2366	1.1041	1.1991	1.2621	1.3604	0.0287	0.0158	0.0280	0.2548
3	**Level 4**	34sec	1.0970	1.1389	1.2049	1.4544	1.0970	1.1389	1.2047	1.4561	1.1229	1.1530	1.2617	2.2077	1.0559	1.1241	1.1551	1.2667	0.0204	0.0095	0.0380	0.2405
months	**Level 5**	1.1min	1.0588	1.0917	1.1451	1.3316	1.0587	1.0917	1.1449	1.3320	1.0784	1.1034	1.1939	2.0196	1.0329	1.0802	1.1051	1.1944	0.0146	0.0058	0.0293	0.2078
before	**Level 6**	2.3min	1.0383	1.0610	1.0986	1.2287	1.0383	1.0610	1.0986	1.2304	1.0524	1.0726	1.1231	1.7500	1.0168	1.0526	1.0739	1.1239	0.0115	0.0061	0.0183	0.1563
	Level 7	4.5min	1.0241	1.0399	1.0639	1.1480	1.0242	1.0399	1.0639	1.1490	1.0339	1.0458	1.0826	1.5148	1.0079	1.0345	1.0474	1.0827	0.0074	0.0033	0.0104	0.1087
	Level 8	9.1min	1.0152	1.0261	1.0412	1.0993	1.0152	1.0261	1.0411	1.1003	1.0228	1.0315	1.0534	1.3937	1.0049	1.0234	1.0317	1.0542	0.0044	0.0020	0.0063	0.0838
	Level 9	18.1min	1.0111	1.0199	1.0310	1.0914	1.0111	1.0199	1.0311	1.0908	1.0160	1.0244	1.0393	1.5641	1.0036	1.0178	1.0246	1.0396	0.0031	0.0017	0.0043	0.1278
	Level 1	2.6sec	1.4914	1.5672	1.6234	1.8686	1.4914	1.5671	1.6234	1.8670	1.5370	1.5953	1.6601	4.3034	1.4179	1.5372	1.5954	1.6622	0.0323	0.0179	0.0179	0.3736
	Level 2	5.1sec	1.2629	1.3361	1.3934	1.6470	1.2628	1.3361	1.3933	1.6463	1.3094	1.3630	1.4388	3.7849	1.1858	1.3096	1.3636	1.4426	0.0323	0.0149	0.0220	0.3386
	Level 3	10.3sec	1.1502	1.2047	1.2636	1.5532	1.1502	1.2049	1.2635	1.5527	1.1825	1.2285	1.3044	8.5875	1.0845	1.1847	1.2291	1.3060	0.0230	0.0124	0.0232	0.9031
1	**Level 4**	20.5sec	1.0910	1.1319	1.1763	1.4776	1.0910	1.1319	1.1764	1.4831	1.1144	1.1488	1.2128	11.5231	1.0490	1.1162	1.1499	1.2131	0.0155	0.0101	0.0187	1.2743
Year	**Level 5**	41.1sec	1.0579	1.0883	1.1221	1.4030	1.0579	1.0883	1.1220	1.4059	1.0739	1.1014	1.1450	12.3163	1.0298	1.0748	1.1023	1.1469	0.0110	0.0078	0.0129	1.3803
before	**Level 6**	1.4min	1.0380	1.0594	1.0842	1.2869	1.0380	1.0594	1.0842	1.2896	1.0490	1.0713	1.1000	9.3921	1.0168	1.0490	1.0715	1.1005	0.0083	0.0061	0.0093	1.0250
	Level 7	2.7min	1.0246	1.0390	1.0556	1.1887	1.0247	1.0390	1.0555	1.1900	1.0320	1.0462	1.0669	6.5208	1.0079	1.0321	1.0464	1.0673	0.0058	0.0040	0.0063	0.6746
	Level 8	5.5min	1.0160	1.0257	1.0368	1.1376	1.0160	1.0257	1.0368	1.1346	1.0211	1.0304	1.0430	5.1795	1.0049	1.0211	1.0304	1.0437	0.0038	0.0024	0.0040	0.5118
	Level 9	11min	1.0119	1.0195	1.0282	1.1616	1.0119	1.0195	1.0282	1.1611	1.0163	1.0234	1.0337	7.6658	1.0036	1.0163	1.0236	1.0339	0.0028	0.0018	0.0031	0.8221

Table A.52: EDZ1 Other Results Table –Continued

EDZ1 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.4sec	1.5517	1.6330	1.8371	2.3008	1.5516	1.6328	1.8357	2.3047	1.6139	1.6413	1.9771	2.6386	1.4564	1.6159	1.6421	2.0530	0.0598	0.0099	0.1407	0.2336
	Level 2	26.9sec	1.3081	1.3921	1.5986	2.0126	1.3085	1.3919	1.5977	2.0141	1.3616	1.4203	1.8048	2.3319	1.2292	1.3719	1.4320	1.8772	0.0464	0.0218	0.1566	0.1817
	Level 3	53.8sec	1.1586	1.2291	1.3492	1.7897	1.1582	1.2292	1.3482	1.7866	1.1882	1.2599	1.4845	1.9305	1.1101	1.2022	1.2662	1.6071	0.0295	0.0226	0.0890	0.1345
30	**Level 4**	1.8min	1.0841	1.1263	1.2070	1.5562	1.0842	1.1262	1.2054	1.5578	1.1079	1.1516	1.3316	1.6932	1.0554	1.1155	1.1566	1.3848	0.0194	0.0150	0.0722	0.1348
days	**Level 5**	3.6min	1.0441	1.0743	1.1316	1.4008	1.0440	1.0747	1.1314	1.3993	1.0551	1.0856	1.2126	1.5765	1.0318	1.0575	1.0920	1.2245	0.0085	0.0105	0.0485	0.1399
before	**Level 6**	7.2min	1.0258	1.0516	1.0919	1.2867	1.0258	1.0515	1.0917	1.2886	1.0342	1.0585	1.1355	1.4181	1.0167	1.0358	1.0615	1.1423	0.0061	0.0090	0.0292	0.1073
	Level 7	14.3min	1.0166	1.0375	1.0649	1.1969	1.0166	1.0376	1.0649	1.1969	1.0232	1.0420	1.0914	1.2775	1.0079	1.0251	1.0422	1.1046	0.0051	0.0072	0.0180	0.0682
	Level 8	28.7min	1.0116	1.0280	1.0493	1.1432	1.0117	1.0280	1.0493	1.1432	1.0170	1.0327	1.0631	1.1996	1.0050	1.0183	1.0338	1.0824	0.0039	0.0058	0.0120	0.0470
	Level 9	57.3min	1.0099	1.0250	1.0467	1.1289	1.0100	1.0250	1.0466	1.1296	1.0156	1.0291	1.0572	1.1734	1.0040	1.0164	1.0376	1.0708	0.0037	0.0051	0.0084	0.0410
	Level 1	6.7sec	1.5164	1.6113	1.6728	2.1176	1.5165	1.6112	1.6730	2.1189	1.5806	1.6361	1.7357	2.6386	1.4453	1.5820	1.6379	1.7604	0.0443	0.0182	0.0375	0.2792
	Level 2	13.4sec	1.2884	1.3589	1.4421	1.8741	1.2887	1.3592	1.4420	1.8729	1.3309	1.3999	1.5201	2.3319	1.2292	1.3311	1.4007	1.5368	0.0333	0.0227	0.0368	0.2454
	Level 3	26.8sec	1.1629	1.2178	1.2884	1.6248	1.1631	1.2183	1.2886	1.6260	1.1960	1.2398	1.3361	1.9305	1.1101	1.1970	1.2499	1.3862	0.0243	0.0157	0.0249	0.2070
60	**Level 4**	53.6sec	1.0945	1.1362	1.1916	1.4377	1.0943	1.1362	1.1919	1.4396	1.1162	1.1566	1.2539	1.6932	1.0554	1.1168	1.1570	1.2541	0.0193	0.0128	0.0348	0.1552
days	**Level 5**	1.8min	1.0542	1.0890	1.1323	1.3203	1.0542	1.0890	1.1325	1.3180	1.0767	1.1038	1.1813	1.5765	1.0318	1.0770	1.1048	1.1852	0.0143	0.0087	0.0280	0.1263
before	**Level 6**	3.6min	1.0348	1.0607	1.0920	1.2278	1.0348	1.0606	1.0923	1.2276	1.0535	1.0697	1.1200	1.4181	1.0167	1.0539	1.0720	1.1324	0.0120	0.0056	0.0181	0.0958
	Level 7	7.1min	1.0234	1.0417	1.0637	1.1542	1.0234	1.0418	1.0638	1.1537	1.0371	1.0476	1.0813	1.2775	1.0079	1.0374	1.0481	1.0850	0.0091	0.0027	0.0109	0.0639
	Level 8	14.3min	1.0167	1.0302	1.0458	1.1095	1.0167	1.0302	1.0458	1.1090	1.0260	1.0338	1.0584	1.1996	1.0050	1.0274	1.0369	1.0611	0.0067	0.0020	0.0078	0.0465
	Level 9	28.6min	1.0144	1.0266	1.0408	1.0950	1.0144	1.0266	1.0408	1.0947	1.0228	1.0333	1.0504	1.1734	1.0040	1.0236	1.0339	1.0511	0.0060	0.0031	0.0062	0.0434
	Level 1	4.2sec	1.5089	1.6051	1.6678	2.0249	1.5086	1.6048	1.6676	2.0274	1.5655	1.6326	1.7357	2.6386	1.4318	1.5696	1.6350	1.7382	0.0413	0.0205	0.0338	0.2716
	Level 2	8.4sec	1.2857	1.3574	1.4310	1.7982	1.2859	1.3577	1.4314	1.7966	1.3309	1.3918	1.4926	2.3319	1.2004	1.3311	1.3997	1.5034	0.0375	0.0198	0.0261	0.2421
	Level 3	16.8sec	1.1632	1.2150	1.2884	1.5697	1.1632	1.2150	1.2879	1.5713	1.1960	1.2398	1.3361	1.9305	1.1067	1.1963	1.2499	1.3520	0.0260	0.0152	0.0247	0.2000
3	**Level 4**	33.5sec	1.0961	1.1346	1.1912	1.4038	1.0964	1.1347	1.1909	1.4052	1.1175	1.1524	1.2539	1.6932	1.0554	1.1189	1.1566	1.2541	0.0198	0.0108	0.0323	0.1459
months	**Level 5**	1.1min	1.0581	1.0892	1.1323	1.2895	1.0582	1.0892	1.1323	1.2915	1.0770	1.1026	1.1787	1.5765	1.0318	1.0791	1.1038	1.1813	0.0145	0.0066	0.0265	0.1166
before	**Level 6**	2.2min	1.0377	1.0601	1.0913	1.2051	1.0377	1.0601	1.0914	1.2040	1.0535	1.0697	1.1192	1.4181	1.0167	1.0538	1.0720	1.1200	0.0112	0.0051	0.0162	0.0892
	Level 7	4.5min	1.0248	1.0410	1.0616	1.1373	1.0247	1.0410	1.0617	1.1371	1.0341	1.0476	1.0778	1.2775	1.0079	1.0344	1.0481	1.0804	0.0077	0.0031	0.0091	0.0596
	Level 8	8.9min	1.0169	1.0294	1.0428	1.0971	1.0170	1.0294	1.0429	1.0967	1.0252	1.0329	1.0549	1.1996	1.0050	1.0254	1.0338	1.0552	0.0055	0.0023	0.0063	0.0432
	Level 9	17.9min	1.0141	1.0256	1.0373	1.0832	1.0142	1.0256	1.0373	1.0832	1.0214	1.0291	1.0474	1.1734	1.0040	1.0228	1.0294	1.0500	0.0047	0.0022	0.0048	0.0399
	Level 1	2.5sec	1.4907	1.5677	1.6228	1.8367	1.4907	1.5677	1.6228	1.8370	1.5346	1.5953	1.6557	3.3871	1.4304	1.5350	1.5955	1.6611	0.0312	0.0191	0.0159	0.2734
	Level 2	5.1sec	1.2615	1.3340	1.3881	1.6581	1.2616	1.3339	1.3882	1.6561	1.3031	1.3580	1.4320	5.6747	1.1836	1.3057	1.3582	1.4334	0.0301	0.0138	0.0221	0.5379
	Level 3	10.2sec	1.1485	1.2003	1.2542	1.6256	1.1485	1.2003	1.2541	1.6232	1.1786	1.2206	1.2885	14.5195	1.0820	1.1790	1.2232	1.2910	0.0232	0.0116	0.0196	1.6315
1	**Level 4**	20.4sec	1.0893	1.1273	1.1662	1.7716	1.0893	1.1272	1.1663	1.7672	1.1114	1.1435	1.1964	31.6638	1.0460	1.1116	1.1438	1.1971	0.0159	0.0095	0.0137	3.7678
Year	**Level 5**	40.8sec	1.0558	1.0852	1.1132	1.9926	1.0559	1.0852	1.1132	1.9986	1.0721	1.0981	1.1368	52.2299	1.0276	1.0741	1.0986	1.1369	0.0106	0.0074	0.0105	6.3284
before	**Level 6**	1.4min	1.0365	1.0574	1.0792	2.0852	1.0365	1.0575	1.0792	2.0788	1.0470	1.0673	1.0949	61.5203	1.0167	1.0472	1.0677	1.0949	0.0077	0.0057	0.0085	7.4883
	Level 7	2.7min	1.0243	1.0386	1.0550	1.8092	1.0243	1.0386	1.0550	1.7669	1.0312	1.0441	1.0656	44.1782	1.0079	1.0315	1.0454	1.0658	0.0055	0.0038	0.0062	5.3429
	Level 8	5.4min	1.0170	1.0275	1.0392	1.6779	1.0170	1.0275	1.0392	1.6859	1.0226	1.0327	1.0465	40.6390	1.0050	1.0227	1.0327	1.0468	0.0041	0.0029	0.0044	4.9072
	Level 9	10.9min	1.0142	1.0236	1.0334	2.1288	1.0142	1.0236	1.0334	2.1173	1.0188	1.0280	1.0411	68.9526	1.0040	1.0189	1.0282	1.0412	0.0035	0.0027	0.0037	8.4196

Table A.52: EDZ1 Other Results Table –Continued

EDZ1 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.6sec	1.5472	1.6278	1.8561	2.3605	1.5476	1.6277	1.8563	2.3576	1.6091	1.6396	2.0817	2.6574	1.4529	1.6118	1.6459	2.1786	0.0575	0.0138	0.1648	0.1936
	Level 2	27.2sec	1.3066	1.3885	1.6058	2.0687	1.3066	1.3879	1.6059	2.0683	1.3605	1.4179	1.8322	2.3665	1.2207	1.3692	1.4313	1.9425	0.0490	0.0231	0.1659	0.1842
	Level 3	54.4sec	1.1573	1.2230	1.3506	1.8247	1.1571	1.2231	1.3513	1.8230	1.1866	1.2544	1.5082	1.9823	1.1056	1.2002	1.2663	1.5938	0.0303	0.0226	0.0941	0.1588
30	**Level 4**	1.8min	1.0825	1.1215	1.2024	1.5968	1.0826	1.1215	1.2010	1.5969	1.1052	1.1353	1.3398	1.9028	1.0537	1.1112	1.1429	1.3753	0.0188	0.0098	0.0785	0.2052
days	**Level 5**	3.6min	1.0421	1.0685	1.1238	1.4288	1.0422	1.0685	1.1242	1.4255	1.0507	1.0831	1.2062	1.7449	1.0299	1.0545	1.0846	1.2132	0.0080	0.0106	0.0490	0.2030
before	**Level 6**	7.3min	1.0235	1.0432	1.0820	1.2892	1.0235	1.0430	1.0819	1.2926	1.0297	1.0502	1.1236	1.5197	1.0163	1.0329	1.0571	1.1256	0.0050	0.0077	0.0269	0.1482
	Level 7	14.5min	1.0137	1.0281	1.0523	1.1755	1.0137	1.0280	1.0523	1.1765	1.0182	1.0327	1.0743	1.3106	1.0073	1.0211	1.0354	1.0774	0.0038	0.0051	0.0146	0.0868
	Level 8	29min	1.0080	1.0172	1.0325	1.1042	1.0080	1.0172	1.0324	1.1037	1.0110	1.0200	1.0434	1.1831	1.0042	1.0129	1.0200	1.0491	0.0023	0.0031	0.0087	0.0503
	Level 9	58min	1.0049	1.0109	1.0210	1.0659	1.0049	1.0109	1.0209	1.0660	1.0070	1.0125	1.0289	1.1153	1.0027	1.0083	1.0127	1.0323	0.0015	0.0016	0.0061	0.0321
	Level 1	6.7sec	1.5142	1.6086	1.6726	2.1487	1.5139	1.6084	1.6729	2.1467	1.5738	1.6351	1.7348	2.6574	1.4413	1.5808	1.6384	1.7680	0.0454	0.0158	0.0346	0.2759
	Level 2	13.5sec	1.2856	1.3590	1.4380	1.8946	1.2859	1.3590	1.4382	1.8915	1.3262	1.3922	1.5205	2.3665	1.2207	1.3288	1.3943	1.5280	0.0365	0.0195	0.0396	0.2580
	Level 3	27sec	1.1598	1.2136	1.2861	1.6314	1.1600	1.2136	1.2864	1.6298	1.1866	1.2389	1.3258	1.9823	1.1056	1.1946	1.2544	1.3700	0.0238	0.0149	0.0234	0.2286
60	**Level 4**	54sec	1.0911	1.1296	1.1836	1.4444	1.0911	1.1296	1.1827	1.4438	1.1112	1.1410	1.2383	1.9028	1.0537	1.1141	1.1429	1.2433	0.0179	0.0097	0.0329	0.2016
days	**Level 5**	1.8min	1.0503	1.0811	1.1225	1.3152	1.0504	1.0812	1.1225	1.3133	1.0683	1.0900	1.1622	1.7449	1.0299	1.0699	1.0952	1.1692	0.0115	0.0071	0.0237	0.1702
before	**Level 6**	3.6min	1.0304	1.0522	1.0818	1.2121	1.0303	1.0522	1.0816	1.2115	1.0446	1.0620	1.1071	1.5197	1.0163	1.0451	1.0640	1.1076	0.0090	0.0062	0.0160	0.1236
	Level 7	7.2min	1.0182	1.0323	1.0510	1.1280	1.0182	1.0323	1.0511	1.1271	1.0258	1.0374	1.0650	1.3106	1.0073	1.0274	1.0393	1.0654	0.0060	0.0033	0.0092	0.0736
	Level 8	14.4min	1.0105	1.0187	1.0300	1.0743	1.0105	1.0187	1.0300	1.0748	1.0140	1.0210	1.0389	1.1831	1.0042	1.0149	1.0223	1.0389	0.0034	0.0019	0.0055	0.0429
	Level 9	28.8min	1.0062	1.0114	1.0184	1.0480	1.0062	1.0114	1.0184	1.0482	1.0084	1.0127	1.0262	1.1153	1.0027	1.0088	1.0130	1.0264	0.0019	0.0011	0.0037	0.0268
	Level 1	4.2sec	1.5081	1.6029	1.6648	2.0432	1.5077	1.6029	1.6647	2.0465	1.5656	1.6300	1.7262	2.6574	1.4310	1.5681	1.6351	1.7348	0.0428	0.0188	0.0302	0.2766
	Level 2	8.4sec	1.2845	1.3561	1.4256	1.8090	1.2843	1.3561	1.4256	1.8103	1.3262	1.3795	1.4921	2.3665	1.1984	1.3280	1.3922	1.5008	0.0397	0.0173	0.0283	0.2559
	Level 3	16.9sec	1.1598	1.2116	1.2837	1.5754	1.1599	1.2115	1.2837	1.5733	1.1866	1.2389	1.3258	1.9823	1.1050	1.1944	1.2544	1.3393	0.0255	0.0140	0.0237	0.2181
3	**Level 4**	33.7sec	1.0935	1.1286	1.1822	1.4038	1.0934	1.1287	1.1821	1.4047	1.1141	1.1410	1.2383	1.9028	1.0537	1.1147	1.1429	1.2433	0.0189	0.0087	0.0308	0.1824
months	**Level 5**	1.1min	1.0545	1.0818	1.1228	1.2822	1.0544	1.0818	1.1228	1.2825	1.0728	1.0900	1.1622	1.7449	1.0299	1.0729	1.0952	1.1662	0.0125	0.0058	0.0228	0.1514
before	**Level 6**	2.2min	1.0330	1.0520	1.0811	1.1867	1.0331	1.0520	1.0810	1.1876	1.0446	1.0620	1.1032	1.5197	1.0163	1.0451	1.0640	1.1042	0.0087	0.0054	0.0137	0.1096
	Level 7	4.5min	1.0195	1.0318	1.0497	1.1127	1.0196	1.0318	1.0498	1.1125	1.0264	1.0374	1.0616	1.3106	1.0073	1.0273	1.0393	1.0618	0.0054	0.0032	0.0075	0.0653
	Level 8	9min	1.0110	1.0183	1.0284	1.0659	1.0110	1.0183	1.0284	1.0660	1.0144	1.0210	1.0348	1.1831	1.0042	1.0149	1.0223	1.0359	0.0029	0.0019	0.0041	0.0381
	Level 9	18min	1.0064	1.0110	1.0172	1.0418	1.0064	1.0111	1.0172	1.0419	1.0085	1.0130	1.0219	1.1153	1.0027	1.0088	1.0133	1.0219	0.0017	0.0013	0.0023	0.0242
	Level 1	2.6sec	1.4881	1.5639	1.6184	1.8349	1.4881	1.5638	1.6184	1.8353	1.5298	1.5891	1.6540	3.3214	1.4222	1.5307	1.5900	1.6547	0.0309	0.0185	0.0168	0.2741
	Level 2	5.1sec	1.2576	1.3270	1.3805	1.5825	1.2576	1.3270	1.3805	1.5809	1.2985	1.3528	1.4184	2.3665	1.1834	1.2996	1.3530	1.4188	0.0300	0.0139	0.0203	0.1920
	Level 3	10.2sec	1.1304	1.1935	1.2436	1.4042	1.1302	1.1936	1.2437	1.4041	1.1731	1.2142	1.2769	1.9823	0.2822	1.1731	1.2144	1.2776	0.1090	0.0114	0.0193	0.1585
1	**Level 4**	20.5sec	1.0848	1.1193	1.1554	1.3999	1.0847	1.1193	1.1554	1.4005	1.1058	1.1353	1.1819	8.9312	1.0449	1.1066	1.1353	1.1855	0.0147	0.0090	0.0131	0.9570
Year	**Level 5**	40.9sec	1.0513	1.0764	1.1011	1.3932	1.0513	1.0764	1.1011	1.3948	1.0638	1.0880	1.1237	14.2266	1.0257	1.0639	1.0881	1.1239	0.0094	0.0071	0.0093	1.6194
before	**Level 6**	1.4min	1.0316	1.0481	1.0665	1.3024	1.0316	1.0481	1.0664	1.2992	1.0401	1.0569	1.0793	12.2728	1.0149	1.0401	1.0571	1.0795	0.0066	0.0048	0.0064	1.3841
	Level 7	2.7min	1.0189	1.0293	1.0412	1.1656	1.0189	1.0293	1.0412	1.1649	1.0244	1.0345	1.0489	6.7071	1.0073	1.0247	1.0347	1.0489	0.0042	0.0028	0.0045	0.6994
	Level 8	5.5min	1.0110	1.0172	1.0243	1.1054	1.0110	1.0172	1.0243	1.1038	1.0143	1.0202	1.0293	4.7526	1.0042	1.0144	1.0204	1.0296	0.0025	0.0017	0.0027	0.4603
	Level 9	10.9min	1.0066	1.0108	1.0154	1.0881	1.0066	1.0108	1.0155	1.0859	1.0088	1.0127	1.0186	4.6642	1.0027	1.0089	1.0127	1.0188	0.0016	0.0012	0.0017	0.4510

Table A.52: EDZ1 Other Results Table –Continued

EDZ1 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.6sec	0.4486	0.5555	0.6137	0.6507	0.4488	0.5558	0.6137	0.6505	0.5058	0.6090	0.6196	0.6866	0.3790	0.5119	0.6093	0.6212	0.0475	0.0420	0.0044	0.0246
	Level 2	27.2sec	0.5084	0.6455	0.7213	0.7718	0.5085	0.6462	0.7212	0.7712	0.5541	0.6983	0.7344	0.8135	0.4288	0.5718	0.7041	0.7493	0.0428	0.0535	0.0119	0.0262
	Level 3	54.4sec	0.5822	0.7588	0.8186	0.8684	0.5808	0.7584	0.8184	0.8683	0.6736	0.7898	0.8416	0.9008	0.5180	0.6966	0.7937	0.8458	0.0595	0.0358	0.0175	0.0218
30	**Level 4**	1.8min	0.6620	0.8480	0.8905	0.9270	0.6634	0.8481	0.8905	0.9266	0.7510	0.8646	0.9026	0.9475	0.5906	0.7975	0.8684	0.9091	0.0668	0.0286	0.0120	0.0149
days	**Level 5**	3.6min	0.7385	0.8972	0.9333	0.9600	0.7378	0.8973	0.9334	0.9599	0.8247	0.9157	0.9478	0.9691	0.6343	0.8553	0.9211	0.9505	0.0775	0.0242	0.0108	0.0068
before	**Level 6**	7.3min	0.7971	0.9238	0.9537	0.9765	0.7971	0.9237	0.9537	0.9765	0.8806	0.9421	0.9669	0.9836	0.7052	0.8935	0.9448	0.9716	0.0722	0.0185	0.0098	0.0047
	Level 7	14.5min	0.8498	0.9437	0.9661	0.9850	0.8508	0.9439	0.9661	0.9850	0.9162	0.9595	0.9774	0.9922	0.7828	0.9256	0.9597	0.9818	0.0539	0.0123	0.0082	0.0042
	Level 8	29min	0.8862	0.9554	0.9745	0.9896	0.8867	0.9556	0.9745	0.9895	0.9407	0.9673	0.9832	0.9950	0.8336	0.9424	0.9683	0.9873	0.0419	0.0102	0.0065	0.0032
	Level 9	58min	0.8971	0.9574	0.9771	0.9912	0.8962	0.9575	0.9771	0.9912	0.9459	0.9637	0.9847	0.9960	0.8523	0.9484	0.9718	0.9893	0.0380	0.0067	0.0057	0.0028
	Level 1	6.7sec	0.4788	0.5983	0.6206	0.6598	0.4792	0.5980	0.6207	0.6600	0.5681	0.6105	0.6321	0.6919	0.3790	0.5761	0.6112	0.6327	0.0612	0.0132	0.0070	0.0195
	Level 2	13.5sec	0.5419	0.6938	0.7361	0.7764	0.5421	0.6939	0.7359	0.7765	0.6507	0.7139	0.7513	0.8135	0.4288	0.6579	0.7143	0.7514	0.0691	0.0173	0.0122	0.0203
	Level 3	27sec	0.6244	0.7763	0.8209	0.8602	0.6240	0.7763	0.8210	0.8601	0.7214	0.8001	0.8354	0.9008	0.5180	0.7484	0.8066	0.8361	0.0781	0.0150	0.0106	0.0182
60	**Level 4**	54sec	0.7030	0.8393	0.8802	0.9140	0.7017	0.8396	0.8802	0.9141	0.7974	0.8643	0.8954	0.9475	0.5906	0.7975	0.8646	0.8959	0.0727	0.0241	0.0099	0.0163
days	**Level 5**	1.8min	0.7650	0.8837	0.9184	0.9488	0.7647	0.8835	0.9183	0.9488	0.8438	0.9051	0.9285	0.9691	0.6343	0.8465	0.9060	0.9288	0.0686	0.0216	0.0073	0.0128
before	**Level 6**	3.6min	0.8183	0.9157	0.9428	0.9666	0.8189	0.9157	0.9429	0.9665	0.8831	0.9328	0.9489	0.9836	0.7052	0.8928	0.9348	0.9492	0.0610	0.0151	0.0050	0.0112
	Level 7	7.2min	0.8690	0.9401	0.9599	0.9771	0.8691	0.9401	0.9599	0.9772	0.9216	0.9541	0.9640	0.9922	0.7828	0.9248	0.9546	0.9642	0.0466	0.0096	0.0025	0.0087
	Level 8	14.4min	0.9032	0.9562	0.9707	0.9836	0.9032	0.9563	0.9707	0.9836	0.9424	0.9644	0.9733	0.9950	0.8336	0.9448	0.9673	0.9747	0.0368	0.0071	0.0019	0.0065
	Level 9	28.8min	0.9146	0.9609	0.9741	0.9858	0.9147	0.9608	0.9741	0.9859	0.9514	0.9672	0.9770	0.9960	0.8523	0.9520	0.9678	0.9777	0.0353	0.0057	0.0029	0.0058
	Level 1	4.2sec	0.5012	0.6006	0.6240	0.6634	0.5009	0.6006	0.6239	0.6633	0.5753	0.6125	0.6371	0.6984	0.3790	0.5761	0.6135	0.6388	0.0616	0.0120	0.0078	0.0185
	Level 2	8.4sec	0.5664	0.7000	0.7378	0.7781	0.5656	0.7000	0.7378	0.7783	0.6652	0.7185	0.7513	0.8331	0.4288	0.6700	0.7221	0.7514	0.0715	0.0131	0.0100	0.0232
	Level 3	16.9sec	0.6451	0.7784	0.8243	0.8601	0.6457	0.7785	0.8242	0.8601	0.7396	0.8066	0.8359	0.9036	0.5180	0.7484	0.8102	0.8361	0.0780	0.0160	0.0097	0.0197
3	**Level 4**	33.7sec	0.7186	0.8418	0.8822	0.9124	0.7184	0.8419	0.8822	0.9124	0.7974	0.8678	0.8938	0.9475	0.5906	0.7975	0.8684	0.8949	0.0698	0.0228	0.0078	0.0167
months	**Level 5**	1.1min	0.7803	0.8847	0.9189	0.9452	0.7798	0.8850	0.9189	0.9452	0.8465	0.9069	0.9267	0.9691	0.6343	0.8484	0.9101	0.9285	0.0646	0.0206	0.0049	0.0130
before	**Level 6**	2.2min	0.8344	0.9174	0.9439	0.9638	0.8346	0.9175	0.9439	0.9638	0.8928	0.9348	0.9490	0.9836	0.7052	0.8935	0.9365	0.9492	0.0578	0.0138	0.0041	0.0104
	Level 7	4.5min	0.8816	0.9428	0.9610	0.9759	0.8816	0.9427	0.9610	0.9759	0.9256	0.9546	0.9668	0.9922	0.7828	0.9278	0.9579	0.9670	0.0439	0.0084	0.0025	0.0074
	Level 8	9min	0.9128	0.9595	0.9717	0.9833	0.9131	0.9595	0.9717	0.9833	0.9476	0.9681	0.9752	0.9950	0.8336	0.9479	0.9683	0.9755	0.0345	0.0060	0.0020	0.0053
	Level 9	18min	0.9244	0.9645	0.9752	0.9860	0.9244	0.9645	0.9753	0.9860	0.9524	0.9717	0.9778	0.9960	0.8523	0.9548	0.9718	0.9791	0.0326	0.0047	0.0020	0.0046
	Level 1	2.6sec	0.5527	0.6164	0.6382	0.6712	0.5526	0.6164	0.6382	0.6711	0.6020	0.6269	0.6515	0.6991	0.2952	0.6040	0.6271	0.6516	0.0579	0.0061	0.0077	0.0141
	Level 2	5.1sec	0.6269	0.7208	0.7499	0.7931	0.6274	0.7208	0.7500	0.7931	0.6976	0.7364	0.7659	0.8449	0.1762	0.6983	0.7368	0.7674	0.0831	0.0115	0.0076	0.0192
	Level 3	10.2sec	0.7008	0.7979	0.8335	0.8712	0.7003	0.7979	0.8334	0.8711	0.7746	0.8193	0.8482	0.9242	0.0689	0.7761	0.8193	0.8484	0.1024	0.0126	0.0079	0.0178
1	**Level 4**	20.5sec	0.7624	0.8578	0.8874	0.9182	0.7628	0.8578	0.8874	0.9183	0.8354	0.8745	0.8996	0.9560	0.0316	0.8358	0.8750	0.8998	0.1092	0.0102	0.0073	0.0135
Year	**Level 5**	40.9sec	0.8150	0.8986	0.9217	0.9472	0.8151	0.8986	0.9217	0.9472	0.8796	0.9107	0.9310	0.9731	0.0191	0.8797	0.9109	0.9327	0.1129	0.0085	0.0062	0.0095
before	**Level 6**	1.4min	0.8592	0.9269	0.9458	0.9648	0.8589	0.9268	0.9458	0.9648	0.9133	0.9369	0.9550	0.9836	0.0163	0.9133	0.9370	0.9551	0.1153	0.0073	0.0050	0.0072
	Level 7	2.7min	0.8944	0.9481	0.9629	0.9763	0.8935	0.9481	0.9629	0.9763	0.9382	0.9578	0.9695	0.9922	0.0226	0.9385	0.9578	0.9697	0.1151	0.0056	0.0035	0.0053
	Level 8	5.5min	0.9159	0.9624	0.9734	0.9833	0.9154	0.9624	0.9734	0.9833	0.9553	0.9683	0.9778	0.9950	0.0246	0.9555	0.9687	0.9779	0.1162	0.0041	0.0027	0.0039
	Level 9	10.9min	0.9197	0.9677	0.9770	0.9860	0.9196	0.9678	0.9770	0.9860	0.9605	0.9728	0.9814	0.9960	0.0145	0.9606	0.9728	0.9815	0.1201	0.0035	0.0025	0.0034

Table A.53: EDZ2 Other Results Table

EDZ2	Ask Variance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	16.5sec	1.4439	1.7348	1.9793	3.5722	1.4445	1.7410	1.9792	3.5679	1.5397	1.9023	1.9892	5.0000	1.3493	1.5796	1.9691	2.1359	0.1346	0.2282	0.0142	2.0252
	Level 2	32.9sec	1.3974	1.5276	1.6826	7.6981	1.3971	1.5277	1.6826	7.5526	1.4234	1.5849	1.7072	12.9427	1.3708	1.4705	1.6579	2.1625	0.0372	0.0809	0.0349	7.6227
	Level 3	1.1min	1.2977	1.4122	1.4993	6.3008	1.2979	1.4120	1.4981	6.2150	1.3329	1.4481	1.5396	10.5037	1.2630	1.3758	1.4565	1.9264	0.0494	0.0511	0.0588	6.0650
30	**Level 4**	2.2min	1.1762	1.2544	1.3571	4.4725	1.1767	1.2542	1.3555	4.5544	1.1889	1.2881	1.3941	7.4782	1.1644	1.2202	1.3170	1.6306	0.0173	0.0480	0.0545	4.1349
days	**Level 5**	4.4min	1.1036	1.1581	1.2197	3.0927	1.1033	1.1595	1.2197	3.0670	1.1194	1.1995	1.2241	4.6701	1.0871	1.1194	1.2153	1.4639	0.0228	0.0566	0.0062	2.2671
before	**Level 6**	8.8min	1.0601	1.0929	1.1382	2.3854	1.0600	1.0924	1.1382	2.4152	1.0635	1.1176	1.1437	3.4776	1.0566	1.0672	1.1327	1.3528	0.0049	0.0356	0.0077	1.5024
	Level 7	17.6min	1.0375	1.0555	1.0856	2.2188	1.0375	1.0556	1.0854	2.1893	1.0391	1.0682	1.0903	3.1117	1.0358	1.0430	1.0806	1.2668	0.0023	0.0178	0.0068	1.3045
	Level 8	35.1min	1.0231	1.0364	1.0534	1.8725	1.0232	1.0368	1.0536	1.8654	1.0238	1.0476	1.0578	2.5061	1.0225	1.0261	1.0494	1.2247	0.0009	0.0152	0.0059	0.9061
	Level 9	70.3min	1.0173	1.0260	1.0455	1.9507	1.0173	1.0259	1.0455	1.9323	1.0175	1.0329	1.0551	2.4596	1.0172	1.0190	1.0360	1.4050	0.0003	0.0098	0.0135	0.7457
	Level 1	7.5sec	1.4734	1.6116	1.8797	2.8216	1.4734	1.6118	1.8810	2.8239	1.5448	1.6709	1.9691	5.0000	1.3493	1.5796	1.7858	1.9864	0.0764	0.0332	0.0670	1.0875
	Level 2	15sec	1.2747	1.4577	1.6240	3.9565	1.2745	1.4587	1.6235	3.9650	1.3440	1.4937	1.7266	12.9427	1.1945	1.3708	1.5198	1.7805	0.0556	0.0454	0.0766	4.0363
	Level 3	29.9sec	1.1679	1.2810	1.4506	3.3142	1.1680	1.2815	1.4504	3.2942	1.2218	1.3329	1.5396	10.5037	1.1198	1.2406	1.3758	1.6051	0.0444	0.0399	0.0478	3.2328
60	**Level 4**	59.8sec	1.0974	1.1643	1.2965	2.6622	1.0970	1.1645	1.2958	2.6588	1.1241	1.2202	1.3380	7.4782	1.0625	1.1258	1.2323	1.3941	0.0266	0.0349	0.0394	2.2389
days	**Level 5**	2min	1.0504	1.1039	1.1812	2.0715	1.0503	1.1040	1.1819	2.0768	1.0637	1.1194	1.2241	4.6701	1.0313	1.0810	1.1313	1.2282	0.0129	0.0151	0.0372	1.3153
before	**Level 6**	4min	1.0267	1.0613	1.1122	1.7236	1.0267	1.0614	1.1124	1.7068	1.0329	1.0713	1.1341	3.4776	1.0159	1.0517	1.0807	1.1437	0.0069	0.0075	0.0215	0.8561
	Level 7	8min	1.0150	1.0353	1.0741	1.5370	1.0151	1.0353	1.0741	1.5378	1.0214	1.0430	1.0968	3.1117	1.0086	1.0273	1.0508	1.1213	0.0042	0.0051	0.0173	0.7241
	Level 8	16min	1.0099	1.0216	1.0520	1.4054	1.0098	1.0215	1.0520	1.4120	1.0144	1.0261	1.0828	2.5061	1.0066	1.0149	1.0332	1.1041	0.0028	0.0038	0.0154	0.5032
	Level 9	31.9min	1.0077	1.0170	1.0430	1.4453	1.0078	1.0171	1.0428	1.4466	1.0116	1.0208	1.0724	2.4596	1.0052	1.0119	1.0208	1.0882	0.0024	0.0035	0.0167	0.4776
	Level 1	4.5sec	1.4611	1.5762	1.7377	2.4470	1.4611	1.5762	1.7380	2.4582	1.5291	1.6207	1.8835	5.0000	1.3493	1.5364	1.6250	1.8945	0.0527	0.0274	0.0750	0.9223
	Level 2	9sec	1.2611	1.3838	1.5151	3.0299	1.2608	1.3836	1.5152	3.0353	1.3170	1.4500	1.6018	12.9427	1.1945	1.3251	1.4700	1.6068	0.0394	0.0449	0.0468	3.1959
	Level 3	18sec	1.1581	1.2455	1.3619	2.5719	1.1584	1.2459	1.3624	2.5787	1.1959	1.2793	1.4462	10.5037	1.1198	1.1985	1.2965	1.4481	0.0292	0.0247	0.0550	2.5476
3	**Level 4**	36sec	1.0967	1.1419	1.2420	2.1720	1.0969	1.1419	1.2423	2.1596	1.1235	1.1811	1.3002	7.4782	1.0625	1.1241	1.1889	1.3170	0.0205	0.0183	0.0345	1.7684
months	**Level 5**	1.2min	1.0568	1.0908	1.1511	1.7453	1.0569	1.0908	1.1513	1.7569	1.0756	1.1128	1.1995	4.6701	1.0313	1.0774	1.1194	1.1997	0.0132	0.0122	0.0256	1.0518
before	**Level 6**	2.4min	1.0322	1.0567	1.0949	1.4951	1.0320	1.0567	1.0949	1.4899	1.0461	1.0659	1.1199	3.4776	1.0159	1.0498	1.0672	1.1229	0.0090	0.0053	0.0182	0.6883
	Level 7	4.8min	1.0185	1.0341	1.0601	1.3603	1.0185	1.0340	1.0601	1.3642	1.0289	1.0391	1.0780	3.1117	1.0086	1.0300	1.0427	1.0806	0.0059	0.0031	0.0135	0.5769
	Level 8	9.6min	1.0116	1.0219	1.0400	1.2745	1.0116	1.0219	1.0399	1.2742	1.0168	1.0250	1.0512	2.5061	1.0066	1.0172	1.0261	1.0550	0.0034	0.0024	0.0091	0.4092
	Level 9	19.2min	1.0092	1.0169	1.0317	1.2850	1.0092	1.0169	1.0318	1.2904	1.0127	1.0192	1.0442	2.4596	1.0052	1.0128	1.0202	1.0531	0.0026	0.0021	0.0079	0.4024
	Level 1	3sec	1.4827	1.5701	1.6452	1.9292	1.4829	1.5703	1.6454	1.9289	1.5388	1.6010	1.7069	5.0000	1.3493	1.5395	1.6036	1.7079	0.0400	0.0191	0.0314	0.4831
	Level 2	6sec	1.2680	1.3476	1.4345	1.8930	1.2678	1.3477	1.4343	1.8853	1.3172	1.3856	1.4961	12.9427	1.1756	1.3172	1.3858	1.4969	0.0371	0.0200	0.0340	1.4859
	Level 3	11.9sec	1.1610	1.2251	1.2892	1.6675	1.1608	1.2253	1.2892	1.6667	1.1954	1.2547	1.3248	10.5037	1.0586	1.1959	1.2554	1.3329	0.0295	0.0183	0.0204	1.1847
1	**Level 4**	23.9sec	1.1005	1.1443	1.1948	1.4714	1.1006	1.1444	1.1948	1.4737	1.1258	1.1684	1.2217	7.4782	1.0233	1.1261	1.1698	1.2225	0.0209	0.0130	0.0165	0.8331
Year	**Level 5**	47.8sec	1.0627	1.0936	1.1292	1.3127	1.0627	1.0936	1.1292	1.3139	1.0793	1.1095	1.1507	4.6701	1.0140	1.0794	1.1096	1.1522	0.0140	0.0096	0.0116	0.5035
before	**Level 6**	1.6min	1.0389	1.0600	1.0840	1.2033	1.0389	1.0599	1.0841	1.2049	1.0507	1.0690	1.1036	3.4776	1.0083	1.0511	1.0704	1.1043	0.0098	0.0059	0.0095	0.3286
	Level 7	3.2min	1.0242	1.0382	1.0535	1.1433	1.0242	1.0382	1.0536	1.1432	1.0319	1.0458	1.0667	3.1117	1.0051	1.0320	1.0458	1.0681	0.0066	0.0039	0.0059	0.2713
	Level 8	6.4min	1.0157	1.0253	1.0355	1.1014	1.0157	1.0253	1.0355	1.1020	1.0216	1.0297	1.0441	2.5061	1.0034	1.0216	1.0298	1.0449	0.0045	0.0023	0.0040	0.1957
	Level 9	12.7min	1.0123	1.0198	1.0276	1.0935	1.0122	1.0198	1.0276	1.0953	1.0170	1.0226	1.0336	2.4596	1.0029	1.0170	1.0226	1.0342	0.0035	0.0017	0.0031	0.1983

Table A.53: EDZ2 Other Results Table –Continued

EDZ2 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.3sec	1.4464	1.7373	1.9250	3.5535	1.4463	1.7428	1.9255	3.5315	1.5411	1.8978	1.9515	5.0000	1.3514	1.5877	1.8996	2.0629	0.1341	0.2193	0.0367	2.0768
	Level 2	26.7sec	1.3964	1.5255	1.6392	7.4060	1.3969	1.5260	1.6400	7.4605	1.4246	1.5796	1.6524	12.9109	1.3693	1.4724	1.6277	2.0100	0.0391	0.0758	0.0175	7.7081
	Level 3	53.4sec	1.2999	1.4037	1.4847	6.1611	1.2986	1.4034	1.4837	6.0892	1.3312	1.4377	1.5217	10.3167	1.2660	1.3692	1.4457	1.8617	0.0461	0.0484	0.0538	5.9786
30	**Level 4**	1.8min	1.1769	1.2547	1.3442	4.4055	1.1770	1.2545	1.3463	4.4083	1.1884	1.2923	1.3943	7.2174	1.1656	1.2167	1.2983	1.5992	0.0162	0.0535	0.0679	3.9727
days	**Level 5**	3.6min	1.1033	1.1621	1.2117	3.0562	1.1034	1.1626	1.2117	3.0848	1.1180	1.1984	1.2134	4.7699	1.0889	1.1268	1.2100	1.3997	0.0206	0.0506	0.0024	2.3831
before	**Level 6**	7.1min	1.0619	1.0928	1.1379	2.3418	1.0619	1.0930	1.1380	2.3525	1.0642	1.1122	1.1400	3.4265	1.0596	1.0739	1.1359	1.2786	0.0032	0.0271	0.0028	1.5188
	Level 7	14.2min	1.0381	1.0567	1.0981	2.0985	1.0381	1.0567	1.0980	2.0966	1.0383	1.0707	1.1001	3.0230	1.0378	1.0427	1.0960	1.1702	0.0004	0.0198	0.0029	1.3102
	Level 8	28.5min	1.0223	1.0408	1.0752	2.0264	1.0224	1.0405	1.0752	2.0173	1.0242	1.0553	1.0811	2.9267	1.0206	1.0257	1.0693	1.1079	0.0025	0.0210	0.0083	1.2861
	Level 9	57min	1.0173	1.0352	1.0724	2.1822	1.0172	1.0355	1.0724	2.2087	1.0206	1.0443	1.0734	3.3121	1.0137	1.0268	1.0714	1.1053	0.0049	0.0124	0.0014	1.5604
	Level 1	6.3sec	1.4710	1.6155	1.8435	2.8130	1.4713	1.6155	1.8431	2.8048	1.5421	1.6897	1.9327	5.0000	1.3514	1.5450	1.6929	1.9413	0.0724	0.0469	0.0865	1.1166
	Level 2	12.6sec	1.2687	1.4422	1.5859	3.8342	1.2687	1.4412	1.5861	3.8241	1.3285	1.4949	1.6524	12.9109	1.1948	1.3685	1.4971	1.7314	0.0478	0.0540	0.0563	4.0460
	Level 3	25.3sec	1.1578	1.2686	1.4178	3.1525	1.1575	1.2689	1.4179	3.1548	1.2025	1.3214	1.5217	10.3167	1.1193	1.2437	1.3312	1.6400	0.0350	0.0286	0.0634	3.1873
60	**Level 4**	50.5sec	1.0885	1.1523	1.2710	2.4870	1.0886	1.1519	1.2710	2.4930	1.1135	1.1884	1.3752	7.2174	1.0625	1.1244	1.2007	1.3943	0.0194	0.0272	0.0582	2.1324
days	**Level 5**	1.7min	1.0480	1.0885	1.1626	1.9682	1.0483	1.0883	1.1624	1.9598	1.0659	1.1174	1.2100	4.7699	1.0313	1.0707	1.1180	1.2134	0.0129	0.0174	0.0391	1.2979
before	**Level 6**	3.4min	1.0267	1.0575	1.0945	1.6122	1.0266	1.0575	1.0945	1.6132	1.0363	1.0642	1.1359	3.4265	1.0157	1.0464	1.0662	1.1400	0.0077	0.0061	0.0256	0.8263
	Level 7	6.7min	1.0157	1.0348	1.0625	1.4652	1.0158	1.0348	1.0626	1.4539	1.0266	1.0387	1.0960	3.0230	1.0081	1.0273	1.0427	1.1001	0.0066	0.0044	0.0194	0.7008
	Level 8	13.5min	1.0090	1.0231	1.0477	1.3937	1.0090	1.0232	1.0478	1.3962	1.0149	1.0283	1.0693	2.9267	1.0044	1.0169	1.0296	1.0811	0.0039	0.0045	0.0160	0.6783
	Level 9	26.9min	1.0062	1.0192	1.0514	1.4543	1.0062	1.0192	1.0512	1.4569	1.0099	1.0310	1.0734	3.3121	1.0029	1.0113	1.0353	1.0814	0.0029	0.0075	0.0165	0.8213
	Level 1	3.8sec	1.4624	1.5761	1.7340	2.4211	1.4631	1.5760	1.7339	2.4336	1.5172	1.6311	1.8098	5.0000	1.3514	1.5369	1.6480	1.8956	0.0484	0.0327	0.0579	0.9438
	Level 2	7.6sec	1.2560	1.3758	1.5190	2.9232	1.2555	1.3759	1.5193	2.9167	1.3047	1.4721	1.6144	12.9109	1.1756	1.3142	1.4724	1.6245	0.0383	0.0519	0.0495	3.1917
	Level 3	15.2sec	1.1492	1.2385	1.3528	2.4221	1.1494	1.2387	1.3533	2.4644	1.1870	1.2672	1.4377	10.3167	1.1073	1.1939	1.2692	1.4429	0.0263	0.0264	0.0494	2.5042
3	**Level 4**	30.4sec	1.0899	1.1348	1.2296	2.0317	1.0896	1.1349	1.2300	2.0257	1.1135	1.1656	1.2922	7.2174	1.0625	1.1155	1.1744	1.2923	0.0162	0.0148	0.0388	1.6781
months	**Level 5**	1min	1.0533	1.0802	1.1423	1.6624	1.0532	1.0802	1.1420	1.6638	1.0659	1.1015	1.1919	4.7699	1.0313	1.0693	1.1046	1.1984	0.0117	0.0107	0.0302	1.0267
before	**Level 6**	2min	1.0306	1.0531	1.0851	1.4338	1.0306	1.0530	1.0851	1.4291	1.0393	1.0633	1.1122	3.4265	1.0157	1.0412	1.0634	1.1190	0.0078	0.0080	0.0180	0.6519
	Level 7	4.1min	1.0183	1.0326	1.0564	1.3087	1.0182	1.0326	1.0563	1.3208	1.0262	1.0383	1.0758	3.0230	1.0081	1.0266	1.0387	1.0777	0.0060	0.0045	0.0139	0.5439
	Level 8	8.1min	1.0111	1.0216	1.0409	1.2824	1.0111	1.0216	1.0409	1.2824	1.0169	1.0279	1.0592	2.9267	1.0044	1.0177	1.0283	1.0636	0.0041	0.0032	0.0113	0.5221
	Level 9	16.2min	1.0081	1.0182	1.0408	1.3331	1.0082	1.0182	1.0408	1.3365	1.0123	1.0215	1.0676	3.3121	1.0029	1.0137	1.0268	1.0714	0.0031	0.0020	0.0119	0.6302
	Level 1	2.8sec	1.4803	1.5642	1.6339	1.9232	1.4803	1.5642	1.6337	1.9221	1.5353	1.5957	1.6868	5.0000	1.3514	1.5369	1.5960	1.6891	0.0387	0.0199	0.0252	0.4881
	Level 2	5.6sec	1.2587	1.3421	1.4221	1.8457	1.2587	1.3421	1.4218	1.8489	1.3055	1.3723	1.4734	12.9109	1.1681	1.3056	1.3753	1.4737	0.0361	0.0193	0.0307	1.4694
	Level 3	11.2sec	1.1516	1.2150	1.2784	1.6154	1.1515	1.2152	1.2784	1.6164	1.1876	1.2437	1.3178	10.3167	1.0580	1.1876	1.2459	1.3186	0.0284	0.0170	0.0223	1.1553
1	**Level 4**	22.4sec	1.0936	1.1342	1.1817	1.4283	1.0935	1.1342	1.1816	1.4228	1.1167	1.1512	1.2120	7.2174	1.0231	1.1173	1.1517	1.2123	0.0189	0.0105	0.0178	0.7806
Year	**Level 5**	44.7sec	1.0579	1.0854	1.1175	1.2747	1.0580	1.0853	1.1175	1.2779	1.0726	1.1003	1.1383	4.7699	1.0131	1.0727	1.1005	1.1401	0.0122	0.0082	0.0117	0.4811
before	**Level 6**	1.5min	1.0364	1.0556	1.0772	1.1826	1.0364	1.0556	1.0772	1.1822	1.0476	1.0642	1.0919	3.4265	1.0072	1.0477	1.0649	1.0930	0.0086	0.0052	0.0080	0.3061
	Level 7	3min	1.0234	1.0369	1.0515	1.1317	1.0234	1.0369	1.0515	1.1307	1.0305	1.0430	1.0612	3.0230	1.0041	1.0306	1.0430	1.0623	0.0061	0.0036	0.0047	0.2522
	Level 8	6min	1.0161	1.0267	1.0373	1.1074	1.0161	1.0267	1.0373	1.1070	1.0221	1.0318	1.0458	2.9267	1.0034	1.0222	1.0320	1.0460	0.0046	0.0027	0.0042	0.2406
	Level 9	11.9min	1.0137	1.0236	1.0342	1.1216	1.0137	1.0236	1.0342	1.1216	1.0197	1.0279	1.0411	3.3121	1.0029	1.0197	1.0281	1.0411	0.0044	0.0024	0.0039	0.2945

Table A.53: EDZ2 Other Results Table –Continued

EDZ2 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.9sec	1.4512	1.7384	1.9378	3.4921	1.4453	1.7418	1.9381	3.5041	1.5404	1.9009	1.9497	5.0000	1.3503	1.5826	1.9266	2.0081	0.1344	0.2251	0.0163	2.1156
	Level 2	29.8sec	1.3966	1.5267	1.6262	7.5630	1.3969	1.5261	1.6258	7.4702	1.4239	1.5821	1.6476	12.9266	1.3699	1.4700	1.6040	2.0139	0.0382	0.0793	0.0309	7.7164
	Level 3	59.6sec	1.2979	1.3927	1.4762	6.2957	1.2981	1.3927	1.4767	6.1199	1.3319	1.4133	1.5277	10.4077	1.2643	1.3721	1.4257	1.8321	0.0478	0.0291	0.0721	6.0638
30	**Level 4**	2min	1.1765	1.2421	1.3354	4.4225	1.1763	1.2427	1.3342	4.4485	1.1881	1.2675	1.3891	7.3365	1.1645	1.2179	1.2793	1.5606	0.0167	0.0351	0.0777	4.0842
days	**Level 5**	4min	1.1020	1.1504	1.1929	3.0476	1.1024	1.1506	1.1929	3.0036	1.1177	1.1798	1.2034	4.6329	1.0871	1.1214	1.1825	1.3743	0.0217	0.0413	0.0147	2.3042
before	**Level 6**	8min	1.0591	1.0840	1.1153	2.2282	1.0591	1.0846	1.1153	2.2662	1.0621	1.1012	1.1159	3.2910	1.0561	1.0680	1.1146	1.2413	0.0042	0.0235	0.0009	1.4494
	Level 7	15.9min	1.0345	1.0477	1.0682	2.0322	1.0345	1.0476	1.0681	2.0120	1.0352	1.0557	1.0726	2.8904	1.0339	1.0395	1.0636	1.1337	0.0009	0.0114	0.0063	1.2421
	Level 8	31.8min	1.0175	1.0258	1.0394	1.6800	1.0175	1.0258	1.0392	1.6681	1.0188	1.0304	1.0438	2.2667	1.0163	1.0212	1.0346	1.0694	0.0017	0.0065	0.0065	0.8466
	Level 9	63.6min	1.0085	1.0148	1.0249	1.6335	1.0084	1.0148	1.0249	1.6553	1.0117	1.0151	1.0280	2.2763	1.0052	1.0144	1.0219	1.0342	0.0046	0.0005	0.0043	0.8783
	Level 1	6.9sec	1.4643	1.6090	1.8565	2.8159	1.4648	1.6088	1.8576	2.8003	1.5404	1.6750	1.9327	5.0000	1.3503	1.5449	1.7640	1.9497	0.0747	0.0416	0.0720	1.1170
	Level 2	13.8sec	1.2657	1.4441	1.5894	3.8607	1.2664	1.4446	1.5903	3.8599	1.3338	1.4827	1.6869	12.9266	1.1947	1.3699	1.4953	1.7289	0.0542	0.0444	0.0691	4.0536
	Level 3	27.6sec	1.1585	1.2724	1.4080	3.1853	1.1580	1.2725	1.4085	3.1715	1.2068	1.3213	1.5277	10.4077	1.1195	1.2395	1.3319	1.6066	0.0373	0.0305	0.0666	3.2285
60	**Level 4**	55.2sec	1.0911	1.1534	1.2556	2.5113	1.0910	1.1534	1.2559	2.5064	1.1182	1.1881	1.3391	7.3365	1.0625	1.1188	1.1966	1.3723	0.0216	0.0302	0.0468	2.1923
days	**Level 5**	1.8min	1.0475	1.0877	1.1476	1.9368	1.0474	1.0878	1.1472	1.9325	1.0608	1.1139	1.1825	4.6329	1.0312	1.0614	1.1177	1.1843	0.0110	0.0173	0.0303	1.2690
before	**Level 6**	3.7min	1.0243	1.0516	1.0795	1.5552	1.0243	1.0517	1.0794	1.5628	1.0300	1.0621	1.1015	3.2910	1.0156	1.0307	1.0647	1.1146	0.0061	0.0101	0.0175	0.7901
	Level 7	7.4min	1.0118	1.0276	1.0449	1.3868	1.0118	1.0277	1.0450	1.3936	1.0177	1.0339	1.0576	2.8904	1.0077	1.0188	1.0352	1.0636	0.0040	0.0050	0.0087	0.6673
	Level 8	14.7min	1.0059	1.0140	1.0256	1.2460	1.0059	1.0140	1.0256	1.2503	1.0104	1.0163	1.0331	2.2667	1.0028	1.0122	1.0188	1.0346	0.0028	0.0017	0.0061	0.4520
	Level 9	29.4min	1.0025	1.0069	1.0148	1.2227	1.0025	1.0069	1.0147	1.2258	1.0052	1.0085	1.0219	2.2763	1.0000	1.0057	1.0091	1.0225	0.0019	0.0012	0.0044	0.4648
	Level 1	4.2sec	1.4558	1.5706	1.7248	2.4331	1.4559	1.5708	1.7253	2.4349	1.5131	1.6178	1.8019	5.0000	1.3503	1.5321	1.6279	1.8950	0.0491	0.0323	0.0643	0.9406
	Level 2	8.3sec	1.2527	1.3712	1.5025	2.9242	1.2531	1.3711	1.5022	2.9439	1.2997	1.4445	1.5821	12.9266	1.1777	1.3008	1.4681	1.6040	0.0402	0.0519	0.0372	3.2009
	Level 3	16.6sec	1.1467	1.2367	1.3357	2.4487	1.1465	1.2363	1.3358	2.4673	1.1847	1.2680	1.4133	10.4077	1.1076	1.1941	1.2850	1.4257	0.0255	0.0291	0.0406	2.5385
3	**Level 4**	33.2sec	1.0865	1.1325	1.2150	2.0227	1.0865	1.1325	1.2154	2.0253	1.1065	1.1645	1.2675	7.3365	1.0625	1.1101	1.1739	1.2741	0.0148	0.0186	0.0329	1.7256
months	**Level 5**	1.1min	1.0504	1.0764	1.1255	1.6393	1.0504	1.0764	1.1258	1.6373	1.0608	1.0944	1.1719	4.6329	1.0312	1.0613	1.0980	1.1754	0.0098	0.0108	0.0212	1.0063
before	**Level 6**	2.2min	1.0270	1.0464	1.0692	1.3749	1.0270	1.0463	1.0692	1.3807	1.0351	1.0554	1.0905	3.2910	1.0156	1.0359	1.0555	1.0913	0.0063	0.0074	0.0115	0.6258
	Level 7	4.4min	1.0139	1.0253	1.0386	1.2570	1.0139	1.0253	1.0387	1.2596	1.0191	1.0303	1.0524	2.8904	1.0077	1.0201	1.0319	1.0557	0.0044	0.0032	0.0062	0.5201
	Level 8	8.9min	1.0072	1.0134	1.0211	1.1654	1.0072	1.0135	1.0211	1.1619	1.0113	1.0159	1.0310	2.2667	1.0028	1.0117	1.0163	1.0322	0.0030	0.0014	0.0046	0.3513
	Level 9	17.7min	1.0035	1.0078	1.0120	1.1444	1.0035	1.0077	1.0120	1.1410	1.0059	1.0094	1.0187	2.2763	1.0000	1.0061	1.0095	1.0194	0.0018	0.0012	0.0026	0.3589
	Level 1	2.9sec	1.4741	1.5579	1.6263	1.9125	1.4740	1.5580	1.6264	1.9152	1.5270	1.5924	1.6750	5.0000	1.3503	1.5272	1.5929	1.6798	0.0382	0.0193	0.0221	0.4881
	Level 2	5.8sec	1.2521	1.3285	1.4136	1.8411	1.2519	1.3285	1.4136	1.8401	1.2958	1.3558	1.4709	12.9266	1.1595	1.2963	1.3607	1.4729	0.0360	0.0173	0.0298	1.4791
	Level 3	11.6sec	1.1429	1.2032	1.2656	1.5992	1.1427	1.2032	1.2656	1.6037	1.1756	1.2328	1.3001	10.4077	1.0581	1.1773	1.2354	1.3030	0.0258	0.0156	0.0191	1.1715
1	**Level 4**	23.1sec	1.0857	1.1233	1.1668	1.4095	1.0856	1.1233	1.1668	1.4068	1.1065	1.1434	1.1958	7.3365	1.0228	1.1073	1.1435	1.1966	0.0174	0.0101	0.0161	0.8022
Year	**Level 5**	46.2sec	1.0509	1.0746	1.1031	1.2518	1.0508	1.0746	1.1031	1.2543	1.0638	1.0862	1.1228	4.6329	1.0132	1.0639	1.0871	1.1234	0.0109	0.0066	0.0108	0.4724
before	**Level 6**	1.5min	1.0296	1.0453	1.0618	1.1540	1.0296	1.0453	1.0618	1.1541	1.0384	1.0527	1.0749	3.2910	1.0071	1.0388	1.0529	1.0753	0.0071	0.0043	0.0065	0.2915
	Level 7	3.1min	1.0170	1.0268	1.0363	1.0993	1.0170	1.0268	1.0362	1.0990	1.0226	1.0308	1.0430	2.8904	1.0039	1.0230	1.0308	1.0436	0.0045	0.0023	0.0036	0.2371
	Level 8	6.2min	1.0097	1.0157	1.0212	1.0619	1.0097	1.0157	1.0212	1.0609	1.0132	1.0180	1.0251	2.2667	1.0023	1.0133	1.0181	1.0253	0.0028	0.0014	0.0019	0.1589
	Level 9	12.3min	1.0057	1.0099	1.0135	1.0460	1.0057	1.0099	1.0135	1.0460	1.0082	1.0113	1.0159	2.2763	1.0000	1.0083	1.0113	1.0160	0.0019	0.0009	0.0013	0.1609

Table A.53: EDZ2 Other Results Table –Continued

EDZ2 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.9sec	0.3415	0.5195	0.5802	0.6945	0.3424	0.5194	0.5784	0.6944	0.4847	0.5264	0.6298	0.7400	0.2000	0.5124	0.5269	0.6489	0.2013	0.0099	0.0728	0.0644
	Level 2	29.8sec	0.2835	0.6099	0.6563	0.7161	0.2875	0.6098	0.6561	0.7161	0.4975	0.6144	0.6791	0.7303	0.0775	0.6052	0.6331	0.7019	0.2970	0.0065	0.0326	0.0201
	Level 3	59.6sec	0.3195	0.6739	0.7133	0.7709	0.3170	0.6744	0.7130	0.7705	0.5371	0.6917	0.7304	0.7899	0.0969	0.6571	0.6956	0.7512	0.3113	0.0244	0.0246	0.0274
30	**Level 4**	2min	0.3807	0.7426	0.7987	0.8494	0.3819	0.7437	0.7979	0.8497	0.6253	0.7702	0.8219	0.8579	0.1386	0.7172	0.7738	0.8414	0.3442	0.0375	0.0340	0.0117
days	**Level 5**	4min	0.4651	0.8253	0.8606	0.9062	0.4620	0.8253	0.8610	0.9064	0.7144	0.8264	0.8875	0.9184	0.2096	0.8241	0.8345	0.8945	0.3569	0.0016	0.0375	0.0169
before	**Level 6**	8min	0.5490	0.8788	0.9149	0.9418	0.5370	0.8788	0.9152	0.9417	0.7821	0.8803	0.9312	0.9437	0.2918	0.8772	0.8991	0.9397	0.3467	0.0022	0.0227	0.0029
	Level 7	15.9min	0.5937	0.9108	0.9468	0.9633	0.5927	0.9107	0.9465	0.9633	0.8546	0.9124	0.9591	0.9636	0.3308	0.9090	0.9339	0.9631	0.3704	0.0024	0.0178	0.0004
	Level 8	31.8min	0.6208	0.9299	0.9615	0.9781	0.6222	0.9301	0.9613	0.9781	0.9026	0.9352	0.9750	0.9798	0.3417	0.9250	0.9476	0.9764	0.3966	0.0072	0.0194	0.0024
	Level 9	63.6min	0.6024	0.9325	0.9661	0.9831	0.6033	0.9325	0.9658	0.9831	0.9047	0.9333	0.9739	0.9864	0.3019	0.9316	0.9576	0.9798	0.4262	0.0012	0.0115	0.0047
	Level 1	6.9sec	0.3938	0.5431	0.6196	0.6815	0.3962	0.5436	0.6195	0.6811	0.5151	0.5907	0.6473	0.7400	0.2000	0.5174	0.5918	0.6484	0.1205	0.0264	0.0180	0.0346
	Level 2	13.8sec	0.4033	0.6307	0.6945	0.7891	0.4026	0.6312	0.6947	0.7892	0.5776	0.6679	0.7307	0.8369	0.0775	0.6052	0.6689	0.7527	0.1748	0.0228	0.0265	0.0300
	Level 3	27.6sec	0.4635	0.7067	0.7882	0.8649	0.4673	0.7065	0.7884	0.8646	0.6097	0.7512	0.8041	0.8935	0.0969	0.6571	0.7568	0.8316	0.1855	0.0314	0.0174	0.0259
60	**Level 4**	55.2sec	0.5482	0.7889	0.8682	0.9189	0.5485	0.7881	0.8685	0.9188	0.7172	0.8329	0.8894	0.9411	0.1386	0.7272	0.8414	0.8981	0.2145	0.0353	0.0204	0.0164
days	**Level 5**	1.8min	0.6306	0.8612	0.9190	0.9538	0.6330	0.8611	0.9191	0.9541	0.8241	0.8945	0.9340	0.9696	0.2096	0.8264	0.8949	0.9382	0.2267	0.0288	0.0145	0.0118
before	**Level 6**	3.7min	0.7051	0.9141	0.9456	0.9740	0.7091	0.9141	0.9456	0.9742	0.8772	0.9379	0.9556	0.9845	0.2918	0.8803	0.9397	0.9650	0.2095	0.0212	0.0055	0.0073
	Level 7	7.4min	0.7747	0.9414	0.9664	0.9844	0.7716	0.9413	0.9664	0.9845	0.9090	0.9591	0.9735	0.9920	0.3308	0.9124	0.9627	0.9741	0.2064	0.0170	0.0041	0.0064
	Level 8	14.7min	0.7998	0.9545	0.9774	0.9912	0.8025	0.9546	0.9774	0.9911	0.9250	0.9713	0.9834	0.9956	0.3417	0.9352	0.9725	0.9853	0.2089	0.0146	0.0043	0.0038
	Level 9	29.4min	0.7920	0.9516	0.9812	0.9938	0.7928	0.9515	0.9812	0.9938	0.9247	0.9659	0.9888	0.9971	0.3019	0.9316	0.9699	0.9902	0.2229	0.0149	0.0072	0.0029
	Level 1	4.2sec	0.4567	0.5794	0.6366	0.6865	0.4568	0.5794	0.6366	0.6863	0.5526	0.6068	0.6591	0.7400	0.2000	0.5541	0.6131	0.6627	0.1095	0.0186	0.0143	0.0232
	Level 2	8.3sec	0.4977	0.6621	0.7306	0.7997	0.4981	0.6621	0.7307	0.7998	0.6194	0.6791	0.7664	0.8506	0.0775	0.6224	0.6793	0.7733	0.1638	0.0179	0.0280	0.0242
	Level 3	16.6sec	0.5605	0.7435	0.8104	0.8730	0.5624	0.7435	0.8103	0.8728	0.6956	0.7879	0.8425	0.9031	0.0969	0.7037	0.7892	0.8493	0.1703	0.0245	0.0193	0.0188
3	**Level 4**	33.2sec	0.6363	0.8169	0.8827	0.9196	0.6361	0.8170	0.8826	0.9196	0.7739	0.8515	0.8981	0.9411	0.1386	0.7853	0.8579	0.9027	0.1828	0.0237	0.0118	0.0129
months	**Level 5**	1.1min	0.7122	0.8793	0.9268	0.9505	0.7139	0.8793	0.9268	0.9505	0.8390	0.9053	0.9382	0.9696	0.2096	0.8390	0.9079	0.9388	0.1860	0.0209	0.0094	0.0105
before	**Level 6**	2.2min	0.7819	0.9237	0.9507	0.9711	0.7798	0.9237	0.9507	0.9711	0.8991	0.9404	0.9622	0.9845	0.2918	0.9025	0.9405	0.9634	0.1697	0.0142	0.0077	0.0073
	Level 7	4.4min	0.8241	0.9483	0.9689	0.9827	0.8266	0.9482	0.9689	0.9828	0.9296	0.9627	0.9745	0.9920	0.3308	0.9300	0.9631	0.9747	0.1605	0.0117	0.0043	0.0055
	Level 8	8.9min	0.8484	0.9623	0.9792	0.9896	0.8482	0.9622	0.9792	0.9895	0.9441	0.9725	0.9834	0.9956	0.3417	0.9476	0.9729	0.9838	0.1602	0.0095	0.0032	0.0037
	Level 9	17.7min	0.8309	0.9629	0.9826	0.9922	0.8317	0.9629	0.9825	0.9923	0.9367	0.9739	0.9878	0.9971	0.3019	0.9443	0.9789	0.9888	0.1734	0.0085	0.0024	0.0030
	Level 1	2.9sec	0.5370	0.6125	0.6396	0.6759	0.5369	0.6125	0.6396	0.6760	0.5920	0.6267	0.6507	0.7400	0.2000	0.5929	0.6268	0.6514	0.0703	0.0095	0.0080	0.0181
	Level 2	5.8sec	0.6036	0.7040	0.7455	0.7950	0.6038	0.7040	0.7455	0.7951	0.6785	0.7287	0.7659	0.8561	0.0775	0.6787	0.7296	0.7660	0.0975	0.0153	0.0106	0.0234
	Level 3	11.6sec	0.6809	0.7828	0.8234	0.8690	0.6807	0.7828	0.8234	0.8690	0.7584	0.8041	0.8420	0.9451	0.0969	0.7588	0.8049	0.8420	0.1048	0.0138	0.0114	0.0219
1	**Level 4**	23.1sec	0.7537	0.8468	0.8820	0.9147	0.7539	0.8468	0.8820	0.9147	0.8249	0.8686	0.8950	0.9774	0.1386	0.8251	0.8689	0.8955	0.1066	0.0129	0.0080	0.0162
Year	**Level 5**	46.2sec	0.8172	0.8953	0.9217	0.9451	0.8178	0.8952	0.9216	0.9453	0.8772	0.9088	0.9322	0.9871	0.2096	0.8785	0.9093	0.9323	0.1022	0.0094	0.0068	0.0110
before	**Level 6**	1.5min	0.8677	0.9285	0.9475	0.9649	0.8680	0.9285	0.9475	0.9650	0.9150	0.9397	0.9545	0.9929	0.2918	0.9158	0.9398	0.9546	0.0909	0.0069	0.0046	0.0081
	Level 7	3.1min	0.9025	0.9512	0.9645	0.9772	0.9021	0.9512	0.9645	0.9772	0.9414	0.9588	0.9703	0.9959	0.3308	0.9423	0.9588	0.9704	0.0835	0.0044	0.0033	0.0058
	Level 8	6.2min	0.9205	0.9641	0.9740	0.9842	0.9204	0.9641	0.9740	0.9842	0.9560	0.9692	0.9783	0.9966	0.3417	0.9562	0.9695	0.9784	0.0821	0.0039	0.0025	0.0045
	Level 9	12.3min	0.9149	0.9670	0.9770	0.9865	0.9149	0.9670	0.9770	0.9865	0.9605	0.9728	0.9807	0.9971	0.3019	0.9605	0.9728	0.9807	0.0953	0.0037	0.0023	0.0043

Table A.54: EDZ3 Other Results Table

EDZ3 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	13.4sec	1.5090	1.5484	2.1012	4.6585	1.5087	1.5484	2.1038	4.6585	1.5174	1.5484	2.2009	4.6585	1.5000	1.5484	2.0068	4.6585	0.0123	0.0000	0.1373	0.0000
	Level 2	26.9sec	1.2696	1.4556	2.3269	3.6550	1.2698	1.4556	2.3247	3.6550	1.2896	1.4556	2.5048	3.6550	1.2500	1.4556	2.1446	3.6550	0.0280	0.0000	0.2547	0.0000
	Level 3	53.8sec	1.1513	1.4803	2.1571	2.5906	1.1510	1.4803	2.1579	2.5906	1.1768	1.4803	2.3276	2.5906	1.1251	1.4803	1.9882	2.5906	0.0365	0.0000	0.2401	0.0000
30	**Level 4**	1.8min	1.0855	1.4333	1.6733	3.0192	1.0859	1.4333	1.6730	3.0192	1.1087	1.4333	1.6818	3.0192	1.0631	1.4333	1.6642	3.0192	0.0323	0.0000	0.0124	0.0000
days	**Level 5**	3.6min	1.0514	1.3271	1.4164	2.9318	1.0512	1.3271	1.4165	2.9318	1.0693	1.3271	1.4999	2.9318	1.0331	1.3271	1.3331	2.9318	0.0256	0.0000	0.1179	0.0000
before	**Level 6**	7.2min	1.0295	1.1697	1.2678	2.3212	1.0297	1.1697	1.2690	2.3212	1.0397	1.1697	1.3568	2.3212	1.0197	1.1697	1.1811	2.3212	0.0141	0.0000	0.1242	0.0000
	Level 7	14.3min	1.0175	1.0940	1.1473	1.8004	1.0176	1.0940	1.1501	1.8004	1.0231	1.0940	1.2050	1.8004	1.0121	1.0940	1.0953	1.8004	0.0078	0.0000	0.0776	0.0000
	Level 8	28.7min	1.0108	1.0577	1.1072	1.5411	1.0107	1.0577	1.1069	1.5411	1.0139	1.0577	1.1283	1.5411	1.0074	1.0577	1.0856	1.5411	0.0046	0.0000	0.0302	0.0000
	Level 9	57.4min	1.0091	1.0413	1.0856	1.5106	1.0091	1.0413	1.0862	1.5106	1.0112	1.0413	1.1102	1.5106	1.0070	1.0413	1.0622	1.5106	0.0029	0.0000	0.0339	0.0000
	Level 1	11.4sec	1.5067	1.6381	2.0440	3.8602	1.5065	1.6394	2.0438	3.8457	1.5366	1.7481	2.1729	5.0000	1.4847	1.5484	1.9351	2.2009	0.0180	0.0788	0.0986	1.2278
	Level 2	22.8sec	1.2660	1.4698	1.8708	7.1650	1.2658	1.4690	1.8708	7.2691	1.2896	1.5825	2.1446	17.0000	1.2500	1.3839	1.7149	2.5048	0.0180	0.0768	0.1665	6.0234
	Level 3	45.6sec	1.1474	1.3667	1.6423	16.8387	1.1473	1.3681	1.6420	16.8559	1.1901	1.4803	1.9882	65.0000	1.1250	1.2044	1.5135	2.1584	0.0289	0.1245	0.1995	24.8593
60	**Level 4**	1.5min	1.0820	1.2725	1.4862	52.0063	1.0820	1.2724	1.4864	51.5053	1.1087	1.3706	1.6642	257.0000	1.0626	1.1393	1.4013	1.6818	0.0202	0.1026	0.1033	101.7575
days	**Level 5**	3min	1.0558	1.1880	1.3269	185.7673	1.0556	1.1881	1.3274	182.8201	1.0880	1.2687	1.3631	1025.0000	1.0315	1.1035	1.3056	1.4999	0.0219	0.0677	0.0233	413.2628
before	**Level 6**	6.1min	1.0384	1.1257	1.2075	472.3375	1.0382	1.1248	1.2073	477.0541	1.0678	1.1697	1.2643	2793.7273	1.0164	1.0742	1.1811	1.3568	0.0200	0.0386	0.0355	1135.1759
	Level 7	12.2min	1.0227	1.0766	1.1325	1438.8438	1.0230	1.0766	1.1324	1373.7416	1.0417	1.0953	1.1544	8193.0000	1.0106	1.0468	1.1087	1.2050	0.0128	0.0200	0.0197	3340.7815
	Level 8	24.3min	1.0148	1.0514	1.0881	2457.9792	1.0147	1.0515	1.0882	2487.6649	1.0297	1.0715	1.0956	14895.5455	1.0074	1.0299	1.0785	1.1283	0.0088	0.0159	0.0067	6078.6024
	Level 9	48.6min	1.0111	1.0375	1.0647	2994.7297	1.0112	1.0377	1.0645	2982.7677	1.0240	1.0501	1.0795	17874.4546	1.0044	1.0240	1.0544	1.1102	0.0073	0.0111	0.0094	7295.4095
	Level 1	6.4sec	1.4936	1.5582	1.7077	3.1019	1.4935	1.5583	1.7090	3.1116	1.5172	1.6038	1.9351	5.0000	1.4576	1.5174	1.6245	1.9854	0.0183	0.0252	0.0862	1.2323
	Level 2	12.8sec	1.2484	1.3445	1.5265	5.0111	1.2485	1.3441	1.5265	4.9894	1.2822	1.3823	1.7149	17.0000	1.2103	1.2832	1.3839	1.7654	0.0206	0.0341	0.0978	5.0245
	Level 3	25.6sec	1.1322	1.2318	1.4297	9.9449	1.1322	1.2320	1.4297	10.1077	1.1768	1.2810	1.5216	65.0000	1.0914	1.1901	1.2921	1.5259	0.0202	0.0293	0.0772	19.2182
3	**Level 4**	51.3sec	1.0789	1.1558	1.3311	30.3646	1.0791	1.1550	1.3313	28.8824	1.0993	1.2255	1.4333	257.0000	1.0626	1.0994	1.2427	1.4472	0.0132	0.0405	0.0567	76.5047
months	**Level 5**	1.7min	1.0518	1.1026	1.2292	100.8313	1.0519	1.1023	1.2304	100.3967	1.0693	1.1458	1.3079	1025.0000	1.0315	1.0697	1.1669	1.3271	0.0138	0.0265	0.0483	307.1818
before	**Level 6**	3.4min	1.0306	1.0719	1.1470	260.5140	1.0306	1.0719	1.1474	260.8108	1.0433	1.0961	1.1823	2793.7273	1.0164	1.0531	1.1093	1.1890	0.0097	0.0153	0.0284	840.2600
	Level 7	6.8min	1.0182	1.0460	1.0926	754.3737	1.0180	1.0460	1.0926	749.8615	1.0286	1.0662	1.1162	8193.0000	1.0106	1.0315	1.0702	1.1344	0.0062	0.0106	0.0156	2468.6412
	Level 8	13.7min	1.0107	1.0291	1.0634	1369.6726	1.0107	1.0292	1.0633	1357.4261	1.0149	1.0355	1.0856	14895.5455	1.0070	1.0205	1.0388	1.0884	0.0032	0.0046	0.0150	4490.0918
	Level 9	27.4min	1.0070	1.0218	1.0476	1635.5889	1.0070	1.0218	1.0475	1627.4754	1.0112	1.0286	1.0622	17874.4546	1.0044	1.0147	1.0296	1.0664	0.0023	0.0043	0.0107	5388.5154
	Level 1	3.9sec	1.5159	1.6053	1.7103	2.3682	1.5159	1.6054	1.7101	2.3645	1.5622	1.6555	1.7836	5.8100	1.3600	1.5623	1.6566	1.7887	0.0335	0.0264	0.0375	1.0382
	Level 2	7.8sec	1.2856	1.3932	1.5063	2.9591	1.2856	1.3931	1.5063	2.9634	1.3386	1.4385	1.5765	17.0000	1.1976	1.3404	1.4407	1.5782	0.0363	0.0284	0.0375	3.6596
	Level 3	15.5sec	1.1684	1.2565	1.3422	5.4598	1.1681	1.2565	1.3420	5.4254	1.2124	1.2924	1.4084	65.0000	1.0914	1.2132	1.2925	1.4127	0.0331	0.0245	0.0345	14.3198
1	**Level 4**	31sec	1.1008	1.1638	1.2261	15.5949	1.1007	1.1639	1.2258	15.4550	1.1335	1.1867	1.2783	257.0000	1.0504	1.1336	1.1895	1.2818	0.0231	0.0152	0.0242	57.1312
Year	**Level 5**	1min	1.0612	1.1010	1.1445	54.8650	1.0612	1.1010	1.1446	55.3926	1.0847	1.1215	1.1742	1025.0000	1.0290	1.0856	1.1218	1.1758	0.0159	0.0107	0.0164	228.5671
before	**Level 6**	2.1min	1.0357	1.0604	1.0877	190.9809	1.0358	1.0604	1.0877	191.6642	1.0502	1.0720	1.1093	4097.0000	1.0158	1.0509	1.0724	1.1095	0.0100	0.0062	0.0110	829.8051
	Level 7	4.1min	1.0206	1.0350	1.0522	706.8325	1.0206	1.0350	1.0522	708.0830	1.0294	1.0425	1.0682	16385.0000	1.0082	1.0295	1.0427	1.0689	0.0061	0.0038	0.0078	3176.0714
	Level 8	8.3min	1.0122	1.0212	1.0323	1863.2823	1.0122	1.0212	1.0323	1872.5054	1.0175	1.0259	1.0424	65537.0001	1.0051	1.0175	1.0259	1.0430	0.0034	0.0025	0.0051	9461.4082
	Level 9	16.5min	1.0090	1.0158	1.0245	5210.2451	1.0090	1.0157	1.0245	5152.0914	1.0127	1.0189	1.0333	262145.0003	1.0044	1.0127	1.0190	1.0334	0.0024	0.0019	0.0042	34501.6120

Table A.54: EDZ3 Other Results Table –Continued

EDZ3 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	15sec	1.4835	1.5523	2.0538	4.6583	1.4835	1.5523	2.0545	4.6583	1.5000	1.5523	2.1630	4.6583	1.4669	1.5523	1.9460	4.6583	0.0234	0.0000	0.1534	0.0000
	Level 2	30.1sec	1.2705	1.3896	2.8968	3.6544	1.2711	1.3896	2.9232	3.6544	1.2921	1.3896	3.6366	3.6544	1.2500	1.3896	2.2099	3.6544	0.0298	0.0000	1.0089	0.0000
	Level 3	1min	1.1496	1.3974	2.1243	5.6404	1.1497	1.3974	2.1275	5.6404	1.1743	1.3974	2.3273	5.6404	1.1250	1.3974	1.9276	5.6404	0.0349	0.0000	0.2827	0.0000
30	**Level 4**	2min	1.0831	1.3365	1.5886	5.8904	1.0835	1.3365	1.5875	5.8904	1.1045	1.3365	1.6639	5.8904	1.0625	1.3365	1.5112	5.8904	0.0297	0.0000	0.1080	0.0000
days	**Level 5**	4min	1.0484	1.2940	1.3209	6.0090	1.0485	1.2940	1.3208	6.0090	1.0657	1.2940	1.3324	6.0090	1.0313	1.2940	1.3092	6.0090	0.0243	0.0000	0.0164	0.0000
before	**Level 6**	8min	1.0254	1.1672	1.2149	5.3159	1.0258	1.1672	1.2154	5.3159	1.0358	1.1672	1.2350	5.3159	1.0157	1.1672	1.1958	5.3159	0.0142	0.0000	0.0277	0.0000
	Level 7	16min	1.0133	1.0855	1.1374	3.9962	1.0134	1.0855	1.1374	3.9962	1.0188	1.0855	1.1652	3.9962	1.0081	1.0855	1.1097	3.9962	0.0076	0.0000	0.0392	0.0000
	Level 8	32.1min	1.0084	1.0467	1.0928	3.0234	1.0084	1.0467	1.0921	3.0234	1.0124	1.0467	1.1185	3.0234	1.0044	1.0467	1.0658	3.0234	0.0056	0.0000	0.0373	0.0000
	Level 9	64.2min	1.0075	1.0311	1.0791	2.6083	1.0075	1.0311	1.0787	2.6083	1.0121	1.0311	1.0934	2.6083	1.0029	1.0311	1.0641	2.6083	0.0064	0.0000	0.0207	0.0000
	Level 1	8.9sec	1.4965	1.6141	2.0145	4.0133	1.4963	1.6155	2.0143	4.0241	1.5239	1.7251	2.1630	5.0000	1.4669	1.5482	1.8218	2.1898	0.0188	0.0699	0.1439	1.2755
	Level 2	17.8sec	1.2679	1.4362	1.8486	7.6857	1.2678	1.4360	1.8483	7.6679	1.2921	1.5268	2.2099	17.0000	1.2500	1.3411	1.6779	2.5869	0.0197	0.0790	0.2154	5.7887
	Level 3	35.5sec	1.1493	1.3382	1.6145	17.5366	1.1493	1.3374	1.6141	17.4924	1.1917	1.4187	1.9276	65.0000	1.1250	1.1959	1.4853	2.2088	0.0288	0.0907	0.1792	24.4458
60	**Level 4**	1.2min	1.0865	1.2367	1.4298	52.3795	1.0867	1.2388	1.4312	51.9095	1.1285	1.3365	1.5161	257.0000	1.0625	1.1411	1.3724	1.6639	0.0270	0.0794	0.0753	101.4705
days	**Level 5**	2.4min	1.0595	1.1708	1.3055	183.0520	1.0601	1.1723	1.3049	176.9107	1.0916	1.2648	1.3324	989.9915	1.0313	1.0933	1.2784	1.3398	0.0268	0.0656	0.0202	398.9244
before	**Level 6**	4.7min	1.0365	1.1243	1.2139	360.4713	1.0367	1.1247	1.2139	348.6744	1.0627	1.1672	1.2350	2031.4957	1.0157	1.0746	1.1897	1.2569	0.0200	0.0356	0.0204	824.6176
	Level 7	9.5min	1.0214	1.0801	1.1427	577.6283	1.0214	1.0795	1.1427	612.8486	1.0420	1.1074	1.1647	3641.8889	1.0081	1.0506	1.1097	1.1652	0.0136	0.0214	0.0213	1483.9507
	Level 8	18.9min	1.0143	1.0509	1.0960	922.4649	1.0144	1.0508	1.0959	937.4372	1.0304	1.0658	1.1060	5602.3675	1.0044	1.0354	1.0846	1.1185	0.0101	0.0127	0.0077	2285.3455
	Level 9	37.9min	1.0132	1.0447	1.0752	751.3253	1.0130	1.0447	1.0752	749.8560	1.0304	1.0641	1.0809	4482.0940	1.0029	1.0311	1.0684	1.0934	0.0100	0.0149	0.0059	1828.4188
	Level 1	5.6sec	1.4910	1.5534	1.7041	3.1492	1.4911	1.5533	1.7039	3.1592	1.5105	1.5833	1.9460	5.0000	1.4587	1.5167	1.6294	1.9777	0.0159	0.0232	0.0972	1.3450
	Level 2	11.2sec	1.2530	1.3422	1.5490	5.1378	1.2528	1.3418	1.5491	5.0862	1.2826	1.3782	1.6970	17.0000	1.2355	1.2835	1.3896	1.7241	0.0153	0.0325	0.1015	5.0579
	Level 3	22.5sec	1.1357	1.2334	1.4126	10.4116	1.1355	1.2333	1.4124	10.3779	1.1743	1.2675	1.5165	65.0000	1.1090	1.1917	1.3126	1.5596	0.0172	0.0278	0.0633	19.1227
3	**Level 4**	45sec	1.0773	1.1484	1.2976	28.4020	1.0773	1.1485	1.2981	29.0304	1.1000	1.1902	1.3773	257.0000	1.0625	1.1045	1.2345	1.3790	0.0139	0.0241	0.0515	76.4141
months	**Level 5**	1.5min	1.0485	1.0959	1.2152	93.5764	1.0486	1.0957	1.2153	97.1294	1.0657	1.1259	1.2940	989.9915	1.0313	1.0684	1.1486	1.3047	0.0123	0.0182	0.0470	296.6011
before	**Level 6**	3min	1.0283	1.0670	1.1473	177.2306	1.0282	1.0670	1.1475	190.7668	1.0405	1.0968	1.1958	2031.4957	1.0157	1.0411	1.1056	1.2175	0.0083	0.0166	0.0288	610.6645
	Level 7	6min	1.0161	1.0447	1.0964	341.4094	1.0162	1.0446	1.0968	334.8230	1.0257	1.0602	1.1353	3641.8889	1.0081	1.0281	1.0710	1.1496	0.0058	0.0111	0.0179	1096.8539
	Level 8	12min	1.0105	1.0299	1.0657	496.0879	1.0105	1.0298	1.0657	511.8432	1.0164	1.0388	1.0949	5602.3675	1.0044	1.0187	1.0467	1.0952	0.0045	0.0074	0.0163	1688.3406
	Level 9	24min	1.0083	1.0262	1.0550	403.8601	1.0083	1.0262	1.0551	409.5171	1.0146	1.0317	1.0693	4482.0940	1.0029	1.0177	1.0325	1.0785	0.0041	0.0054	0.0134	1350.7235
	Level 1	3.7sec	1.5154	1.6005	1.6994	2.3756	1.5151	1.6006	1.6996	2.3791	1.5568	1.6384	1.7793	5.2136	1.3753	1.5575	1.6390	1.7819	0.0317	0.0245	0.0419	1.0369
	Level 2	7.4sec	1.2828	1.3858	1.4994	3.0006	1.2827	1.3859	1.4993	2.9709	1.3328	1.4396	1.5739	17.0000	1.1979	1.3342	1.4412	1.5791	0.0347	0.0293	0.0369	3.6641
	Level 3	14.8sec	1.1607	1.2477	1.3290	5.3573	1.1607	1.2478	1.3289	5.2990	1.2067	1.2796	1.3802	65.0000	1.0924	1.2071	1.2806	1.3834	0.0281	0.0205	0.0296	13.7496
1	**Level 4**	29.5sec	1.0943	1.1513	1.2105	12.7020	1.0942	1.1515	1.2107	12.9373	1.1250	1.1758	1.2550	257.0000	1.0495	1.1251	1.1785	1.2571	0.0199	0.0145	0.0253	48.9268
Year	**Level 5**	59sec	1.0568	1.0919	1.1331	41.9004	1.0568	1.0919	1.1331	40.8057	1.0751	1.1082	1.1632	1025.0000	1.0282	1.0755	1.1089	1.1637	0.0135	0.0090	0.0181	186.5799
before	**Level 6**	2min	1.0338	1.0560	1.0833	113.3764	1.0338	1.0561	1.0832	114.7992	1.0458	1.0664	1.1043	4097.0000	1.0157	1.0458	1.0671	1.1056	0.0086	0.0058	0.0108	597.0474
	Level 7	3.9min	1.0201	1.0348	1.0522	357.6370	1.0201	1.0348	1.0521	359.5263	1.0276	1.0421	1.0676	16385.0000	1.0081	1.0281	1.0421	1.0677	0.0057	0.0040	0.0071	2195.5871
	Level 8	7.9min	1.0131	1.0234	1.0351	1295.7563	1.0130	1.0234	1.0351	1247.3309	1.0193	1.0286	1.0455	65537.0000	1.0044	1.0194	1.0286	1.0460	0.0039	0.0027	0.0049	8622.2086
	Level 9	15.7min	1.0105	1.0199	1.0302	1018.6648	1.0104	1.0200	1.0302	998.0480	1.0158	1.0243	1.0387	52429.8000	1.0029	1.0159	1.0245	1.0395	0.0034	0.0026	0.0044	6897.7693

Table A.54: EDZ3 Other Results Table –Continued

EDZ3 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.2sec	1.4911	1.5502	2.0215	4.6584	1.4910	1.5502	2.0219	4.6584	1.5000	1.5502	2.0699	4.6584	1.4820	1.5502	1.9738	4.6584	0.0127	0.0000	0.0679	0.0000
	Level 2	28.5sec	1.2708	1.3991	2.4189	3.6547	1.2703	1.3991	2.4109	3.6547	1.2906	1.3991	2.6541	3.6547	1.2500	1.3991	2.1677	3.6547	0.0287	0.0000	0.3439	0.0000
	Level 3	57sec	1.1487	1.4152	2.1281	3.4114	1.1500	1.4152	2.1380	3.4114	1.1751	1.4152	2.3275	3.4114	1.1250	1.4152	1.9485	3.4114	0.0354	0.0000	0.2680	0.0000
30	**Level 4**	1.9min	1.0840	1.3534	1.6064	3.6165	1.0841	1.3534	1.6067	3.6165	1.1057	1.3534	1.6640	3.6165	1.0625	1.3534	1.5494	3.6165	0.0305	0.0000	0.0810	0.0000
days	**Level 5**	3.8min	1.0483	1.2681	1.3261	3.5880	1.0488	1.2681	1.3259	3.5880	1.0663	1.2681	1.3325	3.5880	1.0313	1.2681	1.3194	3.5880	0.0247	0.0000	0.0092	0.0000
before	**Level 6**	7.6min	1.0256	1.1372	1.1955	2.9685	1.0255	1.1372	1.1938	2.9685	1.0352	1.1372	1.2205	2.9685	1.0157	1.1372	1.1672	2.9685	0.0137	0.0000	0.0377	0.0000
	Level 7	15.2min	1.0129	1.0634	1.1095	2.1848	1.0129	1.0634	1.1095	2.1848	1.0177	1.0634	1.1334	2.1848	1.0081	1.0634	1.0855	2.1848	0.0068	0.0000	0.0338	0.0000
	Level 8	30.4min	1.0070	1.0267	1.0641	1.5886	1.0069	1.0267	1.0643	1.5886	1.0095	1.0267	1.0819	1.5886	1.0044	1.0267	1.0467	1.5886	0.0036	0.0000	0.0249	0.0000
	Level 9	60.8min	1.0053	1.0122	1.0394	1.3192	1.0053	1.0122	1.0394	1.3192	1.0077	1.0122	1.0477	1.3192	1.0029	1.0122	1.0311	1.3192	0.0033	0.0000	0.0117	0.0000
	Level 1	10.1sec	1.4992	1.6218	2.0029	3.9323	1.4993	1.6218	2.0048	3.9236	1.5293	1.7320	2.1261	5.0000	1.4820	1.5489	1.8669	2.1809	0.0168	0.0733	0.0990	1.2376
	Level 2	20.3sec	1.2660	1.4360	1.8464	7.3834	1.2663	1.4363	1.8444	7.3745	1.2906	1.5441	2.1677	17.0000	1.2500	1.3536	1.6957	2.5418	0.0184	0.0762	0.1894	5.9711
	Level 3	40.6sec	1.1474	1.3281	1.6058	17.0214	1.1474	1.3299	1.6055	17.0133	1.1903	1.4152	1.9485	65.0000	1.1250	1.1950	1.4810	2.1530	0.0286	0.1041	0.1954	24.7397
60	**Level 4**	1.4min	1.0796	1.2353	1.4230	52.9143	1.0795	1.2357	1.4231	51.4838	1.1057	1.3372	1.5494	257.0000	1.0625	1.1226	1.3534	1.6640	0.0181	0.0873	0.0839	101.7247
days	**Level 5**	2.7min	1.0523	1.1609	1.2881	176.9686	1.0524	1.1595	1.2881	176.6551	1.0769	1.2372	1.3194	990.2881	1.0313	1.0794	1.2661	1.3325	0.0186	0.0601	0.0243	399.2357
before	**Level 6**	5.4min	1.0321	1.1054	1.1815	349.7930	1.0320	1.1055	1.1812	345.7664	1.0483	1.1372	1.2205	2014.2881	1.0157	1.0658	1.1576	1.2399	0.0142	0.0275	0.0249	817.6473
	Level 7	10.8min	1.0171	1.0603	1.1095	612.8041	1.0170	1.0602	1.1092	607.3987	1.0268	1.0769	1.1323	3611.0339	1.0081	1.0383	1.0855	1.1334	0.0084	0.0149	0.0177	1471.5086
	Level 8	21.6min	1.0091	1.0327	1.0584	882.6720	1.0091	1.0326	1.0584	928.9425	1.0162	1.0467	1.0654	5554.8983	1.0044	1.0219	1.0492	1.0819	0.0049	0.0103	0.0059	2266.2512
	Level 9	43.3min	1.0054	1.0184	1.0322	777.2685	1.0054	1.0184	1.0322	742.4894	1.0122	1.0282	1.0375	4444.1186	1.0015	1.0141	1.0284	1.0477	0.0040	0.0056	0.0037	1813.4216
	Level 1	6sec	1.4909	1.5545	1.6929	3.1139	1.4910	1.5541	1.6916	3.1139	1.5125	1.5826	1.8669	5.0000	1.4581	1.5169	1.6132	1.9738	0.0155	0.0223	0.0843	1.2861
	Level 2	12sec	1.2496	1.3408	1.5102	4.9760	1.2498	1.3406	1.5102	4.9470	1.2817	1.3737	1.6957	17.0000	1.2186	1.2828	1.3816	1.7466	0.0182	0.0326	0.0957	5.0659
	Level 3	24.1sec	1.1322	1.2229	1.4011	10.4359	1.1323	1.2229	1.3998	10.1222	1.1751	1.2562	1.4810	65.0000	1.0949	1.1903	1.2694	1.4833	0.0195	0.0251	0.0688	19.2046
3	**Level 4**	48.1sec	1.0751	1.1419	1.2914	28.8930	1.0750	1.1422	1.2908	28.7961	1.0937	1.1823	1.3597	257.0000	1.0625	1.0976	1.1834	1.3630	0.0118	0.0275	0.0529	76.5078
months	**Level 5**	1.6min	1.0476	1.0877	1.1988	100.7876	1.0477	1.0879	1.1984	96.9845	1.0614	1.1109	1.2661	990.2881	1.0313	1.0663	1.1433	1.2681	0.0107	0.0181	0.0422	296.7712
before	**Level 6**	3.2min	1.0271	1.0586	1.1249	190.7517	1.0271	1.0585	1.1248	189.1643	1.0352	1.0844	1.1672	2014.2881	1.0157	1.0374	1.0870	1.1707	0.0077	0.0139	0.0244	605.5126
	Level 7	6.4min	1.0134	1.0349	1.0729	322.8191	1.0134	1.0349	1.0729	331.8279	1.0177	1.0496	1.1012	3611.0339	1.0081	1.0218	1.0499	1.1051	0.0039	0.0093	0.0145	1087.6161
	Level 8	12.8min	1.0061	1.0184	1.0405	509.6994	1.0061	1.0184	1.0405	507.1849	1.0095	1.0252	1.0573	5554.8983	1.0037	1.0098	1.0267	1.0579	0.0020	0.0054	0.0110	1674.1410
	Level 9	25.7min	1.0028	1.0106	1.0227	405.0685	1.0028	1.0106	1.0227	405.4693	1.0046	1.0142	1.0311	4444.1186	1.0015	1.0051	1.0145	1.0342	0.0011	0.0034	0.0060	1339.4692
	Level 1	3.8sec	1.5123	1.5961	1.6969	2.3633	1.5123	1.5961	1.6970	2.3609	1.5540	1.6355	1.7740	5.6237	1.3623	1.5541	1.6457	1.7756	0.0320	0.0238	0.0379	1.0418
	Level 2	7.6sec	0.9913	1.3766	1.4832	2.6653	0.9984	1.3766	1.4831	2.6702	1.3296	1.4223	1.5452	17.0000	-15.0000	1.3303	1.4235	1.5525	2.1378	0.0252	0.0389	3.1506
	Level 3	15.1sec	1.1549	1.2367	1.3145	4.2522	1.1548	1.2367	1.3145	4.2893	1.1985	1.2680	1.3747	65.0000	1.0000	1.1987	1.2688	1.3769	0.0342	0.0193	0.0296	11.9158
1	**Level 4**	30.3sec	1.0890	1.1429	1.1975	10.8551	1.0891	1.1429	1.1974	10.9845	1.1166	1.1636	1.2395	257.0000	1.0000	1.1180	1.1645	1.2430	0.0213	0.0136	0.0223	47.1646
Year	**Level 5**	1min	1.0517	1.0838	1.1184	36.3584	1.0516	1.0838	1.1185	37.0557	1.0700	1.0984	1.1484	1025.0000	1.0000	1.0704	1.0988	1.1490	0.0134	0.0085	0.0158	185.2099
before	**Level 6**	2min	1.0286	1.0474	1.0680	109.6706	1.0286	1.0474	1.0680	107.4243	1.0390	1.0550	1.0870	4097.0000	1.0000	1.0395	1.0552	1.0873	0.0080	0.0046	0.0089	594.9528
	Level 7	4min	1.0149	1.0256	1.0373	353.8581	1.0149	1.0256	1.0373	346.2895	1.0216	1.0295	1.0485	16385.0000	1.0000	1.0217	1.0296	1.0488	0.0045	0.0022	0.0048	2194.7042
	Level 8	8.1min	1.0075	1.0134	1.0197	647.2965	1.0075	1.0134	1.0197	662.0005	1.0109	1.0156	1.0244	32769.0000	1.0000	1.0109	1.0156	1.0248	0.0023	0.0013	0.0025	4351.3384
	Level 9	16.1min	1.0037	1.0073	1.0112	75.6612	1.0038	1.0073	1.0112	77.7303	1.0060	1.0086	1.0141	4444.1186	1.0000	1.0061	1.0086	1.0141	0.0017	0.0008	0.0016	583.3937

Table A.54: EDZ3 Other Results Table –Continued

EDZ3 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	14.2sec	0.3382	0.5139	0.6552	0.6817	0.3385	0.5139	0.6554	0.6817	0.4623	0.5139	0.6667	0.6817	0.2147	0.5139	0.6442	0.6817	0.1751	0.0000	0.0159	0.0000
	Level 2	28.5sec	0.2743	0.4525	0.7477	0.8000	0.2743	0.4525	0.7468	0.8000	0.2750	0.4525	0.7739	0.8000	0.2736	0.4525	0.7196	0.8000	0.0009	0.0000	0.0384	0.0000
	Level 3	57sec	0.3016	0.5188	0.7808	0.8889	0.3035	0.5188	0.7836	0.8889	0.4297	0.5188	0.8515	0.8889	0.1773	0.5188	0.7156	0.8889	0.1785	0.0000	0.0961	0.0000
30	**Level 4**	1.9min	0.3845	0.6617	0.8267	0.9411	0.3854	0.6617	0.8268	0.9411	0.6010	0.6617	0.9054	0.9411	0.1698	0.6617	0.7482	0.9411	0.3049	0.0000	0.1111	0.0000
days	**Level 5**	3.8min	0.4529	0.7638	0.8576	0.9696	0.4585	0.7638	0.8556	0.9696	0.7505	0.7638	0.9384	0.9696	0.1664	0.7638	0.7728	0.9696	0.4130	0.0000	0.1171	0.0000
before	**Level 6**	7.6min	0.4971	0.8362	0.9129	0.9845	0.4989	0.8362	0.9111	0.9845	0.8097	0.8362	0.9654	0.9845	0.1881	0.8362	0.8568	0.9845	0.4396	0.0000	0.0768	0.0000
	Level 7	15.2min	0.5430	0.9012	0.9502	0.9920	0.5542	0.9012	0.9514	0.9920	0.8582	0.9012	0.9815	0.9920	0.2502	0.9012	0.9212	0.9920	0.4299	0.0000	0.0427	0.0000
	Level 8	30.4min	0.6200	0.9383	0.9723	0.9956	0.6124	0.9383	0.9716	0.9956	0.8941	0.9383	0.9878	0.9956	0.3308	0.9383	0.9554	0.9956	0.3983	0.0000	0.0229	0.0000
	Level 9	60.8min	0.6514	0.9398	0.9787	0.9971	0.6490	0.9398	0.9790	0.9971	0.9146	0.9398	0.9881	0.9971	0.3834	0.9398	0.9698	0.9971	0.3756	0.0000	0.0129	0.0000
	Level 1	10.1sec	0.2759	0.5116	0.6283	0.6683	0.2782	0.5120	0.6280	0.6684	0.4567	0.5797	0.6459	0.6817	0.2000	0.4623	0.6044	0.6562	0.1130	0.0463	0.0195	0.0084
	Level 2	20.3sec	0.2037	0.5640	0.7067	0.7888	0.2037	0.5645	0.7068	0.7889	0.3866	0.6550	0.7456	0.8000	0.0588	0.4525	0.6673	0.7739	0.1286	0.0680	0.0360	0.0122
	Level 3	40.6sec	0.2085	0.6384	0.7603	0.8711	0.2093	0.6383	0.7599	0.8706	0.4527	0.7049	0.8362	0.8889	0.0154	0.5188	0.7156	0.8391	0.1892	0.0639	0.0542	0.0216
60	**Level 4**	1.4min	0.2436	0.7087	0.8224	0.9206	0.2487	0.7082	0.8224	0.9207	0.6010	0.7482	0.8764	0.9411	0.0039	0.6596	0.7659	0.8861	0.2541	0.0378	0.0479	0.0226
days	**Level 5**	2.7min	0.3049	0.7706	0.8679	0.9438	0.2938	0.7705	0.8682	0.9438	0.7464	0.7906	0.9147	0.9696	0.0010	0.7505	0.8298	0.9161	0.3147	0.0145	0.0403	0.0238
before	**Level 6**	5.4min	0.3296	0.8297	0.8962	0.9650	0.3326	0.8295	0.8965	0.9649	0.7956	0.8568	0.9306	0.9845	0.0005	0.8097	0.8651	0.9410	0.3447	0.0183	0.0260	0.0185
	Level 7	10.8min	0.3740	0.8805	0.9313	0.9795	0.3789	0.8800	0.9314	0.9792	0.8582	0.9030	0.9518	0.9920	0.0003	0.8586	0.9153	0.9597	0.3673	0.0186	0.0160	0.0130
	Level 8	21.6min	0.4251	0.9167	0.9544	0.9859	0.4249	0.9168	0.9545	0.9859	0.8941	0.9383	0.9659	0.9956	0.0002	0.9042	0.9398	0.9705	0.3756	0.0120	0.0106	0.0098
	Level 9	43.3min	0.4577	0.9318	0.9612	0.9872	0.4542	0.9317	0.9609	0.9872	0.9146	0.9398	0.9699	0.9971	0.0002	0.9251	0.9458	0.9705	0.3787	0.0060	0.0117	0.0097
	Level 1	6sec	0.3673	0.5888	0.6440	0.6707	0.3668	0.5885	0.6439	0.6707	0.5056	0.6137	0.6593	0.6855	0.2000	0.5139	0.6316	0.6620	0.1309	0.0309	0.0096	0.0072
	Level 2	12sec	0.3436	0.6482	0.7455	0.7983	0.3431	0.6481	0.7457	0.7983	0.5800	0.7196	0.7791	0.8094	0.0588	0.5893	0.7256	0.7796	0.1891	0.0432	0.0183	0.0096
	Level 3	24.1sec	0.3711	0.7094	0.8112	0.8810	0.3696	0.7093	0.8112	0.8808	0.6412	0.7619	0.8391	0.9017	0.0154	0.6594	0.7890	0.8515	0.2372	0.0316	0.0185	0.0132
3	**Level 4**	48.1sec	0.4267	0.7716	0.8714	0.9282	0.4296	0.7714	0.8711	0.9284	0.7252	0.8101	0.9054	0.9411	0.0039	0.7261	0.8402	0.9091	0.2807	0.0303	0.0183	0.0119
months	**Level 5**	1.6min	0.4923	0.8242	0.9130	0.9537	0.4903	0.8239	0.9129	0.9537	0.7665	0.8706	0.9360	0.9696	0.0010	0.7728	0.8882	0.9384	0.3209	0.0315	0.0152	0.0112
before	**Level 6**	3.2min	0.5361	0.8722	0.9376	0.9726	0.5393	0.8720	0.9374	0.9726	0.8214	0.9045	0.9605	0.9845	0.0005	0.8362	0.9118	0.9611	0.3428	0.0217	0.0146	0.0078
	Level 7	6.4min	0.5887	0.9120	0.9574	0.9841	0.5893	0.9120	0.9574	0.9841	0.8699	0.9337	0.9727	0.9920	0.0003	0.8808	0.9432	0.9749	0.3564	0.0147	0.0102	0.0056
	Level 8	12.8min	0.6346	0.9386	0.9711	0.9896	0.6348	0.9385	0.9711	0.9896	0.9130	0.9554	0.9816	0.9956	0.0002	0.9133	0.9627	0.9839	0.3599	0.0143	0.0070	0.0044
	Level 9	25.7min	0.6580	0.9478	0.9746	0.9917	0.6579	0.9479	0.9745	0.9917	0.9272	0.9685	0.9826	0.9971	0.0002	0.9352	0.9693	0.9857	0.3566	0.0122	0.0051	0.0040
	Level 1	3.8sec	0.4674	0.5891	0.6252	0.6603	0.4683	0.5891	0.6252	0.6603	0.5612	0.6104	0.6421	0.7271	0.1918	0.5620	0.6109	0.6423	0.1143	0.0145	0.0095	0.0143
	Level 2	7.6sec	0.5083	0.6677	0.7223	0.7801	0.5084	0.6679	0.7224	0.7802	0.6333	0.6946	0.7495	0.8348	0.0588	0.6354	0.6947	0.7503	0.1663	0.0166	0.0149	0.0213
	Level 3	15.1sec	0.5734	0.7534	0.8020	0.8621	0.5736	0.7534	0.8020	0.8620	0.7229	0.7815	0.8284	0.9154	0.0154	0.7246	0.7816	0.8287	0.1981	0.0170	0.0131	0.0210
1	**Level 4**	30.3sec	0.6479	0.8268	0.8689	0.9142	0.6475	0.8268	0.8689	0.9142	0.7955	0.8505	0.8888	0.9529	0.0039	0.7968	0.8508	0.8889	0.2188	0.0173	0.0107	0.0168
Year	**Level 5**	1min	0.7140	0.8830	0.9161	0.9465	0.7129	0.8831	0.9161	0.9464	0.8594	0.9024	0.9298	0.9725	0.0010	0.8597	0.9026	0.9301	0.2377	0.0142	0.0074	0.0122
before	**Level 6**	2min	0.7689	0.9235	0.9471	0.9674	0.7678	0.9235	0.9471	0.9674	0.9045	0.9377	0.9562	0.9845	0.0002	0.9056	0.9379	0.9562	0.2484	0.0092	0.0051	0.0081
	Level 7	4min	0.8097	0.9506	0.9665	0.9803	0.8099	0.9506	0.9665	0.9803	0.9365	0.9596	0.9727	0.9920	0.0001	0.9367	0.9597	0.9732	0.2521	0.0064	0.0037	0.0055
	Level 8	8.1min	0.8361	0.9661	0.9772	0.9872	0.8366	0.9662	0.9772	0.9871	0.9560	0.9722	0.9810	0.9956	0.0000	0.9565	0.9724	0.9810	0.2511	0.0046	0.0025	0.0038
	Level 9	16.1min	0.8427	0.9708	0.9805	0.9897	0.8427	0.9708	0.9805	0.9897	0.9620	0.9763	0.9844	0.9971	0.0000	0.9628	0.9763	0.9845	0.2493	0.0042	0.0024	0.0033

Table A.55: EDZ4 Other Results Table

EDZ4 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	9.5sec	1.5449	1.7146	1.9284	2.4280	1.5447	1.7147	1.9295	2.4357	1.6321	1.7629	1.9901	2.7327	1.5000	1.6794	1.8351	2.0510	0.0757	0.0375	0.0828	0.3492
	Level 2	19sec	1.2946	1.5048	1.8182	2.4089	1.2949	1.5045	1.8179	2.4153	1.3789	1.5992	1.8976	2.8512	1.2500	1.3999	1.7397	2.0349	0.0728	0.0940	0.0790	0.4110
	Level 3	38.1sec	1.1592	1.3749	1.5822	1.8035	1.1596	1.3719	1.5825	1.8019	1.2247	1.5128	1.6207	2.0744	1.1250	1.2326	1.5545	1.6341	0.0564	0.1148	0.0342	0.2381
30	**Level 4**	1.3min	1.0812	1.2698	1.3688	1.6153	1.0807	1.2703	1.3688	1.6155	1.1125	1.3487	1.3882	1.7636	1.0625	1.1505	1.3577	1.3885	0.0276	0.0908	0.0169	0.1997
days	**Level 5**	2.5min	1.0418	1.1677	1.2359	1.4287	1.0419	1.1668	1.2368	1.4339	1.0565	1.2037	1.2552	1.5688	1.0314	1.0902	1.2042	1.2592	0.0131	0.0526	0.0283	0.1586
before	**Level 6**	5.1min	1.0236	1.0957	1.1354	1.2619	1.0236	1.0958	1.1354	1.2646	1.0288	1.1207	1.1400	1.3565	1.0160	1.0563	1.1261	1.1464	0.0068	0.0303	0.0080	0.1075
	Level 7	10.1min	1.0146	1.0530	1.0753	1.1747	1.0146	1.0529	1.0753	1.1732	1.0195	1.0712	1.0778	1.2364	1.0090	1.0308	1.0714	1.0823	0.0053	0.0185	0.0034	0.0807
	Level 8	20.3min	1.0093	1.0283	1.0477	1.1191	1.0093	1.0283	1.0477	1.1209	1.0105	1.0362	1.0515	1.1683	1.0081	1.0172	1.0450	1.0549	0.0012	0.0091	0.0033	0.0589
	Level 9	40.6min	1.0065	1.0193	1.0366	1.0994	1.0065	1.0192	1.0365	1.0983	1.0068	1.0262	1.0386	1.1447	1.0059	1.0112	1.0344	1.0429	0.0005	0.0067	0.0021	0.0515
	Level 1	7.3sec	1.5445	1.7055	1.8684	3.0333	1.5448	1.7051	1.8696	3.0269	1.6594	1.7629	1.9901	5.0000	1.4875	1.6667	1.7952	2.0308	0.0703	0.0329	0.0765	1.1155
	Level 2	14.7sec	1.3214	1.4667	1.6726	5.3030	1.3217	1.4664	1.6702	5.2567	1.3789	1.5274	1.8433	17.0000	1.2500	1.3999	1.5281	1.8976	0.0572	0.0453	0.1274	5.4482
	Level 3	29.3sec	1.1893	1.3094	1.4829	11.7440	1.1898	1.3098	1.4835	12.1671	1.2326	1.3824	1.5725	65.0000	1.1250	1.2475	1.3886	1.6207	0.0458	0.0517	0.0772	23.4577
60	**Level 4**	58.7sec	1.1065	1.2030	1.3272	39.8720	1.1059	1.2034	1.3270	40.2170	1.1406	1.2501	1.3604	257.0000	1.0625	1.1505	1.2521	1.3882	0.0320	0.0289	0.0429	95.7338
days	**Level 5**	2min	1.0582	1.1355	1.2086	149.2379	1.0578	1.1358	1.2086	149.3075	1.0902	1.1746	1.2508	1025.0000	1.0314	1.0949	1.1793	1.2552	0.0214	0.0315	0.0247	386.1669
before	**Level 6**	3.9min	1.0316	1.0808	1.1242	578.0574	1.0317	1.0808	1.1243	587.4000	1.0550	1.1083	1.1400	4097.0000	1.0160	1.0563	1.1127	1.1400	0.0132	0.0192	0.0104	1547.5903
	Level 7	7.8min	1.0178	1.0467	1.0706	761.8824	1.0178	1.0466	1.0706	741.9078	1.0286	1.0618	1.0778	5182.2650	1.0090	1.0308	1.0649	1.0804	0.0074	0.0104	0.0051	1958.0140
	Level 8	15.6min	1.0109	1.0277	1.0431	487.3101	1.0109	1.0277	1.0432	481.5637	1.0172	1.0352	1.0515	3361.8205	1.0071	1.0208	1.0357	1.0549	0.0043	0.0055	0.0062	1270.0741
	Level 9	31.3min	1.0081	1.0186	1.0336	332.8931	1.0081	1.0186	1.0337	321.3857	1.0135	1.0229	1.0419	2241.5470	1.0058	1.0136	1.0262	1.0429	0.0030	0.0032	0.0058	846.7117
	Level 1	4.8sec	1.5322	1.6788	1.8324	2.7710	1.5319	1.6786	1.8319	2.7742	1.6395	1.7249	1.9753	5.0000	1.4711	1.6515	1.7252	1.9901	0.0520	0.0236	0.0727	0.9664
	Level 2	9.7sec	1.3079	1.4358	1.6018	4.2570	1.3077	1.4352	1.6019	4.2932	1.3678	1.4874	1.7397	17.0000	1.2114	1.3789	1.5086	1.7472	0.0543	0.0380	0.0726	4.2382
	Level 3	19.4sec	1.1792	1.2829	1.4161	8.4126	1.1794	1.2827	1.4157	8.3597	1.2233	1.3469	1.5286	65.0000	1.0937	1.2247	1.3572	1.5468	0.0434	0.0416	0.0627	17.2929
3	**Level 4**	38.8sec	1.1038	1.1849	1.2890	23.6651	1.1040	1.1846	1.2894	23.9941	1.1406	1.2292	1.3560	257.0000	1.0625	1.1425	1.2315	1.3577	0.0272	0.0272	0.0427	70.2430
months	**Level 5**	1.3min	1.0592	1.1251	1.1972	82.4932	1.0592	1.1250	1.1970	84.1343	1.0847	1.1573	1.2378	1025.0000	1.0314	1.0902	1.1640	1.2469	0.0162	0.0234	0.0220	282.8790
before	**Level 6**	2.6min	1.0325	1.0790	1.1204	317.0039	1.0325	1.0786	1.1204	323.4578	1.0459	1.0950	1.1400	4097.0000	1.0160	1.0550	1.0998	1.1400	0.0090	0.0160	0.0130	1134.0392
	Level 7	5.2min	1.0185	1.0469	1.0691	415.7997	1.0186	1.0470	1.0691	416.0231	1.0279	1.0594	1.0778	5182.2650	1.0090	1.0286	1.0618	1.0792	0.0059	0.0105	0.0051	1433.2131
	Level 8	10.3min	1.0116	1.0290	1.0431	278.2793	1.0116	1.0290	1.0431	303.9388	1.0172	1.0357	1.0513	3361.8205	1.0071	1.0208	1.0362	1.0515	0.0037	0.0052	0.0047	932.3199
	Level 9	20.7min	1.0091	1.0214	1.0335	229.0974	1.0090	1.0214	1.0334	232.3560	1.0136	1.0262	1.0419	2241.5470	1.0052	1.0151	1.0262	1.0429	0.0030	0.0036	0.0047	639.5524
	Level 1	3sec	1.5230	1.6217	1.7326	2.1276	1.5231	1.6217	1.7329	2.1312	1.5732	1.6667	1.8024	5.0000	1.4411	1.5738	1.6668	1.8025	0.0312	0.0258	0.0409	0.5840
	Level 2	6.1sec	1.3087	1.4171	1.5290	2.3551	1.3086	1.4172	1.5290	2.3498	1.3681	1.4627	1.5992	17.0000	1.1815	1.3691	1.4654	1.6052	0.0466	0.0268	0.0392	2.1960
	Level 3	12.1sec	1.1881	1.2726	1.3591	3.1121	1.1882	1.2724	1.3590	3.1144	1.2407	1.3120	1.4182	65.0000	1.0868	1.2410	1.3170	1.4227	0.0389	0.0211	0.0282	8.2450
1	**Level 4**	24.2sec	1.1158	1.1776	1.2354	6.5986	1.1160	1.1776	1.2356	6.3553	1.1507	1.2025	1.2797	257.0000	1.0465	1.1518	1.2028	1.2818	0.0275	0.0158	0.0235	32.7686
Year	**Level 5**	48.4sec	1.0703	1.1110	1.1522	19.2781	1.0702	1.1110	1.1521	19.0381	1.0925	1.1287	1.1849	1025.0000	1.0277	1.0946	1.1295	1.1863	0.0175	0.0107	0.0175	131.0407
before	**Level 6**	1.6min	1.0411	1.0674	1.0934	69.1752	1.0411	1.0674	1.0934	69.9066	1.0560	1.0800	1.1134	4097.0000	1.0157	1.0563	1.0803	1.1159	0.0109	0.0061	0.0089	524.3193
	Level 7	3.2min	1.0237	1.0401	1.0563	85.8826	1.0237	1.0401	1.0563	89.5519	1.0327	1.0469	1.0676	5182.2650	1.0081	1.0329	1.0470	1.0679	0.0064	0.0038	0.0061	663.4512
	Level 8	6.5min	1.0147	1.0250	1.0350	63.8955	1.0147	1.0251	1.0349	65.6241	1.0202	1.0294	1.0420	3361.8205	1.0044	1.0207	1.0299	1.0422	0.0040	0.0026	0.0036	435.2955
	Level 9	12.9min	1.0112	1.0190	1.0270	49.3924	1.0111	1.0190	1.0270	50.3546	1.0151	1.0217	1.0334	2241.5470	1.0029	1.0151	1.0218	1.0336	0.0031	0.0020	0.0033	301.5397

Table A.55: EDZ4 Other Results Table –Continued

EDZ4 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	11.8sec	1.5430	1.6991	1.9218	2.3993	1.5448	1.7000	1.9221	2.4037	1.6321	1.7417	1.9926	2.6237	1.5000	1.6625	1.8149	2.0607	0.0756	0.0329	0.0943	0.3009
	Level 2	23.6sec	1.2911	1.5094	1.8076	2.3082	1.2908	1.5097	1.8083	2.3081	1.3648	1.6655	1.8962	2.5182	1.2500	1.3996	1.7128	2.0358	0.0642	0.1276	0.0919	0.2472
	Level 3	47.1sec	1.1573	1.3406	1.5511	1.7849	1.1584	1.3399	1.5509	1.7829	1.2188	1.4168	1.6117	2.0118	1.1252	1.2245	1.4887	1.6336	0.0524	0.0848	0.0615	0.2013
30	**Level 4**	1.6min	1.0829	1.2618	1.3473	1.5385	1.0818	1.2627	1.3472	1.5338	1.1123	1.3354	1.3518	1.8574	1.0631	1.1482	1.3401	1.3597	0.0266	0.0867	0.0062	0.2805
days	**Level 5**	3.1min	1.0442	1.1543	1.2292	1.3711	1.0440	1.1545	1.2289	1.3686	1.0563	1.1781	1.2399	1.5855	1.0327	1.0957	1.2074	1.2596	0.0118	0.0394	0.0186	0.1879
before	**Level 6**	6.3min	1.0268	1.0950	1.1330	1.2509	1.0267	1.0955	1.1331	1.2527	1.0333	1.1228	1.1487	1.4002	1.0184	1.0614	1.1242	1.1547	0.0076	0.0267	0.0135	0.1300
	Level 7	12.6min	1.0172	1.0519	1.0826	1.1684	1.0174	1.0518	1.0824	1.1689	1.0244	1.0652	1.0894	1.2734	1.0128	1.0333	1.0729	1.0909	0.0061	0.0152	0.0085	0.0941
	Level 8	25.1min	1.0114	1.0307	1.0492	1.1249	1.0114	1.0306	1.0491	1.1251	1.0135	1.0400	1.0542	1.2020	1.0089	1.0189	1.0414	1.0706	0.0023	0.0105	0.0068	0.0685
	Level 9	50.3min	1.0084	1.0232	1.0373	1.1154	1.0084	1.0232	1.0374	1.1148	1.0090	1.0320	1.0408	1.1939	1.0074	1.0165	1.0344	1.0597	0.0009	0.0075	0.0032	0.0703
	Level 1	7.4sec	1.5459	1.6977	1.8647	3.1329	1.5457	1.6971	1.8653	3.1397	1.6355	1.7417	1.9926	5.5163	1.4793	1.6625	1.7954	2.0138	0.0652	0.0235	0.0782	1.3460
	Level 2	14.9sec	1.2992	1.4635	1.6773	4.7022	1.2995	1.4640	1.6767	4.7397	1.3648	1.5388	1.8159	11.4470	1.2500	1.3996	1.5625	1.8962	0.0439	0.0494	0.0898	3.8865
	Level 3	29.8sec	1.1804	1.3072	1.4329	7.3556	1.1808	1.3068	1.4335	7.2776	1.2245	1.3431	1.5523	21.1956	1.1252	1.2457	1.3656	1.6117	0.0413	0.0410	0.0672	8.7917
60	**Level 4**	59.6sec	1.0979	1.1904	1.3036	13.4437	1.0978	1.1905	1.3041	13.4882	1.1283	1.2367	1.3497	57.5096	1.0631	1.1436	1.2432	1.3518	0.0251	0.0337	0.0445	21.8183
days	**Level 5**	2min	1.0535	1.1166	1.1912	30.0784	1.0534	1.1166	1.1908	30.5525	1.0662	1.1604	1.2393	172.4252	1.0327	1.0957	1.1679	1.2399	0.0126	0.0215	0.0261	63.7463
before	**Level 6**	4min	1.0308	1.0695	1.1174	73.7809	1.0307	1.0695	1.1174	72.4790	1.0457	1.0886	1.1311	450.0430	1.0184	1.0526	1.0955	1.1487	0.0086	0.0116	0.0123	167.5145
	Level 7	7.9min	1.0184	1.0412	1.0723	120.3380	1.0184	1.0413	1.0723	123.7836	1.0289	1.0500	1.0849	826.2681	1.0124	1.0292	1.0600	1.0894	0.0062	0.0081	0.0099	310.0119
	Level 8	15.9min	1.0122	1.0260	1.0467	203.3741	1.0123	1.0260	1.0467	197.9757	1.0185	1.0333	1.0563	1360.2652	1.0068	1.0189	1.0389	1.0585	0.0046	0.0063	0.0072	512.5693
	Level 9	31.8min	1.0093	1.0219	1.0374	208.5505	1.0093	1.0220	1.0374	225.5074	1.0148	1.0305	1.0448	1554.4459	1.0045	1.0165	1.0315	1.0534	0.0040	0.0056	0.0051	586.0429
	Level 1	5.1sec	1.5230	1.6779	1.8282	2.9906	1.5229	1.6779	1.8280	2.9834	1.6326	1.7042	1.9589	5.5163	1.3882	1.6355	1.7327	1.9682	0.0668	0.0208	0.0636	1.2745
	Level 2	10.2sec	1.2877	1.4294	1.6089	4.8608	1.2878	1.4293	1.6096	4.8302	1.3648	1.4922	1.7050	15.6286	1.1973	1.3676	1.5064	1.7128	0.0539	0.0417	0.0661	4.5603
	Level 3	20.4sec	1.1717	1.2812	1.3826	7.4390	1.1717	1.2812	1.3826	7.3601	1.2236	1.3346	1.4435	30.2571	1.1033	1.2245	1.3363	1.4887	0.0406	0.0420	0.0373	9.6786
3	**Level 4**	40.7sec	1.0985	1.1785	1.2678	12.6511	1.0986	1.1785	1.2683	12.7897	1.1283	1.2283	1.3354	59.5143	1.0631	1.1312	1.2313	1.3401	0.0215	0.0306	0.0378	21.5996
months	**Level 5**	1.4min	1.0574	1.1106	1.1816	26.2385	1.0575	1.1105	1.1816	26.3455	1.0822	1.1397	1.2100	172.4252	1.0327	1.0848	1.1428	1.2316	0.0126	0.0145	0.0209	54.6661
before	**Level 6**	2.7min	1.0333	1.0687	1.1140	56.8612	1.0333	1.0687	1.1141	57.7567	1.0465	1.0881	1.1371	450.0430	1.0184	1.0481	1.0886	1.1395	0.0081	0.0109	0.0157	134.4882
	Level 7	5.4min	1.0193	1.0428	1.0711	104.2222	1.0193	1.0428	1.0710	103.2789	1.0289	1.0539	1.0835	826.2681	1.0124	1.0292	1.0561	1.0839	0.0052	0.0073	0.0101	252.5398
	Level 8	10.9min	1.0131	1.0290	1.0468	178.4323	1.0131	1.0290	1.0468	179.1766	1.0189	1.0376	1.0585	1360.2652	1.0068	1.0191	1.0389	1.0622	0.0041	0.0061	0.0071	438.9167
	Level 9	21.7min	1.0112	1.0254	1.0406	258.5440	1.0113	1.0254	1.0407	266.0228	1.0178	1.0320	1.0534	1873.4571	1.0045	1.0180	1.0324	1.0584	0.0047	0.0049	0.0061	645.9178
	Level 1	3.2sec	1.5183	1.6134	1.7214	2.1707	1.5181	1.6135	1.7213	2.1731	1.5668	1.6611	1.8015	5.5163	1.3882	1.5673	1.6625	1.8017	0.0354	0.0271	0.0371	0.7405
	Level 2	6.4sec	1.2987	1.3977	1.5142	2.4492	1.2989	1.3978	1.5140	2.4441	1.3598	1.4520	1.5921	15.6286	1.1835	1.3618	1.4522	1.5985	0.0424	0.0270	0.0428	2.4315
	Level 3	12.9sec	1.1804	1.2537	1.3391	2.8738	1.1805	1.2537	1.3391	2.8674	1.2244	1.2985	1.3879	30.2571	1.0855	1.2245	1.3003	1.3918	0.0346	0.0204	0.0259	4.9901
1	**Level 4**	25.7sec	1.1094	1.1607	1.2173	3.8950	1.1094	1.1607	1.2173	3.9356	1.1381	1.1816	1.2513	59.5143	1.0454	1.1387	1.1823	1.2526	0.0229	0.0125	0.0192	10.7805
Year	**Level 5**	51.4sec	1.0672	1.1006	1.1371	6.6934	1.0673	1.1006	1.1370	6.6979	1.0884	1.1148	1.1683	172.4252	1.0271	1.0887	1.1150	1.1688	0.0159	0.0084	0.0155	26.5475
before	**Level 6**	1.7min	1.0401	1.0622	1.0858	13.3011	1.0401	1.0622	1.0858	13.2705	1.0539	1.0720	1.1033	450.0430	1.0157	1.0542	1.0722	1.1036	0.0100	0.0052	0.0088	64.5178
	Level 7	3.4min	1.0239	1.0393	1.0543	21.6183	1.0239	1.0393	1.0543	22.9029	1.0320	1.0449	1.0655	826.2681	1.0081	1.0321	1.0453	1.0656	0.0062	0.0035	0.0059	120.5577
	Level 8	6.9min	1.0157	1.0264	1.0376	39.4624	1.0157	1.0264	1.0376	39.0467	1.0212	1.0306	1.0451	1360.2652	1.0044	1.0212	1.0306	1.0453	0.0043	0.0029	0.0044	209.6102
	Level 9	13.7min	1.0129	1.0223	1.0330	56.8835	1.0129	1.0223	1.0330	57.5498	1.0183	1.0262	1.0394	1873.4571	1.0029	1.0185	1.0265	1.0395	0.0040	0.0022	0.0039	308.8832

Table A.55: EDZ4 Other Results Table –Continued

EDZ4 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	10.6sec	1.5446	1.6921	1.9224	2.4097	1.5447	1.6919	1.9248	2.4165	1.6321	1.7309	1.9911	2.6687	1.5000	1.6704	1.8240	2.0558	0.0757	0.0275	0.0888	0.3205
	Level 2	21.3sec	1.2867	1.4884	1.8090	2.3480	1.2861	1.4901	1.8107	2.3479	1.3519	1.6258	1.8960	2.6436	1.2500	1.3706	1.7239	2.0351	0.0571	0.1243	0.0861	0.3046
	Level 3	42.6sec	1.1613	1.3315	1.5528	1.7629	1.1592	1.3318	1.5528	1.7634	1.2232	1.3842	1.6157	1.9588	1.1250	1.2245	1.4957	1.6313	0.0555	0.0737	0.0602	0.1727
30	**Level 4**	1.4min	1.0802	1.2597	1.3549	1.4895	1.0807	1.2606	1.3549	1.4887	1.1124	1.3500	1.3589	1.7009	1.0625	1.1447	1.3528	1.3812	0.0275	0.0930	0.0034	0.1838
days	**Level 5**	2.8min	1.0414	1.1504	1.2238	1.3360	1.0418	1.1506	1.2234	1.3377	1.0564	1.1752	1.2352	1.4868	1.0313	1.0863	1.2037	1.2550	0.0130	0.0430	0.0172	0.1293
before	**Level 6**	5.7min	1.0233	1.0858	1.1212	1.2034	1.0233	1.0860	1.1213	1.2021	1.0285	1.1052	1.1252	1.2974	1.0157	1.0515	1.1182	1.1453	0.0067	0.0242	0.0036	0.0831
	Level 7	11.4min	1.0135	1.0436	1.0647	1.1230	1.0135	1.0436	1.0647	1.1229	1.0176	1.0554	1.0672	1.1904	1.0081	1.0247	1.0627	1.0770	0.0049	0.0136	0.0023	0.0597
	Level 8	22.7min	1.0070	1.0200	1.0349	1.0667	1.0071	1.0201	1.0349	1.0672	1.0085	1.0258	1.0367	1.1058	1.0044	1.0107	1.0334	1.0405	0.0023	0.0066	0.0017	0.0342
	Level 9	45.4min	1.0039	1.0103	1.0199	1.0402	1.0039	1.0102	1.0199	1.0400	1.0056	1.0153	1.0203	1.0667	1.0029	1.0058	1.0197	1.0265	0.0015	0.0041	0.0003	0.0231
	Level 1	7.4sec	1.5430	1.6910	1.8650	3.6678	1.5432	1.6909	1.8650	3.6594	1.6436	1.7309	1.9911	9.0000	1.4787	1.6704	1.7951	2.0052	0.0670	0.0215	0.0773	2.5156
	Level 2	14.8sec	1.3043	1.4456	1.6625	7.6061	1.3042	1.4459	1.6623	7.7334	1.3519	1.5078	1.8123	33.0000	1.2500	1.3706	1.5601	1.8960	0.0423	0.0592	0.1006	11.3668
	Level 3	29.6sec	1.1751	1.2986	1.4214	20.9005	1.1755	1.2984	1.4219	21.6679	1.2232	1.3429	1.5470	129.0000	1.1250	1.2245	1.3472	1.6157	0.0371	0.0459	0.0732	47.4742
60	**Level 4**	59.1sec	1.0894	1.1771	1.2986	80.2679	1.0896	1.1776	1.2983	77.1399	1.1225	1.2081	1.3531	513.0000	1.0625	1.1260	1.2149	1.3589	0.0247	0.0314	0.0602	192.3001
days	**Level 5**	2min	-219.4884	1.0920	1.1633	3.3687	-218.3911	1.0921	1.1630	3.3773	1.0575	1.1090	1.2037	15.3464	-1535.0000	1.0600	1.1191	1.2313	580.5699	0.0176	0.0286	5.2821
before	**Level 6**	3.9min	-142.4866	1.0492	1.0919	3.2144	-145.2661	1.0492	1.0918	3.1584	1.0285	1.0596	1.1182	14.7902	-1023.0000	1.0301	1.0634	1.1204	387.0443	0.0100	0.0189	5.1307
	Level 7	7.9min	1.0110	1.0256	1.0484	2.3414	1.0110	1.0255	1.0483	2.3608	1.0173	1.0311	1.0627	9.7149	1.0000	1.0176	1.0374	1.0643	0.0062	0.0052	0.0091	3.2441
	Level 8	15.8min	1.0058	1.0146	1.0247	1.6402	1.0058	1.0146	1.0247	1.6435	1.0092	1.0188	1.0334	5.0520	1.0000	1.0098	1.0203	1.0346	0.0032	0.0033	0.0045	1.5039
	Level 9	31.5min	1.0027	1.0087	1.0147	1.3343	1.0027	1.0087	1.0148	1.3380	1.0046	1.0116	1.0197	3.1342	1.0000	1.0056	1.0119	1.0198	0.0014	0.0023	0.0028	0.7924
	Level 1	5sec	1.5224	1.6707	1.8129	3.0407	1.5225	1.6706	1.8122	3.0309	1.6321	1.7045	1.9475	9.0000	1.4152	1.6347	1.7309	1.9595	0.0591	0.0203	0.0593	1.9694
	Level 2	9.9sec	1.2879	1.4152	1.5906	5.4271	1.2882	1.4144	1.5907	5.3647	1.3519	1.4871	1.6991	33.0000	1.2025	1.3624	1.5065	1.7239	0.0514	0.0410	0.0629	8.5718
	Level 3	19.9sec	1.1623	1.2676	1.3692	12.2285	1.1624	1.2674	1.3690	12.8776	1.2097	1.3122	1.4249	129.0000	1.0898	1.2142	1.3318	1.4308	0.0378	0.0367	0.0309	35.0368
3	**Level 4**	39.8sec	1.0885	1.1623	1.2456	40.5470	1.0889	1.1622	1.2460	42.5838	1.1225	1.1999	1.3195	513.0000	1.0625	1.1250	1.2024	1.3500	0.0221	0.0243	0.0379	141.4243
months	**Level 5**	1.3min	-122.0723	1.0935	1.1535	2.7243	-117.1096	1.0935	1.1536	2.7225	1.0600	1.1111	1.1812	15.3464	-1535.0000	1.0699	1.1153	1.1891	426.0230	0.0133	0.0244	3.9766
before	**Level 6**	2.7min	-79.3210	1.0526	1.0892	2.4812	-77.7456	1.0526	1.0892	2.4276	1.0321	1.0650	1.1172	14.7902	-1023.0000	1.0367	1.0687	1.1182	284.0136	0.0091	0.0153	3.7847
	Level 7	5.3min	1.0130	1.0279	1.0478	1.8669	1.0130	1.0278	1.0479	1.8712	1.0173	1.0394	1.0599	9.7149	1.0000	1.0176	1.0413	1.0627	0.0050	0.0073	0.0063	2.3863
	Level 8	10.6min	1.0070	1.0155	1.0250	1.3959	1.0070	1.0155	1.0250	1.4057	1.0098	1.0205	1.0286	5.0520	1.0000	1.0099	1.0207	1.0334	0.0029	0.0040	0.0022	1.1056
	Level 9	21.2min	1.0034	1.0096	1.0145	1.2100	1.0034	1.0096	1.0145	1.2102	1.0058	1.0116	1.0195	3.1342	1.0000	1.0070	1.0119	1.0197	0.0020	0.0015	0.0021	0.5814
	Level 1	3.1sec	1.5120	1.6060	1.7156	2.1775	1.5120	1.6061	1.7157	2.1726	1.5592	1.6535	1.7879	9.0000	1.3689	1.5607	1.6562	1.7925	0.0368	0.0269	0.0377	1.0098
	Level 2	6.2sec	1.2946	1.3879	1.5041	2.5691	1.2945	1.3879	1.5041	2.5450	1.3515	1.4357	1.5780	33.0000	1.1815	1.3518	1.4361	1.5804	0.0404	0.0241	0.0425	4.1325
	Level 3	12.5sec	1.1721	1.2456	1.3283	3.9685	1.1719	1.2456	1.3283	4.0273	1.2145	1.2856	1.3770	129.0000	1.0846	1.2156	1.2863	1.3782	0.0322	0.0193	0.0274	16.3613
1	**Level 4**	25sec	1.1006	1.1504	1.2016	10.1283	1.1007	1.1505	1.2017	10.2663	1.1301	1.1734	1.2379	513.0000	1.0438	1.1311	1.1744	1.2389	0.0218	0.0126	0.0170	65.4910
Year	**Level 5**	49.9sec	-25.6340	1.0886	1.1200	1.6454	-24.1230	1.0885	1.1199	1.6418	1.0778	1.1027	1.1423	15.3464	-1535.0000	1.0781	1.1030	1.1477	196.6721	0.0073	0.0114	2.0689
before	**Level 6**	1.7min	-15.8389	1.0499	1.0687	1.4548	-15.7550	1.0499	1.0687	1.4551	1.0430	1.0593	1.0841	14.7902	-1023.0000	1.0434	1.0594	1.0846	131.1139	0.0043	0.0068	1.8240
	Level 7	3.3min	1.0169	1.0271	1.0374	1.2687	1.0168	1.0271	1.0374	1.2650	1.0224	1.0314	1.0454	9.7149	1.0000	1.0224	1.0316	1.0455	0.0043	0.0027	0.0039	1.1370
	Level 8	6.7min	1.0089	1.0145	1.0198	1.1333	1.0088	1.0145	1.0198	1.1289	1.0120	1.0170	1.0237	5.0520	1.0000	1.0121	1.0171	1.0238	0.0023	0.0015	0.0020	0.5304
	Level 9	13.3min	1.0044	1.0080	1.0115	1.0679	1.0044	1.0080	1.0115	1.0710	1.0065	1.0096	1.0142	3.1342	1.0000	1.0067	1.0097	1.0142	0.0016	0.0009	0.0013	0.2829

Table A.55: EDZ4 Other Results Table –Continued

EDZ4 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	10.6sec	0.4215	0.5342	0.5931	0.6479	0.4207	0.5344	0.5932	0.6484	0.4853	0.5741	0.6015	0.6667	0.3811	0.5019	0.5868	0.6127	0.0564	0.0341	0.0075	0.0309
	Level 2	21.3sec	0.4353	0.5657	0.6887	0.7767	0.4367	0.5656	0.6877	0.7760	0.4912	0.6004	0.7145	0.8000	0.3971	0.5274	0.6400	0.7327	0.0488	0.0328	0.0414	0.0375
	Level 3	42.6sec	0.5650	0.6610	0.7632	0.8641	0.5654	0.6606	0.7629	0.8644	0.6122	0.7058	0.8167	0.8888	0.4971	0.6205	0.7207	0.8204	0.0605	0.0367	0.0490	0.0382
30	**Level 4**	1.4min	0.6634	0.7440	0.8110	0.9244	0.6654	0.7439	0.8102	0.9247	0.7355	0.7488	0.8709	0.9407	0.5384	0.7398	0.7552	0.8990	0.1102	0.0043	0.0581	0.0225
days	**Level 5**	2.8min	0.7410	0.8226	0.8725	0.9580	0.7393	0.8226	0.8730	0.9579	0.7939	0.8488	0.9127	0.9683	0.6307	0.8065	0.8502	0.9467	0.0940	0.0202	0.0344	0.0109
before	**Level 6**	5.7min	0.8060	0.8848	0.9207	0.9739	0.8038	0.8846	0.9208	0.9740	0.8660	0.8907	0.9422	0.9819	0.7142	0.8706	0.9016	0.9678	0.0795	0.0094	0.0204	0.0072
	Level 7	11.4min	0.8589	0.9279	0.9551	0.9828	0.8591	0.9276	0.9549	0.9829	0.9167	0.9388	0.9678	0.9873	0.7853	0.9179	0.9404	0.9762	0.0672	0.0095	0.0137	0.0059
	Level 8	22.7min	0.8908	0.9552	0.9733	0.9887	0.8910	0.9553	0.9733	0.9887	0.9341	0.9615	0.9814	0.9911	0.8319	0.9486	0.9625	0.9867	0.0529	0.0065	0.0097	0.0022
	Level 9	45.4min	0.8989	0.9653	0.9803	0.9917	0.8994	0.9652	0.9802	0.9917	0.9437	0.9690	0.9838	0.9927	0.8376	0.9608	0.9740	0.9911	0.0552	0.0035	0.0054	0.0009
	Level 1	7.4sec	0.3613	0.5369	0.5892	0.6481	0.3616	0.5369	0.5893	0.6479	0.4966	0.5570	0.6015	0.6760	0.1813	0.5019	0.5741	0.6114	0.1208	0.0218	0.0081	0.0268
	Level 2	14.8sec	0.3259	0.5981	0.6833	0.7705	0.3280	0.5979	0.6837	0.7703	0.5274	0.6400	0.7145	0.8000	0.0874	0.5507	0.6499	0.7327	0.1779	0.0317	0.0230	0.0258
	Level 3	29.6sec	0.3804	0.6986	0.7658	0.8476	0.3822	0.6988	0.7659	0.8478	0.6205	0.7323	0.8028	0.8888	0.0472	0.6442	0.7446	0.8167	0.2584	0.0318	0.0245	0.0300
60	**Level 4**	59.1sec	0.4622	0.7672	0.8407	0.9113	0.4544	0.7676	0.8406	0.9113	0.7398	0.8044	0.8744	0.9407	0.0174	0.7409	0.8086	0.8863	0.3188	0.0266	0.0240	0.0209
days	**Level 5**	2min	0.5123	0.8403	0.8958	0.9493	0.5155	0.8401	0.8959	0.9494	0.8065	0.8562	0.9127	0.9683	0.0058	0.8069	0.8618	0.9379	0.3536	0.0181	0.0169	0.0114
before	**Level 6**	3.9min	0.5570	0.8950	0.9350	0.9701	0.5678	0.8950	0.9351	0.9702	0.8706	0.9129	0.9500	0.9819	0.0022	0.8841	0.9186	0.9563	0.3878	0.0100	0.0101	0.0080
	Level 7	7.9min	0.6104	0.9326	0.9604	0.9819	0.6098	0.9326	0.9604	0.9820	0.9179	0.9434	0.9717	0.9877	0.0012	0.9217	0.9524	0.9719	0.4114	0.0086	0.0075	0.0060
	Level 8	15.8min	0.6367	0.9555	0.9747	0.9879	0.6418	0.9554	0.9747	0.9879	0.9447	0.9625	0.9814	0.9933	0.0007	0.9467	0.9678	0.9818	0.4238	0.0066	0.0060	0.0045
	Level 9	31.5min	0.6529	0.9640	0.9786	0.9908	0.6539	0.9640	0.9785	0.9908	0.9494	0.9695	0.9838	0.9955	0.0006	0.9571	0.9704	0.9854	0.4301	0.0047	0.0053	0.0040
	Level 1	5sec	0.3837	0.5474	0.5961	0.6575	0.3835	0.5476	0.5961	0.6578	0.5081	0.5771	0.6114	0.7203	0.1813	0.5105	0.5868	0.6125	0.1260	0.0187	0.0074	0.0290
	Level 2	9.9sec	0.3695	0.6221	0.6999	0.7778	0.3677	0.6222	0.7002	0.7778	0.5838	0.6638	0.7312	0.8352	0.0640	0.5865	0.6702	0.7327	0.2053	0.0256	0.0204	0.0327
	Level 3	19.9sec	0.4185	0.7239	0.7814	0.8543	0.4166	0.7238	0.7813	0.8544	0.6717	0.7483	0.8167	0.9064	0.0331	0.6927	0.7493	0.8173	0.2671	0.0193	0.0257	0.0297
3	**Level 4**	39.8sec	0.4804	0.7886	0.8491	0.9105	0.4778	0.7891	0.8491	0.9105	0.7462	0.8122	0.8840	0.9407	0.0168	0.7488	0.8141	0.8863	0.3117	0.0230	0.0221	0.0179
months	**Level 5**	1.3min	0.5360	0.8463	0.9007	0.9458	0.5366	0.8466	0.9007	0.9458	0.8119	0.8751	0.9218	0.9683	0.0058	0.8264	0.8774	0.9240	0.3448	0.0150	0.0117	0.0112
before	**Level 6**	2.7min	0.5894	0.8978	0.9357	0.9678	0.5932	0.8977	0.9358	0.9678	0.8776	0.9186	0.9541	0.9819	0.0022	0.8794	0.9190	0.9555	0.3725	0.0127	0.0096	0.0076
	Level 7	5.3min	0.6396	0.9337	0.9589	0.9810	0.6386	0.9338	0.9590	0.9811	0.9226	0.9468	0.9717	0.9877	0.0012	0.9229	0.9489	0.9719	0.3870	0.0088	0.0067	0.0049
	Level 8	10.6min	0.6721	0.9553	0.9718	0.9871	0.6725	0.9553	0.9718	0.9871	0.9414	0.9625	0.9813	0.9933	0.0007	0.9447	0.9637	0.9814	0.3911	0.0064	0.0058	0.0040
	Level 9	21.2min	0.6797	0.9609	0.9752	0.9888	0.6780	0.9609	0.9752	0.9888	0.9449	0.9686	0.9823	0.9955	0.0005	0.9494	0.9690	0.9825	0.3946	0.0056	0.0047	0.0046
	Level 1	3.1sec	0.4887	0.5812	0.6199	0.6591	0.4886	0.5812	0.6199	0.6591	0.5550	0.6015	0.6380	0.7203	0.1813	0.5551	0.6020	0.6382	0.0883	0.0124	0.0104	0.0158
	Level 2	6.2sec	0.5312	0.6609	0.7157	0.7708	0.5313	0.6610	0.7157	0.7707	0.6256	0.6886	0.7343	0.8449	0.0640	0.6281	0.6887	0.7354	0.1428	0.0186	0.0137	0.0257
	Level 3	12.5sec	0.6013	0.7471	0.7979	0.8478	0.6018	0.7471	0.7979	0.8479	0.7185	0.7691	0.8167	0.9212	0.0331	0.7205	0.7701	0.8167	0.1765	0.0144	0.0129	0.0253
1	**Level 4**	25sec	0.6777	0.8217	0.8616	0.9017	0.6778	0.8217	0.8617	0.9018	0.7983	0.8458	0.8782	0.9566	0.0168	0.7992	0.8463	0.8787	0.1990	0.0130	0.0093	0.0189
Year	**Level 5**	49.9sec	0.7456	0.8797	0.9087	0.9372	0.7448	0.8797	0.9086	0.9372	0.8556	0.8969	0.9185	0.9736	0.0058	0.8559	0.8970	0.9188	0.2129	0.0119	0.0070	0.0141
before	**Level 6**	1.7min	0.8030	0.9210	0.9414	0.9616	0.8026	0.9211	0.9414	0.9616	0.9061	0.9327	0.9486	0.9845	0.0022	0.9064	0.9328	0.9489	0.2192	0.0075	0.0046	0.0093
	Level 7	3.3min	0.8463	0.9485	0.9622	0.9766	0.8464	0.9485	0.9622	0.9767	0.9384	0.9566	0.9689	0.9920	0.0012	0.9386	0.9570	0.9690	0.2191	0.0053	0.0032	0.0059
	Level 8	6.7min	0.8735	0.9638	0.9743	0.9845	0.8723	0.9638	0.9743	0.9845	0.9566	0.9703	0.9792	0.9956	0.0007	0.9569	0.9703	0.9792	0.2154	0.0041	0.0027	0.0041
	Level 9	13.3min	0.8784	0.9681	0.9782	0.9872	0.8780	0.9681	0.9782	0.9872	0.9620	0.9742	0.9818	0.9971	0.0005	0.9621	0.9744	0.9820	0.2170	0.0037	0.0021	0.0039

Table A.56: EDZ5 Other Results Table

EDZ5 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	26.7sec	1.5350	1.5648	1.6490	2.2127	1.5349	1.5648	1.6477	2.2323	1.5469	1.5703	1.6897	2.6888	1.5229	1.5607	1.6058	1.7758	0.0169	0.0050	0.0593	0.6456
	Level 2	53.3sec	1.2965	1.3452	1.4204	2.3203	1.2967	1.3456	1.4227	2.3356	1.3043	1.3638	1.4690	3.1833	1.2892	1.3101	1.3764	1.4879	0.0107	0.0308	0.0655	1.1988
	Level 3	1.8min	1.1599	1.2189	1.3177	2.1275	1.1587	1.2183	1.3177	2.1264	1.1853	1.2502	1.3232	2.6882	1.1321	1.2009	1.3122	1.5646	0.0376	0.0277	0.0078	0.7945
30	**Level 4**	3.6min	1.0961	1.1767	1.1968	1.8357	1.0965	1.1765	1.1968	1.8343	1.1157	1.1917	1.2004	2.1659	1.0774	1.1591	1.1932	1.5028	0.0270	0.0164	0.0051	0.4689
days	**Level 5**	7.1min	1.0674	1.1305	1.1506	1.6359	1.0669	1.1304	1.1507	1.6415	1.0793	1.1378	1.1586	1.8397	1.0545	1.1167	1.1428	1.4433	0.0175	0.0119	0.0111	0.2803
before	**Level 6**	14.2min	1.0511	1.0999	1.1127	1.5416	1.0511	1.1000	1.1127	1.5422	1.0618	1.1116	1.1130	1.7562	1.0403	1.0863	1.1124	1.3282	0.0152	0.0127	0.0004	0.3026
	Level 7	28.5min	1.0398	1.0665	1.0918	1.4075	1.0402	1.0666	1.0918	1.4106	1.0517	1.0724	1.0953	1.5965	1.0287	1.0574	1.0883	1.2248	0.0163	0.0081	0.0050	0.2629
	Level 8	56.9min	1.0309	1.0516	1.0808	1.3267	1.0309	1.0517	1.0804	1.3333	1.0406	1.0592	1.0962	1.4894	1.0212	1.0430	1.0647	1.1772	0.0137	0.0082	0.0223	0.2208
	Level 9	113.8min	1.0296	1.0506	1.0796	1.3039	1.0300	1.0508	1.0791	1.3059	1.0393	1.0598	1.0972	1.4537	1.0206	1.0419	1.0611	1.1580	0.0132	0.0089	0.0256	0.2090
	Level 1	10.6sec	1.5387	1.6457	1.7739	2.1630	1.5383	1.6458	1.7739	2.1632	1.5703	1.6897	1.8173	2.6888	1.4752	1.5714	1.6937	1.8513	0.0330	0.0455	0.0474	0.3544
	Level 2	21.2sec	1.3089	1.4277	1.5470	2.0506	1.3087	1.4272	1.5472	2.0438	1.3629	1.4709	1.6663	3.1833	1.2638	1.3638	1.4807	1.7385	0.0377	0.0407	0.0682	0.5124
	Level 3	42.4sec	1.1788	1.3070	1.4024	1.8007	1.1788	1.3067	1.4018	1.8026	1.2249	1.3409	1.4937	2.6882	1.1307	1.2502	1.3503	1.5646	0.0360	0.0288	0.0603	0.4020
60	**Level 4**	1.4min	1.1221	1.2069	1.2817	1.6135	1.1227	1.2070	1.2817	1.6073	1.1787	1.2442	1.3191	2.1659	1.0635	1.1823	1.2504	1.4340	0.0433	0.0219	0.0236	0.2618
days	**Level 5**	2.8min	1.0820	1.1472	1.2045	1.4387	1.0825	1.1472	1.2044	1.4426	1.1335	1.1595	1.2284	1.8397	1.0296	1.1357	1.1812	1.2967	0.0358	0.0101	0.0209	0.1926
before	**Level 6**	5.7min	1.0579	1.1057	1.1463	1.3434	1.0574	1.1056	1.1463	1.3419	1.0927	1.1164	1.1758	1.7562	1.0158	1.0940	1.1179	1.1777	0.0266	0.0086	0.0238	0.1939
	Level 7	11.3min	1.0400	1.0725	1.1050	1.2661	1.0401	1.0724	1.1049	1.2644	1.0642	1.0877	1.1211	1.5965	1.0102	1.0647	1.0883	1.1528	0.0188	0.0076	0.0146	0.1546
	Level 8	22.6min	1.0291	1.0531	1.0826	1.2022	1.0290	1.0532	1.0826	1.2029	1.0439	1.0641	1.0962	1.4894	1.0072	1.0484	1.0642	1.1086	0.0138	0.0056	0.0141	0.1313
	Level 9	45.2min	1.0264	1.0480	1.0734	1.1787	1.0265	1.0479	1.0737	1.1775	1.0393	1.0598	1.0902	1.4537	1.0093	1.0403	1.0599	1.0972	0.0119	0.0073	0.0117	0.1250
	Level 1	5.6sec	1.5215	1.5893	1.7065	2.0158	1.5218	1.5892	1.7060	2.0098	1.5530	1.6561	1.7758	2.6888	1.4752	1.5532	1.6573	1.8028	0.0290	0.0281	0.0375	0.3054
	Level 2	11.1sec	1.2967	1.3789	1.4698	1.8293	1.2972	1.3789	1.4700	1.8361	1.3486	1.4107	1.5410	3.1833	1.2433	1.3546	1.4298	1.5451	0.0275	0.0195	0.0335	0.4320
	Level 3	22.2sec	1.1702	1.2532	1.3412	1.6432	1.1706	1.2538	1.3411	1.6418	1.2038	1.2957	1.3996	2.6882	1.1222	1.2120	1.3062	1.4078	0.0284	0.0297	0.0267	0.3383
3	**Level 4**	44.4sec	1.1078	1.1781	1.2412	1.5041	1.1079	1.1783	1.2410	1.5014	1.1401	1.1971	1.2832	2.1659	1.0635	1.1442	1.2004	1.2890	0.0255	0.0175	0.0287	0.2538
months	**Level 5**	1.5min	1.0710	1.1288	1.1710	1.4257	1.0712	1.1287	1.1709	1.4263	1.1000	1.1441	1.1979	2.3584	1.0296	1.1002	1.1443	1.2000	0.0208	0.0161	0.0167	0.3307
before	**Level 6**	3min	1.0495	1.0919	1.1212	1.4372	1.0494	1.0919	1.1213	1.4434	1.0672	1.1020	1.1352	3.5819	1.0158	1.0732	1.1031	1.1355	0.0150	0.0109	0.0108	0.6633
	Level 7	5.9min	1.0346	1.0627	1.0853	1.5915	1.0346	1.0627	1.0852	1.5762	1.0496	1.0700	1.0962	6.0831	1.0102	1.0508	1.0724	1.0980	0.0112	0.0068	0.0093	1.3607
	Level 8	11.8min	1.0244	1.0453	1.0617	1.9182	1.0245	1.0453	1.0617	1.9219	1.0344	1.0518	1.0726	11.1147	1.0072	1.0371	1.0523	1.0757	0.0080	0.0046	0.0074	2.7642
	Level 9	23.7min	1.0212	1.0390	1.0562	2.6224	1.0211	1.0391	1.0563	2.6794	1.0285	1.0453	1.0658	21.1951	1.0093	1.0313	1.0456	1.0685	0.0059	0.0040	0.0066	5.5642
	Level 1	3.1sec	1.4640	1.5267	1.5830	1.7800	1.4639	1.5267	1.5829	1.7798	1.4956	1.5516	1.6352	2.6888	1.3781	1.4976	1.5529	1.6400	0.0219	0.0150	0.0238	0.1945
	Level 2	6.3sec	1.2418	1.2995	1.3563	1.5572	1.2417	1.2995	1.3564	1.5587	1.2735	1.3257	1.4020	3.1833	1.1709	1.2760	1.3263	1.4030	0.0265	0.0144	0.0212	0.2560
	Level 3	12.5sec	1.1369	1.1878	1.2328	1.4026	1.1368	1.1878	1.2327	1.4017	1.1688	1.2038	1.2737	2.6882	1.0739	1.1712	1.2050	1.2749	0.0226	0.0091	0.0191	0.2073
1	**Level 4**	25sec	1.0832	1.1260	1.1623	1.2962	1.0833	1.1260	1.1624	1.2959	1.1077	1.1382	1.1909	2.1659	1.0431	1.1078	1.1383	1.1917	0.0180	0.0083	0.0152	0.1651
Year	**Level 5**	50sec	1.0528	1.0874	1.1165	1.2290	1.0528	1.0874	1.1164	1.2293	1.0734	1.0987	1.1368	2.3584	1.0240	1.0735	1.0995	1.1371	0.0137	0.0078	0.0123	0.1863
before	**Level 6**	1.7min	1.0347	1.0612	1.0824	1.1934	1.0347	1.0611	1.0824	1.1917	1.0498	1.0700	1.0983	3.5819	1.0135	1.0527	1.0703	1.0993	0.0102	0.0051	0.0087	0.3283
	Level 7	3.3min	1.0235	1.0421	1.0573	1.1898	1.0235	1.0421	1.0573	1.1904	1.0360	1.0485	1.0693	6.0831	1.0086	1.0360	1.0487	1.0695	0.0076	0.0035	0.0063	0.6470
	Level 8	6.7min	1.0168	1.0300	1.0412	1.2376	1.0168	1.0300	1.0412	1.2465	1.0251	1.0344	1.0492	11.1147	1.0059	1.0251	1.0345	1.0495	0.0057	0.0027	0.0046	1.2971
	Level 9	13.3min	1.0142	1.0253	1.0349	1.4052	1.0142	1.0253	1.0349	1.4041	1.0206	1.0292	1.0419	21.1951	1.0046	1.0211	1.0297	1.0419	0.0048	0.0023	0.0037	2.5989

Table A.56: EDZ5 Other Results Table –Continued

EDZ5 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	26.7sec	1.5407	1.5666	1.6602	2.1431	1.5407	1.5666	1.6596	2.1615	1.5447	1.5729	1.7045	2.5519	1.5366	1.5578	1.6147	1.7711	0.0057	0.0079	0.0635	0.5521
	Level 2	53.3sec	1.2953	1.3520	1.4323	2.2593	1.2952	1.3522	1.4329	2.2768	1.3027	1.3711	1.4781	3.0723	1.2878	1.3323	1.3877	1.4812	0.0106	0.0194	0.0639	1.1251
	Level 3	1.8min	1.1582	1.2229	1.3069	2.0799	1.1586	1.2225	1.3070	2.0851	1.1836	1.2403	1.3103	2.5996	1.1337	1.2084	1.3038	1.5705	0.0353	0.0162	0.0046	0.7277
30	**Level 4**	3.6min	1.0959	1.1717	1.1980	1.7997	1.0965	1.1717	1.1977	1.7981	1.1146	1.1830	1.2070	2.1282	1.0783	1.1649	1.1885	1.4679	0.0256	0.0098	0.0131	0.4669
days	**Level 5**	7.1min	1.0662	1.1262	1.1452	1.6317	1.0660	1.1263	1.1453	1.6282	1.0775	1.1303	1.1516	1.8634	1.0545	1.1215	1.1390	1.3930	0.0162	0.0044	0.0089	0.3326
before	**Level 6**	14.2min	1.0483	1.0950	1.1105	1.5442	1.0483	1.0950	1.1106	1.5453	1.0583	1.1018	1.1135	1.7701	1.0383	1.0862	1.1076	1.3204	0.0142	0.0080	0.0042	0.3180
	Level 7	28.4min	1.0373	1.0672	1.0821	1.4347	1.0375	1.0674	1.0821	1.4352	1.0470	1.0769	1.0847	1.6050	1.0280	1.0580	1.0795	1.2654	0.0135	0.0094	0.0037	0.2401
	Level 8	56.9min	1.0317	1.0539	1.0720	1.3403	1.0319	1.0539	1.0720	1.3402	1.0395	1.0642	1.0774	1.4696	1.0242	1.0431	1.0665	1.2108	0.0108	0.0105	0.0077	0.1830
	Level 9	113.8min	1.0344	1.0521	1.0696	1.3099	1.0343	1.0520	1.0694	1.3069	1.0411	1.0577	1.0762	1.4128	1.0275	1.0436	1.0627	1.2011	0.0096	0.0075	0.0096	0.1497
	Level 1	10.6sec	1.5395	1.6482	1.7782	2.1289	1.5388	1.6478	1.7790	2.1282	1.5729	1.6942	1.8299	2.5876	1.4645	1.5922	1.7045	1.8425	0.0369	0.0378	0.0498	0.3135
	Level 2	21.2sec	1.3073	1.4332	1.5510	1.9992	1.3077	1.4333	1.5516	2.0082	1.3571	1.4777	1.6470	3.0723	1.2593	1.3711	1.4781	1.7083	0.0409	0.0399	0.0733	0.4780
	Level 3	42.4sec	1.1793	1.2990	1.4122	1.7592	1.1788	1.2991	1.4119	1.7612	1.2266	1.3293	1.4897	2.5996	1.1274	1.2403	1.3529	1.5333	0.0411	0.0273	0.0528	0.3778
60	**Level 4**	1.4min	1.1200	1.2048	1.2880	1.5820	1.1205	1.2050	1.2883	1.5830	1.1673	1.2391	1.3095	2.1282	1.0598	1.1830	1.2609	1.4429	0.0432	0.0193	0.0183	0.2473
days	**Level 5**	2.8min	1.0813	1.1437	1.2059	1.4416	1.0821	1.1436	1.2059	1.4375	1.1269	1.1552	1.2503	1.8634	1.0292	1.1303	1.1766	1.3002	0.0352	0.0105	0.0280	0.2008
before	**Level 6**	5.7min	1.0574	1.1029	1.1455	1.3409	1.0568	1.1030	1.1452	1.3415	1.0911	1.1107	1.1773	1.7701	1.0165	1.0919	1.1135	1.1809	0.0260	0.0068	0.0280	0.1977
	Level 7	11.3min	1.0399	1.0712	1.1018	1.2606	1.0401	1.0712	1.1017	1.2630	1.0635	1.0776	1.1281	1.6050	1.0138	1.0654	1.0795	1.1336	0.0173	0.0044	0.0191	0.1587
	Level 8	22.6min	1.0306	1.0535	1.0796	1.1993	1.0308	1.0535	1.0797	1.2010	1.0450	1.0642	1.0974	1.4696	1.0113	1.0466	1.0648	1.1101	0.0123	0.0066	0.0117	0.1251
	Level 9	45.2min	1.0285	1.0485	1.0711	1.1778	1.0286	1.0485	1.0711	1.1752	1.0411	1.0577	1.0849	1.4128	1.0113	1.0418	1.0588	1.0909	0.0112	0.0063	0.0091	0.1111
	Level 1	5.5sec	1.5181	1.5925	1.7072	1.9926	1.5177	1.5925	1.7068	1.9943	1.5487	1.6513	1.7813	2.5876	1.4645	1.5512	1.6536	1.8148	0.0286	0.0267	0.0395	0.2692
	Level 2	11.1sec	1.2935	1.3731	1.4718	1.8233	1.2933	1.3732	1.4719	1.8209	1.3323	1.4125	1.5578	3.0723	1.2442	1.3514	1.4131	1.5741	0.0277	0.0208	0.0358	0.3988
	Level 3	22.2sec	1.1694	1.2465	1.3306	1.6114	1.1696	1.2466	1.3306	1.6130	1.2144	1.2914	1.3859	2.5996	1.1248	1.2181	1.2963	1.4066	0.0307	0.0239	0.0304	0.3155
3	**Level 4**	44.4sec	1.1074	1.1747	1.2341	1.4516	1.1068	1.1747	1.2342	1.4511	1.1449	1.1933	1.2761	2.1282	1.0598	1.1511	1.1962	1.2769	0.0259	0.0142	0.0290	0.2295
months	**Level 5**	1.5min	1.0711	1.1246	1.1663	1.3338	1.0711	1.1244	1.1663	1.3347	1.0971	1.1410	1.1915	1.8634	1.0292	1.1009	1.1473	1.1941	0.0207	0.0151	0.0160	0.1838
before	**Level 6**	3min	1.0492	1.0879	1.1165	1.2574	1.0491	1.0876	1.1166	1.2562	1.0662	1.1029	1.1364	1.7701	1.0165	1.0674	1.1053	1.1368	0.0147	0.0131	0.0121	0.1700
	Level 7	5.9min	1.0339	1.0602	1.0805	1.1912	1.0339	1.0602	1.0804	1.1922	1.0436	1.0705	1.0961	1.6050	1.0138	1.0470	1.0707	1.0969	0.0096	0.0092	0.0089	0.1378
	Level 8	11.8min	1.0247	1.0433	1.0607	1.1462	1.0246	1.0433	1.0607	1.1470	1.0307	1.0502	1.0736	1.4696	1.0113	1.0343	1.0512	1.0774	0.0066	0.0056	0.0077	0.1074
	Level 9	23.7min	1.0216	1.0379	1.0536	1.1303	1.0217	1.0379	1.0537	1.1293	1.0275	1.0429	1.0645	1.4128	1.0113	1.0294	1.0436	1.0661	0.0054	0.0049	0.0072	0.0941
	Level 1	3.1sec	1.4638	1.5262	1.5827	1.7812	1.4637	1.5261	1.5827	1.7806	1.4985	1.5487	1.6316	2.5876	1.3782	1.4985	1.5496	1.6416	0.0224	0.0146	0.0231	0.1829
	Level 2	6.3sec	1.2415	1.3003	1.3546	1.5669	1.2413	1.3003	1.3546	1.5655	1.2742	1.3282	1.3947	3.0723	1.1726	1.2751	1.3297	1.3974	0.0269	0.0153	0.0188	0.2523
	Level 3	12.5sec	1.1365	1.1894	1.2322	1.4084	1.1366	1.1894	1.2320	1.4092	1.1711	1.2070	1.2699	2.5996	1.0723	1.1715	1.2084	1.2701	0.0225	0.0099	0.0170	0.2198
1	**Level 4**	25sec	1.0834	1.1266	1.1624	1.3054	1.0834	1.1267	1.1624	1.3047	1.1099	1.1390	1.1849	2.3942	1.0423	1.1122	1.1411	1.1855	0.0184	0.0073	0.0136	0.2052
Year	**Level 5**	50sec	1.0532	1.0880	1.1162	1.2602	1.0532	1.0880	1.1163	1.2623	1.0757	1.1001	1.1364	4.3893	1.0233	1.0758	1.1005	1.1366	0.0143	0.0073	0.0113	0.4263
before	**Level 6**	1.7min	1.0350	1.0613	1.0819	1.2622	1.0350	1.0613	1.0819	1.2577	1.0531	1.0689	1.0958	7.5543	1.0130	1.0535	1.0692	1.0969	0.0104	0.0047	0.0081	0.8325
	Level 7	3.3min	1.0239	1.0423	1.0566	1.3284	1.0239	1.0423	1.0566	1.3235	1.0363	1.0476	1.0675	14.0093	1.0085	1.0366	1.0480	1.0678	0.0076	0.0033	0.0056	1.6674
	Level 8	6.7min	1.0173	1.0303	1.0409	1.5066	1.0173	1.0303	1.0409	1.5122	1.0254	1.0353	1.0490	26.8564	1.0060	1.0256	1.0353	1.0498	0.0056	0.0027	0.0040	3.3280
	Level 9	13.3min	1.0148	1.0258	1.0352	1.9458	1.0148	1.0257	1.0352	1.9357	1.0213	1.0298	1.0424	52.6156	1.0048	1.0214	1.0302	1.0424	0.0048	0.0025	0.0038	6.6539

Table A.56: EDZ5 Other Results Table –Continued

EDZ5 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	26.7sec	1.5370	1.5652	1.6518	2.1781	1.5369	1.5653	1.6509	2.1945	1.5448	1.5696	1.6955	2.6156	1.5290	1.5601	1.6062	1.7734	0.0112	0.0048	0.0632	0.5955
	Level 2	53.3sec	1.2952	1.3479	1.4234	2.3046	1.2954	1.3474	1.4244	2.2997	1.3026	1.3661	1.4701	3.1180	1.2883	1.3200	1.3787	1.4814	0.0101	0.0242	0.0647	1.1572
	Level 3	1.8min	1.1577	1.2162	1.3096	2.1152	1.1577	1.2163	1.3096	2.0887	1.1830	1.2408	1.3098	2.6198	1.1325	1.1993	1.3095	1.5575	0.0357	0.0218	0.0002	0.7512
30	**Level 4**	3.6min	1.0945	1.1682	1.1923	1.7945	1.0949	1.1683	1.1924	1.7903	1.1127	1.1807	1.2011	2.1134	1.0772	1.1580	1.1837	1.4673	0.0251	0.0115	0.0123	0.4569
days	**Level 5**	7.1min	1.0636	1.1211	1.1413	1.5929	1.0636	1.1211	1.1411	1.5929	1.0740	1.1269	1.1490	1.8008	1.0532	1.1132	1.1332	1.3850	0.0147	0.0071	0.0112	0.2940
before	**Level 6**	14.2min	1.0450	1.0883	1.0991	1.4809	1.0454	1.0882	1.0990	1.4845	1.0540	1.0940	1.1030	1.6962	1.0369	1.0792	1.0950	1.2728	0.0121	0.0079	0.0057	0.2994
	Level 7	28.4min	1.0328	1.0561	1.0695	1.3584	1.0330	1.0560	1.0693	1.3529	1.0416	1.0606	1.0720	1.5137	1.0244	1.0489	1.0667	1.1921	0.0122	0.0062	0.0038	0.2274
	Level 8	56.9min	1.0232	1.0381	1.0542	1.2456	1.0232	1.0381	1.0544	1.2464	1.0308	1.0421	1.0636	1.3616	1.0157	1.0343	1.0451	1.1313	0.0107	0.0039	0.0131	0.1629
	Level 9	113.8min	1.0191	1.0319	1.0460	1.1857	1.0191	1.0318	1.0460	1.1857	1.0259	1.0354	1.0551	1.2708	1.0124	1.0299	1.0369	1.1007	0.0096	0.0031	0.0129	0.1203
	Level 1	10.6sec	1.5376	1.6449	1.7765	2.1424	1.5379	1.6453	1.7768	2.1405	1.5696	1.6931	1.8281	2.6158	1.4683	1.5774	1.6955	1.8348	0.0351	0.0429	0.0506	0.3370
	Level 2	21.2sec	1.3064	1.4276	1.5449	2.0208	1.3069	1.4277	1.5452	2.0145	1.3561	1.4701	1.6534	3.1180	1.2615	1.3661	1.4756	1.7170	0.0392	0.0394	0.0706	0.4952
	Level 3	42.4sec	1.1758	1.2990	1.3972	1.7636	1.1762	1.2989	1.3968	1.7653	1.2253	1.3299	1.4748	2.6198	1.1272	1.2408	1.3488	1.5562	0.0381	0.0285	0.0535	0.3856
60	**Level 4**	1.4min	1.1168	1.1994	1.2714	1.5733	1.1174	1.1997	1.2713	1.5735	1.1662	1.2357	1.2856	2.1134	1.0586	1.1782	1.2467	1.4297	0.0428	0.0214	0.0160	0.2481
days	**Level 5**	2.8min	1.0765	1.1367	1.1884	1.4080	1.0772	1.1368	1.1885	1.4084	1.1231	1.1490	1.2174	1.8008	1.0253	1.1247	1.1696	1.2795	0.0348	0.0098	0.0193	0.1850
before	**Level 6**	5.7min	1.0518	1.0937	1.1277	1.2995	1.0515	1.0936	1.1278	1.2998	1.0821	1.1021	1.1526	1.6962	1.0122	1.0837	1.1030	1.1583	0.0245	0.0060	0.0192	0.1807
	Level 7	11.3min	1.0335	1.0606	1.0841	1.2174	1.0334	1.0606	1.0842	1.2157	1.0527	1.0667	1.0994	1.5137	1.0074	1.0553	1.0720	1.1084	0.0157	0.0045	0.0122	0.1368
	Level 8	22.6min	1.0227	1.0398	1.0597	1.1448	1.0225	1.0398	1.0597	1.1467	1.0347	1.0451	1.0668	1.3616	1.0041	1.0348	1.0465	1.0819	0.0113	0.0032	0.0082	0.0981
	Level 9	45.2min	1.0172	1.0316	1.0472	1.1089	1.0173	1.0316	1.0471	1.1096	1.0260	1.0369	1.0551	1.2708	1.0021	1.0298	1.0391	1.0660	0.0089	0.0028	0.0058	0.0730
	Level 1	5.6sec	1.5164	1.5896	1.7051	2.0003	1.5164	1.5896	1.7051	1.9994	1.5500	1.6540	1.7769	2.6158	1.4683	1.5512	1.6547	1.8075	0.0285	0.0271	0.0383	0.2875
	Level 2	11.1sec	1.2911	1.3713	1.4660	1.8250	1.2911	1.3712	1.4659	1.8206	1.3247	1.4097	1.5449	3.1180	1.2427	1.3494	1.4098	1.5540	0.0248	0.0181	0.0348	0.4132
	Level 3	22.2sec	1.1672	1.2424	1.3253	1.6109	1.1673	1.2425	1.3255	1.6088	1.2089	1.2839	1.3722	2.6198	1.1216	1.2120	1.2904	1.3844	0.0288	0.0250	0.0254	0.3251
3	**Level 4**	44.4sec	1.1033	1.1687	1.2256	1.4362	1.1031	1.1686	1.2255	1.4388	1.1382	1.1852	1.2556	2.1134	1.0586	1.1442	1.1867	1.2734	0.0248	0.0142	0.0260	0.2318
months	**Level 5**	1.5min	1.0666	1.1172	1.1553	1.3086	1.0664	1.1169	1.1552	1.3099	1.0938	1.1328	1.1744	1.8008	1.0253	1.0940	1.1332	1.1787	0.0204	0.0157	0.0150	0.1717
before	**Level 6**	3min	1.0435	1.0791	1.1047	1.2231	1.0435	1.0792	1.1047	1.2234	1.0591	1.0919	1.1201	1.6962	1.0122	1.0621	1.0920	1.1208	0.0134	0.0118	0.0103	0.1543
	Level 7	5.9min	1.0281	1.0504	1.0677	1.1577	1.0282	1.0505	1.0676	1.1576	1.0389	1.0585	1.0781	1.5137	1.0074	1.0390	1.0592	1.0806	0.0089	0.0071	0.0061	0.1169
	Level 8	11.8min	1.0182	1.0332	1.0445	1.1080	1.0181	1.0332	1.0445	1.1081	1.0247	1.0383	1.0522	1.3616	1.0041	1.0248	1.0384	1.0561	0.0059	0.0042	0.0051	0.0819
	Level 9	23.7min	1.0137	1.0254	1.0348	1.0816	1.0137	1.0254	1.0348	1.0817	1.0180	1.0299	1.0409	1.2708	1.0021	1.0188	1.0299	1.0448	0.0046	0.0035	0.0044	0.0605
	Level 1	3.1sec	1.4629	1.5251	1.5815	1.7762	1.4631	1.5252	1.5815	1.7769	1.4955	1.5500	1.6322	2.6158	1.3776	1.4964	1.5501	1.6375	0.0219	0.0149	0.0231	0.1866
	Level 2	6.3sec	1.2404	1.2977	1.3523	1.5514	1.2403	1.2977	1.3524	1.5528	1.2711	1.3247	1.3930	3.1180	1.1711	1.2722	1.3252	1.3939	0.0264	0.0144	0.0195	0.2471
	Level 3	12.5sec	1.1353	1.1851	1.2277	1.3896	1.1352	1.1852	1.2275	1.3891	1.1678	1.2015	1.2644	2.6198	1.0727	1.1678	1.2017	1.2645	0.0222	0.0094	0.0174	0.1974
1	**Level 4**	25sec	1.0810	1.1216	1.1554	1.2745	1.0810	1.1217	1.1553	1.2751	1.1056	1.1343	1.1804	2.1134	1.0422	1.1066	1.1343	1.1807	0.0174	0.0072	0.0132	0.1452
Year	**Level 5**	50sec	1.0499	1.0821	1.1073	1.1936	1.0500	1.0821	1.1073	1.1939	1.0679	1.0928	1.1280	1.8008	1.0227	1.0690	1.0928	1.1284	0.0128	0.0069	0.0108	0.1065
before	**Level 6**	1.7min	1.0317	1.0546	1.0723	1.1322	1.0317	1.0547	1.0723	1.1327	1.0457	1.0621	1.0846	1.6962	1.0121	1.0466	1.0622	1.0873	0.0092	0.0044	0.0068	0.0869
	Level 7	3.3min	1.0202	1.0357	1.0473	1.0884	1.0202	1.0357	1.0472	1.0884	1.0308	1.0404	1.0564	1.5137	1.0073	1.0309	1.0404	1.0565	0.0064	0.0027	0.0047	0.0652
	Level 8	6.7min	1.0134	1.0235	1.0312	1.0589	1.0133	1.0235	1.0312	1.0587	1.0196	1.0265	1.0369	1.3616	1.0041	1.0200	1.0266	1.0372	0.0044	0.0019	0.0030	0.0458
	Level 9	13.3min	1.0101	1.0177	1.0237	1.0443	1.0102	1.0177	1.0237	1.0445	1.0153	1.0206	1.0277	1.2708	1.0021	1.0153	1.0206	1.0280	0.0035	0.0015	0.0022	0.0340

Table A.56: EDZ5 Other Results Table –Continued

EDZ5 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	26.7sec	0.4787	0.6139	0.6395	0.6490	0.4782	0.6139	0.6396	0.6491	0.5646	0.6358	0.6420	0.6508	0.3919	0.5867	0.6373	0.6474	0.1222	0.0250	0.0033	0.0024
	Level 2	53.3sec	0.5041	0.7089	0.7447	0.7721	0.5003	0.7088	0.7448	0.7721	0.6751	0.7293	0.7506	0.7765	0.3255	0.6765	0.7390	0.7676	0.2472	0.0283	0.0082	0.0063
	Level 3	1.8min	0.5126	0.7789	0.8238	0.8633	0.5107	0.7788	0.8240	0.8635	0.6368	0.8063	0.8275	0.8821	0.3847	0.7632	0.8204	0.8449	0.1782	0.0239	0.0050	0.0263
30	**Level 4**	3.6min	0.5700	0.8384	0.8575	0.9123	0.5756	0.8384	0.8576	0.9123	0.6812	0.8453	0.8584	0.9274	0.4699	0.8285	0.8567	0.8972	0.1495	0.0088	0.0013	0.0213
days	**Level 5**	7.1min	0.6254	0.8772	0.8894	0.9386	0.6273	0.8770	0.8895	0.9382	0.7179	0.8847	0.8916	0.9483	0.5367	0.8684	0.8874	0.9281	0.1281	0.0082	0.0030	0.0143
before	**Level 6**	14.2min	0.6590	0.9028	0.9161	0.9538	0.6611	0.9028	0.9161	0.9540	0.7573	0.9076	0.9206	0.9631	0.5649	0.8980	0.9117	0.9449	0.1360	0.0048	0.0063	0.0129
	Level 7	28.4min	0.7042	0.9256	0.9410	0.9640	0.7067	0.9256	0.9410	0.9639	0.7903	0.9286	0.9452	0.9728	0.6231	0.9219	0.9369	0.9551	0.1182	0.0034	0.0059	0.0125
	Level 8	56.9min	0.7541	0.9352	0.9535	0.9693	0.7532	0.9352	0.9535	0.9692	0.8259	0.9397	0.9587	0.9763	0.6805	0.9281	0.9484	0.9620	0.1029	0.0062	0.0073	0.0101
	Level 9	113.8min	0.7681	0.9385	0.9532	0.9669	0.7702	0.9385	0.9532	0.9669	0.8326	0.9454	0.9582	0.9732	0.7078	0.9292	0.9481	0.9605	0.0882	0.0084	0.0072	0.0090
	Level 1	10.6sec	0.4776	0.5659	0.6093	0.6501	0.4780	0.5660	0.6096	0.6502	0.5428	0.5902	0.6281	0.6828	0.3865	0.5465	0.5942	0.6358	0.0646	0.0177	0.0132	0.0160
	Level 2	21.2sec	0.5156	0.6498	0.7014	0.7657	0.5158	0.6496	0.7012	0.7654	0.5854	0.6767	0.7293	0.7941	0.3255	0.6072	0.6787	0.7369	0.0882	0.0301	0.0191	0.0239
	Level 3	42.4sec	0.5847	0.7146	0.7723	0.8494	0.5847	0.7145	0.7726	0.8492	0.6522	0.7523	0.8063	0.8870	0.3847	0.6713	0.7551	0.8152	0.0927	0.0288	0.0162	0.0298
60	**Level 4**	1.4min	0.6413	0.7800	0.8334	0.8938	0.6424	0.7802	0.8334	0.8936	0.6931	0.8070	0.8453	0.9436	0.4699	0.7637	0.8145	0.8567	0.0799	0.0149	0.0100	0.0347
days	**Level 5**	2.8min	0.7056	0.8340	0.8759	0.9248	0.7056	0.8341	0.8758	0.9250	0.7691	0.8656	0.8847	0.9716	0.5367	0.7998	0.8675	0.8874	0.0832	0.0217	0.0078	0.0302
before	**Level 6**	5.7min	0.7586	0.8768	0.9076	0.9467	0.7570	0.8770	0.9076	0.9467	0.8468	0.9003	0.9158	0.9837	0.5649	0.8494	0.9004	0.9165	0.0922	0.0219	0.0054	0.0234
	Level 7	11.3min	0.8022	0.9105	0.9343	0.9618	0.8010	0.9104	0.9343	0.9617	0.8821	0.9279	0.9386	0.9864	0.6231	0.8864	0.9286	0.9403	0.0856	0.0162	0.0034	0.0160
	Level 8	22.6min	0.8406	0.9281	0.9506	0.9702	0.8394	0.9280	0.9506	0.9702	0.9008	0.9397	0.9554	0.9888	0.6805	0.9113	0.9412	0.9569	0.0762	0.0104	0.0048	0.0117
	Level 9	45.2min	0.8582	0.9353	0.9549	0.9723	0.8567	0.9351	0.9549	0.9723	0.9167	0.9454	0.9599	0.9888	0.7078	0.9218	0.9480	0.9605	0.0715	0.0084	0.0050	0.0107
	Level 1	5.6sec	0.5085	0.5877	0.6299	0.6592	0.5086	0.5877	0.6300	0.6591	0.5510	0.6056	0.6447	0.6828	0.3865	0.5614	0.6193	0.6457	0.0577	0.0139	0.0084	0.0125
	Level 2	11.1sec	0.5653	0.6820	0.7301	0.7736	0.5659	0.6819	0.7301	0.7736	0.6353	0.7080	0.7400	0.8037	0.3255	0.6419	0.7141	0.7506	0.0844	0.0175	0.0095	0.0167
	Level 3	22.2sec	0.6360	0.7535	0.8049	0.8553	0.6355	0.7536	0.8048	0.8555	0.7109	0.7744	0.8210	0.8890	0.3847	0.7216	0.7807	0.8234	0.0874	0.0174	0.0133	0.0225
3	**Level 4**	44.4sec	0.7013	0.8130	0.8525	0.9039	0.7017	0.8128	0.8525	0.9039	0.7831	0.8380	0.8687	0.9436	0.4699	0.7837	0.8407	0.8734	0.0876	0.0198	0.0099	0.0213
months	**Level 5**	1.5min	0.7599	0.8591	0.8906	0.9341	0.7600	0.8590	0.8906	0.9339	0.8374	0.8764	0.9084	0.9716	0.5367	0.8393	0.8780	0.9115	0.0856	0.0124	0.0118	0.0183
before	**Level 6**	3min	0.8065	0.8965	0.9207	0.9533	0.8067	0.8965	0.9206	0.9533	0.8796	0.9067	0.9369	0.9837	0.5649	0.8800	0.9076	0.9379	0.0864	0.0097	0.0109	0.0135
	Level 7	5.9min	0.8476	0.9263	0.9440	0.9673	0.8473	0.9263	0.9441	0.9673	0.9117	0.9342	0.9551	0.9864	0.6231	0.9123	0.9342	0.9582	0.0801	0.0076	0.0081	0.0090
	Level 8	11.8min	0.8781	0.9436	0.9590	0.9759	0.8778	0.9435	0.9590	0.9760	0.9281	0.9522	0.9668	0.9888	0.6805	0.9314	0.9526	0.9702	0.0691	0.0071	0.0050	0.0063
	Level 9	23.7min	0.8906	0.9498	0.9639	0.9788	0.8904	0.9498	0.9639	0.9788	0.9380	0.9589	0.9715	0.9888	0.7078	0.9394	0.9593	0.9732	0.0632	0.0068	0.0046	0.0052
	Level 1	3.1sec	0.5664	0.6319	0.6554	0.6834	0.5663	0.6320	0.6553	0.6833	0.6092	0.6453	0.6673	0.7256	0.3865	0.6129	0.6457	0.6673	0.0467	0.0092	0.0063	0.0106
	Level 2	6.3sec	0.6499	0.7383	0.7691	0.8060	0.6497	0.7383	0.7692	0.8060	0.7156	0.7521	0.7843	0.8528	0.3255	0.7170	0.7529	0.7848	0.0719	0.0102	0.0090	0.0178
	Level 3	12.5sec	0.7223	0.8118	0.8408	0.8800	0.7214	0.8118	0.8408	0.8801	0.7874	0.8275	0.8536	0.9325	0.3847	0.7874	0.8285	0.8539	0.0788	0.0111	0.0070	0.0177
1	**Level 4**	25sec	0.7786	0.8604	0.8876	0.9233	0.7790	0.8604	0.8876	0.9232	0.8435	0.8764	0.8991	0.9594	0.4177	0.8439	0.8780	0.9010	0.0829	0.0101	0.0058	0.0158
Year	**Level 5**	50sec	0.8228	0.8960	0.9191	0.9497	0.8226	0.8959	0.9192	0.9497	0.8799	0.9087	0.9295	0.9772	0.2278	0.8800	0.9090	0.9296	0.0993	0.0090	0.0062	0.0129
before	**Level 6**	1.7min	0.8614	0.9243	0.9423	0.9663	0.8612	0.9244	0.9423	0.9663	0.9117	0.9353	0.9492	0.9871	0.1324	0.9125	0.9355	0.9496	0.1108	0.0069	0.0042	0.0098
	Level 7	3.3min	0.8918	0.9464	0.9594	0.9767	0.8918	0.9464	0.9594	0.9767	0.9365	0.9542	0.9647	0.9916	0.0714	0.9368	0.9546	0.9650	0.1188	0.0050	0.0030	0.0072
	Level 8	6.7min	0.9108	0.9607	0.9706	0.9830	0.9115	0.9607	0.9706	0.9830	0.9526	0.9659	0.9750	0.9941	0.0372	0.9533	0.9659	0.9752	0.1230	0.0037	0.0026	0.0054
	Level 9	13.3min	0.9164	0.9660	0.9749	0.9854	0.9162	0.9660	0.9749	0.9854	0.9593	0.9707	0.9791	0.9953	0.0190	0.9593	0.9710	0.9791	0.1265	0.0035	0.0024	0.0047

Table A.57: EDZ6 Other Results Table

EDZ6 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	19.7sec	1.5004	1.5675	1.7116	2.1354	1.5005	1.5673	1.7117	2.1385	1.5366	1.6162	1.7366	2.8234	1.4483	1.5414	1.6824	1.7405	0.0334	0.0288	0.0279	0.4664
	Level 2	39.5sec	1.2743	1.3710	1.4421	1.8418	1.2741	1.3699	1.4422	1.8389	1.3200	1.4190	1.4514	2.5232	1.2307	1.3204	1.4244	1.4812	0.0334	0.0471	0.0126	0.4734
	Level 3	1.3min	1.1558	1.2372	1.3363	1.6425	1.1560	1.2381	1.3362	1.6380	1.1809	1.3025	1.3484	2.1410	1.1247	1.1873	1.3231	1.3507	0.0249	0.0431	0.0128	0.3227
30	**Level 4**	2.6min	1.1027	1.1598	1.2559	1.6268	1.1027	1.1600	1.2552	1.6313	1.1212	1.1856	1.3268	2.3353	1.0714	1.1271	1.2170	1.3541	0.0205	0.0256	0.0491	0.4135
days	**Level 5**	5.3min	1.0765	1.1113	1.1779	1.8025	1.0768	1.1112	1.1768	1.7778	1.1016	1.1220	1.2335	3.4488	1.0518	1.1018	1.1225	1.2693	0.0179	0.0082	0.0458	0.9373
before	**Level 6**	10.5min	1.0554	1.0820	1.1482	1.6827	1.0553	1.0821	1.1481	1.6864	1.0642	1.0979	1.1709	3.3209	1.0367	1.0665	1.1154	1.1803	0.0109	0.0114	0.0237	0.9166
	Level 7	21.1min	1.0424	1.0642	1.1259	1.5925	1.0424	1.0640	1.1262	1.6037	1.0489	1.0789	1.1408	3.0718	1.0259	1.0501	1.1131	1.1448	0.0098	0.0119	0.0115	0.8230
	Level 8	42.1min	1.0352	1.0593	1.1123	1.5920	1.0352	1.0593	1.1121	1.5837	1.0444	1.0743	1.1414	3.0456	1.0200	1.0454	1.1011	1.1429	0.0094	0.0117	0.0196	0.8188
	Level 9	84.2min	1.0335	1.0677	1.1256	1.6457	1.0336	1.0677	1.1258	1.6542	1.0446	1.0904	1.1623	3.2868	1.0203	1.0465	1.1011	1.1771	0.0097	0.0160	0.0284	0.9138
	Level 1	9.1sec	1.5226	1.6318	1.7661	2.7399	1.5229	1.6324	1.7662	2.7542	1.5625	1.6932	1.8924	5.0000	1.4483	1.5636	1.6958	1.9470	0.0338	0.0462	0.0614	1.1832
	Level 2	18.2sec	1.3013	1.4161	1.5432	4.8392	1.3013	1.4163	1.5429	4.8522	1.3581	1.4507	1.7060	17.0000	1.2307	1.3606	1.4514	1.7112	0.0381	0.0291	0.0959	6.0837
	Level 3	36.3sec	1.1778	1.3004	1.4183	6.6654	1.1783	1.3005	1.4180	6.6900	1.2289	1.3376	1.4819	34.3517	1.1247	1.2503	1.3393	1.5439	0.0335	0.0325	0.0634	11.0269
60	**Level 4**	1.2min	1.1130	1.2134	1.3320	12.9575	1.1131	1.2134	1.3318	12.8666	1.1637	1.2452	1.4142	96.9805	1.0714	1.1671	1.2558	1.4222	0.0274	0.0276	0.0540	30.0227
days	**Level 5**	2.4min	1.0808	1.1474	1.2590	12.4832	1.0808	1.1476	1.2584	12.3467	1.1077	1.1834	1.3341	96.6403	1.0461	1.1173	1.1944	1.3594	0.0232	0.0232	0.0544	29.8547
before	**Level 6**	4.8min	1.0573	1.1114	1.1852	7.2419	1.0574	1.1117	1.1857	7.3891	1.0789	1.1379	1.2467	51.5963	1.0350	1.0814	1.1379	1.2666	0.0162	0.0223	0.0402	15.7612
	Level 7	9.7min	1.0422	1.0822	1.1376	4.8999	1.0423	1.0821	1.1377	4.9611	1.0567	1.1131	1.1665	26.8865	1.0230	1.0579	1.1134	1.1669	0.0123	0.0156	0.0179	8.2855
	Level 8	19.4min	1.0335	1.0643	1.1100	3.6819	1.0334	1.0643	1.1099	3.7041	1.0454	1.0846	1.1414	15.1199	1.0161	1.0507	1.0886	1.1427	0.0104	0.0110	0.0153	4.9545
	Level 9	38.7min	1.0297	1.0619	1.1086	3.2766	1.0298	1.0619	1.1087	3.3181	1.0425	1.0771	1.1343	10.9972	1.0137	1.0446	1.0904	1.1457	0.0102	0.0117	0.0160	3.9494
	Level 1	5.1sec	1.5158	1.6249	1.7597	2.4819	1.5158	1.6250	1.7595	2.4740	1.5525	1.6932	1.8172	5.0000	1.4483	1.5625	1.6958	1.8205	0.0308	0.0443	0.0345	1.0347
	Level 2	10.1sec	1.2923	1.4075	1.5181	3.7614	1.2923	1.4077	1.5176	3.7944	1.3362	1.4514	1.6389	17.0000	1.2307	1.3448	1.4553	1.6459	0.0368	0.0340	0.0534	5.1177
	Level 3	20.3sec	1.1686	1.2876	1.3928	5.0121	1.1691	1.2873	1.3932	4.9569	1.2185	1.3274	1.4712	34.3517	1.1247	1.2289	1.3376	1.4735	0.0275	0.0348	0.0494	9.1980
3	**Level 4**	40.6sec	1.1101	1.2004	1.2962	9.3144	1.1103	1.2002	1.2962	9.0443	1.1475	1.2395	1.3541	96.9805	1.0714	1.1506	1.2440	1.3736	0.0226	0.0313	0.0397	24.7134
months	**Level 5**	1.4min	1.0799	1.1385	1.2175	8.4576	1.0799	1.1387	1.2174	8.6703	1.1076	1.1727	1.2762	96.6403	1.0461	1.1077	1.1781	1.2966	0.0212	0.0228	0.0299	24.5345
before	**Level 6**	2.7min	1.0557	1.1022	1.1544	5.1722	1.0557	1.1025	1.1542	5.3361	1.0774	1.1328	1.1983	51.5963	1.0335	1.0788	1.1330	1.2050	0.0142	0.0195	0.0181	12.9895
	Level 7	5.4min	1.0395	1.0725	1.1150	3.6687	1.0395	1.0725	1.1148	3.6936	1.0517	1.0945	1.1408	26.8865	1.0208	1.0537	1.0947	1.1448	0.0107	0.0122	0.0155	6.8975
	Level 8	10.8min	1.0295	1.0544	1.0873	2.8656	1.0295	1.0544	1.0872	2.8441	1.0393	1.0669	1.1081	15.1199	1.0156	1.0410	1.0670	1.1152	0.0085	0.0081	0.0134	4.1671
	Level 9	21.6min	1.0249	1.0489	1.0822	2.5522	1.0250	1.0489	1.0821	2.5857	1.0346	1.0620	1.1018	10.9972	1.0129	1.0403	1.0659	1.1054	0.0071	0.0072	0.0134	3.3432
	Level 1	2.5sec	1.4912	1.5483	1.6079	1.9051	1.4912	1.5483	1.6077	1.9068	1.5301	1.5776	1.6515	5.0000	1.4049	1.5303	1.5778	1.6519	0.0299	0.0124	0.0219	0.5950
	Level 2	5.1sec	1.2536	1.3177	1.3836	2.0662	1.2536	1.3178	1.3836	2.0526	1.2879	1.3440	1.4244	17.0000	1.2025	1.2880	1.3448	1.4259	0.0230	0.0156	0.0234	2.6454
	Level 3	10.1sec	1.1441	1.2007	1.2625	2.2421	1.1441	1.2007	1.2625	2.2333	1.1745	1.2298	1.3004	34.3517	1.0831	1.1746	1.2301	1.3025	0.0196	0.0160	0.0212	4.6718
1	**Level 4**	20.2sec	1.0918	1.1388	1.1863	3.1710	1.0919	1.1388	1.1864	3.1515	1.1159	1.1598	1.2175	96.9805	1.0375	1.1159	1.1610	1.2177	0.0170	0.0131	0.0179	12.3060
Year	**Level 5**	40.5sec	1.0614	1.0984	1.1333	3.0450	1.0615	1.0984	1.1333	3.0080	1.0796	1.1125	1.1608	96.6403	1.0212	1.0807	1.1125	1.1629	0.0137	0.0104	0.0139	12.1882
before	**Level 6**	1.3min	1.0414	1.0686	1.0949	2.1726	1.0414	1.0686	1.0949	2.1595	1.0551	1.0797	1.1171	51.5963	1.0135	1.0560	1.0802	1.1178	0.0103	0.0073	0.0103	6.4806
	Level 7	2.7min	1.0284	1.0481	1.0671	1.7301	1.0284	1.0482	1.0671	1.7312	1.0392	1.0559	1.0815	26.8865	1.0095	1.0397	1.0560	1.0834	0.0076	0.0052	0.0074	3.4883
	Level 8	5.4min	1.0201	1.0349	1.0489	1.5146	1.0201	1.0349	1.0489	1.5052	1.0286	1.0404	1.0597	15.1199	1.0071	1.0287	1.0406	1.0598	0.0056	0.0037	0.0054	2.1371
	Level 9	10.8min	1.0169	1.0295	1.0420	1.4350	1.0169	1.0295	1.0420	1.4362	1.0243	1.0345	1.0525	10.9972	1.0064	1.0243	1.0346	1.0527	0.0049	0.0031	0.0045	1.7303

Table A.57: EDZ6 Other Results Table –Continued

EDZ6 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	19.7sec	1.5076	1.5746	1.7167	2.0814	1.5081	1.5747	1.7165	2.0867	1.5418	1.6336	1.7446	2.5714	1.4443	1.5527	1.6793	1.7575	0.0392	0.0336	0.0275	0.3373
	Level 2	39.5sec	1.2759	1.3615	1.4430	1.8027	1.2771	1.3614	1.4432	1.8074	1.3309	1.3962	1.4878	2.3411	1.2313	1.3381	1.4251	1.5210	0.0379	0.0257	0.0298	0.3613
	Level 3	1.3min	1.1548	1.2523	1.3350	1.6854	1.1548	1.2526	1.3349	1.6723	1.1752	1.3006	1.3635	2.4234	1.1203	1.1898	1.3048	1.3823	0.0247	0.0433	0.0271	0.4376
30	**Level 4**	2.6min	1.0975	1.1620	1.2509	1.6149	1.0978	1.1623	1.2508	1.6186	1.1195	1.1876	1.3006	2.4013	1.0654	1.1260	1.2040	1.3553	0.0220	0.0254	0.0395	0.4448
days	**Level 5**	5.3min	1.0675	1.1139	1.1803	1.5983	1.0678	1.1142	1.1798	1.5896	1.0846	1.1365	1.2186	2.6699	1.0461	1.0879	1.1370	1.2236	0.0140	0.0194	0.0338	0.6071
before	**Level 6**	10.5min	1.0484	1.0836	1.1554	1.4963	1.0484	1.0835	1.1555	1.4898	1.0569	1.1027	1.1625	2.3736	1.0322	1.0635	1.1376	1.1658	0.0099	0.0162	0.0119	0.4979
	Level 7	21min	1.0388	1.0665	1.1264	1.4554	1.0388	1.0666	1.1267	1.4538	1.0480	1.0780	1.1402	2.3582	1.0233	1.0539	1.1163	1.1431	0.0102	0.0087	0.0104	0.5084
	Level 8	42.1min	1.0343	1.0640	1.1099	1.4356	1.0341	1.0641	1.1099	1.4370	1.0459	1.0735	1.1284	2.3873	1.0188	1.0552	1.0911	1.1370	0.0109	0.0065	0.0152	0.5328
	Level 9	84.2min	1.0360	1.0717	1.1191	1.4664	1.0358	1.0712	1.1196	1.4658	1.0459	1.0972	1.1373	2.4898	1.0195	1.0566	1.1016	1.1557	0.0112	0.0153	0.0146	0.5737
	Level 1	9.1sec	1.5324	1.6400	1.7808	2.6764	1.5320	1.6394	1.7801	2.6700	1.5680	1.6970	1.9085	5.0000	1.4443	1.5834	1.7069	1.9354	0.0371	0.0370	0.0731	1.1197
	Level 2	18.2sec	1.3087	1.4140	1.5515	4.4745	1.3083	1.4141	1.5513	4.5762	1.3488	1.4440	1.6800	17.0000	1.2313	1.3814	1.4509	1.6987	0.0422	0.0250	0.0818	5.6754
	Level 3	36.3sec	1.1814	1.3068	1.4093	6.5371	1.1814	1.3071	1.4089	6.5713	1.2439	1.3412	1.4686	29.2831	1.1203	1.2565	1.3511	1.5420	0.0398	0.0251	0.0400	10.2402
60	**Level 4**	1.2min	1.1111	1.2216	1.3275	13.7665	1.1114	1.2216	1.3269	14.1088	1.1611	1.2593	1.4020	99.6905	1.0654	1.1731	1.2668	1.4054	0.0301	0.0323	0.0466	31.2142
days	**Level 5**	2.4min	1.0758	1.1583	1.2553	16.6380	1.0759	1.1584	1.2549	16.6574	1.1202	1.1942	1.3389	130.5750	1.0447	1.1253	1.2003	1.3439	0.0234	0.0252	0.0566	40.6226
before	**Level 6**	4.8min	1.0537	1.1161	1.1894	13.1751	1.0537	1.1163	1.1893	13.5007	1.0790	1.1451	1.2573	98.9221	1.0322	1.0817	1.1458	1.2751	0.0152	0.0243	0.0425	30.8815
	Level 7	9.7min	1.0408	1.0804	1.1382	12.5780	1.0406	1.0805	1.1383	12.4491	1.0539	1.0979	1.1624	85.1864	1.0233	1.0648	1.1151	1.1982	0.0122	0.0122	0.0169	26.9192
	Level 8	19.4min	1.0333	1.0632	1.1080	10.7770	1.0333	1.0632	1.1080	10.7598	1.0495	1.0735	1.1370	75.4385	1.0151	1.0552	1.0768	1.1434	0.0119	0.0060	0.0169	23.5842
	Level 9	38.7min	1.0315	1.0597	1.1058	8.1837	1.0314	1.0597	1.1061	8.3402	1.0459	1.0681	1.1373	50.6257	1.0110	1.0484	1.0880	1.1557	0.0122	0.0071	0.0167	16.1915
	Level 1	5.1sec	1.5239	1.6283	1.7564	2.4225	1.5235	1.6283	1.7565	2.4254	1.5657	1.6970	1.8237	5.0000	1.4443	1.5680	1.7069	1.8577	0.0357	0.0412	0.0319	0.9674
	Level 2	10.1sec	1.2967	1.4075	1.5211	3.6063	1.2966	1.4074	1.5210	3.6050	1.3451	1.4509	1.6031	17.0000	1.2267	1.3464	1.4521	1.6164	0.0411	0.0334	0.0509	4.7674
	Level 3	20.3sec	1.1691	1.2939	1.3938	4.8527	1.1691	1.2942	1.3937	4.8695	1.2315	1.3407	1.4438	29.2831	1.1203	1.2434	1.3412	1.4455	0.0280	0.0301	0.0363	8.5800
3	**Level 4**	40.6sec	1.1092	1.2035	1.2983	10.1859	1.1093	1.2039	1.2986	9.8670	1.1517	1.2485	1.3471	99.6905	1.0654	1.1557	1.2503	1.3553	0.0241	0.0324	0.0340	25.7859
months	**Level 5**	1.4min	1.0763	1.1445	1.2161	11.5280	1.0764	1.1444	1.2160	11.5438	1.1102	1.1793	1.2759	130.5750	1.0447	1.1102	1.1826	1.2953	0.0202	0.0225	0.0233	33.4197
before	**Level 6**	2.7min	1.0532	1.1032	1.1555	9.3240	1.0534	1.1034	1.1555	9.4122	1.0732	1.1376	1.1945	98.9221	1.0322	1.0767	1.1382	1.2250	0.0131	0.0199	0.0149	25.4734
	Level 7	5.4min	1.0385	1.0721	1.1135	8.5836	1.0385	1.0718	1.1137	8.6853	1.0518	1.0890	1.1431	85.1864	1.0228	1.0537	1.0930	1.1483	0.0104	0.0112	0.0169	22.2755
	Level 8	10.8min	1.0292	1.0554	1.0843	7.2878	1.0291	1.0554	1.0843	7.5471	1.0409	1.0657	1.1098	75.4385	1.0151	1.0420	1.0661	1.1106	0.0088	0.0073	0.0159	19.4855
	Level 9	21.6min	1.0256	1.0496	1.0780	5.8451	1.0256	1.0496	1.0779	5.9334	1.0408	1.0616	1.0992	50.6257	1.0110	1.0408	1.0620	1.1016	0.0085	0.0064	0.0141	13.4517
	Level 1	2.5sec	1.4923	1.5488	1.6071	1.8959	1.4923	1.5488	1.6072	1.8940	1.5292	1.5732	1.6525	5.0000	1.4019	1.5307	1.5772	1.6531	0.0310	0.0125	0.0214	0.5571
	Level 2	5.1sec	1.2548	1.3181	1.3844	2.0071	1.2548	1.3181	1.3843	2.0065	1.2908	1.3440	1.4262	17.0000	1.2018	1.2911	1.3441	1.4263	0.0245	0.0158	0.0245	2.4594
	Level 3	10.1sec	1.1447	1.2003	1.2643	2.1891	1.1447	1.2004	1.2643	2.2126	1.1744	1.2312	1.3008	29.2831	1.0827	1.1745	1.2315	1.3025	0.0206	0.0158	0.0212	4.3804
1	**Level 4**	20.2sec	1.0919	1.1388	1.1858	3.3052	1.0919	1.1388	1.1858	3.3519	1.1160	1.1611	1.2172	99.6905	1.0370	1.1169	1.1612	1.2190	0.0176	0.0133	0.0170	12.8985
Year	**Level 5**	40.5sec	1.0612	1.0979	1.1343	3.7135	1.0612	1.0979	1.1344	3.7032	1.0791	1.1147	1.1606	130.5750	1.0211	1.0796	1.1150	1.1639	0.0136	0.0108	0.0130	16.6215
before	**Level 6**	1.3min	1.0413	1.0682	1.0955	3.0810	1.0413	1.0682	1.0955	3.1461	1.0554	1.0808	1.1163	98.9221	1.0137	1.0554	1.0811	1.1170	0.0101	0.0078	0.0103	12.7147
	Level 7	2.7min	1.0284	1.0477	1.0674	2.9541	1.0284	1.0477	1.0674	2.9382	1.0387	1.0561	1.0817	85.1864	1.0096	1.0389	1.0561	1.0818	0.0075	0.0054	0.0070	11.1623
	Level 8	5.4min	1.0201	1.0344	1.0493	2.6013	1.0202	1.0345	1.0493	2.6417	1.0273	1.0405	1.0605	75.4385	1.0072	1.0273	1.0405	1.0607	0.0055	0.0039	0.0056	9.7440
	Level 9	10.8min	1.0169	1.0293	1.0419	2.2399	1.0170	1.0292	1.0419	2.2447	1.0236	1.0341	1.0514	50.6257	1.0064	1.0237	1.0345	1.0520	0.0048	0.0032	0.0044	6.7781

Table A.57: EDZ6 Other Results Table –Continued

EDZ6 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	19.7sec	1.4980	1.5691	1.7040	2.1016	1.4983	1.5687	1.7042	2.0998	1.5357	1.6243	1.7377	2.6535	1.4445	1.5445	1.6729	1.7469	0.0348	0.0320	0.0265	0.3875
	Level 2	39.5sec	1.2713	1.3523	1.4269	1.7944	1.2716	1.3522	1.4269	1.8002	1.3195	1.3973	1.4350	2.3467	1.2275	1.3218	1.4164	1.5074	0.0344	0.0325	0.0095	0.3885
	Level 3	1.3min	1.1425	1.2388	1.3185	1.5882	1.1428	1.2384	1.3187	1.5860	1.1728	1.2968	1.3310	2.0448	1.1210	1.1781	1.3071	1.3398	0.0250	0.0453	0.0100	0.2936
30	**Level 4**	2.6min	1.0875	1.1514	1.2393	1.5222	1.0873	1.1509	1.2398	1.5182	1.1075	1.1738	1.2967	2.0570	1.0663	1.1108	1.1977	1.2983	0.0177	0.0263	0.0413	0.3177
days	**Level 5**	5.3min	1.0633	1.0957	1.1572	1.5150	1.0632	1.0957	1.1571	1.5231	1.0822	1.1119	1.1814	2.5109	1.0458	1.0836	1.1162	1.1938	0.0134	0.0108	0.0283	0.5555
before	**Level 6**	10.5min	1.0417	1.0697	1.1135	1.4062	1.0417	1.0697	1.1138	1.4158	1.0503	1.0764	1.1249	2.2516	1.0305	1.0618	1.0904	1.1417	0.0077	0.0053	0.0161	0.4691
	Level 7	21.1min	1.0304	1.0484	1.0901	1.3624	1.0305	1.0485	1.0899	1.3617	1.0402	1.0552	1.1012	2.1518	1.0208	1.0422	1.0785	1.1041	0.0070	0.0062	0.0109	0.4435
	Level 8	42.1min	1.0244	1.0409	1.0729	1.3323	1.0244	1.0409	1.0729	1.3371	1.0351	1.0487	1.0871	2.1518	1.0156	1.0352	1.0532	1.0885	0.0072	0.0055	0.0143	0.4565
	Level 9	84.2min	1.0221	1.0407	1.0760	1.3412	1.0221	1.0406	1.0762	1.3371	1.0279	1.0463	1.0830	2.1561	1.0145	1.0328	1.0700	1.0865	0.0054	0.0052	0.0058	0.4591
	Level 1	9.1sec	1.5251	1.6304	1.7676	2.7240	1.5249	1.6301	1.7675	2.7109	1.5604	1.6943	1.8923	5.0000	1.4445	1.5642	1.7011	1.9404	0.0368	0.0433	0.0667	1.1624
	Level 2	18.2sec	1.3016	1.4008	1.5368	4.7591	1.3011	1.4008	1.5376	4.7293	1.3492	1.4347	1.6868	17.0000	1.2275	1.3533	1.4350	1.6943	0.0396	0.0264	0.0879	5.9325
	Level 3	36.3sec	1.1710	1.2959	1.3935	6.2583	1.1706	1.2960	1.3938	6.3180	1.2295	1.3213	1.4689	30.8631	1.1210	1.2513	1.3310	1.5429	0.0386	0.0216	0.0529	10.0970
60	**Level 4**	1.2min	1.1034	1.2069	1.3032	12.4305	1.1034	1.2067	1.3027	12.5884	1.1647	1.2352	1.3793	94.3700	1.0663	1.1657	1.2512	1.3795	0.0301	0.0283	0.0396	29.2437
days	**Level 5**	2.4min	1.0687	1.1426	1.2185	13.1591	1.0688	1.1426	1.2193	13.0001	1.0940	1.1667	1.3043	103.7741	1.0424	1.0998	1.1773	1.3088	0.0179	0.0265	0.0457	32.1444
before	**Level 6**	4.8min	1.0480	1.0973	1.1519	8.2655	1.0480	1.0975	1.1524	8.3147	1.0706	1.1227	1.2134	62.8608	1.0305	1.0715	1.1234	1.2139	0.0146	0.0197	0.0354	19.3275
	Level 7	9.7min	1.0330	1.0658	1.1045	5.1496	1.0331	1.0657	1.1045	5.2489	1.0475	1.0785	1.1333	30.0412	1.0208	1.0524	1.0829	1.1357	0.0095	0.0110	0.0171	9.3474
	Level 8	19.4min	1.0255	1.0456	1.0759	3.4910	1.0256	1.0456	1.0758	3.5440	1.0352	1.0536	1.0882	15.2243	1.0127	1.0363	1.0582	1.0885	0.0086	0.0057	0.0093	4.9743
	Level 9	38.7min	1.0211	1.0402	1.0664	2.9869	1.0210	1.0402	1.0665	2.9756	1.0280	1.0475	1.0815	10.4829	1.0089	1.0328	1.0529	1.0830	0.0066	0.0053	0.0096	3.6656
	Level 1	5.1sec	1.5172	1.6224	1.7540	2.4545	1.5179	1.6223	1.7541	2.4476	1.5588	1.6943	1.8199	5.0000	1.4445	1.5604	1.7011	1.8520	0.0341	0.0432	0.0348	1.0095
	Level 2	10.1sec	1.2915	1.3962	1.5140	3.7437	1.2920	1.3963	1.5136	3.7070	1.3369	1.4350	1.5956	17.0000	1.2267	1.3397	1.4472	1.6128	0.0387	0.0308	0.0504	4.9865
	Level 3	20.3sec	1.1634	1.2850	1.3770	4.6626	1.1628	1.2851	1.3776	4.7013	1.2214	1.3203	1.4325	30.8631	1.1210	1.2295	1.3213	1.4427	0.0295	0.0298	0.0416	8.4345
3	**Level 4**	40.6sec	1.1024	1.1955	1.2791	8.7759	1.1024	1.1953	1.2791	8.8468	1.1425	1.2327	1.3275	94.3700	1.0663	1.1511	1.2352	1.3292	0.0230	0.0304	0.0310	24.0783
months	**Level 5**	1.4min	1.0710	1.1336	1.1933	9.0610	1.0709	1.1338	1.1930	9.0928	1.0987	1.1664	1.2269	103.7741	1.0424	1.0998	1.1667	1.2460	0.0178	0.0257	0.0180	26.4000
before	**Level 6**	2.7min	1.0481	1.0907	1.1311	5.7284	1.0481	1.0908	1.1310	5.9419	1.0685	1.1172	1.1457	62.8608	1.0305	1.0706	1.1227	1.1826	0.0128	0.0164	0.0087	15.8810
	Level 7	5.4min	1.0321	1.0606	1.0901	3.8050	1.0321	1.0607	1.0901	3.8743	1.0434	1.0784	1.1083	30.0412	1.0184	1.0453	1.0785	1.1142	0.0082	0.0101	0.0098	7.7600
	Level 8	10.8min	1.0229	1.0419	1.0630	2.7853	1.0229	1.0418	1.0631	2.7245	1.0338	1.0502	1.0768	15.2243	1.0123	1.0345	1.0526	1.0797	0.0068	0.0052	0.0095	4.1648
	Level 9	21.6min	1.0181	1.0341	1.0523	2.3386	1.0181	1.0340	1.0524	2.3420	1.0264	1.0400	1.0656	10.4829	1.0086	1.0271	1.0419	1.0700	0.0052	0.0043	0.0081	3.0819
	Level 1	2.5sec	1.4905	1.5473	1.6050	1.8981	1.4905	1.5473	1.6052	1.8977	1.5290	1.5737	1.6449	5.0000	1.4027	1.5293	1.5749	1.6487	0.0302	0.0120	0.0213	0.5797
	Level 2	5.1sec	1.2523	1.3154	1.3789	2.0307	1.2522	1.3154	1.3790	2.0262	1.2854	1.3397	1.4164	17.0000	1.2019	1.2872	1.3401	1.4169	0.0232	0.0152	0.0230	2.5742
	Level 3	10.1sec	1.1410	1.1965	1.2574	2.1424	1.1408	1.1965	1.2574	2.1628	1.1693	1.2276	1.2929	30.8631	1.0825	1.1724	1.2285	1.2930	0.0190	0.0157	0.0203	4.2918
1	**Level 4**	20.2sec	1.0876	1.1332	1.1774	3.0999	1.0876	1.1332	1.1774	3.0936	1.1099	1.1521	1.2087	94.3700	1.0367	1.1103	1.1534	1.2109	0.0158	0.0131	0.0160	11.9916
Year	**Level 5**	40.5sec	1.0571	1.0909	1.1237	3.0449	1.0571	1.0909	1.1236	3.0967	1.0738	1.1055	1.1466	103.7741	1.0205	1.0749	1.1055	1.1488	0.0123	0.0097	0.0126	13.1004
before	**Level 6**	1.3min	1.0368	1.0609	1.0841	2.2595	1.0368	1.0609	1.0840	2.2913	1.0486	1.0714	1.1026	62.8608	1.0128	1.0487	1.0715	1.1033	0.0086	0.0071	0.0087	7.8871
	Level 7	2.7min	1.0239	1.0401	1.0560	1.7665	1.0239	1.0401	1.0560	1.7598	1.0323	1.0475	1.0690	30.0412	1.0085	1.0325	1.0477	1.0698	0.0060	0.0047	0.0059	3.9078
	Level 8	5.4min	1.0157	1.0266	1.0373	1.4695	1.0157	1.0266	1.0373	1.4609	1.0216	1.0318	1.0455	15.2243	1.0059	1.0217	1.0320	1.0464	0.0041	0.0032	0.0037	2.1211
	Level 9	10.8min	1.0117	1.0199	1.0282	1.3492	1.0117	1.0199	1.0282	1.3589	1.0163	1.0237	1.0341	10.4829	1.0047	1.0164	1.0238	1.0349	0.0032	0.0023	0.0032	1.5791

Table A.57: EDZ6 Other Results Table –Continued

EDZ6 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	19.7sec	0.4877	0.5883	0.6411	0.6635	0.4888	0.5886	0.6411	0.6635	0.5690	0.6122	0.6441	0.6924	0.3889	0.5732	0.6378	0.6486	0.0741	0.0155	0.0033	0.0177
	Level 2	39.5sec	0.5725	0.6981	0.7397	0.7838	0.5697	0.6977	0.7393	0.7836	0.6575	0.7162	0.7473	0.8122	0.4272	0.6722	0.7239	0.7514	0.1032	0.0160	0.0105	0.0231
	Level 3	1.3min	0.6250	0.7533	0.8070	0.8663	0.6249	0.7532	0.8067	0.8663	0.7234	0.7689	0.8405	0.8926	0.4126	0.7334	0.7779	0.8509	0.1295	0.0158	0.0257	0.0187
30	**Level 4**	2.6min	0.6466	0.8083	0.8652	0.9112	0.6472	0.8085	0.8654	0.9112	0.7378	0.8420	0.8881	0.9386	0.4164	0.7689	0.8439	0.8932	0.1344	0.0288	0.0183	0.0185
days	**Level 5**	5.3min	0.6847	0.8547	0.9022	0.9364	0.6826	0.8545	0.9021	0.9367	0.8173	0.8799	0.9192	0.9559	0.3745	0.8206	0.8887	0.9220	0.1760	0.0255	0.0141	0.0123
before	**Level 6**	10.5min	0.7151	0.8737	0.9271	0.9539	0.7163	0.8738	0.9271	0.9539	0.8578	0.9069	0.9403	0.9688	0.4213	0.8602	0.9120	0.9462	0.1697	0.0201	0.0120	0.0091
	Level 7	21.1min	0.7364	0.8954	0.9402	0.9628	0.7377	0.8956	0.9401	0.9627	0.8748	0.9276	0.9489	0.9772	0.4240	0.8770	0.9362	0.9542	0.1791	0.0192	0.0060	0.0096
	Level 8	42.1min	0.7502	0.9071	0.9419	0.9671	0.7515	0.9072	0.9418	0.9671	0.8795	0.9315	0.9477	0.9815	0.4189	0.8862	0.9394	0.9561	0.1882	0.0173	0.0040	0.0103
	Level 9	84.2min	0.7428	0.8969	0.9391	0.9656	0.7422	0.8969	0.9392	0.9655	0.8652	0.9114	0.9464	0.9809	0.4016	0.8793	0.9362	0.9561	0.1922	0.0129	0.0048	0.0105
	Level 1	9.1sec	0.4165	0.5623	0.6103	0.6531	0.4174	0.5626	0.6103	0.6531	0.5167	0.5859	0.6315	0.6924	0.2000	0.5240	0.5893	0.6378	0.1153	0.0224	0.0137	0.0164
	Level 2	18.2sec	0.4369	0.6457	0.7074	0.7650	0.4348	0.6462	0.7074	0.7651	0.5887	0.6892	0.7239	0.8122	0.0588	0.5952	0.6925	0.7414	0.1993	0.0336	0.0126	0.0252
	Level 3	36.3sec	0.4659	0.7103	0.7655	0.8474	0.4666	0.7103	0.7653	0.8473	0.6485	0.7402	0.7959	0.8926	0.0341	0.6809	0.7456	0.8039	0.2361	0.0202	0.0148	0.0283
60	**Level 4**	1.2min	0.5084	0.7546	0.8191	0.9004	0.5060	0.7545	0.8191	0.9003	0.7116	0.7894	0.8524	0.9386	0.0100	0.7133	0.7941	0.8613	0.2696	0.0265	0.0218	0.0243
days	**Level 5**	2.4min	0.5443	0.7984	0.8636	0.9299	0.5459	0.7983	0.8636	0.9298	0.7441	0.8331	0.8887	0.9572	0.0077	0.7469	0.8374	0.8927	0.2962	0.0353	0.0187	0.0201
before	**Level 6**	4.8min	0.5849	0.8415	0.8959	0.9492	0.5821	0.8418	0.8962	0.9493	0.7842	0.8728	0.9245	0.9688	0.0101	0.7954	0.8733	0.9268	0.3128	0.0296	0.0196	0.0137
	Level 7	9.7min	0.6129	0.8785	0.9256	0.9612	0.6113	0.8786	0.9256	0.9611	0.8346	0.8967	0.9391	0.9772	0.0117	0.8603	0.9108	0.9489	0.3322	0.0131	0.0105	0.0113
	Level 8	19.4min	0.6327	0.9027	0.9405	0.9680	0.6318	0.9027	0.9406	0.9679	0.8746	0.9287	0.9477	0.9852	0.0133	0.8795	0.9315	0.9528	0.3432	0.0138	0.0053	0.0112
	Level 9	38.7min	0.6266	0.9041	0.9437	0.9697	0.6255	0.9043	0.9437	0.9697	0.8652	0.9191	0.9538	0.9892	0.0198	0.8793	0.9362	0.9561	0.3404	0.0136	0.0063	0.0116
	Level 1	5.1sec	0.4506	0.5708	0.6162	0.6568	0.4506	0.5707	0.6162	0.6567	0.5383	0.5893	0.6378	0.6924	0.2000	0.5483	0.5935	0.6387	0.1050	0.0111	0.0144	0.0157
	Level 2	10.1sec	0.4897	0.6602	0.7123	0.7718	0.4904	0.6601	0.7123	0.7720	0.6187	0.6892	0.7427	0.8152	0.0588	0.6238	0.6925	0.7434	0.1794	0.0225	0.0166	0.0249
	Level 3	20.3sec	0.5389	0.7195	0.7747	0.8559	0.5385	0.7197	0.7749	0.8558	0.6918	0.7459	0.8043	0.8926	0.0341	0.6926	0.7496	0.8120	0.2166	0.0194	0.0172	0.0205
3	**Level 4**	40.6sec	0.5773	0.7726	0.8330	0.9021	0.5784	0.7725	0.8332	0.9019	0.7378	0.8009	0.8652	0.9386	0.0100	0.7424	0.8019	0.8683	0.2408	0.0209	0.0215	0.0196
months	**Level 5**	1.4min	0.6159	0.8243	0.8759	0.9294	0.6172	0.8242	0.8758	0.9293	0.7720	0.8479	0.9007	0.9572	0.0077	0.7838	0.8506	0.9007	0.2594	0.0162	0.0162	0.0174
before	**Level 6**	2.7min	0.6574	0.8666	0.9087	0.9495	0.6580	0.8664	0.9084	0.9495	0.8163	0.8790	0.9288	0.9688	0.0101	0.8372	0.8818	0.9318	0.2743	0.0112	0.0150	0.0119
	Level 7	5.4min	0.6960	0.8994	0.9341	0.9630	0.6955	0.8994	0.9341	0.9630	0.8708	0.9182	0.9491	0.9777	0.0117	0.8748	0.9187	0.9508	0.2935	0.0140	0.0092	0.0097
	Level 8	10.8min	0.7148	0.9233	0.9482	0.9719	0.7184	0.9234	0.9482	0.9718	0.9004	0.9384	0.9597	0.9852	0.0133	0.9011	0.9394	0.9607	0.3030	0.0136	0.0063	0.0083
	Level 9	21.6min	0.7180	0.9289	0.9535	0.9751	0.7147	0.9288	0.9535	0.9751	0.9078	0.9420	0.9608	0.9892	0.0198	0.9097	0.9434	0.9608	0.3026	0.0122	0.0053	0.0081
	Level 1	2.5sec	0.5495	0.6226	0.6459	0.6703	0.5493	0.6225	0.6459	0.6704	0.6049	0.6357	0.6533	0.7133	0.2000	0.6051	0.6358	0.6539	0.0778	0.0084	0.0051	0.0142
	Level 2	5.1sec	0.6260	0.7229	0.7590	0.7971	0.6262	0.7229	0.7590	0.7972	0.7011	0.7441	0.7745	0.8321	0.0588	0.7012	0.7449	0.7747	0.1181	0.0129	0.0090	0.0157
	Level 3	10.1sec	0.6867	0.7915	0.8335	0.8739	0.6866	0.7915	0.8336	0.8739	0.7678	0.8122	0.8515	0.9236	0.0341	0.7687	0.8125	0.8515	0.1358	0.0134	0.0107	0.0159
1	**Level 4**	20.2sec	0.7363	0.8438	0.8786	0.9161	0.7362	0.8437	0.8785	0.9161	0.8204	0.8613	0.8953	0.9643	0.0100	0.8216	0.8619	0.8960	0.1479	0.0122	0.0101	0.0149
Year	**Level 5**	40.5sec	0.7806	0.8819	0.9111	0.9424	0.7811	0.8819	0.9111	0.9425	0.8592	0.8971	0.9263	0.9793	0.0077	0.8617	0.8976	0.9267	0.1566	0.0102	0.0089	0.0122
before	**Level 6**	1.3min	0.8210	0.9131	0.9364	0.9603	0.8208	0.9131	0.9364	0.9604	0.8952	0.9253	0.9475	0.9865	0.0101	0.8958	0.9257	0.9475	0.1615	0.0086	0.0068	0.0094
	Level 7	2.7min	0.8560	0.9371	0.9546	0.9724	0.8551	0.9371	0.9546	0.9724	0.9244	0.9469	0.9626	0.9905	0.0117	0.9245	0.9473	0.9628	0.1679	0.0063	0.0048	0.0071
	Level 8	5.4min	0.8788	0.9532	0.9668	0.9802	0.8784	0.9532	0.9668	0.9803	0.9428	0.9611	0.9734	0.9928	0.0133	0.9430	0.9612	0.9735	0.1717	0.0051	0.0037	0.0053
	Level 9	10.8min	0.8832	0.9599	0.9717	0.9834	0.8832	0.9599	0.9717	0.9833	0.9505	0.9670	0.9768	0.9936	0.0198	0.9511	0.9670	0.9769	0.1742	0.0042	0.0030	0.0046

Table A.58: EDZ7 Other Results Table

EDZ7 Ask Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.1sec	1.4680	1.5325	1.6233	1.8111	1.4681	1.5325	1.6236	1.8098	1.4840	1.5461	1.6475	2.2001	1.4545	1.5199	1.5569	1.6477	0.0145	0.0108	0.0379	0.2242
	Level 2	16.2sec	1.2189	1.2829	1.3791	1.5472	1.2188	1.2829	1.3790	1.5470	1.2500	1.3261	1.4101	1.6685	1.1986	1.2518	1.3481	1.4232	0.0240	0.0277	0.0283	0.1094
	Level 3	32.5sec	1.1016	1.1584	1.2161	1.3089	1.1016	1.1583	1.2158	1.3100	1.1261	1.1896	1.2368	1.4114	1.0806	1.1311	1.1916	1.2421	0.0187	0.0245	0.0207	0.0701
30	**Level 4**	1.1min	1.0481	1.0929	1.1211	1.1618	1.0481	1.0931	1.1211	1.1610	1.0582	1.1153	1.1276	1.2083	1.0341	1.0687	1.1172	1.1350	0.0092	0.0179	0.0046	0.0324
days	**Level 5**	2.2min	1.0228	1.0519	1.0791	1.1068	1.0228	1.0518	1.0791	1.1066	1.0276	1.0709	1.0879	1.1533	1.0164	1.0358	1.0739	1.0915	0.0043	0.0141	0.0062	0.0263
before	**Level 6**	4.3min	1.0117	1.0313	1.0511	1.1041	1.0117	1.0312	1.0511	1.1029	1.0170	1.0434	1.0558	1.2671	1.0085	1.0191	1.0446	1.0577	0.0034	0.0101	0.0048	0.0919
	Level 7	8.7min	1.0074	1.0214	1.0358	1.1394	1.0074	1.0214	1.0358	1.1366	1.0120	1.0296	1.0418	1.5002	1.0037	1.0126	1.0307	1.0418	0.0030	0.0067	0.0052	0.2033
	Level 8	17.3min	1.0061	1.0177	1.0290	1.2295	1.0061	1.0178	1.0288	1.2295	1.0102	1.0228	1.0350	1.9941	1.0023	1.0105	1.0240	1.0355	0.0028	0.0051	0.0047	0.4274
	Level 9	34.6min	1.0065	1.0189	1.0290	1.4118	1.0066	1.0190	1.0290	1.4298	1.0110	1.0253	1.0322	2.9763	1.0023	1.0112	1.0257	1.0378	0.0031	0.0055	0.0024	0.8645
	Level 1	4.1sec	1.4644	1.5191	1.6130	1.7783	1.4645	1.5191	1.6137	1.7795	1.4912	1.5452	1.6477	2.2001	1.3748	1.4929	1.5461	1.6527	0.0330	0.0163	0.0354	0.1540
	Level 2	8.3sec	1.2258	1.2868	1.3692	1.5478	1.2254	1.2867	1.3689	1.5484	1.2568	1.3053	1.4101	1.7719	1.1832	1.2603	1.3184	1.4232	0.0249	0.0170	0.0339	0.1124
	Level 3	16.5sec	1.1118	1.1622	1.2187	1.3344	1.1117	1.1621	1.2185	1.3346	1.1311	1.1896	1.2421	1.4487	1.0806	1.1396	1.1916	1.2546	0.0173	0.0201	0.0215	0.0637
60	**Level 4**	33.1sec	1.0589	1.0979	1.1268	1.2039	1.0590	1.0977	1.1267	1.2031	1.0737	1.1172	1.1391	1.2794	1.0341	1.0768	1.1174	1.1410	0.0127	0.0137	0.0080	0.0415
days	**Level 5**	1.1min	1.0319	1.0595	1.0837	1.1382	1.0319	1.0596	1.0837	1.1381	1.0468	1.0709	1.0972	1.2225	1.0164	1.0481	1.0732	1.0983	0.0096	0.0077	0.0086	0.0365
before	**Level 6**	2.2min	1.0188	1.0391	1.0558	1.1143	1.0188	1.0392	1.0557	1.1156	1.0288	1.0446	1.0643	1.2671	1.0085	1.0337	1.0478	1.0669	0.0075	0.0038	0.0061	0.0591
	Level 7	4.4min	1.0130	1.0272	1.0404	1.1262	1.0130	1.0272	1.0404	1.1237	1.0211	1.0318	1.0512	1.5002	1.0037	1.0233	1.0325	1.0547	0.0061	0.0027	0.0062	0.1360
	Level 8	8.8min	1.0107	1.0210	1.0322	1.1676	1.0106	1.0211	1.0322	1.1726	1.0166	1.0244	1.0381	1.9941	1.0023	1.0167	1.0256	1.0434	0.0049	0.0024	0.0049	0.2964
	Level 9	17.7min	1.0106	1.0202	1.0317	1.2872	1.0106	1.0202	1.0318	1.2938	1.0159	1.0253	1.0413	2.9763	1.0023	1.0163	1.0257	1.0425	0.0045	0.0033	0.0054	0.6089
	Level 1	2.7sec	1.4493	1.5139	1.5983	1.7557	1.4489	1.5139	1.5982	1.7537	1.4884	1.5387	1.6462	2.2001	1.3748	1.4901	1.5447	1.6475	0.0357	0.0158	0.0356	0.1326
	Level 2	5.4sec	1.2152	1.2809	1.3557	1.5292	1.2150	1.2810	1.3562	1.5296	1.2500	1.3053	1.4073	1.7719	1.1805	1.2518	1.3170	1.4076	0.0217	0.0191	0.0309	0.1034
	Level 3	10.7sec	1.1120	1.1570	1.2163	1.3183	1.1120	1.1570	1.2164	1.3191	1.1354	1.1879	1.2415	1.4487	1.0806	1.1396	1.1881	1.2417	0.0167	0.0148	0.0210	0.0628
3	**Level 4**	21.5sec	1.0603	1.0940	1.1275	1.1960	1.0603	1.0940	1.1276	1.1962	1.0768	1.1106	1.1410	1.2794	1.0341	1.0799	1.1153	1.1434	0.0114	0.0094	0.0093	0.0373
months	**Level 5**	43sec	1.0333	1.0590	1.0833	1.1348	1.0332	1.0590	1.0832	1.1347	1.0468	1.0708	1.0972	1.2225	1.0164	1.0481	1.0709	1.0983	0.0091	0.0064	0.0085	0.0312
before	**Level 6**	1.4min	1.0197	1.0392	1.0557	1.1085	1.0198	1.0392	1.0557	1.1075	1.0288	1.0465	1.0643	1.2671	1.0085	1.0301	1.0478	1.0669	0.0071	0.0045	0.0056	0.0494
	Level 7	2.9min	1.0134	1.0274	1.0399	1.1029	1.0134	1.0274	1.0400	1.1039	1.0211	1.0325	1.0512	1.5002	1.0037	1.0211	1.0329	1.0547	0.0056	0.0032	0.0054	0.1129
	Level 8	5.7min	1.0105	1.0211	1.0312	1.1314	1.0106	1.0212	1.0312	1.1310	1.0160	1.0246	1.0381	1.9941	1.0023	1.0166	1.0247	1.0402	0.0045	0.0026	0.0047	0.2454
	Level 9	11.5min	1.0105	1.0197	1.0299	1.2083	1.0104	1.0197	1.0298	1.2108	1.0157	1.0244	1.0391	2.9763	1.0023	1.0159	1.0249	1.0395	0.0041	0.0026	0.0044	0.5031
	Level 1	1.7sec	1.4720	1.5393	1.5965	1.7110	1.4720	1.5393	1.5964	1.7102	1.5146	1.5631	1.6269	2.2001	1.3748	1.5160	1.5653	1.6273	0.0324	0.0144	0.0181	0.0955
	Level 2	3.4sec	1.2370	1.2939	1.3510	1.4743	1.2368	1.2939	1.3511	1.4745	1.2660	1.3173	1.3897	1.7719	1.1714	1.2661	1.3184	1.3954	0.0246	0.0150	0.0211	0.0797
	Level 3	6.8sec	1.1251	1.1667	1.2155	1.3076	1.1250	1.1669	1.2156	1.3076	1.1497	1.1884	1.2442	1.4487	1.0792	1.1504	1.1890	1.2459	0.0177	0.0120	0.0170	0.0522
1	**Level 4**	13.6sec	1.0696	1.1029	1.1404	1.2130	1.0696	1.1029	1.1403	1.2128	1.0890	1.1183	1.1663	1.3862	1.0341	1.0891	1.1191	1.1672	0.0136	0.0088	0.0124	0.0412
Year	**Level 5**	27.2sec	1.0410	1.0693	1.0999	1.1567	1.0410	1.0693	1.0998	1.1568	1.0586	1.0819	1.1174	1.4424	1.0164	1.0588	1.0820	1.1190	0.0110	0.0070	0.0115	0.0459
before	**Level 6**	54.4sec	1.0262	1.0478	1.0716	1.1241	1.0262	1.0478	1.0716	1.1244	1.0395	1.0572	1.0884	1.6558	1.0085	1.0396	1.0573	1.0887	0.0088	0.0050	0.0099	0.0748
	Level 7	1.8min	1.0181	1.0337	1.0515	1.1107	1.0181	1.0338	1.0515	1.1109	1.0269	1.0406	1.0634	2.1719	1.0037	1.0274	1.0410	1.0634	0.0067	0.0038	0.0070	0.1497
	Level 8	3.6min	1.0136	1.0254	1.0383	1.1270	1.0136	1.0254	1.0383	1.1272	1.0205	1.0300	1.0463	3.2575	1.0023	1.0206	1.0309	1.0463	0.0051	0.0027	0.0049	0.3053
	Level 9	7.3min	1.0121	1.0228	1.0343	1.1953	1.0122	1.0228	1.0343	1.1966	1.0183	1.0274	1.0413	5.4539	1.0023	1.0184	1.0280	1.0414	0.0044	0.0026	0.0041	0.6187

Table A.58: EDZ7 Other Results Table –Continued

EDZ7 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.1sec	1.4676	1.5305	1.6237	1.8067	1.4681	1.5306	1.6238	1.8047	1.4881	1.5459	1.6469	2.1951	1.4538	1.5146	1.5633	1.6516	0.0159	0.0116	0.0343	0.2229
	Level 2	16.2sec	1.2176	1.2800	1.3756	1.5432	1.2175	1.2803	1.3760	1.5426	1.2503	1.3218	1.4043	1.6635	1.1986	1.2524	1.3477	1.4061	0.0215	0.0258	0.0243	0.1121
	Level 3	32.4sec	1.1014	1.1534	1.2126	1.3073	1.1017	1.1535	1.2124	1.3064	1.1210	1.1890	1.2290	1.4063	1.0821	1.1244	1.1938	1.2359	0.0162	0.0268	0.0174	0.0691
30	**Level 4**	1.1min	1.0482	1.0826	1.1187	1.1591	1.0483	1.0826	1.1188	1.1592	1.0569	1.1024	1.1256	1.2023	1.0376	1.0617	1.1093	1.1352	0.0073	0.0169	0.0069	0.0285
days	**Level 5**	2.2min	1.0234	1.0442	1.0754	1.0929	1.0233	1.0442	1.0754	1.0929	1.0266	1.0599	1.0821	1.0959	1.0196	1.0340	1.0679	1.0847	0.0026	0.0109	0.0054	0.0046
before	**Level 6**	4.3min	1.0132	1.0276	1.0479	1.0605	1.0132	1.0275	1.0479	1.0605	1.0185	1.0406	1.0545	1.0692	1.0077	1.0204	1.0425	1.0549	0.0044	0.0081	0.0053	0.0063
	Level 7	8.7min	1.0085	1.0213	1.0328	1.0441	1.0085	1.0212	1.0327	1.0441	1.0125	1.0272	1.0398	1.0491	1.0034	1.0141	1.0292	1.0400	0.0039	0.0055	0.0041	0.0042
	Level 8	17.3min	1.0068	1.0181	1.0285	1.0376	1.0068	1.0180	1.0285	1.0376	1.0106	1.0231	1.0354	1.0421	1.0021	1.0118	1.0241	1.0358	0.0035	0.0046	0.0051	0.0026
	Level 9	34.6min	1.0072	1.0187	1.0284	1.0404	1.0072	1.0187	1.0284	1.0404	1.0113	1.0250	1.0302	1.0492	1.0020	1.0120	1.0270	1.0330	0.0038	0.0047	0.0016	0.0058
	Level 1	4.1sec	1.4642	1.5189	1.6128	1.7759	1.4642	1.5190	1.6133	1.7741	1.4911	1.5420	1.6516	2.1951	1.3750	1.4948	1.5459	1.6570	0.0335	0.0156	0.0354	0.1530
	Level 2	8.3sec	1.2260	1.2850	1.3646	1.5407	1.2258	1.2853	1.3645	1.5408	1.2539	1.3044	1.4061	1.7427	1.1814	1.2600	1.3104	1.4166	0.0250	0.0155	0.0335	0.1066
	Level 3	16.5sec	1.1124	1.1602	1.2146	1.3301	1.1123	1.1605	1.2143	1.3300	1.1287	1.1890	1.2382	1.4336	1.0821	1.1299	1.1935	1.2556	0.0166	0.0202	0.0189	0.0594
60	**Level 4**	33.1sec	1.0583	1.0930	1.1239	1.1999	1.0583	1.0929	1.1239	1.1998	1.0746	1.1093	1.1399	1.2651	1.0376	1.0754	1.1118	1.1443	0.0116	0.0118	0.0086	0.0404
days	**Level 5**	1.1min	1.0312	1.0568	1.0784	1.1308	1.0311	1.0569	1.0784	1.1307	1.0447	1.0673	1.0942	1.2172	1.0196	1.0481	1.0679	1.0942	0.0081	0.0070	0.0079	0.0391
before	**Level 6**	2.2min	1.0191	1.0374	1.0510	1.0925	1.0192	1.0373	1.0510	1.0924	1.0289	1.0425	1.0576	1.1639	1.0077	1.0289	1.0427	1.0610	0.0068	0.0042	0.0051	0.0303
	Level 7	4.4min	1.0136	1.0264	1.0366	1.0681	1.0136	1.0264	1.0367	1.0686	1.0203	1.0292	1.0452	1.1283	1.0034	1.0235	1.0304	1.0478	0.0058	0.0018	0.0052	0.0236
	Level 8	8.8min	1.0111	1.0206	1.0309	1.0537	1.0111	1.0206	1.0309	1.0535	1.0168	1.0235	1.0368	1.1009	1.0021	1.0173	1.0241	1.0374	0.0048	0.0019	0.0052	0.0185
	Level 9	17.6min	1.0110	1.0195	1.0299	1.0494	1.0110	1.0195	1.0300	1.0492	1.0165	1.0239	1.0388	1.0893	1.0020	1.0170	1.0250	1.0394	0.0046	0.0024	0.0039	0.0148
	Level 1	2.7sec	1.4488	1.5139	1.5972	1.7483	1.4484	1.5138	1.5980	1.7489	1.4881	1.5381	1.6399	2.1951	1.3750	1.4895	1.5420	1.6469	0.0359	0.0158	0.0351	0.1316
	Level 2	5.4sec	1.2158	1.2806	1.3531	1.5225	1.2161	1.2802	1.3532	1.5222	1.2503	1.3104	1.3982	1.7427	1.1807	1.2524	1.3115	1.4043	0.0224	0.0192	0.0281	0.0981
	Level 3	10.7sec	1.1120	1.1575	1.2130	1.3156	1.1120	1.1575	1.2131	1.3157	1.1299	1.1841	1.2377	1.4336	1.0821	1.1376	1.1890	1.2382	0.0156	0.0145	0.0188	0.0584
3	**Level 4**	21.5sec	1.0597	1.0921	1.1250	1.1939	1.0597	1.0921	1.1251	1.1940	1.0754	1.1062	1.1439	1.2651	1.0376	1.0763	1.1093	1.1443	0.0106	0.0090	0.0111	0.0364
months	**Level 5**	43sec	1.0325	1.0571	1.0797	1.1293	1.0325	1.0572	1.0797	1.1295	1.0459	1.0673	1.0942	1.2172	1.0196	1.0481	1.0679	1.0942	0.0081	0.0062	0.0078	0.0330
before	**Level 6**	1.4min	1.0199	1.0377	1.0523	1.0915	1.0199	1.0377	1.0524	1.0916	1.0289	1.0427	1.0610	1.1639	1.0077	1.0289	1.0439	1.0621	0.0065	0.0044	0.0050	0.0255
	Level 7	2.9min	1.0138	1.0265	1.0371	1.0674	1.0138	1.0266	1.0371	1.0669	1.0203	1.0304	1.0452	1.1283	1.0034	1.0210	1.0312	1.0478	0.0055	0.0026	0.0044	0.0198
	Level 8	5.7min	1.0107	1.0206	1.0300	1.0515	1.0107	1.0206	1.0300	1.0515	1.0163	1.0238	1.0368	1.1009	1.0021	1.0168	1.0241	1.0374	0.0045	0.0022	0.0046	0.0156
	Level 9	11.5min	1.0103	1.0190	1.0283	1.0473	1.0103	1.0190	1.0283	1.0471	1.0159	1.0228	1.0342	1.0893	1.0020	1.0160	1.0239	1.0388	0.0042	0.0021	0.0033	0.0125
	Level 1	1.7sec	1.4731	1.5405	1.5967	1.7101	1.4731	1.5405	1.5968	1.7092	1.5155	1.5658	1.6265	2.1951	1.3750	1.5156	1.5668	1.6273	0.0335	0.0148	0.0183	0.0941
	Level 2	3.4sec	1.2381	1.2947	1.3519	1.4754	1.2380	1.2946	1.3520	1.4757	1.2680	1.3194	1.3830	1.7427	1.1709	1.2684	1.3194	1.3868	0.0254	0.0149	0.0193	0.0783
	Level 3	6.8sec	1.1254	1.1685	1.2160	1.3173	1.1252	1.1684	1.2161	1.3168	1.1493	1.1898	1.2451	1.7671	1.0778	1.1510	1.1901	1.2455	0.0177	0.0117	0.0169	0.0788
1	**Level 4**	13.6sec	1.0697	1.1032	1.1407	1.2297	1.0698	1.1032	1.1407	1.2304	1.0886	1.1159	1.1645	1.9203	1.0376	1.0889	1.1181	1.1651	0.0136	0.0081	0.0137	0.1180
Year	**Level 5**	27.2sec	1.0408	1.0693	1.0982	1.2086	1.0409	1.0693	1.0983	1.2104	1.0563	1.0810	1.1181	3.6412	1.0196	1.0581	1.0812	1.1191	0.0109	0.0069	0.0120	0.3507
before	**Level 6**	54.4sec	1.0261	1.0475	1.0707	1.2327	1.0261	1.0475	1.0706	1.2334	1.0389	1.0565	1.0865	6.2590	1.0077	1.0391	1.0576	1.0865	0.0086	0.0053	0.0094	0.7258
	Level 7	1.8min	1.0180	1.0332	1.0507	1.3159	1.0180	1.0333	1.0507	1.3309	1.0271	1.0405	1.0628	11.4709	1.0034	1.0272	1.0411	1.0631	0.0065	0.0039	0.0067	1.4682
	Level 8	3.6min	1.0133	1.0248	1.0374	1.5753	1.0133	1.0248	1.0375	1.5680	1.0198	1.0302	1.0454	21.9058	1.0021	1.0199	1.0303	1.0455	0.0049	0.0029	0.0046	2.9463
	Level 9	7.3min	1.0118	1.0220	1.0329	2.0757	1.0118	1.0221	1.0329	2.0742	1.0177	1.0266	1.0394	42.7984	1.0020	1.0178	1.0268	1.0395	0.0043	0.0027	0.0041	5.9003

Table A.58: EDZ7 Other Results Table –Continued

EDZ7 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.1sec	1.4676	1.5308	1.6227	1.8036	1.4678	1.5306	1.6233	1.8066	1.4856	1.5451	1.6470	2.1973	1.4540	1.5144	1.5599	1.6491	0.0152	0.0116	0.0360	0.2237
	Level 2	16.2sec	1.2165	1.2802	1.3764	1.5434	1.2163	1.2804	1.3762	1.5434	1.2500	1.3225	1.4049	1.6646	1.1981	1.2509	1.3469	1.4122	0.0218	0.0263	0.0258	0.1109
	Level 3	32.5sec	1.1003	1.1529	1.2116	1.3062	1.0998	1.1530	1.2111	1.3059	1.1169	1.1898	1.2284	1.4068	1.0802	1.1250	1.1901	1.2359	0.0160	0.0265	0.0187	0.0697
30	**Level 4**	1.1min	1.0470	1.0811	1.1156	1.1559	1.0472	1.0811	1.1156	1.1557	1.0572	1.1014	1.1227	1.2019	1.0337	1.0588	1.1081	1.1293	0.0090	0.0171	0.0062	0.0308
days	**Level 5**	2.2min	1.0217	1.0420	1.0701	1.0864	1.0216	1.0421	1.0702	1.0864	1.0251	1.0565	1.0762	1.0922	1.0157	1.0322	1.0658	1.0791	0.0038	0.0102	0.0040	0.0050
before	**Level 6**	4.3min	1.0104	1.0243	1.0421	1.0518	1.0104	1.0243	1.0422	1.0518	1.0145	1.0356	1.0456	1.0593	1.0078	1.0166	1.0377	1.0475	0.0027	0.0069	0.0038	0.0054
	Level 7	8.7min	1.0059	1.0150	1.0258	1.0344	1.0059	1.0150	1.0258	1.0344	1.0092	1.0209	1.0291	1.0392	1.0031	1.0096	1.0226	1.0310	0.0022	0.0039	0.0023	0.0036
	Level 8	17.3min	1.0042	1.0118	1.0186	1.0253	1.0042	1.0118	1.0185	1.0253	1.0067	1.0156	1.0218	1.0279	1.0017	1.0068	1.0168	1.0232	0.0018	0.0034	0.0019	0.0021
	Level 9	34.6min	1.0038	1.0115	1.0175	1.0246	1.0038	1.0114	1.0175	1.0247	1.0060	1.0146	1.0216	1.0291	1.0015	1.0066	1.0148	1.0221	0.0016	0.0032	0.0028	0.0030
	Level 1	4.1sec	1.4637	1.5183	1.6127	1.7750	1.4640	1.5182	1.6126	1.7756	1.4907	1.5427	1.6491	2.1973	1.3747	1.4926	1.5451	1.6537	0.0331	0.0160	0.0355	0.1536
	Level 2	8.3sec	1.2242	1.2838	1.3644	1.5418	1.2244	1.2840	1.3646	1.5416	1.2551	1.3028	1.4049	1.7548	1.1818	1.2592	1.3115	1.4122	0.0246	0.0155	0.0340	0.1105
	Level 3	16.5sec	1.1100	1.1577	1.2126	1.3272	1.1102	1.1580	1.2124	1.3275	1.1255	1.1898	1.2359	1.4366	1.0802	1.1297	1.1898	1.2456	0.0162	0.0197	0.0192	0.0622
60	**Level 4**	33.1sec	1.0563	1.0904	1.1192	1.1935	1.0564	1.0903	1.1191	1.1932	1.0717	1.1081	1.1355	1.2629	1.0337	1.0722	1.1104	1.1392	0.0112	0.0120	0.0078	0.0398
days	**Level 5**	1.1min	1.0291	1.0532	1.0721	1.1208	1.0290	1.0533	1.0721	1.1206	1.0406	1.0635	1.0841	1.2066	1.0157	1.0430	1.0657	1.0882	0.0078	0.0067	0.0062	0.0366
before	**Level 6**	2.2min	1.0165	1.0332	1.0444	1.0800	1.0164	1.0332	1.0444	1.0800	1.0249	1.0377	1.0500	1.1490	1.0078	1.0258	1.0384	1.0518	0.0064	0.0042	0.0041	0.0284
	Level 7	4.4min	1.0101	1.0211	1.0290	1.0563	1.0102	1.0211	1.0290	1.0561	1.0169	1.0240	1.0348	1.1117	1.0031	1.0174	1.0253	1.0372	0.0047	0.0023	0.0033	0.0216
	Level 8	8.8min	1.0075	1.0152	1.0209	1.0403	1.0075	1.0153	1.0209	1.0401	1.0125	1.0172	1.0244	1.0807	1.0017	1.0129	1.0179	1.0269	0.0037	0.0016	0.0028	0.0158
	Level 9	17.7min	1.0067	1.0132	1.0188	1.0324	1.0067	1.0132	1.0188	1.0323	1.0102	1.0148	1.0224	1.0624	1.0015	1.0102	1.0153	1.0233	0.0031	0.0016	0.0027	0.0111
	Level 1	2.7sec	1.4477	1.5130	1.5968	1.7498	1.4482	1.5130	1.5972	1.7503	1.4856	1.5365	1.6427	2.1973	1.3747	1.4893	1.5427	1.6470	0.0356	0.0156	0.0352	0.1321
	Level 2	5.4sec	1.2144	1.2789	1.3523	1.5254	1.2142	1.2789	1.3524	1.5232	1.2500	1.3052	1.4014	1.7548	1.1798	1.2509	1.3115	1.4049	0.0215	0.0185	0.0297	0.1012
	Level 3	10.7sec	1.1101	1.1541	1.2105	1.3128	1.1101	1.1541	1.2106	1.3130	1.1297	1.1801	1.2335	1.4366	1.0802	1.1307	1.1844	1.2359	0.0154	0.0139	0.0187	0.0606
3	**Level 4**	21.5sec	1.0579	1.0886	1.1205	1.1870	1.0578	1.0886	1.1205	1.1870	1.0722	1.1029	1.1391	1.2629	1.0337	1.0752	1.1069	1.1392	0.0102	0.0085	0.0104	0.0361
months	**Level 5**	43sec	1.0305	1.0533	1.0732	1.1198	1.0305	1.0533	1.0731	1.1198	1.0428	1.0626	1.0852	1.2066	1.0157	1.0430	1.0635	1.0882	0.0077	0.0056	0.0067	0.0308
before	**Level 6**	1.4min	1.0174	1.0334	1.0455	1.0803	1.0173	1.0334	1.0455	1.0802	1.0249	1.0382	1.0518	1.1490	1.0078	1.0258	1.0384	1.0536	0.0061	0.0041	0.0040	0.0236
	Level 7	2.9min	1.0107	1.0214	1.0297	1.0549	1.0107	1.0214	1.0297	1.0551	1.0169	1.0253	1.0348	1.1117	1.0031	1.0174	1.0259	1.0372	0.0045	0.0025	0.0029	0.0179
	Level 8	5.7min	1.0076	1.0153	1.0210	1.0389	1.0076	1.0153	1.0210	1.0388	1.0122	1.0174	1.0244	1.0807	1.0017	1.0125	1.0179	1.0269	0.0034	0.0016	0.0024	0.0132
	Level 9	11.5min	1.0066	1.0128	1.0182	1.0309	1.0066	1.0128	1.0182	1.0310	1.0102	1.0148	1.0224	1.0624	1.0015	1.0102	1.0153	1.0233	0.0028	0.0016	0.0025	0.0094
	Level 1	1.7sec	1.4710	1.5382	1.5947	1.7078	1.4709	1.5382	1.5947	1.7078	1.5143	1.5628	1.6250	2.1973	1.3747	1.5144	1.5648	1.6261	0.0328	0.0146	0.0181	0.0938
	Level 2	3.4sec	1.2349	1.2919	1.3477	1.4669	1.2349	1.2918	1.3478	1.4674	1.2643	1.3159	1.3791	1.7548	1.1709	1.2644	1.3161	1.3844	0.0247	0.0146	0.0196	0.0766
	Level 3	6.8sec	1.1229	1.1639	1.2106	1.2975	1.1229	1.1639	1.2106	1.2971	1.1476	1.1840	1.2378	1.4366	1.0781	1.1481	1.1844	1.2389	0.0172	0.0108	0.0164	0.0471
1	**Level 4**	13.6sec	1.0675	1.0981	1.1334	1.1978	1.0673	1.0980	1.1334	1.1977	1.0858	1.1111	1.1559	1.2944	1.0337	1.0859	1.1116	1.1561	0.0131	0.0080	0.0124	0.0322
Year	**Level 5**	27.2sec	1.0379	1.0630	1.0900	1.1356	1.0380	1.0630	1.0900	1.1357	1.0525	1.0738	1.1087	1.2140	1.0157	1.0526	1.0750	1.1088	0.0098	0.0061	0.0106	0.0242
before	**Level 6**	54.4sec	1.0230	1.0411	1.0605	1.0932	1.0230	1.0411	1.0604	1.0933	1.0338	1.0485	1.0738	1.1490	1.0078	1.0341	1.0490	1.0744	0.0075	0.0043	0.0081	0.0163
	Level 7	1.8min	1.0146	1.0270	1.0403	1.0618	1.0146	1.0270	1.0403	1.0617	1.0222	1.0322	1.0489	1.1117	1.0031	1.0226	1.0323	1.0495	0.0053	0.0029	0.0054	0.0112
	Level 8	3.6min	1.0098	1.0182	1.0268	1.0409	1.0098	1.0182	1.0268	1.0409	1.0152	1.0221	1.0325	1.0807	1.0017	1.0152	1.0222	1.0326	0.0036	0.0020	0.0034	0.0078
	Level 9	7.3min	1.0075	1.0140	1.0204	1.0308	1.0075	1.0140	1.0204	1.0308	1.0115	1.0168	1.0248	1.0624	1.0003	1.0116	1.0168	1.0249	0.0029	0.0016	0.0024	0.0063

Table A.58: EDZ7 Other Results Table –Continued

EDZ7 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.1sec	0.5610	0.6213	0.6547	0.6811	0.5601	0.6212	0.6546	0.6812	0.6055	0.6469	0.6603	0.6878	0.4556	0.6072	0.6485	0.6720	0.0605	0.0173	0.0043	0.0074
	Level 2	16.2sec	0.6523	0.7315	0.7862	0.8217	0.6510	0.7319	0.7863	0.8216	0.7112	0.7566	0.7985	0.8343	0.6011	0.7121	0.7755	0.7998	0.0480	0.0167	0.0110	0.0144
	Level 3	32.5sec	0.7670	0.8276	0.8726	0.9079	0.7672	0.8277	0.8725	0.9079	0.8091	0.8411	0.8894	0.9242	0.7111	0.8137	0.8458	0.8921	0.0397	0.0125	0.0171	0.0133
30	**Level 4**	1.1min	0.8631	0.8961	0.9275	0.9539	0.8631	0.8960	0.9272	0.9540	0.8809	0.9071	0.9419	0.9638	0.8317	0.8884	0.9095	0.9461	0.0209	0.0074	0.0132	0.0066
days	**Level 5**	2.2min	0.9151	0.9322	0.9605	0.9772	0.9150	0.9322	0.9606	0.9772	0.9219	0.9435	0.9672	0.9807	0.9125	0.9241	0.9506	0.9741	0.0039	0.0069	0.0079	0.0025
before	**Level 6**	4.3min	0.9430	0.9555	0.9757	0.9869	0.9430	0.9555	0.9758	0.9870	0.9479	0.9610	0.9800	0.9924	0.9353	0.9484	0.9677	0.9818	0.0056	0.0051	0.0053	0.0043
	Level 7	8.7min	0.9579	0.9693	0.9805	0.9916	0.9577	0.9692	0.9804	0.9916	0.9615	0.9735	0.9861	0.9966	0.9532	0.9617	0.9740	0.9877	0.0038	0.0041	0.0050	0.0038
	Level 8	17.3min	0.9637	0.9731	0.9834	0.9932	0.9638	0.9731	0.9833	0.9932	0.9654	0.9774	0.9883	0.9979	0.9596	0.9658	0.9779	0.9895	0.0024	0.0048	0.0042	0.0035
	Level 9	34.6min	0.9612	0.9729	0.9828	0.9928	0.9612	0.9729	0.9828	0.9928	0.9681	0.9757	0.9881	0.9980	0.9531	0.9707	0.9777	0.9888	0.0053	0.0019	0.0039	0.0038
	Level 1	4.1sec	0.5704	0.6217	0.6594	0.6846	0.5704	0.6216	0.6595	0.6846	0.6055	0.6469	0.6706	0.7273	0.4556	0.6072	0.6485	0.6714	0.0409	0.0137	0.0074	0.0166
	Level 2	8.3sec	0.6575	0.7355	0.7799	0.8180	0.6571	0.7355	0.7799	0.8180	0.7112	0.7631	0.7975	0.8464	0.5738	0.7121	0.7667	0.7985	0.0449	0.0174	0.0107	0.0165
	Level 3	16.5sec	0.7585	0.8254	0.8643	0.9007	0.7582	0.8253	0.8641	0.9005	0.8076	0.8379	0.8860	0.9242	0.6976	0.8091	0.8411	0.8876	0.0355	0.0123	0.0159	0.0135
60	**Level 4**	33.1sec	0.8385	0.8911	0.9166	0.9464	0.8382	0.8911	0.9165	0.9464	0.8773	0.8994	0.9306	0.9638	0.7904	0.8809	0.9014	0.9314	0.0295	0.0056	0.0105	0.0097
days	**Level 5**	1.1min	0.8878	0.9287	0.9473	0.9714	0.8879	0.9287	0.9472	0.9712	0.9139	0.9364	0.9572	0.9807	0.8215	0.9198	0.9370	0.9624	0.0294	0.0054	0.0068	0.0066
before	**Level 6**	2.2min	0.9183	0.9521	0.9647	0.9821	0.9187	0.9521	0.9648	0.9822	0.9455	0.9590	0.9719	0.9924	0.8592	0.9470	0.9592	0.9732	0.0250	0.0044	0.0044	0.0061
	Level 7	4.4min	0.9377	0.9654	0.9748	0.9873	0.9381	0.9654	0.9748	0.9872	0.9568	0.9705	0.9801	0.9966	0.8863	0.9585	0.9716	0.9801	0.0200	0.0043	0.0024	0.0055
	Level 8	8.8min	0.9507	0.9706	0.9801	0.9897	0.9508	0.9706	0.9802	0.9896	0.9645	0.9765	0.9835	0.9979	0.9084	0.9653	0.9771	0.9839	0.0161	0.0047	0.0021	0.0046
	Level 9	17.7min	0.9542	0.9717	0.9812	0.9897	0.9541	0.9718	0.9812	0.9896	0.9626	0.9757	0.9838	0.9980	0.9180	0.9681	0.9767	0.9844	0.0127	0.0025	0.0023	0.0044
	Level 1	2.7sec	0.5764	0.6272	0.6613	0.6920	0.5765	0.6272	0.6614	0.6921	0.6098	0.6485	0.6720	0.7273	0.4556	0.6106	0.6502	0.6742	0.0362	0.0136	0.0072	0.0173
	Level 2	5.4sec	0.6630	0.7409	0.7825	0.8239	0.6629	0.7409	0.7824	0.8241	0.7152	0.7625	0.7998	0.8469	0.5738	0.7162	0.7631	0.8043	0.0419	0.0144	0.0122	0.0144
	Level 3	10.7sec	0.7642	0.8256	0.8654	0.9004	0.7643	0.8256	0.8654	0.9004	0.8080	0.8411	0.8851	0.9242	0.6976	0.8085	0.8445	0.8860	0.0342	0.0124	0.0117	0.0126
3	**Level 4**	21.5sec	0.8405	0.8897	0.9166	0.9447	0.8405	0.8898	0.9166	0.9446	0.8742	0.9014	0.9299	0.9638	0.7904	0.8754	0.9040	0.9306	0.0260	0.0081	0.0082	0.0090
months	**Level 5**	43sec	0.8880	0.9271	0.9465	0.9694	0.8878	0.9271	0.9466	0.9694	0.9139	0.9364	0.9561	0.9807	0.8215	0.9140	0.9370	0.9572	0.0252	0.0060	0.0059	0.0071
before	**Level 6**	1.4min	0.9183	0.9507	0.9642	0.9812	0.9182	0.9508	0.9642	0.9811	0.9425	0.9579	0.9719	0.9924	0.8592	0.9455	0.9590	0.9732	0.0211	0.0042	0.0045	0.0061
	Level 7	2.9min	0.9389	0.9647	0.9745	0.9869	0.9388	0.9647	0.9745	0.9869	0.9568	0.9697	0.9801	0.9966	0.8863	0.9585	0.9705	0.9801	0.0170	0.0037	0.0028	0.0052
	Level 8	5.7min	0.9521	0.9713	0.9800	0.9898	0.9521	0.9713	0.9801	0.9898	0.9645	0.9765	0.9839	0.9979	0.9084	0.9653	0.9767	0.9843	0.0136	0.0042	0.0023	0.0043
	Level 9	11.5min	0.9558	0.9729	0.9815	0.9902	0.9558	0.9729	0.9815	0.9902	0.9669	0.9767	0.9844	0.9980	0.9180	0.9681	0.9777	0.9854	0.0110	0.0028	0.0021	0.0040
	Level 1	1.7sec	0.5865	0.6265	0.6494	0.6792	0.5866	0.6265	0.6494	0.6792	0.6145	0.6386	0.6598	0.7273	0.4556	0.6148	0.6389	0.6599	0.0285	0.0073	0.0061	0.0158
	Level 2	3.4sec	0.6794	0.7401	0.7728	0.8081	0.6794	0.7401	0.7728	0.8081	0.7211	0.7579	0.7884	0.8541	0.5738	0.7231	0.7586	0.7886	0.0339	0.0107	0.0088	0.0169
	Level 3	6.8sec	0.7618	0.8227	0.8562	0.8889	0.7617	0.8227	0.8562	0.8889	0.8029	0.8405	0.8688	0.9278	0.5659	0.8032	0.8411	0.8701	0.0391	0.0115	0.0084	0.0142
1	**Level 4**	13.6sec	0.8180	0.8771	0.9067	0.9350	0.8180	0.8771	0.9067	0.9349	0.8583	0.8962	0.9183	0.9638	0.5208	0.8588	0.8962	0.9186	0.0555	0.0107	0.0066	0.0119
Year	**Level 5**	27.2sec	0.8526	0.9109	0.9354	0.9608	0.8528	0.9109	0.9354	0.9608	0.8936	0.9250	0.9451	0.9807	0.2746	0.8944	0.9259	0.9467	0.0958	0.0100	0.0059	0.0101
before	**Level 6**	54.4sec	0.8791	0.9343	0.9548	0.9747	0.8798	0.9343	0.9548	0.9747	0.9203	0.9465	0.9623	0.9924	0.1598	0.9204	0.9470	0.9626	0.1232	0.0082	0.0047	0.0082
	Level 7	1.8min	0.9010	0.9519	0.9679	0.9824	0.9010	0.9519	0.9679	0.9824	0.9407	0.9611	0.9735	0.9966	0.0872	0.9409	0.9615	0.9736	0.1435	0.0062	0.0036	0.0063
	Level 8	3.6min	0.9139	0.9640	0.9759	0.9869	0.9135	0.9640	0.9759	0.9869	0.9565	0.9707	0.9805	0.9979	0.0456	0.9565	0.9708	0.9806	0.1574	0.0043	0.0027	0.0048
	Level 9	7.3min	0.9151	0.9683	0.9785	0.9884	0.9148	0.9683	0.9785	0.9884	0.9620	0.9741	0.9825	0.9980	0.0234	0.9621	0.9742	0.9826	0.1680	0.0038	0.0026	0.0042

Table A.59: EDZ8 Other Results Table

EDZ8	Ask Variance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.5sec	1.4499	1.5493	1.6250	1.7807	1.4497	1.5492	1.6249	1.7807	1.4825	1.5837	1.6522	1.9206	1.4165	1.5095	1.5869	1.7133	0.0238	0.0327	0.0277	0.0813
	Level 2	17sec	1.2142	1.2889	1.3728	1.4685	1.2142	1.2887	1.3725	1.4692	1.2290	1.3380	1.3972	1.6223	1.1842	1.2448	1.3472	1.4073	0.0174	0.0404	0.0186	0.0875
	Level 3	33.9sec	1.0970	1.1421	1.2009	1.2565	1.0970	1.1418	1.2011	1.2566	1.1114	1.1703	1.2293	1.3240	1.0811	1.1146	1.1775	1.2303	0.0121	0.0233	0.0225	0.0381
30	**Level 4**	1.1min	1.0463	1.0705	1.1026	1.1566	1.0462	1.0706	1.1025	1.1567	1.0550	1.0850	1.1198	1.1746	1.0364	1.0556	1.0902	1.1374	0.0091	0.0115	0.0109	0.0174
days	**Level 5**	2.3min	1.0239	1.0373	1.0562	1.0884	1.0239	1.0373	1.0560	1.0888	1.0304	1.0442	1.0678	1.0974	1.0167	1.0319	1.0481	1.0713	0.0066	0.0046	0.0074	0.0102
before	**Level 6**	4.5min	1.0142	1.0218	1.0317	1.0549	1.0142	1.0219	1.0318	1.0550	1.0186	1.0256	1.0382	1.0633	1.0089	1.0197	1.0269	1.0461	0.0047	0.0021	0.0043	0.0069
	Level 7	9min	1.0093	1.0144	1.0209	1.0369	1.0092	1.0144	1.0209	1.0369	1.0120	1.0168	1.0259	1.0420	1.0055	1.0131	1.0169	1.0316	0.0032	0.0015	0.0035	0.0040
	Level 8	18.1min	1.0069	1.0107	1.0156	1.0278	1.0069	1.0107	1.0157	1.0278	1.0095	1.0124	1.0190	1.0316	1.0038	1.0097	1.0131	1.0235	0.0025	0.0012	0.0025	0.0032
	Level 9	36.2min	1.0063	1.0099	1.0147	1.0273	1.0063	1.0099	1.0147	1.0272	1.0087	1.0114	1.0183	1.0318	1.0037	1.0087	1.0122	1.0217	0.0020	0.0009	0.0027	0.0041
	Level 1	4.5sec	1.4497	1.5390	1.6180	1.8052	1.4497	1.5390	1.6176	1.8048	1.4825	1.5730	1.6722	2.1997	1.3767	1.5095	1.5828	1.7023	0.0325	0.0198	0.0333	0.1435
	Level 2	9sec	1.2156	1.2763	1.3633	1.4968	1.2155	1.2766	1.3632	1.4960	1.2332	1.3142	1.3972	1.7768	1.1797	1.2400	1.3290	1.4073	0.0183	0.0246	0.0236	0.1127
	Level 3	18.1sec	1.1016	1.1386	1.1855	1.2761	1.1015	1.1389	1.1855	1.2773	1.1114	1.1613	1.2110	1.4903	1.0811	1.1146	1.1681	1.2177	0.0106	0.0161	0.0146	0.0803
60	**Level 4**	36.2sec	1.0496	1.0732	1.0950	1.1574	1.0496	1.0731	1.0952	1.1573	1.0568	1.0850	1.1040	1.2593	1.0364	1.0622	1.0890	1.1046	0.0077	0.0092	0.0059	0.0465
days	**Level 5**	1.2min	1.0268	1.0404	1.0539	1.0893	1.0267	1.0403	1.0539	1.0896	1.0326	1.0477	1.0584	1.1392	1.0167	1.0336	1.0481	1.0599	0.0058	0.0053	0.0034	0.0266
before	**Level 6**	2.4min	1.0158	1.0239	1.0328	1.0550	1.0159	1.0240	1.0328	1.0547	1.0200	1.0286	1.0372	1.0902	1.0089	1.0201	1.0300	1.0376	0.0039	0.0032	0.0021	0.0162
	Level 7	4.8min	1.0103	1.0155	1.0218	1.0364	1.0103	1.0155	1.0218	1.0365	1.0130	1.0185	1.0244	1.0567	1.0055	1.0131	1.0199	1.0251	0.0027	0.0019	0.0015	0.0096
	Level 8	9.6min	1.0076	1.0114	1.0160	1.0270	1.0076	1.0114	1.0160	1.0271	1.0095	1.0135	1.0182	1.0400	1.0038	1.0097	1.0143	1.0183	0.0020	0.0015	0.0013	0.0067
	Level 9	19.3min	1.0067	1.0103	1.0141	1.0255	1.0067	1.0103	1.0141	1.0255	1.0087	1.0122	1.0164	1.0348	1.0037	1.0087	1.0125	1.0169	0.0017	0.0013	0.0014	0.0064
	Level 1	2.8sec	1.4597	1.5350	1.6190	1.7761	1.4602	1.5350	1.6192	1.7764	1.5074	1.5654	1.6820	2.1997	1.3767	1.5095	1.5730	1.6857	0.0326	0.0171	0.0352	0.1265
	Level 2	5.7sec	1.2205	1.2756	1.3530	1.4745	1.2206	1.2756	1.3528	1.4743	1.2448	1.3030	1.3972	1.7768	1.1797	1.2501	1.3142	1.4073	0.0179	0.0160	0.0251	0.0980
	Level 3	11.3sec	1.1052	1.1406	1.1795	1.2640	1.1050	1.1407	1.1796	1.2642	1.1223	1.1526	1.1997	1.4903	1.0811	1.1250	1.1585	1.2110	0.0110	0.0081	0.0154	0.0690
3	**Level 4**	22.7sec	1.0522	1.0701	1.0917	1.1487	1.0522	1.0700	1.0917	1.1486	1.0645	1.0809	1.1033	1.2593	1.0364	1.0653	1.0815	1.1040	0.0088	0.0052	0.0067	0.0420
months	**Level 5**	45.3sec	1.0273	1.0360	1.0504	1.0850	1.0272	1.0360	1.0504	1.0850	1.0325	1.0413	1.0568	1.1392	1.0167	1.0326	1.0425	1.0576	0.0054	0.0027	0.0045	0.0263
before	**Level 6**	1.5min	1.0149	1.0206	1.0300	1.0526	1.0149	1.0206	1.0300	1.0526	1.0181	1.0226	1.0337	1.0902	1.0089	1.0184	1.0255	1.0341	0.0032	0.0013	0.0027	0.0180
	Level 7	3min	1.0091	1.0132	1.0193	1.0355	1.0091	1.0132	1.0193	1.0355	1.0119	1.0156	1.0224	1.0639	1.0055	1.0120	1.0159	1.0224	0.0021	0.0009	0.0019	0.0120
	Level 8	6min	1.0064	1.0096	1.0140	1.0265	1.0064	1.0096	1.0140	1.0264	1.0085	1.0108	1.0161	1.0476	1.0038	1.0085	1.0120	1.0174	0.0015	0.0006	0.0013	0.0087
	Level 9	12.1min	1.0057	1.0086	1.0124	1.0244	1.0057	1.0086	1.0124	1.0244	1.0076	1.0102	1.0139	1.0412	1.0037	1.0077	1.0102	1.0156	0.0012	0.0007	0.0010	0.0078
	Level 1	1.4sec	1.4684	1.5196	1.5680	1.6901	1.4684	1.5196	1.5680	1.6902	1.5004	1.5396	1.5979	2.1997	1.3680	1.5019	1.5403	1.6027	0.0279	0.0109	0.0165	0.0909
	Level 2	2.7sec	1.2266	1.2708	1.3123	1.4137	1.2266	1.2708	1.3125	1.4138	1.2519	1.2887	1.3380	1.7768	1.1588	1.2543	1.2888	1.3382	0.0199	0.0102	0.0150	0.0726
	Level 3	5.4sec	1.1127	1.1430	1.1696	1.2395	1.1127	1.1430	1.1696	1.2397	1.1303	1.1585	1.1878	1.4903	1.0755	1.1303	1.1592	1.1878	0.0121	0.0084	0.0083	0.0533
1	**Level 4**	10.8sec	1.0579	1.0772	1.0954	1.1446	1.0579	1.0772	1.0954	1.1445	1.0688	1.0851	1.1064	1.2593	1.0364	1.0690	1.0854	1.1065	0.0083	0.0049	0.0060	0.0355
Year	**Level 5**	21.7sec	1.0310	1.0447	1.0574	1.0946	1.0310	1.0447	1.0575	1.0946	1.0380	1.0507	1.0652	1.1570	1.0167	1.0384	1.0508	1.0662	0.0051	0.0037	0.0041	0.0245
before	**Level 6**	43.3sec	1.0182	1.0283	1.0380	1.0666	1.0182	1.0283	1.0379	1.0663	1.0229	1.0331	1.0443	1.2051	1.0089	1.0233	1.0332	1.0448	0.0034	0.0029	0.0032	0.0246
	Level 7	1.4min	1.0119	1.0191	1.0266	1.0501	1.0119	1.0191	1.0267	1.0502	1.0156	1.0223	1.0312	1.3698	1.0055	1.0159	1.0224	1.0313	0.0025	0.0019	0.0024	0.0423
	Level 8	2.9min	1.0087	1.0140	1.0198	1.0440	1.0087	1.0140	1.0198	1.0443	1.0118	1.0165	1.0234	1.7184	1.0038	1.0119	1.0166	1.0234	0.0019	0.0014	0.0018	0.0861
	Level 9	5.8min	1.0077	1.0123	1.0172	1.0512	1.0077	1.0123	1.0172	1.0519	1.0102	1.0144	1.0202	2.4212	1.0037	1.0103	1.0144	1.0203	0.0017	0.0012	0.0016	0.1741

Table A.59: EDZ8 Other Results Table –Continued

EDZ8 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.5sec	1.4474	1.5438	1.6277	1.7770	1.4475	1.5439	1.6275	1.7776	1.4835	1.5853	1.6532	1.9168	1.4117	1.5111	1.6070	1.7047	0.0262	0.0285	0.0232	0.0817
	Level 2	17sec	1.2126	1.2895	1.3640	1.4727	1.2129	1.2894	1.3639	1.4718	1.2246	1.3357	1.3998	1.6058	1.1796	1.2407	1.3477	1.4220	0.0188	0.0383	0.0210	0.0757
	Level 3	33.9sec	1.0973	1.1419	1.1983	1.2593	1.0971	1.1418	1.1980	1.2594	1.1122	1.1732	1.2262	1.3113	1.0780	1.1125	1.1784	1.2372	0.0140	0.0228	0.0189	0.0299
30	**Level 4**	1.1min	1.0460	1.0699	1.1050	1.1510	1.0460	1.0699	1.1050	1.1510	1.0546	1.0892	1.1162	1.1780	1.0354	1.0552	1.0893	1.1166	0.0096	0.0123	0.0112	0.0249
days	**Level 5**	2.3min	1.0237	1.0358	1.0555	1.0847	1.0237	1.0358	1.0555	1.0846	1.0288	1.0430	1.0592	1.0929	1.0160	1.0298	1.0434	1.0737	0.0065	0.0051	0.0068	0.0087
before	**Level 6**	4.5min	1.0137	1.0210	1.0314	1.0497	1.0137	1.0210	1.0313	1.0497	1.0173	1.0236	1.0346	1.0574	1.0085	1.0180	1.0247	1.0385	0.0045	0.0025	0.0040	0.0071
	Level 7	9min	1.0088	1.0140	1.0202	1.0322	1.0088	1.0139	1.0202	1.0322	1.0115	1.0169	1.0231	1.0372	1.0052	1.0117	1.0179	1.0236	0.0032	0.0018	0.0027	0.0052
	Level 8	18.1min	1.0065	1.0103	1.0153	1.0250	1.0065	1.0103	1.0153	1.0250	1.0086	1.0126	1.0184	1.0288	1.0036	1.0088	1.0133	1.0189	0.0025	0.0013	0.0022	0.0037
	Level 9	36.2min	1.0058	1.0099	1.0150	1.0251	1.0058	1.0099	1.0150	1.0251	1.0076	1.0122	1.0182	1.0291	1.0035	1.0079	1.0133	1.0202	0.0021	0.0015	0.0022	0.0035
	Level 1	4.5sec	1.4481	1.5374	1.6156	1.8091	1.4484	1.5374	1.6154	1.8078	1.4835	1.5632	1.6668	2.2578	1.3787	1.5111	1.5711	1.7032	0.0328	0.0169	0.0330	0.1602
	Level 2	9sec	1.2140	1.2764	1.3574	1.5010	1.2143	1.2764	1.3574	1.5010	1.2330	1.3157	1.3998	1.8398	1.1796	1.2379	1.3271	1.4220	0.0187	0.0250	0.0236	0.1258
	Level 3	18.1sec	1.1012	1.1387	1.1848	1.2754	1.1012	1.1386	1.1848	1.2771	1.1122	1.1623	1.2074	1.5060	1.0780	1.1125	1.1625	1.2158	0.0116	0.0161	0.0143	0.0839
60	**Level 4**	36.2sec	1.0494	1.0727	1.0952	1.1548	1.0494	1.0727	1.0952	1.1547	1.0571	1.0854	1.1061	1.2619	1.0354	1.0619	1.0854	1.1094	0.0081	0.0100	0.0078	0.0485
days	**Level 5**	1.2min	1.0264	1.0392	1.0552	1.0864	1.0263	1.0392	1.0552	1.0864	1.0316	1.0473	1.0591	1.1400	1.0160	1.0331	1.0481	1.0591	0.0055	0.0046	0.0034	0.0286
before	**Level 6**	2.4min	1.0154	1.0234	1.0331	1.0519	1.0154	1.0234	1.0331	1.0519	1.0193	1.0282	1.0353	1.0926	1.0085	1.0197	1.0304	1.0380	0.0036	0.0028	0.0016	0.0174
	Level 7	4.8min	1.0099	1.0155	1.0215	1.0336	1.0099	1.0154	1.0215	1.0337	1.0126	1.0182	1.0236	1.0578	1.0052	1.0132	1.0189	1.0241	0.0025	0.0019	0.0015	0.0099
	Level 8	9.6min	1.0073	1.0113	1.0158	1.0247	1.0073	1.0113	1.0158	1.0248	1.0096	1.0137	1.0183	1.0381	1.0036	1.0097	1.0141	1.0184	0.0020	0.0016	0.0012	0.0062
	Level 9	19.3min	1.0066	1.0105	1.0141	1.0234	1.0065	1.0105	1.0141	1.0234	1.0082	1.0128	1.0160	1.0319	1.0035	1.0084	1.0133	1.0163	0.0017	0.0015	0.0010	0.0053
	Level 1	2.8sec	1.4585	1.5344	1.6184	1.7769	1.4582	1.5342	1.6183	1.7783	1.5037	1.5632	1.6803	2.2578	1.3787	1.5111	1.5672	1.6853	0.0326	0.0153	0.0357	0.1394
	Level 2	5.7sec	1.2186	1.2755	1.3488	1.4764	1.2189	1.2754	1.3491	1.4772	1.2407	1.3029	1.3998	1.8398	1.1796	1.2515	1.3157	1.4019	0.0184	0.0169	0.0238	0.1094
	Level 3	11.3sec	1.1038	1.1406	1.1798	1.2635	1.1040	1.1406	1.1799	1.2638	1.1149	1.1573	1.2061	1.5060	1.0780	1.1242	1.1606	1.2074	0.0108	0.0091	0.0146	0.0719
3	**Level 4**	22.7sec	1.0515	1.0700	1.0919	1.1464	1.0515	1.0700	1.0919	1.1463	1.0624	1.0811	1.1054	1.2619	1.0354	1.0628	1.0833	1.1061	0.0083	0.0060	0.0079	0.0430
months	**Level 5**	45.3sec	1.0266	1.0358	1.0507	1.0828	1.0266	1.0358	1.0507	1.0828	1.0316	1.0407	1.0570	1.1400	1.0160	1.0316	1.0415	1.0591	0.0050	0.0032	0.0056	0.0278
before	**Level 6**	1.5min	1.0145	1.0204	1.0300	1.0505	1.0145	1.0204	1.0300	1.0506	1.0174	1.0234	1.0343	1.0926	1.0085	1.0180	1.0236	1.0344	0.0029	0.0018	0.0036	0.0189
	Level 7	3min	1.0088	1.0129	1.0192	1.0335	1.0089	1.0129	1.0192	1.0335	1.0113	1.0148	1.0218	1.0627	1.0052	1.0115	1.0153	1.0230	0.0020	0.0010	0.0018	0.0120
	Level 8	6min	1.0064	1.0093	1.0139	1.0248	1.0064	1.0093	1.0139	1.0248	1.0083	1.0106	1.0157	1.0458	1.0036	1.0083	1.0109	1.0168	0.0016	0.0007	0.0013	0.0081
	Level 9	12.1min	1.0057	1.0085	1.0126	1.0232	1.0057	1.0085	1.0126	1.0231	1.0074	1.0102	1.0139	1.0405	1.0035	1.0075	1.0102	1.0150	0.0013	0.0009	0.0011	0.0071
	Level 1	1.4sec	1.4674	1.5200	1.5685	1.6892	1.4675	1.5199	1.5685	1.6898	1.5003	1.5412	1.6002	2.2578	1.3654	1.5012	1.5423	1.6004	0.0281	0.0113	0.0164	0.0949
	Level 2	2.7sec	1.2262	1.2706	1.3122	1.4143	1.2263	1.2707	1.3122	1.4143	1.2524	1.2916	1.3371	1.8398	1.1568	1.2538	1.2919	1.3374	0.0202	0.0108	0.0141	0.0773
	Level 3	5.4sec	1.1121	1.1434	1.1695	1.2398	1.1121	1.1434	1.1695	1.2397	1.1301	1.1579	1.1865	1.5060	1.0762	1.1301	1.1581	1.1875	0.0120	0.0083	0.0086	0.0549
1	**Level 4**	10.8sec	1.0576	1.0774	1.0952	1.1439	1.0575	1.0774	1.0951	1.1439	1.0685	1.0848	1.1058	1.2619	1.0354	1.0688	1.0848	1.1061	0.0082	0.0047	0.0066	0.0358
Year	**Level 5**	21.7sec	1.0310	1.0447	1.0576	1.0931	1.0309	1.0447	1.0576	1.0930	1.0389	1.0507	1.0650	1.1504	1.0160	1.0393	1.0516	1.0658	0.0053	0.0036	0.0041	0.0241
before	**Level 6**	43.3sec	1.0182	1.0283	1.0379	1.0646	1.0182	1.0283	1.0379	1.0646	1.0234	1.0331	1.0448	1.1122	1.0085	1.0234	1.0332	1.0451	0.0036	0.0029	0.0033	0.0174
	Level 7	1.4min	1.0118	1.0192	1.0265	1.0471	1.0118	1.0192	1.0265	1.0471	1.0153	1.0221	1.0312	1.1343	1.0052	1.0156	1.0224	1.0319	0.0025	0.0019	0.0025	0.0168
	Level 8	2.9min	1.0086	1.0141	1.0197	1.0378	1.0086	1.0141	1.0197	1.0379	1.0114	1.0168	1.0234	1.2492	1.0036	1.0115	1.0168	1.0235	0.0019	0.0015	0.0018	0.0293
	Level 9	5.8min	1.0076	1.0123	1.0172	1.0391	1.0076	1.0123	1.0173	1.0391	1.0101	1.0145	1.0201	1.4857	1.0035	1.0101	1.0145	1.0202	0.0017	0.0013	0.0015	0.0596

Table A.59: EDZ8 Other Results Table –Continued

EDZ8 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.5sec	1.4486	1.5448	1.6251	1.7795	1.4483	1.5450	1.6250	1.7782	1.4825	1.5837	1.6516	1.9179	1.4137	1.5111	1.5941	1.7083	0.0250	0.0296	0.0256	0.0814
	Level 2	17sec	1.2130	1.2877	1.3641	1.4655	1.2129	1.2879	1.3643	1.4673	1.2252	1.3356	1.3972	1.6117	1.1813	1.2419	1.3503	1.4192	0.0180	0.0390	0.0189	0.0816
	Level 3	33.9sec	1.0959	1.1398	1.1941	1.2529	1.0960	1.1399	1.1940	1.2527	1.1112	1.1696	1.2171	1.3138	1.0788	1.1124	1.1753	1.2334	0.0129	0.0223	0.0169	0.0344
30	**Level 4**	1.1min	1.0449	1.0674	1.0983	1.1432	1.0447	1.0673	1.0984	1.1432	1.0538	1.0827	1.1112	1.1677	1.0350	1.0539	1.0863	1.1172	0.0090	0.0106	0.0090	0.0226
days	**Level 5**	2.3min	1.0220	1.0325	1.0490	1.0751	1.0220	1.0325	1.0491	1.0751	1.0277	1.0378	1.0531	1.0838	1.0154	1.0277	1.0407	1.0637	0.0059	0.0040	0.0049	0.0101
before	**Level 6**	4.5min	1.0119	1.0168	1.0246	1.0397	1.0119	1.0168	1.0245	1.0398	1.0151	1.0191	1.0273	1.0487	1.0077	1.0151	1.0200	1.0301	0.0038	0.0017	0.0028	0.0075
	Level 7	9min	1.0067	1.0097	1.0137	1.0227	1.0067	1.0097	1.0137	1.0227	1.0090	1.0109	1.0161	1.0263	1.0040	1.0091	1.0111	1.0165	0.0024	0.0008	0.0022	0.0041
	Level 8	18.1min	1.0043	1.0063	1.0087	1.0151	1.0043	1.0063	1.0088	1.0151	1.0057	1.0070	1.0110	1.0166	1.0023	1.0058	1.0072	1.0115	0.0017	0.0005	0.0016	0.0021
	Level 9	36.2min	1.0031	1.0051	1.0071	1.0126	1.0031	1.0051	1.0071	1.0126	1.0044	1.0053	1.0098	1.0137	1.0017	1.0047	1.0059	1.0106	0.0012	0.0002	0.0016	0.0012
	Level 1	4.5sec	1.4489	1.5374	1.6156	1.8034	1.4486	1.5375	1.6149	1.8052	1.4825	1.5712	1.6683	2.2268	1.3772	1.5111	1.5721	1.7021	0.0326	0.0181	0.0335	0.1515
	Level 2	9sec	1.2137	1.2751	1.3574	1.4934	1.2140	1.2750	1.3573	1.4953	1.2323	1.3113	1.3972	1.8048	1.1786	1.2379	1.3253	1.4192	0.0185	0.0242	0.0228	0.1186
	Level 3	18.1sec	1.0997	1.1362	1.1817	1.2696	1.0997	1.1362	1.1818	1.2709	1.1112	1.1562	1.2005	1.4898	1.0788	1.1124	1.1629	1.2115	0.0108	0.0147	0.0136	0.0815
60	**Level 4**	36.2sec	1.0474	1.0696	1.0904	1.1465	1.0474	1.0696	1.0904	1.1466	1.0539	1.0814	1.1015	1.2483	1.0350	1.0597	1.0826	1.1025	0.0073	0.0086	0.0074	0.0460
days	**Level 5**	1.2min	1.0240	1.0352	1.0489	1.0773	1.0241	1.0352	1.0489	1.0776	1.0285	1.0407	1.0525	1.1274	1.0154	1.0296	1.0431	1.0528	0.0048	0.0040	0.0033	0.0257
before	**Level 6**	2.4min	1.0131	1.0189	1.0268	1.0421	1.0132	1.0188	1.0268	1.0423	1.0152	1.0239	1.0295	1.0795	1.0077	1.0159	1.0239	1.0301	0.0029	0.0024	0.0022	0.0152
	Level 7	4.8min	1.0076	1.0106	1.0156	1.0246	1.0076	1.0106	1.0156	1.0247	1.0092	1.0123	1.0177	1.0454	1.0040	1.0092	1.0132	1.0178	0.0019	0.0011	0.0014	0.0079
	Level 8	9.6min	1.0049	1.0068	1.0101	1.0158	1.0049	1.0068	1.0101	1.0158	1.0059	1.0077	1.0115	1.0277	1.0023	1.0060	1.0083	1.0116	0.0013	0.0006	0.0011	0.0044
	Level 9	19.3min	1.0037	1.0053	1.0077	1.0125	1.0037	1.0054	1.0077	1.0125	1.0047	1.0060	1.0092	1.0207	1.0017	1.0047	1.0065	1.0096	0.0010	0.0004	0.0010	0.0032
	Level 1	2.8sec	1.4592	1.5341	1.6177	1.7776	1.4588	1.5339	1.6176	1.7761	1.5050	1.5659	1.6785	2.2268	1.3772	1.5111	1.5712	1.6823	0.0326	0.0157	0.0353	0.1327
	Level 2	5.7sec	1.2190	1.2746	1.3483	1.4704	1.2189	1.2744	1.3485	1.4725	1.2419	1.2987	1.3972	1.8048	1.1786	1.2500	1.3113	1.4013	0.0182	0.0162	0.0237	0.1033
	Level 3	11.3sec	1.1030	1.1390	1.1769	1.2577	1.1030	1.1390	1.1769	1.2577	1.1142	1.1532	1.1980	1.4898	1.0788	1.1228	1.1553	1.2005	0.0106	0.0081	0.0152	0.0701
3	**Level 4**	22.7sec	1.0499	1.0680	1.0873	1.1387	1.0499	1.0679	1.0872	1.1389	1.0615	1.0776	1.0982	1.2483	1.0350	1.0616	1.0778	1.1015	0.0081	0.0056	0.0075	0.0401
months	**Level 5**	45.3sec	1.0249	1.0330	1.0453	1.0739	1.0249	1.0330	1.0453	1.0738	1.0293	1.0378	1.0517	1.1274	1.0154	1.0296	1.0380	1.0525	0.0046	0.0029	0.0051	0.0238
before	**Level 6**	1.5min	1.0128	1.0170	1.0243	1.0413	1.0128	1.0170	1.0243	1.0410	1.0151	1.0191	1.0284	1.0795	1.0077	1.0151	1.0191	1.0288	0.0025	0.0013	0.0028	0.0148
	Level 7	3min	1.0069	1.0097	1.0137	1.0242	1.0069	1.0097	1.0137	1.0242	1.0090	1.0105	1.0163	1.0454	1.0040	1.0091	1.0109	1.0165	0.0016	0.0005	0.0018	0.0084
	Level 8	6min	1.0043	1.0061	1.0087	1.0156	1.0043	1.0061	1.0087	1.0156	1.0055	1.0066	1.0110	1.0277	1.0023	1.0057	1.0070	1.0110	0.0011	0.0003	0.0012	0.0050
	Level 9	12.1min	1.0032	1.0048	1.0067	1.0123	1.0032	1.0048	1.0066	1.0123	1.0042	1.0053	1.0082	1.0207	1.0017	1.0043	1.0053	1.0083	0.0008	0.0004	0.0009	0.0036
	Level 1	1.4sec	1.4672	1.5190	1.5668	1.6870	1.4672	1.5190	1.5668	1.6876	1.5002	1.5404	1.5976	2.2268	1.3662	1.5004	1.5405	1.5989	0.0280	0.0111	0.0167	0.0927
	Level 2	2.7sec	1.2252	1.2688	1.3097	1.4090	1.2251	1.2687	1.3098	1.4086	1.2495	1.2877	1.3347	1.8048	1.1569	1.2500	1.2878	1.3356	0.0200	0.0105	0.0140	0.0738
	Level 3	5.4sec	1.1102	1.1405	1.1655	1.2308	1.1102	1.1404	1.1655	1.2309	1.1267	1.1550	1.1837	1.4898	1.0740	1.1269	1.1551	1.1837	0.0115	0.0080	0.0083	0.0515
1	**Level 4**	10.8sec	1.0554	1.0731	1.0899	1.1318	1.0554	1.0731	1.0899	1.1319	1.0660	1.0808	1.0992	1.2483	1.0350	1.0660	1.0814	1.0999	0.0077	0.0043	0.0058	0.0317
Year	**Level 5**	21.7sec	1.0285	1.0398	1.0509	1.0787	1.0285	1.0398	1.0509	1.0788	1.0352	1.0448	1.0570	1.1300	1.0154	1.0353	1.0450	1.0570	0.0047	0.0028	0.0035	0.0189
before	**Level 6**	43.3sec	1.0154	1.0232	1.0306	1.0488	1.0154	1.0232	1.0306	1.0488	1.0193	1.0264	1.0348	1.0795	1.0077	1.0195	1.0266	1.0348	0.0028	0.0022	0.0026	0.0122
	Level 7	1.4min	1.0090	1.0141	1.0191	1.0305	1.0090	1.0141	1.0191	1.0305	1.0113	1.0165	1.0219	1.0519	1.0040	1.0113	1.0166	1.0219	0.0018	0.0014	0.0017	0.0076
	Level 8	2.9min	1.0057	1.0090	1.0123	1.0194	1.0057	1.0090	1.0123	1.0194	1.0073	1.0105	1.0141	1.0327	1.0023	1.0074	1.0106	1.0142	0.0012	0.0010	0.0010	0.0048
	Level 9	5.8min	1.0042	1.0065	1.0090	1.0143	1.0042	1.0065	1.0090	1.0144	1.0053	1.0077	1.0102	1.0231	1.0017	1.0054	1.0077	1.0103	0.0009	0.0007	0.0008	0.0035

Table A.59: EDZ8 Other Results Table –Continued

EDZ8 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	8.5sec	0.5632	0.6174	0.6515	0.6907	0.5635	0.6173	0.6513	0.6910	0.5866	0.6308	0.6618	0.7084	0.5217	0.6049	0.6397	0.6741	0.0248	0.0102	0.0095	0.0125
	Level 2	17sec	0.6808	0.7362	0.7813	0.8245	0.6808	0.7359	0.7816	0.8246	0.7032	0.7487	0.8060	0.8477	0.6227	0.7144	0.7503	0.8166	0.0329	0.0117	0.0208	0.0130
	Level 3	33.9sec	0.7944	0.8377	0.8809	0.9118	0.7944	0.8378	0.8808	0.9116	0.8083	0.8523	0.8989	0.9277	0.7626	0.8155	0.8602	0.8991	0.0184	0.0137	0.0145	0.0117
30	**Level 4**	1.1min	0.8690	0.9073	0.9382	0.9561	0.8691	0.9072	0.9381	0.9561	0.8956	0.9181	0.9477	0.9658	0.8489	0.8959	0.9268	0.9483	0.0189	0.0098	0.0077	0.0088
days	**Level 5**	2.3min	0.9220	0.9493	0.9668	0.9769	0.9221	0.9493	0.9668	0.9769	0.9314	0.9588	0.9711	0.9842	0.9150	0.9441	0.9610	0.9720	0.0074	0.0072	0.0039	0.0062
before	**Level 6**	4.5min	0.9529	0.9709	0.9800	0.9865	0.9527	0.9709	0.9800	0.9865	0.9629	0.9769	0.9823	0.9915	0.9457	0.9666	0.9771	0.9830	0.0064	0.0045	0.0023	0.0043
	Level 7	9min	0.9688	0.9808	0.9868	0.9913	0.9688	0.9808	0.9868	0.9913	0.9769	0.9834	0.9885	0.9948	0.9641	0.9774	0.9855	0.9886	0.0049	0.0026	0.0012	0.0032
	Level 8	18.1min	0.9756	0.9854	0.9903	0.9935	0.9756	0.9854	0.9903	0.9935	0.9814	0.9876	0.9913	0.9964	0.9720	0.9819	0.9896	0.9915	0.0035	0.0022	0.0007	0.0025
	Level 9	36.2min	0.9755	0.9857	0.9907	0.9942	0.9755	0.9857	0.9906	0.9942	0.9802	0.9879	0.9922	0.9965	0.9717	0.9821	0.9899	0.9924	0.0033	0.0022	0.0010	0.0021
	Level 1	4.5sec	0.5566	0.6213	0.6516	0.6911	0.5565	0.6211	0.6516	0.6908	0.5871	0.6397	0.6618	0.7253	0.4429	0.5999	0.6407	0.6741	0.0417	0.0135	0.0065	0.0160
	Level 2	9sec	0.6703	0.7391	0.7861	0.8236	0.6699	0.7390	0.7861	0.8237	0.7032	0.7601	0.8078	0.8477	0.5435	0.7144	0.7692	0.8110	0.0487	0.0139	0.0140	0.0129
	Level 3	18.1sec	0.7855	0.8455	0.8802	0.9080	0.7858	0.8456	0.8802	0.9082	0.8225	0.8603	0.8989	0.9277	0.6640	0.8282	0.8641	0.8991	0.0460	0.0108	0.0115	0.0097
60	**Level 4**	36.2sec	0.8677	0.9138	0.9333	0.9530	0.8674	0.9139	0.9334	0.9530	0.9014	0.9213	0.9417	0.9658	0.7925	0.9040	0.9216	0.9460	0.0350	0.0066	0.0083	0.0074
days	**Level 5**	1.2min	0.9212	0.9483	0.9631	0.9744	0.9210	0.9484	0.9631	0.9744	0.9442	0.9549	0.9680	0.9842	0.8772	0.9442	0.9584	0.9693	0.0237	0.0036	0.0036	0.0053
before	**Level 6**	2.4min	0.9511	0.9684	0.9776	0.9848	0.9509	0.9683	0.9776	0.9849	0.9634	0.9726	0.9806	0.9915	0.9152	0.9659	0.9727	0.9810	0.0154	0.0020	0.0023	0.0035
	Level 7	4.8min	0.9676	0.9793	0.9850	0.9902	0.9675	0.9793	0.9851	0.9902	0.9764	0.9821	0.9870	0.9948	0.9453	0.9769	0.9823	0.9876	0.0092	0.0017	0.0018	0.0025
	Level 8	9.6min	0.9759	0.9847	0.9891	0.9928	0.9758	0.9847	0.9891	0.9928	0.9819	0.9864	0.9904	0.9964	0.9633	0.9820	0.9868	0.9905	0.0059	0.0013	0.0014	0.0020
	Level 9	19.3min	0.9772	0.9862	0.9899	0.9935	0.9772	0.9862	0.9899	0.9935	0.9840	0.9873	0.9916	0.9965	0.9691	0.9843	0.9875	0.9918	0.0050	0.0010	0.0013	0.0016
	Level 1	2.8sec	0.5650	0.6181	0.6520	0.6860	0.5650	0.6182	0.6519	0.6861	0.5934	0.6381	0.6618	0.7253	0.4429	0.5951	0.6397	0.6650	0.0369	0.0136	0.0065	0.0157
	Level 2	5.7sec	0.6807	0.7413	0.7842	0.8207	0.6799	0.7414	0.7842	0.8206	0.7133	0.7601	0.7991	0.8477	0.5435	0.7144	0.7675	0.8060	0.0429	0.0130	0.0103	0.0126
	Level 3	11.3sec	0.7934	0.8476	0.8768	0.9058	0.7934	0.8476	0.8768	0.9059	0.8282	0.8616	0.8895	0.9277	0.6640	0.8291	0.8641	0.8969	0.0397	0.0104	0.0070	0.0090
3	**Level 4**	22.7sec	0.8733	0.9159	0.9346	0.9511	0.8735	0.9159	0.9346	0.9511	0.9040	0.9231	0.9409	0.9658	0.7925	0.9046	0.9249	0.9413	0.0312	0.0066	0.0053	0.0076
months	**Level 5**	45.3sec	0.9243	0.9518	0.9655	0.9742	0.9241	0.9518	0.9654	0.9741	0.9442	0.9601	0.9693	0.9842	0.8772	0.9461	0.9609	0.9693	0.0231	0.0051	0.0030	0.0047
before	**Level 6**	1.5min	0.9520	0.9708	0.9800	0.9857	0.9521	0.9709	0.9800	0.9857	0.9667	0.9769	0.9823	0.9915	0.9152	0.9668	0.9771	0.9829	0.0167	0.0034	0.0018	0.0028
	Level 7	3min	0.9677	0.9812	0.9873	0.9912	0.9677	0.9812	0.9873	0.9912	0.9775	0.9849	0.9886	0.9948	0.9410	0.9786	0.9855	0.9889	0.0110	0.0018	0.0010	0.0020
	Level 8	6min	0.9757	0.9863	0.9908	0.9936	0.9758	0.9863	0.9908	0.9936	0.9835	0.9892	0.9918	0.9964	0.9562	0.9845	0.9896	0.9918	0.0077	0.0013	0.0007	0.0016
	Level 9	12.1min	0.9775	0.9876	0.9916	0.9943	0.9775	0.9876	0.9916	0.9943	0.9852	0.9899	0.9926	0.9965	0.9611	0.9863	0.9899	0.9926	0.0068	0.0011	0.0009	0.0013
	Level 1	1.4sec	0.5933	0.6376	0.6579	0.6817	0.5933	0.6376	0.6580	0.6817	0.6249	0.6484	0.6661	0.7324	0.4429	0.6249	0.6488	0.6665	0.0285	0.0067	0.0049	0.0134
	Level 2	2.7sec	0.7088	0.7622	0.7871	0.8157	0.7089	0.7622	0.7870	0.8157	0.7477	0.7740	0.7976	0.8644	0.5435	0.7479	0.7742	0.7985	0.0341	0.0081	0.0066	0.0137
	Level 3	5.4sec	0.8080	0.8551	0.8746	0.8993	0.8080	0.8551	0.8746	0.8993	0.8421	0.8635	0.8849	0.9292	0.6640	0.8428	0.8636	0.8849	0.0326	0.0063	0.0064	0.0098
1	**Level 4**	10.8sec	0.8750	0.9131	0.9281	0.9456	0.8750	0.9132	0.9281	0.9457	0.9040	0.9218	0.9356	0.9658	0.7925	0.9043	0.9219	0.9359	0.0263	0.0055	0.0040	0.0074
Year	**Level 5**	21.7sec	0.9152	0.9455	0.9572	0.9700	0.9153	0.9455	0.9572	0.9700	0.9382	0.9510	0.9622	0.9842	0.8692	0.9390	0.9517	0.9626	0.0197	0.0037	0.0033	0.0050
before	**Level 6**	43.3sec	0.9394	0.9635	0.9725	0.9822	0.9396	0.9635	0.9725	0.9822	0.9569	0.9678	0.9771	0.9915	0.8991	0.9571	0.9680	0.9771	0.0151	0.0030	0.0028	0.0035
	Level 7	1.4min	0.9554	0.9742	0.9812	0.9884	0.9553	0.9742	0.9812	0.9884	0.9691	0.9781	0.9846	0.9948	0.8816	0.9697	0.9784	0.9849	0.0147	0.0024	0.0018	0.0025
	Level 8	2.9min	0.9641	0.9807	0.9861	0.9915	0.9641	0.9807	0.9861	0.9915	0.9771	0.9835	0.9887	0.9964	0.8005	0.9772	0.9835	0.9887	0.0233	0.0017	0.0014	0.0019
	Level 9	5.8min	0.9647	0.9830	0.9879	0.9925	0.9646	0.9830	0.9879	0.9925	0.9802	0.9857	0.9900	0.9965	0.6731	0.9803	0.9857	0.9900	0.0402	0.0015	0.0012	0.0017

Table A.60: EDZ9 Other Results Table

EDZ9	Ask Variance		Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	5.7sec	1.5424	1.6878	1.8726	2.8181	1.5411	1.6880	1.8717	2.8270	1.5972	1.7209	1.9563	4.1712	1.4595	1.6077	1.7543	2.0798	0.0676	0.0418	0.0884	0.9770
	Level 2	11.5sec	1.3651	1.4913	1.6892	2.5250	1.3644	1.4910	1.6880	2.5224	1.4230	1.5610	1.7645	3.5703	1.3311	1.4349	1.6010	1.8407	0.0390	0.0535	0.0734	0.9208
	Level 3	23sec	1.2312	1.3153	1.5260	2.4378	1.2312	1.3154	1.5265	2.3960	1.2581	1.3892	1.5926	4.2715	1.2069	1.2583	1.4307	1.5995	0.0234	0.0525	0.0630	1.1469
30	**Level 4**	46sec	1.1402	1.2320	1.3987	2.4759	1.1397	1.2322	1.3974	2.4495	1.1712	1.2810	1.4655	5.4328	1.0922	1.1812	1.2896	1.4665	0.0330	0.0371	0.0785	1.7005
days	**Level 5**	1.5min	1.0867	1.1837	1.2823	2.2980	1.0868	1.1839	1.2816	2.2623	1.1206	1.2094	1.3455	4.6596	1.0434	1.1572	1.2144	1.3980	0.0310	0.0215	0.0536	1.4051
before	**Level 6**	3.1min	1.0573	1.1256	1.2135	2.0089	1.0577	1.1256	1.2141	1.9921	1.0849	1.1416	1.2769	3.7918	1.0246	1.1099	1.1737	1.2877	0.0233	0.0137	0.0472	1.0666
	Level 7	6.1min	1.0412	1.0870	1.1635	1.7544	1.0413	1.0869	1.1629	1.7493	1.0661	1.1042	1.2017	3.0444	1.0160	1.0671	1.1261	1.2464	0.0192	0.0142	0.0340	0.7739
	Level 8	12.3min	1.0279	1.0710	1.1329	1.5692	1.0280	1.0709	1.1332	1.5749	1.0425	1.0935	1.1673	2.4929	1.0116	1.0575	1.1036	1.2145	0.0127	0.0129	0.0297	0.5505
	Level 9	24.5min	1.0228	1.0708	1.1304	1.5082	1.0228	1.0711	1.1308	1.5136	1.0356	1.0931	1.1631	2.2275	1.0103	1.0520	1.0981	1.2166	0.0111	0.0147	0.0296	0.4313
	Level 1	2.6sec	1.5572	1.6823	1.7839	2.4217	1.5570	1.6824	1.7835	2.4173	1.6484	1.7083	1.8985	4.1712	1.4595	1.6485	1.7138	1.9439	0.0647	0.0241	0.0573	0.7823
	Level 2	5.1sec	1.3580	1.4765	1.6280	2.2296	1.3584	1.4766	1.6276	2.2307	1.4349	1.5054	1.7629	3.5703	1.2686	1.4371	1.5127	1.7645	0.0510	0.0212	0.0848	0.7066
	Level 3	10.2sec	1.2233	1.3081	1.4681	2.0577	1.2237	1.3077	1.4683	2.0671	1.2599	1.3621	1.5499	4.2715	1.1417	1.2696	1.3763	1.5507	0.0369	0.0353	0.0667	0.8549
60	**Level 4**	20.5sec	1.1384	1.2143	1.3329	2.0049	1.1379	1.2149	1.3327	2.0123	1.1812	1.2545	1.4286	5.4328	1.0861	1.1848	1.2810	1.4291	0.0312	0.0263	0.0457	1.2313
days	**Level 5**	40.9sec	1.0872	1.1608	1.2364	1.8531	1.0874	1.1609	1.2365	1.8368	1.1206	1.1869	1.2685	4.6596	1.0434	1.1232	1.1935	1.3145	0.0256	0.0201	0.0272	1.0427
before	**Level 6**	1.4min	1.0550	1.1095	1.1653	1.6476	1.0553	1.1094	1.1657	1.6410	1.0780	1.1210	1.1979	3.7918	1.0246	1.0849	1.1328	1.2229	0.0171	0.0126	0.0216	0.8033
	Level 7	2.7min	1.0358	1.0718	1.1186	1.4738	1.0358	1.0720	1.1186	1.4731	1.0474	1.0846	1.1513	3.0444	1.0160	1.0511	1.0945	1.1534	0.0105	0.0093	0.0203	0.5932
	Level 8	5.5min	1.0243	1.0510	1.0868	1.3643	1.0243	1.0510	1.0868	1.3619	1.0344	1.0699	1.1055	2.4929	1.0116	1.0386	1.0705	1.1108	0.0066	0.0090	0.0148	0.4306
	Level 9	10.9min	1.0207	1.0434	1.0792	1.3293	1.0206	1.0434	1.0793	1.3258	1.0336	1.0604	1.0981	2.2275	1.0103	1.0354	1.0633	1.1052	0.0068	0.0093	0.0127	0.3494
	Level 1	1.5sec	1.5243	1.6488	1.7355	2.1991	1.5244	1.6492	1.7358	2.2000	1.5866	1.6962	1.7871	4.1712	1.4595	1.5871	1.7075	1.8030	0.0443	0.0368	0.0258	0.6720
	Level 2	3sec	1.3264	1.4496	1.5522	2.0292	1.3265	1.4497	1.5523	2.0305	1.3976	1.4913	1.6414	3.5703	1.2340	1.3993	1.4971	1.6585	0.0484	0.0278	0.0451	0.6094
	Level 3	6.1sec	1.2105	1.2989	1.4071	1.8703	1.2106	1.2988	1.4072	1.8704	1.2583	1.3505	1.5079	4.2715	1.1241	1.2599	1.3541	1.5088	0.0427	0.0280	0.0454	0.7126
3	**Level 4**	12.1sec	1.1306	1.2103	1.2919	1.7739	1.1303	1.2101	1.2921	1.7752	1.1712	1.2377	1.3407	5.4328	1.0572	1.1812	1.2530	1.3456	0.0325	0.0197	0.0243	1.0049
months	**Level 5**	24.2sec	1.0822	1.1503	1.2080	1.6188	1.0824	1.1504	1.2080	1.6197	1.1163	1.1821	1.2371	4.6596	1.0303	1.1206	1.1838	1.2383	0.0251	0.0159	0.0174	0.8580
before	**Level 6**	48.4sec	1.0525	1.1009	1.1405	1.4707	1.0524	1.1010	1.1401	1.4687	1.0733	1.1173	1.1702	3.7918	1.0187	1.0780	1.1191	1.1717	0.0168	0.0121	0.0170	0.6633
	Level 7	1.6min	1.0339	1.0643	1.0941	1.3423	1.0339	1.0644	1.0942	1.3465	1.0474	1.0754	1.1152	3.0444	1.0122	1.0474	1.0758	1.1153	0.0107	0.0089	0.0131	0.4896
	Level 8	3.2min	1.0225	1.0429	1.0671	1.2619	1.0225	1.0429	1.0672	1.2638	1.0321	1.0511	1.0811	2.4929	1.0086	1.0344	1.0512	1.0935	0.0067	0.0051	0.0090	0.3583
	Level 9	6.5min	1.0185	1.0352	1.0590	1.2392	1.0184	1.0352	1.0591	1.2371	1.0279	1.0413	1.0742	2.2275	1.0075	1.0289	1.0415	1.0805	0.0058	0.0040	0.0095	0.2954
	Level 1	1.1sec	1.4787	1.5347	1.5899	1.8235	1.4786	1.5346	1.5898	1.8214	1.5134	1.5579	1.6379	4.1712	1.3830	1.5151	1.5580	1.6395	0.0262	0.0133	0.0217	0.3971
	Level 2	2.1sec	1.2426	1.2942	1.3622	1.6303	1.2426	1.2941	1.3621	1.6318	1.2676	1.3167	1.4138	3.5703	1.1452	1.2684	1.3171	1.4149	0.0250	0.0150	0.0270	0.3820
	Level 3	4.3sec	1.1291	1.1727	1.2371	1.4829	1.1292	1.1726	1.2372	1.4853	1.1548	1.1953	1.2840	4.2715	1.0689	1.1549	1.1954	1.2854	0.0196	0.0119	0.0270	0.4174
1	**Level 4**	8.6sec	1.0739	1.1100	1.1640	1.3942	1.0739	1.1100	1.1641	1.3913	1.0925	1.1280	1.2033	5.4328	1.0305	1.0935	1.1288	1.2042	0.0141	0.0099	0.0249	0.5406
Year	**Level 5**	17.1sec	1.0456	1.0733	1.1152	1.3006	1.0456	1.0733	1.1153	1.3001	1.0592	1.0873	1.1513	4.6596	1.0162	1.0595	1.0876	1.1522	0.0100	0.0083	0.0201	0.4592
before	**Level 6**	34.2sec	1.0297	1.0494	1.0791	1.2181	1.0297	1.0494	1.0792	1.2193	1.0395	1.0607	1.1043	3.7918	1.0085	1.0403	1.0609	1.1055	0.0072	0.0061	0.0134	0.3556
	Level 7	1.1min	1.0201	1.0339	1.0538	1.1601	1.0201	1.0339	1.0537	1.1588	1.0267	1.0424	1.0705	3.0444	1.0049	1.0270	1.0424	1.0712	0.0050	0.0045	0.0083	0.2646
	Level 8	2.3min	1.0145	1.0245	1.0386	1.1185	1.0145	1.0245	1.0386	1.1192	1.0191	1.0303	1.0479	2.4929	1.0033	1.0191	1.0308	1.0481	0.0036	0.0032	0.0052	0.1970
	Level 9	4.6min	1.0126	1.0211	1.0334	1.1050	1.0126	1.0211	1.0334	1.1054	1.0166	1.0265	1.0409	2.2275	1.0028	1.0168	1.0265	1.0410	0.0030	0.0030	0.0042	0.1650

Table A.60: EDZ9 Other Results Table –Continued

EDZ9 Bid Variance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	5.7sec	1.5538	1.6695	1.8694	2.4537	1.5526	1.6692	1.8683	2.4392	1.6110	1.7245	1.9605	4.1099	1.4505	1.6341	1.7616	1.9899	0.0662	0.0348	0.0862	0.9343
	Level 2	11.5sec	1.3620	1.5035	1.6920	2.1832	1.3617	1.5026	1.6936	2.1701	1.4230	1.5772	1.7429	3.5284	1.2758	1.4323	1.5832	1.7754	0.0616	0.0559	0.0665	0.7603
	Level 3	23sec	1.2209	1.3411	1.5186	1.9758	1.2213	1.3416	1.5202	1.9698	1.2603	1.4161	1.6170	2.6307	1.2029	1.2670	1.4255	1.6173	0.0232	0.0560	0.0837	0.4120
30	**Level 4**	46sec	1.1337	1.2312	1.3643	1.7771	1.1338	1.2316	1.3639	1.7659	1.1610	1.2899	1.4462	2.4033	1.0949	1.1610	1.3038	1.4959	0.0261	0.0458	0.0627	0.3823
days	**Level 5**	1.5min	1.0811	1.1813	1.2754	1.5388	1.0810	1.1809	1.2762	1.5409	1.1030	1.2132	1.3271	2.0007	1.0457	1.1225	1.2171	1.3659	0.0229	0.0336	0.0480	0.2704
before	**Level 6**	3.1min	1.0526	1.1265	1.2212	1.4166	1.0527	1.1269	1.2213	1.4156	1.0699	1.1671	1.2521	1.7448	1.0248	1.0907	1.1710	1.2584	0.0184	0.0283	0.0318	0.2113
	Level 7	6.1min	1.0374	1.0954	1.1741	1.3050	1.0375	1.0958	1.1742	1.3067	1.0588	1.1290	1.1982	1.5251	1.0163	1.0656	1.1328	1.1989	0.0162	0.0250	0.0270	0.1398
	Level 8	12.3min	1.0292	1.0771	1.1393	1.2633	1.0292	1.0767	1.1395	1.2639	1.0537	1.1015	1.1648	1.4399	1.0121	1.0576	1.1151	1.1749	0.0161	0.0188	0.0193	0.1151
	Level 9	24.5min	1.0273	1.0755	1.1386	1.3059	1.0277	1.0754	1.1387	1.3047	1.0587	1.1052	1.1608	1.5090	1.0110	1.0590	1.1151	1.1843	0.0189	0.0207	0.0204	0.1439
	Level 1	2.6sec	1.5620	1.6662	1.7817	2.1969	1.5628	1.6662	1.7817	2.1944	1.6341	1.7019	1.8557	4.1099	1.4505	1.6365	1.7037	1.8700	0.0571	0.0206	0.0471	0.6750
	Level 2	5.1sec	1.3622	1.4754	1.6307	2.0352	1.3628	1.4750	1.6311	2.0404	1.4323	1.5080	1.7429	3.5284	1.2758	1.4340	1.5173	1.7432	0.0529	0.0293	0.0791	0.5476
	Level 3	10.2sec	1.2232	1.3202	1.4571	1.8733	1.2231	1.3200	1.4570	1.8705	1.2624	1.3771	1.5298	2.6307	1.1687	1.2670	1.3952	1.5719	0.0304	0.0337	0.0432	0.3368
60	**Level 4**	20.5sec	1.1393	1.2236	1.3286	1.6632	1.1396	1.2237	1.3287	1.6672	1.1790	1.2633	1.3896	2.4033	1.0949	1.1860	1.2899	1.4006	0.0238	0.0224	0.0302	0.3158
days	**Level 5**	40.9sec	1.0894	1.1625	1.2423	1.4701	1.0893	1.1625	1.2423	1.4728	1.1225	1.2015	1.2932	2.0007	1.0457	1.1344	1.2061	1.3094	0.0229	0.0238	0.0301	0.2186
before	**Level 6**	1.4min	1.0564	1.1083	1.1788	1.3481	1.0564	1.1080	1.1790	1.3491	1.0744	1.1379	1.2312	1.7448	1.0248	1.0848	1.1413	1.2354	0.0156	0.0173	0.0279	0.1652
	Level 7	2.7min	1.0374	1.0749	1.1295	1.2536	1.0374	1.0748	1.1294	1.2530	1.0507	1.1007	1.1631	1.5251	1.0163	1.0560	1.1025	1.1799	0.0109	0.0143	0.0195	0.1102
	Level 8	5.5min	1.0264	1.0558	1.0949	1.2042	1.0263	1.0559	1.0947	1.2057	1.0382	1.0660	1.1203	1.4399	1.0121	1.0442	1.0721	1.1314	0.0081	0.0084	0.0173	0.0987
	Level 9	10.9min	1.0219	1.0529	1.0841	1.2258	1.0219	1.0529	1.0842	1.2217	1.0321	1.0626	1.1131	1.5090	1.0110	1.0339	1.0630	1.1151	0.0069	0.0097	0.0190	0.1305
	Level 1	1.5sec	1.5307	1.6410	1.7229	2.0597	1.5304	1.6410	1.7228	2.0557	1.5808	1.6761	1.7806	4.1099	1.4505	1.5836	1.6762	1.8109	0.0382	0.0271	0.0320	0.5547
	Level 2	3sec	1.3313	1.4435	1.5489	1.9111	1.3309	1.4435	1.5489	1.9093	1.4010	1.4911	1.6207	3.5284	1.2358	1.4149	1.4972	1.6248	0.0474	0.0213	0.0405	0.4598
	Level 3	6.1sec	1.2113	1.3032	1.4041	1.7363	1.2118	1.3032	1.4044	1.7369	1.2603	1.3360	1.4682	2.6307	1.1271	1.2624	1.3597	1.4807	0.0390	0.0238	0.0370	0.3168
3	**Level 4**	12.1sec	1.1325	1.2136	1.2940	1.5543	1.1327	1.2134	1.2939	1.5552	1.1765	1.2365	1.3232	2.4033	1.0595	1.1790	1.2390	1.3316	0.0293	0.0185	0.0246	0.2870
months	**Level 5**	24.2sec	1.0839	1.1475	1.2114	1.3941	1.0839	1.1476	1.2114	1.3955	1.1173	1.1782	1.2342	2.0007	1.0317	1.1225	1.1894	1.2459	0.0234	0.0138	0.0130	0.1985
before	**Level 6**	48.4sec	1.0532	1.0977	1.1453	1.2938	1.0532	1.0976	1.1452	1.2930	1.0744	1.1152	1.1796	1.7448	1.0201	1.0756	1.1182	1.1832	0.0160	0.0118	0.0171	0.1487
	Level 7	1.6min	1.0343	1.0645	1.1012	1.2143	1.0342	1.0643	1.1012	1.2127	1.0483	1.0799	1.1290	1.5251	1.0133	1.0507	1.0816	1.1315	0.0107	0.0088	0.0153	0.1012
	Level 8	3.2min	1.0231	1.0456	1.0710	1.1694	1.0231	1.0456	1.0710	1.1697	1.0351	1.0575	1.0991	1.4399	1.0093	1.0353	1.0576	1.1000	0.0074	0.0068	0.0114	0.0904
	Level 9	6.5min	1.0187	1.0393	1.0620	1.1766	1.0187	1.0394	1.0620	1.1759	1.0275	1.0511	1.0776	1.5090	1.0076	1.0294	1.0511	1.0843	0.0057	0.0074	0.0069	0.1183
	Level 1	1.1sec	1.4809	1.5354	1.5899	1.7800	1.4808	1.5353	1.5900	1.7804	1.5168	1.5577	1.6310	4.1099	1.3823	1.5171	1.5579	1.6341	0.0276	0.0123	0.0212	0.3167
	Level 2	2.1sec	1.2430	1.2953	1.3623	1.5965	1.2429	1.2952	1.3623	1.5956	1.2728	1.3226	1.4225	3.5284	1.1448	1.2728	1.3231	1.4230	0.0256	0.0148	0.0286	0.2934
	Level 3	4.3sec	1.1292	1.1727	1.2377	1.4488	1.1293	1.1727	1.2378	1.4492	1.1563	1.1946	1.2903	2.6307	1.0706	1.1564	1.1948	1.2906	0.0196	0.0115	0.0293	0.2321
1	**Level 4**	8.6sec	1.0741	1.1098	1.1647	1.3346	1.0741	1.1098	1.1647	1.3344	1.0944	1.1270	1.2099	2.4033	1.0331	1.0946	1.1271	1.2099	0.0140	0.0097	0.0259	0.1928
Year	**Level 5**	17.1sec	1.0458	1.0733	1.1145	1.2444	1.0458	1.0732	1.1146	1.2451	1.0594	1.0875	1.1507	2.0007	1.0172	1.0595	1.0877	1.1527	0.0100	0.0084	0.0198	0.1338
before	**Level 6**	34.2sec	1.0300	1.0490	1.0785	1.1813	1.0300	1.0490	1.0786	1.1812	1.0403	1.0590	1.1056	1.7448	1.0086	1.0404	1.0597	1.1078	0.0074	0.0057	0.0127	0.1070
	Level 7	1.1min	1.0201	1.0336	1.0541	1.1368	1.0202	1.0336	1.0541	1.1368	1.0271	1.0418	1.0704	1.7614	1.0048	1.0273	1.0420	1.0718	0.0052	0.0040	0.0078	0.1082
	Level 8	2.3min	1.0145	1.0243	1.0393	1.1181	1.0145	1.0243	1.0393	1.1180	1.0192	1.0300	1.0506	2.4331	1.0032	1.0194	1.0301	1.0511	0.0037	0.0030	0.0053	0.1795
	Level 9	4.6min	1.0126	1.0211	1.0339	1.1352	1.0126	1.0211	1.0339	1.1369	1.0169	1.0259	1.0425	3.7860	1.0027	1.0171	1.0260	1.0428	0.0031	0.0027	0.0048	0.3468

Table A.60: EDZ9 Other Results Table –Continued

EDZ9 Bid Ask Covariance			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	5.7sec	1.5343	1.6724	1.8613	2.4850	1.5344	1.6719	1.8624	2.4862	1.6041	1.7161	1.9642	4.1738	1.4346	1.6087	1.7453	1.9934	0.0778	0.0351	0.0901	0.9451
	Level 2	11.5sec	1.3494	1.4792	1.6619	2.1832	1.3489	1.4779	1.6636	2.1834	1.4190	1.5316	1.7194	3.4608	1.2848	1.4232	1.5634	1.7343	0.0495	0.0419	0.0595	0.7316
	Level 3	23sec	1.2136	1.2967	1.4678	1.9954	1.2132	1.2972	1.4694	1.9838	1.2552	1.3390	1.5652	2.6399	1.1941	1.2552	1.3912	1.5701	0.0250	0.0355	0.0677	0.5353
30	**Level 4**	46sec	1.1268	1.1957	1.2972	1.8460	1.1266	1.1953	1.2968	1.8344	1.1526	1.2279	1.3559	2.9984	1.0905	1.1544	1.2389	1.4043	0.0251	0.0318	0.0419	0.6760
days	**Level 5**	1.5min	1.0729	1.1405	1.1978	1.5632	1.0732	1.1402	1.1980	1.5655	1.0938	1.1605	1.2188	2.2823	1.0407	1.1058	1.1730	1.2589	0.0215	0.0219	0.0206	0.4274
before	**Level 6**	3.1min	1.0441	1.0877	1.1411	1.3823	1.0441	1.0881	1.1412	1.3901	1.0563	1.1079	1.1678	1.8587	1.0204	1.0724	1.1148	1.1704	0.0145	0.0161	0.0230	0.2954
	Level 7	6.1min	1.0275	1.0551	1.0965	1.2703	1.0276	1.0551	1.0965	1.2678	1.0376	1.0727	1.1160	1.6102	1.0116	1.0405	1.0745	1.1179	0.0105	0.0125	0.0182	0.2142
	Level 8	12.3min	1.0168	1.0364	1.0665	1.1894	1.0168	1.0364	1.0667	1.1907	1.0236	1.0474	1.0810	1.4486	1.0073	1.0277	1.0560	1.0830	0.0066	0.0073	0.0106	0.1590
	Level 9	24.5min	1.0107	1.0322	1.0584	1.1538	1.0107	1.0320	1.0583	1.1524	1.0168	1.0429	1.0660	1.3342	1.0059	1.0235	1.0487	1.0710	0.0039	0.0074	0.0071	0.1142
	Level 1	2.6sec	1.5462	1.6712	1.7735	2.2281	1.5468	1.6711	1.7736	2.2269	1.6087	1.7042	1.8569	4.1738	1.4346	1.6472	1.7161	1.9365	0.0611	0.0167	0.0465	0.6872
	Level 2	5.1sec	1.3495	1.4627	1.6065	2.0392	1.3491	1.4621	1.6065	2.0415	1.4232	1.5014	1.7005	3.4608	1.2564	1.4306	1.5035	1.7194	0.0530	0.0272	0.0773	0.5350
	Level 3	10.2sec	1.2117	1.2962	1.4229	1.8474	1.2117	1.2964	1.4225	1.8487	1.2552	1.3390	1.5004	2.6399	1.1260	1.2585	1.3400	1.5150	0.0376	0.0296	0.0607	0.4205
60	**Level 4**	20.5sec	1.1275	1.1936	1.2817	1.6715	1.1276	1.1935	1.2813	1.6705	1.1551	1.2165	1.3214	2.9984	1.0739	1.1574	1.2279	1.3442	0.0264	0.0189	0.0287	0.5077
days	**Level 5**	40.9sec	1.0775	1.1332	1.1906	1.4495	1.0777	1.1334	1.1905	1.4510	1.1061	1.1584	1.2188	2.2823	1.0407	1.1071	1.1605	1.2223	0.0232	0.0172	0.0216	0.3295
before	**Level 6**	1.4min	1.0454	1.0831	1.1256	1.3074	1.0453	1.0831	1.1258	1.3065	1.0622	1.0972	1.1478	1.8587	1.0204	1.0641	1.1042	1.1596	0.0137	0.0115	0.0160	0.2259
	Level 7	2.7min	1.0276	1.0503	1.0807	1.2034	1.0276	1.0503	1.0806	1.2031	1.0374	1.0599	1.0992	1.6102	1.0116	1.0376	1.0636	1.1034	0.0087	0.0084	0.0112	0.1620
	Level 8	5.5min	1.0174	1.0319	1.0510	1.1385	1.0173	1.0319	1.0510	1.1383	1.0236	1.0362	1.0613	1.4486	1.0073	1.0237	1.0364	1.0627	0.0056	0.0046	0.0075	0.1210
	Level 9	10.9min	1.0117	1.0252	1.0402	1.1089	1.0117	1.0252	1.0403	1.1091	1.0171	1.0299	1.0544	1.3342	1.0059	1.0174	1.0326	1.0553	0.0037	0.0037	0.0065	0.0892
	Level 1	1.5sec	1.5211	1.6407	1.7221	2.0753	1.5208	1.6407	1.7224	2.0733	1.5750	1.6786	1.7873	4.1738	1.4346	1.5788	1.6797	1.7880	0.0428	0.0345	0.0317	0.5705
	Level 2	3sec	1.3207	1.4343	1.5356	1.9046	1.3202	1.4342	1.5358	1.9024	1.3845	1.4601	1.6312	3.4608	1.2339	1.3923	1.4867	1.6342	0.0467	0.0195	0.0435	0.4542
	Level 3	6.1sec	1.2012	1.2880	1.3732	1.7132	1.2014	1.2878	1.3734	1.7187	1.2552	1.3230	1.4636	2.6399	1.1246	1.2552	1.3291	1.4712	0.0406	0.0247	0.0375	0.3696
3	**Level 4**	12.1sec	1.1226	1.1918	1.2609	1.5433	1.1225	1.1919	1.2607	1.5406	1.1551	1.2165	1.2936	2.9984	1.0569	1.1574	1.2228	1.2979	0.0291	0.0188	0.0246	0.4300
months	**Level 5**	24.2sec	1.0743	1.1289	1.1760	1.3640	1.0743	1.1289	1.1759	1.3614	1.1058	1.1457	1.2060	2.2823	1.0294	1.1061	1.1493	1.2085	0.0228	0.0136	0.0151	0.2818
before	**Level 6**	48.4sec	1.0440	1.0803	1.1119	1.2429	1.0438	1.0802	1.1117	1.2450	1.0622	1.0930	1.1331	1.8587	1.0176	1.0641	1.0970	1.1349	0.0137	0.0086	0.0104	0.1933
	Level 7	1.6min	1.0263	1.0480	1.0692	1.1637	1.0264	1.0480	1.0692	1.1625	1.0369	1.0577	1.0812	1.6102	1.0110	1.0374	1.0584	1.0834	0.0084	0.0066	0.0074	0.1369
	Level 8	3.2min	1.0163	1.0299	1.0429	1.1091	1.0163	1.0300	1.0430	1.1092	1.0234	1.0360	1.0511	1.4486	1.0071	1.0236	1.0361	1.0551	0.0052	0.0040	0.0055	0.1015
	Level 9	6.5min	1.0111	1.0222	1.0330	1.0856	1.0112	1.0222	1.0331	1.0853	1.0167	1.0274	1.0383	1.3342	1.0051	1.0168	1.0278	1.0396	0.0033	0.0033	0.0036	0.0761
	Level 1	1.1sec	1.4770	1.5314	1.5842	1.7834	1.4770	1.5315	1.5841	1.7831	1.5115	1.5554	1.6268	4.1738	1.3820	1.5122	1.5555	1.6310	0.0263	0.0124	0.0195	0.3280
	Level 2	2.1sec	1.2387	1.2882	1.3513	1.5877	1.2388	1.2883	1.3515	1.5862	1.2634	1.3103	1.4053	3.4608	1.1441	1.2645	1.3123	1.4102	0.0241	0.0143	0.0250	0.2937
	Level 3	4.3sec	1.1235	1.1635	1.2244	1.4294	1.1236	1.1635	1.2244	1.4274	1.1472	1.1828	1.2657	2.6399	1.0695	1.1473	1.1828	1.2692	0.0182	0.0106	0.0263	0.2529
1	**Level 4**	8.6sec	1.0672	1.0985	1.1475	1.3082	1.0673	1.0985	1.1475	1.3092	1.0844	1.1151	1.1881	2.9984	1.0305	1.0856	1.1159	1.1898	0.0125	0.0081	0.0217	0.2519
Year	**Level 5**	17.1sec	1.0380	1.0614	1.0972	1.2108	1.0380	1.0614	1.0972	1.2111	1.0498	1.0729	1.1260	2.2823	1.0154	1.0498	1.0732	1.1305	0.0082	0.0072	0.0167	0.1647
before	**Level 6**	34.2sec	1.0224	1.0382	1.0622	1.1396	1.0224	1.0382	1.0622	1.1398	1.0297	1.0467	1.0817	1.8587	1.0071	1.0297	1.0473	1.0819	0.0054	0.0049	0.0108	0.1137
	Level 7	1.1min	1.0133	1.0236	1.0387	1.0900	1.0133	1.0236	1.0387	1.0899	1.0180	1.0294	1.0497	1.6102	1.0035	1.0181	1.0295	1.0501	0.0035	0.0032	0.0061	0.0799
	Level 8	2.3min	1.0081	1.0150	1.0247	1.0587	1.0081	1.0150	1.0247	1.0583	1.0116	1.0189	1.0315	1.4486	1.0001	1.0118	1.0189	1.0318	0.0024	0.0021	0.0037	0.0583
	Level 9	4.6min	1.0059	1.0108	1.0179	1.0440	1.0059	1.0108	1.0179	1.0444	1.0085	1.0134	1.0231	1.3342	0.9986	1.0085	1.0137	1.0232	0.0019	0.0015	0.0029	0.0445

Table A.60: EDZ9 Other Results Table –Continued

EDZ9 Correlations			Bootstrap Mean				Mean				Min				Max				St.dev			
			0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%	0% - 25%	26% - 50%	51% - 75%	76% - 100%
	Level 1	5.7sec	0.4466	0.5431	0.6032	0.6452	0.4445	0.5435	0.6032	0.6451	0.5025	0.5799	0.6120	0.6894	0.2433	0.5101	0.5905	0.6207	0.1126	0.0285	0.0089	0.0283
	Level 2	11.5sec	0.4951	0.5983	0.6732	0.7357	0.4939	0.5983	0.6727	0.7356	0.5633	0.6340	0.6982	0.7838	0.2834	0.5738	0.6434	0.7027	0.1182	0.0278	0.0213	0.0337
	Level 3	23sec	0.5220	0.6672	0.7543	0.8191	0.5237	0.6672	0.7545	0.8191	0.6183	0.7062	0.7893	0.8313	0.3801	0.6184	0.7167	0.7934	0.0968	0.0374	0.0269	0.0153
30	**Level 4**	46sec	0.5857	0.7414	0.8207	0.8826	0.5846	0.7412	0.8204	0.8824	0.6685	0.7752	0.8613	0.9133	0.4161	0.6915	0.7916	0.8614	0.1067	0.0340	0.0273	0.0206
days	**Level 5**	1.5min	0.6628	0.7904	0.8516	0.9251	0.6628	0.7911	0.8520	0.9254	0.7321	0.8243	0.8909	0.9563	0.4998	0.7535	0.8291	0.9066	0.0991	0.0312	0.0245	0.0199
before	**Level 6**	3.1min	0.7184	0.8258	0.8939	0.9499	0.7180	0.8255	0.8941	0.9502	0.7947	0.8568	0.9168	0.9758	0.5731	0.7987	0.8727	0.9347	0.0974	0.0248	0.0181	0.0168
	Level 7	6.1min	0.7727	0.8576	0.9183	0.9638	0.7719	0.8576	0.9184	0.9640	0.8341	0.8857	0.9384	0.9839	0.6557	0.8346	0.8940	0.9445	0.0770	0.0225	0.0178	0.0150
	Level 8	12.3min	0.7948	0.8825	0.9333	0.9721	0.7962	0.8828	0.9332	0.9718	0.8511	0.9079	0.9456	0.9881	0.6945	0.8585	0.9098	0.9490	0.0686	0.0181	0.0138	0.0150
	Level 9	24.5min	0.7733	0.8831	0.9352	0.9732	0.7736	0.8828	0.9352	0.9733	0.8444	0.9048	0.9443	0.9892	0.6627	0.8615	0.9103	0.9445	0.0810	0.0177	0.0141	0.0177
	Level 1	2.6sec	0.4836	0.5641	0.6014	0.6435	0.4843	0.5639	0.6013	0.6436	0.5389	0.5870	0.6120	0.6894	0.2433	0.5460	0.5876	0.6181	0.0816	0.0136	0.0079	0.0232
	Level 2	5.1sec	0.5183	0.6183	0.6801	0.7383	0.5172	0.6184	0.6800	0.7385	0.5738	0.6591	0.6982	0.7838	0.2834	0.5767	0.6631	0.7027	0.0878	0.0277	0.0142	0.0273
	Level 3	10.2sec	0.5587	0.6900	0.7609	0.8207	0.5579	0.6902	0.7611	0.8206	0.6537	0.7167	0.7921	0.8556	0.3801	0.6651	0.7262	0.7934	0.0873	0.0180	0.0210	0.0195
60	**Level 4**	20.5sec	0.6266	0.7563	0.8203	0.8809	0.6255	0.7563	0.8203	0.8808	0.7196	0.7752	0.8482	0.9133	0.4161	0.7326	0.7916	0.8613	0.0971	0.0134	0.0170	0.0164
days	**Level 5**	40.9sec	0.6979	0.8085	0.8631	0.9210	0.6979	0.8086	0.8633	0.9211	0.7733	0.8291	0.8909	0.9563	0.4998	0.7836	0.8323	0.8950	0.0851	0.0171	0.0189	0.0180
before	**Level 6**	1.4min	0.7551	0.8522	0.9053	0.9485	0.7555	0.8523	0.9053	0.9484	0.8122	0.8762	0.9308	0.9758	0.5731	0.8252	0.8788	0.9325	0.0768	0.0167	0.0158	0.0137
	Level 7	2.7min	0.8076	0.8884	0.9325	0.9652	0.8081	0.8883	0.9325	0.9653	0.8598	0.9070	0.9517	0.9839	0.6557	0.8605	0.9085	0.9539	0.0612	0.0132	0.0133	0.0098
	Level 8	5.5min	0.8388	0.9157	0.9485	0.9756	0.8392	0.9158	0.9486	0.9756	0.8927	0.9328	0.9632	0.9881	0.6945	0.8968	0.9381	0.9659	0.0605	0.0133	0.0086	0.0071
	Level 9	10.9min	0.8324	0.9249	0.9516	0.9796	0.8326	0.9250	0.9516	0.9796	0.8984	0.9408	0.9689	0.9892	0.6627	0.9048	0.9411	0.9689	0.0771	0.0147	0.0101	0.0061
	Level 1	1.5sec	0.5052	0.5817	0.6104	0.6538	0.5048	0.5816	0.6104	0.6538	0.5522	0.5966	0.6315	0.6894	0.2433	0.5616	0.5979	0.6326	0.0737	0.0111	0.0099	0.0165
	Level 2	3sec	0.5411	0.6475	0.6943	0.7520	0.5417	0.6476	0.6944	0.7523	0.6154	0.6706	0.7068	0.8092	0.2834	0.6170	0.6787	0.7138	0.0814	0.0173	0.0085	0.0274
	Level 3	6.1sec	0.5891	0.7150	0.7688	0.8264	0.5905	0.7147	0.7689	0.8260	0.6753	0.7485	0.7921	0.8872	0.3801	0.6811	0.7497	0.7934	0.0876	0.0201	0.0136	0.0273
3	**Level 4**	12.1sec	0.6588	0.7753	0.8250	0.8835	0.6592	0.7754	0.8253	0.8834	0.7510	0.8087	0.8482	0.9439	0.4161	0.7558	0.8097	0.8500	0.0949	0.0169	0.0124	0.0234
months	**Level 5**	24.2sec	0.7270	0.8270	0.8730	0.9229	0.7276	0.8270	0.8730	0.9230	0.8026	0.8487	0.8909	0.9693	0.4998	0.8102	0.8573	0.8950	0.0832	0.0103	0.0088	0.0202
before	**Level 6**	48.4sec	0.7807	0.8749	0.9121	0.9498	0.7814	0.8748	0.9121	0.9497	0.8452	0.8967	0.9297	0.9803	0.5731	0.8477	0.8993	0.9308	0.0743	0.0138	0.0094	0.0146
	Level 7	1.6min	0.8293	0.9095	0.9405	0.9670	0.8293	0.9094	0.9405	0.9670	0.8838	0.9260	0.9517	0.9869	0.6557	0.8857	0.9287	0.9539	0.0597	0.0129	0.0071	0.0100
	Level 8	3.2min	0.8593	0.9346	0.9571	0.9776	0.8591	0.9345	0.9571	0.9774	0.9091	0.9456	0.9659	0.9908	0.6945	0.9098	0.9490	0.9661	0.0582	0.0100	0.0057	0.0070
	Level 9	6.5min	0.8571	0.9422	0.9629	0.9816	0.8574	0.9423	0.9629	0.9817	0.9223	0.9514	0.9714	0.9924	0.6627	0.9280	0.9519	0.9733	0.0736	0.0064	0.0064	0.0055
	Level 1	1.1sec	0.5706	0.6290	0.6514	0.6756	0.5706	0.6291	0.6514	0.6756	0.6120	0.6419	0.6592	0.7234	0.2433	0.6131	0.6420	0.6593	0.0541	0.0084	0.0052	0.0129
	Level 2	2.1sec	0.6393	0.7344	0.7722	0.8049	0.6392	0.7344	0.7722	0.8049	0.7027	0.7558	0.7856	0.8735	0.2834	0.7030	0.7561	0.7857	0.0725	0.0153	0.0088	0.0171
	Level 3	4.3sec	0.7020	0.8083	0.8529	0.8858	0.7026	0.8083	0.8528	0.8858	0.7748	0.8370	0.8647	0.9341	0.3801	0.7750	0.8371	0.8648	0.0814	0.0191	0.0084	0.0157
1	**Level 4**	8.6sec	0.7600	0.8591	0.9011	0.9310	0.7601	0.8590	0.9011	0.9311	0.8265	0.8872	0.9136	0.9680	0.4161	0.8265	0.8873	0.9137	0.0775	0.0190	0.0079	0.0123
Year	**Level 5**	17.1sec	0.8097	0.8974	0.9318	0.9563	0.8100	0.8974	0.9318	0.9563	0.8675	0.9194	0.9438	0.9831	0.4998	0.8690	0.9195	0.9439	0.0659	0.0158	0.0073	0.0092
before	**Level 6**	34.2sec	0.8517	0.9272	0.9534	0.9710	0.8520	0.9273	0.9533	0.9710	0.9027	0.9437	0.9612	0.9915	0.5731	0.9045	0.9443	0.9613	0.0618	0.0109	0.0052	0.0070
	Level 7	1.1min	0.8853	0.9487	0.9675	0.9803	0.8855	0.9487	0.9675	0.9803	0.9330	0.9597	0.9734	0.9952	0.5677	0.9342	0.9599	0.9736	0.0637	0.0070	0.0038	0.0051
	Level 8	2.3min	0.9064	0.9622	0.9763	0.9857	0.9064	0.9622	0.9763	0.9857	0.9514	0.9708	0.9810	0.9969	0.4110	0.9518	0.9709	0.9812	0.0786	0.0049	0.0029	0.0036
	Level 9	4.6min	0.9082	0.9672	0.9794	0.9876	0.9076	0.9672	0.9794	0.9876	0.9590	0.9747	0.9832	0.9973	0.2641	0.9592	0.9747	0.9833	0.1002	0.0045	0.0025	0.0030

Appendix A.4. Annual Median Results

Table A.61: EDH1 median annual variance ratios with time to maturity

EDH1	2006	2007	2008	2009	2010	2011	2012	2013	EDH1	2006	2007	2008	2009	2010	2011	2012	2013
				Ask Varaince									**Bid Varaince**				
Level 1	1.6882	1.6768	1.5450	1.5180	1.5765	1.6746	-	1.7042	Level 1	1.7009	1.7189	1.5509	1.5144	1.5731	1.6783	-	1.7012
Level 2	1.5462	1.4371	1.3009	1.2721	1.3463	1.4479	-	1.5419	Level 2	1.5313	1.4741	1.3018	1.2704	1.3428	1.4546	-	1.4764
Level 3	1.3534	1.2840	1.1694	1.1483	1.2227	1.3037	-	1.4167	Level 3	1.4616	1.2934	1.1639	1.1487	1.2179	1.3007	-	1.3257
Level 4	1.2117	1.1967	1.0966	1.0884	1.1492	1.2082	-	1.3641	Level 4	1.5480	1.1997	1.0955	1.0873	1.1444	1.1889	-	1.2553
Level 5	1.1551	1.1406	1.0558	1.0550	1.0992	1.1627	-	1.3296	Level 5	1.5540	1.1390	1.0601	1.0548	1.0939	1.1410	-	1.1856
Level 6	1.1038	1.0979	1.0352	1.0366	1.0675	1.1141	-	1.3117	Level 6	1.3384	1.1099	1.0400	1.0361	1.0630	1.1006	-	1.1921
Level 7	1.0621	1.0731	1.0259	1.0246	1.0445	1.0800	-	1.3265	Level 7	1.2756	1.0909	1.0299	1.0245	1.0432	1.0762	-	1.2205
Level 8	1.0430	1.0609	1.0218	1.0176	1.0310	1.0580	-	1.3667	Level 8	1.2392	1.0825	1.0256	1.0175	1.0321	1.0646	-	1.3292
Level 9	1.0389	1.0707	1.0228	1.0151	1.0248	1.0466	-	1.5323	Level 9	1.2630	1.1051	1.0268	1.0154	1.0296	1.0646	-	1.7886
				Bid Ask Covaraince									**Correlations**				
Level 1	1.6008	1.6159	1.5344	1.5128	1.5691	1.6657	-	1.5337	Level 1	0.5879	0.5818	0.6448	0.6603	0.6357	0.5958	-	0.5878
Level 2	1.3165	1.3493	1.2793	1.2649	1.3330	1.4373	-	1.2385	Level 2	0.6531	0.6784	0.7682	0.7871	0.7447	0.6875	-	0.6773
Level 3	1.1792	1.1728	1.1399	1.1392	1.2046	1.2954	-	1.0894	Level 3	0.6842	0.7731	0.8592	0.8705	0.8211	0.7688	-	0.7543
Level 4	1.1321	1.0759	1.0678	1.0759	1.1309	1.1734	-	1.0296	Level 4	0.6460	0.8336	0.9129	0.9197	0.8738	0.8411	-	0.7966
Level 5	1.0888	1.0366	1.0307	1.0416	1.0814	1.1184	-	0.9936	Level 5	0.6435	0.8779	0.9433	0.9480	0.9141	0.8764	-	0.8435
Level 6	1.0374	1.0171	1.0135	1.0232	1.0503	1.0766	-	0.9861	Level 6	0.7472	0.9010	0.9616	0.9651	0.9407	0.9086	-	0.8389
Level 7	1.0103	1.0083	1.0061	1.0131	1.0304	1.0474	-	0.9839	Level 7	0.7839	0.9167	0.9710	0.9761	0.9586	0.9292	-	0.8193
Level 8	1.0027	1.0037	1.0030	1.0077	1.0180	1.0312	-	0.9876	Level 8	0.8070	0.9238	0.9750	0.9828	0.9689	0.9393	-	0.7523
Level 9	1.0016	1.0017	1.0016	1.0052	1.0113	1.0203	-	0.9927	Level 9	0.7918	0.9049	0.9739	0.9848	0.9713	0.9393	-	0.5592

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDH1 futures contracts from 2006 to 2013. As EDH1 was delivered in March 2011 and rolled over to a new 10-year contract, results in 2012 are also not available due to being at the beginning of a new period EDH1 contract and the lack of trading activity.

Table A.62: EDH2 median annual variance ratios with time to maturity

EDH2	2007	2008	2009	2010	2011	2012	2013	EDH2	2007	2008	2009	2010	2011	2012	2013
				Ask Variance								**Bid Variance**			
Level 1	1.6804	1.5981	1.5208	1.5468	1.5749	1.6436	1.6330	Level 1	1.7447	1.5996	1.5241	1.5404	1.5738	1.6259	1.6536
Level 2	1.4663	1.3492	1.2760	1.3013	1.3405	1.3810	1.5233	Level 2	1.7444	1.3544	1.2774	1.2981	1.3350	1.4160	1.3934
Level 3	1.2857	1.2112	1.1552	1.1766	1.2173	1.2545	1.3538	Level 3	1.5465	1.2153	1.1537	1.1703	1.2140	1.2595	1.2415
Level 4	1.1861	1.1355	1.0937	1.1110	1.1433	1.1737	1.3624	Level 4	1.2987	1.1360	1.0937	1.1046	1.1368	1.1645	1.1602
Level 5	1.1099	1.0908	1.0611	1.0728	1.0968	1.1162	1.3854	Level 5	1.1714	1.0930	1.0611	1.0669	1.0922	1.1146	1.1219
Level 6	1.0823	1.0644	1.0426	1.0491	1.0649	1.0776	1.4347	Level 6	1.0944	1.0687	1.0413	1.0448	1.0622	1.0762	1.1225
Level 7	1.0479	1.0563	1.0298	1.0331	1.0416	1.0514	1.4564	Level 7	1.0602	1.0582	1.0286	1.0307	1.0416	1.0529	1.1618
Level 8	1.0423	1.0540	1.0216	1.0221	1.0275	1.0327	1.5910	Level 8	1.0550	1.0629	1.0204	1.0228	1.0291	1.0380	1.2638
Level 9	1.0415	1.0629	1.0189	1.0175	1.0207	1.0257	1.6598	Level 9	1.0667	1.0774	1.0179	1.0201	1.0247	1.0336	1.4606
				Bid Ask Covariance								**Correlations**			
Level 1	1.5099	1.5282	1.5115	1.5392	1.5681	1.6285	1.5658	Level 1	0.5732	0.6252	0.6561	0.6492	0.6354	0.6150	0.6048
Level 2	1.2720	1.2766	1.2547	1.2864	1.3299	1.3891	1.3066	Level 2	0.5733	0.7384	0.7828	0.7703	0.7491	0.7062	0.7177
Level 3	1.1787	1.1323	1.1275	1.1549	1.2053	1.2544	1.1690	Level 3	0.6466	0.8228	0.8668	0.8545	0.8238	0.7939	0.8055
Level 4	1.0725	1.0606	1.0634	1.0870	1.1268	1.1602	1.0770	Level 4	0.7700	0.8803	0.9143	0.9053	0.8796	0.8588	0.8619
Level 5	1.0387	1.0254	1.0323	1.0496	1.0810	1.0991	1.0289	Level 5	0.8537	0.9149	0.9424	0.9373	0.9156	0.8972	0.8913
Level 6	1.0164	1.0102	1.0158	1.0288	1.0511	1.0624	1.0093	Level 6	0.9138	0.9357	0.9604	0.9571	0.9415	0.9292	0.8909
Level 7	1.0089	1.0035	1.0076	1.0170	1.0307	1.0378	0.9996	Level 7	0.9433	0.9450	0.9722	0.9702	0.9601	0.9498	0.8608
Level 8	1.0051	1.0012	1.0042	1.0096	1.0179	1.0208	0.9914	Level 8	0.9479	0.9409	0.9800	0.9777	0.9717	0.9634	0.7915
Level 9	1.0010	1.0006	1.0026	1.0060	1.0114	1.0131	0.9962	Level 9	0.9374	0.9282	0.9824	0.9803	0.9759	0.9675	0.6861

Notes: This table describes that the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDH2 futures contracts from 2007 to 2013. Years before 2007 are eliminated because of the lack of trading activity. As EDH2 was delivered in March 2012, it rolls over to a new 10-year period contract.

Table A.63: EDH3 median annual variance ratios with time to maturity

EDH3	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDH3	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
							Ask Variance													**Bid Variance**					
Level 1	1.5720	-	-	-	-	-	1.6313	1.5414	1.5301	1.5452	1.6289	1.6231	Level 1	1.5758	-	-	-	-	-	1.6571	1.5390	1.5273	1.5469	1.6093	1.6373
Level 2	1.4189	-	-	-	-	-	1.4101	1.3060	1.2837	1.3055	1.4164	1.3694	Level 2	1.2494	-	-	-	-	-	1.4164	1.2934	1.2816	1.3056	1.4000	1.4325
Level 3	1.2956	-	-	-	-	-	1.2784	1.1708	1.1563	1.1814	1.2810	1.2409	Level 3	1.1616	-	-	-	-	-	1.3005	1.1646	1.1534	1.1745	1.2601	1.3028
Level 4	1.1855	-	-	-	-	-	1.1803	1.1045	1.0904	1.1109	1.1858	1.1665	Level 4	1.1369	-	-	-	-	-	1.2050	1.0953	1.0870	1.1061	1.1649	1.2312
Level 5	1.1258	-	-	-	-	-	1.1313	1.0723	1.0584	1.0742	1.1182	1.1372	Level 5	1.1732	-	-	-	-	-	1.1640	1.0628	1.0542	1.0687	1.1077	1.2186
Level 6	1.1509	-	-	-	-	-	1.0953	1.0535	1.0390	1.0484	1.0768	1.1347	Level 6	1.1482	-	-	-	-	-	1.1280	1.0471	1.0359	1.0449	1.0717	1.3009
Level 7	1.2456	-	-	-	-	-	1.0857	1.0445	1.0263	1.0321	1.0486	1.1323	Level 7	1.1712	-	-	-	-	-	1.1022	1.0373	1.0256	1.0308	1.0464	1.4989
Level 8	1.4917	-	-	-	-	-	1.0930	1.0437	1.0181	1.0218	1.0316	1.1445	Level 8	1.3532	-	-	-	-	-	1.1163	1.0308	1.0193	1.0232	1.0346	1.9653
Level 9	2.1822	-	-	-	-	-	1.1281	1.0472	1.0144	1.0171	1.0252	1.1717	Level 9	1.8038	-	-	-	-	-	1.1530	1.0332	1.0178	1.0206	1.0315	3.1112
							Bid Ask Covariance													**Correlations**					
Level 1	1.4528	-	-	-	-	-	1.5401	1.5119	1.5218	1.5401	1.6007	1.5687	Level 1	0.6346	-	-	-	-	-	0.6035	0.6498	0.6548	0.6465	0.6214	0.6108
Level 2	1.1864	-	-	-	-	-	1.2697	1.2566	1.2698	1.2937	1.3851	1.3197	Level 2	0.8004	-	-	-	-	-	0.7060	0.7731	0.7803	0.7659	0.7143	0.6981
Level 3	1.1005	-	-	-	-	-	1.1240	1.1228	1.1366	1.1636	1.2442	1.1547	Level 3	0.8609	-	-	-	-	-	0.7689	0.8587	0.8670	0.8514	0.7936	0.7676
Level 4	1.0386	-	-	-	-	-	1.0524	1.0560	1.0699	1.0915	1.1533	1.0753	Level 4	0.8796	-	-	-	-	-	0.8299	0.9130	0.9200	0.9040	0.8584	0.8122
Level 5	1.0107	-	-	-	-	-	1.0233	1.0244	1.0368	1.0536	1.0941	1.0364	Level 5	0.8524	-	-	-	-	-	0.8591	0.9409	0.9486	0.9357	0.9028	0.8206
Level 6	0.9858	-	-	-	-	-	1.0078	1.0095	1.0197	1.0313	1.0555	1.0137	Level 6	0.8709	-	-	-	-	-	0.8865	0.9550	0.9653	0.9571	0.9331	0.7687
Level 7	0.9676	-	-	-	-	-	1.0020	1.0029	1.0104	1.0183	1.0324	1.0044	Level 7	0.8538	-	-	-	-	-	0.9073	0.9641	0.9751	0.9701	0.9557	0.6672
Level 8	0.8957	-	-	-	-	-	0.9996	1.0006	1.0056	1.0107	1.0184	0.9994	Level 8	0.7390	-	-	-	-	-	0.8958	0.9701	0.9811	0.9773	0.9665	0.5092
Level 9	0.8006	-	-	-	-	-	0.9991	1.0001	1.0031	1.0070	1.0118	0.9998	Level 9	0.5544	-	-	-	-	-	0.8673	0.9679	0.9825	0.9798	0.9694	0.3214

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDH3 futures contracts from 2002 to 2013. As EDH3 was delivered in March 2003 and rolled over to a new 10-year contract, results from 2003 to 2007 are also not available due to being at the beginning of a new period EDH3 contract and the lack of trading activity.

Table A.64: EDH4 median annual variance ratios with time to maturity

EDH4	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**EDH4**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
						Ask Variance												**Bid Varaince**					
Level 1	1.5423	-	-	-	-	1.7078	1.6520	1.5348	1.5207	1.6182	1.6678	Level 1	1.5535	-	-	-	-	1.7751	1.5985	1.5322	1.5173	1.6048	1.6618
Level 2	1.3184	-	-	-	-	1.5648	1.4314	1.2809	1.2754	1.3972	1.4684	Level 2	1.3259	-	-	-	-	1.6600	1.3694	1.2789	1.2721	1.3816	1.4521
Level 3	1.1870	-	-	-	-	1.4450	1.3113	1.1473	1.1535	1.2667	1.3174	Level 3	1.2041	-	-	-	-	1.4799	1.2132	1.1469	1.1473	1.2439	1.3005
Level 4	1.1049	-	-	-	-	1.3372	1.1988	1.0822	1.0915	1.1784	1.2033	Level 4	1.1224	-	-	-	-	1.4668	1.1360	1.0812	1.0860	1.1548	1.1836
Level 5	1.0665	-	-	-	-	1.2905	1.1443	1.0495	1.0580	1.1138	1.1297	Level 5	1.0820	-	-	-	-	1.3780	1.0856	1.0491	1.0547	1.1022	1.1160
Level 6	1.0536	-	-	-	-	1.2834	1.1336	1.0325	1.0399	1.0723	1.0806	Level 6	1.0653	-	-	-	-	1.3082	1.0646	1.0320	1.0368	1.0648	1.0723
Level 7	1.0531	-	-	-	-	1.3152	1.1394	1.0223	1.0265	1.0454	1.0471	Level 7	1.0608	-	-	-	-	1.3462	1.0546	1.0235	1.0256	1.0431	1.0453
Level 8	1.0572	-	-	-	-	1.5765	1.1515	1.0157	1.0182	1.0301	1.0300	Level 8	1.0714	-	-	-	-	1.5435	1.0516	1.0186	1.0193	1.0314	1.0306
Level 9	1.0861	-	-	-	-	2.2131	1.2182	1.0132	1.0144	1.0239	1.0218	Level 9	1.1027	-	-	-	-	2.0785	1.0671	1.0195	1.0178	1.0295	1.0264
						Bid Ask Covariance												**Correlations**					
Level 1	1.5118	-	-	-	-	1.5186	1.5262	1.5315	1.5128	1.5927	-	Level 1	0.6437	-	-	-	-	0.5634	0.6256	0.6527	0.6591	0.6231	0.6018
Level 2	1.2780	-	-	-	-	1.2669	1.2566	1.2695	1.2621	1.3554	-	Level 2	0.7542	-	-	-	-	0.6025	0.7303	0.7819	0.7861	0.7238	0.6886
Level 3	1.1486	-	-	-	-	1.1179	1.1140	1.1329	1.1357	1.2160	-	Level 3	0.8305	-	-	-	-	0.6758	0.8243	0.8719	0.8716	0.8039	0.7689
Level 4	1.0736	-	-	-	-	1.0480	1.0512	1.0635	1.0703	1.1314	-	Level 4	0.8909	-	-	-	-	0.6818	0.8803	0.9249	0.9208	0.8659	0.8448
Level 5	1.0312	-	-	-	-	1.0075	1.0217	1.0315	1.0372	1.0778	-	Level 5	0.9242	-	-	-	-	0.7257	0.9212	0.9532	0.9481	0.9073	0.8961
Level 6	1.0119	-	-	-	-	0.9970	1.0086	1.0148	1.0207	1.0440	-	Level 6	0.9387	-	-	-	-	0.7644	0.9393	0.9690	0.9645	0.9392	0.9326
Level 7	1.0042	-	-	-	-	1.0074	1.0027	1.0065	1.0115	1.0246	-	Level 7	0.9427	-	-	-	-	0.7432	0.9482	0.9771	0.9751	0.9587	0.9566
Level 8	0.9991	-	-	-	-	1.0037	1.0005	1.0028	1.0064	1.0138	-	Level 8	0.9334	-	-	-	-	0.6482	0.9510	0.9817	0.9810	0.9696	0.9703
Level 9	0.9993	-	-	-	-	1.0036	0.9995	1.0013	1.0039	1.0082	-	Level 9	0.9068	-	-	-	-	0.4816	0.9371	0.9809	0.9825	0.9714	0.9743

Notes: This table describes the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDH4 futures contracts from 2004 to 2013. As EDH4 was delivered in March 2004 and rolled over to a new 10-year contract, results from 2004 to 2007 are also not available due to being at the beginning of a new period EDH4 contract and the lack of trading activity.

Table A.65: EDH5 median annual variance ratios with time to maturity

EDH5	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**EDH5**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
						Ask Variance												**Bid Variance**					
Level 1	1.6762	1.5541	1.7083	-	-	1.7842	1.7418	1.5479	1.5142	1.5664	1.6072	Level 1	1.6219	1.5572	1.6811	-	-	1.9548	1.6631	1.5452	1.5135	1.5542	1.5996
Level 2	1.3285	1.3265	1.5628	-	-	1.4797	1.5739	1.2942	1.2567	1.3339	1.3783	Level 2	1.3285	1.3278	1.5537	-	-	1.5920	1.4663	1.2903	1.2558	1.3133	1.3695
Level 3	1.1676	1.1893	1.3734	-	-	1.2422	1.4387	1.1515	1.1369	1.2107	1.2529	Level 3	1.1775	1.1887	1.3903	-	-	1.4385	1.2928	1.1535	1.1344	1.1958	1.2358
Level 4	1.0933	1.1199	1.2910	-	-	1.1363	1.3998	1.0823	1.0786	1.1406	1.1734	Level 4	1.1327	1.1184	1.3005	-	-	1.3587	1.1980	1.0825	1.0745	1.1248	1.1529
Level 5	1.0618	1.0814	1.2184	-	-	1.0910	1.3752	1.0502	1.0495	1.0930	1.1191	Level 5	1.1038	1.0836	1.2236	-	-	1.2397	1.1360	1.0506	1.0459	1.0806	1.1018
Level 6	1.0545	1.0570	1.1579	-	-	1.0675	1.4232	1.0335	1.0335	1.0616	1.0770	Level 6	1.0895	1.0581	1.1494	-	-	1.1516	1.1056	1.0357	1.0312	1.0535	1.0674
Level 7	1.0527	1.0415	1.1130	-	-	1.0521	1.5211	1.0236	1.0226	1.0393	1.0469	Level 7	1.1247	1.0409	1.1122	-	-	1.1013	1.1033	1.0287	1.0224	1.0369	1.0440
Level 8	1.0637	1.0316	1.0819	-	-	1.0470	1.6610	1.0178	1.0156	1.0262	1.0298	Level 8	1.1934	1.0309	1.0884	-	-	1.0729	1.1020	1.0260	1.0172	1.0280	1.0312
Level 9	1.0804	1.0290	1.0723	-	-	1.0545	1.9614	1.0166	1.0126	1.0215	1.0231	Level 9	1.3501	1.0289	1.0815	-	-	1.0814	1.1242	1.0330	1.0167	1.0271	1.0274
						Bid Ask Covariance												**Correlations**					
Level 1	1.5003	1.5537	1.6911	-	-	1.7577	1.5951	1.5385	1.5040	1.5365	1.5930	Level 1	0.6166	0.6422	0.5949	-	-	0.5116	0.6013	0.6472	0.6607	0.6434	0.6252
Level 2	1.2083	1.3178	1.5529	-	-	1.3284	1.2794	1.2799	1.2431	1.2880	1.3552	Level 2	0.7527	0.7532	0.6437	-	-	0.6281	0.6820	0.7750	0.7963	0.7614	0.7302
Level 3	1.0944	1.1807	1.3687	-	-	1.1432	1.1429	1.1352	1.1185	1.1581	1.2191	Level 3	0.8493	0.8412	0.7193	-	-	0.6952	0.7735	0.8670	0.8815	0.8363	0.8092
Level 4	1.0368	1.1075	1.2794	-	-	1.0899	1.0653	1.0650	1.0586	1.0884	1.1372	Level 4	0.8835	0.8941	0.7689	-	-	0.7360	0.8347	0.9238	0.9307	0.8890	0.8674
Level 5	1.0137	1.0692	1.2074	-	-	1.0688	1.0314	1.0301	1.0293	1.0503	1.0849	Level 5	0.9068	0.9229	0.8173	-	-	0.8066	0.8803	0.9519	0.9561	0.9254	0.9076
Level 6	0.9973	1.0443	1.1264	-	-	1.0461	1.0143	1.0125	1.0148	1.0285	1.0513	Level 6	0.9182	0.9451	0.8700	-	-	0.8684	0.9045	0.9655	0.9697	0.9492	0.9369
Level 7	0.9954	1.0288	1.0879	-	-	1.0246	1.0077	1.0052	1.0076	1.0158	1.0282	Level 7	0.8895	0.9607	0.8991	-	-	0.9080	0.9063	0.9721	0.9781	0.9644	0.9578
Level 8	0.9924	1.0191	1.0588	-	-	1.0123	1.0028	1.0020	1.0039	1.0086	1.0152	Level 8	0.8381	0.9700	0.9188	-	-	0.9320	0.9075	0.9746	0.9831	0.9728	0.9698
Level 9	0.9890	1.0153	1.0474	-	-	1.0051	1.0007	1.0007	1.0021	1.0051	1.0088	Level 9	0.7409	0.9719	0.9246	-	-	0.9247	0.8895	0.9680	0.9836	0.9737	0.9733

Notes: This table describes the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDH5 futures contracts from 2003 to 2013. As EDH5 was delivered in March 2005 and rolled over to a new 10-year contract, results in 2006 and 2007 are also not available due to being at the beginning of a new period EDH5 contract and the lack of trading activity.

Table A.66: EDH6 median annual variance ratios with time to maturity

EDH6	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDH6	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
					Ask Variance											**Bid Varaince**					
Level 1	1.5194	1.5396	1.7172	-	2.3899	1.7987	1.5778	1.5200	1.5297	1.5311	Level 1	1.5165	1.5394	1.7104	-	1.5555	1.6396	1.5734	1.5201	1.5227	1.5268
Level 2	1.2846	1.3104	1.5145	-	3.0165	1.5129	1.3105	1.2665	1.2898	1.2918	Level 2	1.2837	1.3126	1.5038	-	1.3991	1.3004	1.2994	1.2677	1.2794	1.2852
Level 3	1.1644	1.1938	1.3534	-	2.4103	1.3073	1.1656	1.1392	1.1718	1.1790	Level 3	1.1598	1.1939	1.3525	-	1.2768	1.1802	1.1576	1.1381	1.1607	1.1652
Level 4	1.1011	1.1330	1.2466	-	1.8136	1.1493	1.0928	1.0776	1.1092	1.1207	Level 4	1.0967	1.1323	1.2413	-	1.1682	1.1087	1.0846	1.0790	1.0987	1.1056
Level 5	1.0702	1.0938	1.1710	-	1.5484	1.0805	1.0558	1.0480	1.0729	1.0816	Level 5	1.0670	1.0934	1.1702	-	1.1168	1.0574	1.0483	1.0496	1.0658	1.0695
Level 6	1.0509	1.0646	1.1285	-	1.4045	1.0527	1.0338	1.0322	1.0468	1.0523	Level 6	1.0468	1.0638	1.1227	-	1.0820	1.0375	1.0303	1.0345	1.0447	1.0460
Level 7	1.0361	1.0442	1.0909	-	1.3768	1.0417	1.0235	1.0230	1.0307	1.0327	Level 7	1.0327	1.0442	1.0912	-	1.0686	1.0285	1.0233	1.0264	1.0316	1.0308
Level 8	1.0260	1.0313	1.0688	-	1.4919	1.0312	1.0196	1.0163	1.0211	1.0208	Level 8	1.0243	1.0315	1.0640	-	1.0825	1.0349	1.0219	1.0243	1.0252	1.0221
Level 9	1.0235	1.0265	1.0594	-	1.8146	1.0429	1.0188	1.0144	1.0174	1.0160	Level 9	1.0219	1.0262	1.0603	-	1.1629	1.0587	1.0273	1.0295	1.0266	1.0201
					Bid Ask Covariance											**Correaltions**					
Level 1	1.5119	1.5384	1.7078	-	1.9325	1.4469	1.5677	1.5120	1.5057	1.5142	Level 1	0.6594	0.6496	0.5847	-	0.6429	0.6099	0.6356	0.6578	0.6567	0.6550
Level 2	1.2617	1.3082	1.5092	-	2.0591	1.1793	1.2887	1.2521	1.2545	1.2648	Level 2	0.7790	0.7618	0.6650	-	0.7147	0.7690	0.7696	0.7888	0.7816	0.7781
Level 3	1.1410	1.1897	1.3435	-	1.7600	1.1140	1.1390	1.1202	1.1271	1.1476	Level 3	0.8622	0.8376	0.7394	-	0.7832	0.8473	0.8639	0.8787	0.8616	0.8582
Level 4	1.0745	1.1275	1.2275	-	1.4344	1.0491	1.0666	1.0545	1.0636	1.0875	Level 4	0.9118	0.8832	0.8056	-	0.8560	0.9019	0.9220	0.9268	0.9102	0.9045
Level 5	1.0404	1.0864	1.1542	-	1.2619	1.0244	1.0312	1.0236	1.0313	1.0494	Level 5	0.9372	0.9146	0.8546	-	0.8954	0.9457	0.9540	0.9528	0.9382	0.9350
Level 6	1.0215	1.0569	1.1058	-	1.1624	1.0155	1.0137	1.0095	1.0152	1.0290	Level 6	0.9553	0.9400	0.8907	-	0.9242	0.9638	0.9706	0.9667	0.9572	0.9560
Level 7	1.0120	1.0366	1.0693	-	1.0999	1.0065	1.0056	1.0036	1.0077	1.0161	Level 7	0.9683	0.9577	0.9165	-	0.9358	0.9723	0.9772	0.9743	0.9694	0.9701
Level 8	1.0072	1.0241	1.0473	-	1.0681	1.0022	1.0024	1.0014	1.0038	1.0089	Level 8	0.9762	0.9694	0.9398	-	0.9238	0.9663	0.9786	0.9762	0.9755	0.9784
Level 9	1.0052	1.0183	1.0371	-	0.9703	1.0016	1.0009	1.0005	1.0021	1.0052	Level 9	0.9785	0.9745	0.9432	-	0.8599	0.9445	0.9734	0.9713	0.9741	0.9803

Notes: This table describes the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDH6 futures contracts from 2004 to 2013. As EDH6 was delivered in March 2006 and rolled over to a new 10-year contract, results in 2007 are also not available due to being at the beginning of a new period EDH6 contract and the lack of trading activity.

Table A.67: EDH7 median annual variance ratios with time to maturity

EDH7	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDH7	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
					Ask Variance											**Bid Variance**					
Level 1	1.7079	1.5359	1.5528	1.6369	-	1.7881	1.6785	1.5632	1.5169	1.5203	Level 1	2.3435	1.5350	1.5505	1.6267	-	1.6608	1.6749	1.5691	1.5146	1.5117
Level 2	1.8828	1.2857	1.3265	1.4538	-	1.3820	1.4141	1.3098	1.2703	1.2785	Level 2	2.4891	1.2898	1.3256	1.4391	-	1.3200	1.4410	1.3039	1.2635	1.2690
Level 3	1.5051	1.1681	1.2100	1.3200	-	1.2093	1.2365	1.1659	1.1547	1.1594	Level 3	2.6172	1.1678	1.2082	1.3200	-	1.2127	1.2647	1.1751	1.1466	1.1512
Level 4	1.2784	1.1059	1.1429	1.2188	-	1.1009	1.1538	1.1025	1.0962	1.1020	Level 4	3.0292	1.1063	1.1415	1.2200	-	1.1040	1.1526	1.1195	1.0903	1.0923
Level 5	1.1784	1.0741	1.1028	1.1517	-	1.0487	1.0958	1.0705	1.0625	1.0688	Level 5	2.5600	1.0719	1.1024	1.1432	-	1.0535	1.0910	1.0933	1.0586	1.0587
Level 6	1.1392	1.0512	1.0728	1.1046	-	1.0257	1.0659	1.0477	1.0434	1.0444	Level 6	1.9447	1.0499	1.0714	1.1001	-	1.0344	1.0616	1.0859	1.0424	1.0387
Level 7	1.1298	1.0349	1.0497	1.0851	-	1.0175	1.0478	1.0344	1.0305	1.0275	Level 7	1.5249	1.0347	1.0503	1.0731	-	1.0280	1.0527	1.0808	1.0324	1.0260
Level 8	1.1128	1.0262	1.0364	1.0629	-	1.0153	1.0413	1.0269	1.0234	1.0176	Level 8	1.3088	1.0256	1.0358	1.0538	-	1.0327	1.0545	1.0937	1.0285	1.0188
Level 9	1.1267	1.0231	1.0314	1.0599	-	1.0208	1.0387	1.0247	1.0231	1.0134	Level 9	1.2385	1.0223	1.0305	1.0486	-	1.0570	1.0975	1.1688	1.0340	1.0170
					Bid Ask Covariance											**Correlations**					
Level 1	1.4850	1.5282	1.5489	1.6317	-	1.6715	1.6287	1.5333	1.5013	1.5058	Level 1	0.4267	0.6514	0.6450	0.6147	-	0.6021	0.5971	0.6373	0.6602	0.6615
Level 2	1.2683	1.2742	1.3217	1.4391	-	1.2044	1.3627	1.2645	1.2430	1.2544	Level 2	0.4018	0.7753	0.7544	0.6949	-	0.7576	0.6940	0.7670	0.7915	0.7880
Level 3	1.0814	1.1512	1.2021	1.3010	-	1.1365	1.1790	1.1218	1.1194	1.1288	Level 3	0.3821	0.8563	0.8277	0.7576	-	0.8246	0.7907	0.8510	0.8722	0.8686
Level 4	1.0253	1.0853	1.1344	1.2021	-	1.0580	1.0972	1.0550	1.0596	1.0697	Level 4	0.3301	0.9040	0.8761	0.8197	-	0.9058	0.8676	0.8933	0.9172	0.9155
Level 5	1.0057	1.0494	1.0931	1.1411	-	1.0305	1.0510	1.0206	1.0276	1.0379	Level 5	0.3906	0.9330	0.9071	0.8748	-	0.9492	0.9166	0.9146	0.9447	0.9446
Level 6	1.0061	1.0291	1.0609	1.0883	-	1.0120	1.0231	1.0076	1.0123	1.0205	Level 6	0.5142	0.9525	0.9334	0.9090	-	0.9667	0.9420	0.9209	0.9593	0.9628
Level 7	0.9947	1.0165	1.0397	1.0618	-	1.0045	1.0120	1.0003	1.0055	1.0108	Level 7	0.6558	0.9664	0.9521	0.9319	-	0.9727	0.9500	0.9252	0.9686	0.9746
Level 8	0.9961	1.0098	1.0258	1.0410	-	1.0010	1.0057	0.9974	1.0025	1.0055	Level 8	0.7641	0.9750	0.9655	0.9489	-	0.9683	0.9483	0.9143	0.9723	0.9815
Level 9	1.0021	1.0069	1.0191	1.0304	-	1.0003	1.0033	0.9984	1.0012	1.0032	Level 9	0.8074	0.9782	0.9704	0.9537	-	0.9461	0.9111	0.8556	0.9671	0.9833

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDH7 futures contracts from 2004 to 2013. As EDH7 was delivered in March 2007 and rolled over to a new 10-year contract, results in 2008 are also not available due to being at the beginning of a new period EDH7 contract and the lack of trading activity.

Table A.68: EDH9 median annual variance ratios with time to maturity

EDH9	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**EDH9**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
				Ask Variance										**Bid Variance**					
Level 1	1.4466	1.5701	1.5425	1.5303	1.5823	-	1.9787	1.5680	1.5191	Level 1	1.5136	1.5727	1.5401	1.5271	1.5844	-	2.0732	1.6206	1.5344
Level 2	1.3824	1.3120	1.2831	1.2766	1.3386	-	1.5754	1.3125	1.2779	Level 2	1.3100	1.3133	1.2859	1.2755	1.3396	-	1.6350	1.3897	1.2872
Level 3	1.6878	1.1773	1.1541	1.1474	1.1869	-	1.2468	1.1871	1.1522	Level 3	1.1740	1.1784	1.1541	1.1471	1.1896	-	1.4042	1.2460	1.1599
Level 4	1.8909	1.1086	1.0910	1.0822	1.1060	-	1.1105	1.1182	1.0910	Level 4	1.1491	1.1116	1.0914	1.0818	1.1058	-	1.2313	1.1953	1.0933
Level 5	1.5677	1.0728	1.0589	1.0489	1.0652	-	1.0543	1.0964	1.0610	Level 5	1.1258	1.0721	1.0596	1.0491	1.0675	-	1.1382	1.2068	1.0623
Level 6	1.3937	1.0507	1.0409	1.0314	1.0443	-	1.0255	1.0860	1.0404	Level 6	1.0793	1.0515	1.0411	1.0314	1.0447	-	1.0810	1.2146	1.0444
Level 7	1.3481	1.0364	1.0280	1.0221	1.0303	-	1.0139	1.0698	1.0271	Level 7	1.0465	1.0360	1.0281	1.0218	1.0312	-	1.0572	1.2157	1.0331
Level 8	1.3007	1.0277	1.0194	1.0165	1.0226	-	1.0107	1.0483	1.0207	Level 8	1.0307	1.0284	1.0197	1.0165	1.0242	-	1.0615	1.2505	1.0274
Level 9	1.5228	1.0266	1.0163	1.0144	1.0208	-	1.0237	1.0471	1.0159	Level 9	1.0354	1.0284	1.0166	1.0144	1.0214	-	1.2040	1.2853	1.0283
				Bid Ask Covariance										**Correlatinos**					
Level 1	1.4629	1.5517	1.5339	1.5264	1.5811	-	2.0274	1.5213	1.5124	Level 1	0.6607	0.6359	0.6493	0.6548	0.6312	-	0.4824	0.6171	0.6517
Level 2	1.2094	1.2900	1.2767	1.2745	1.3353	-	1.6258	1.2399	1.2647	Level 2	0.7634	0.7615	0.7776	0.7840	0.7465	-	0.6116	0.7196	0.7769
Level 3	1.0475	1.1438	1.1429	1.1444	1.1838	-	1.2672	1.1115	1.1286	Level 3	0.8518	0.8486	0.8665	0.8717	0.8406	-	0.7122	0.8026	0.8621
Level 4	1.0055	1.0769	1.0793	1.0772	1.0997	-	1.1196	1.0585	1.0616	Level 4	0.8702	0.8996	0.9163	0.9244	0.9043	-	0.8121	0.8366	0.9146
Level 5	1.0067	1.0397	1.0458	1.0429	1.0583	-	1.0628	1.0321	1.0301	Level 5	0.8882	0.9328	0.9438	0.9532	0.9368	-	0.8786	0.8286	0.9414
Level 6	0.9975	1.0207	1.0277	1.0250	1.0350	-	1.0310	1.0164	1.0133	Level 6	0.9266	0.9511	0.9606	0.9695	0.9572	-	0.9251	0.8233	0.9575
Level 7	0.9941	1.0104	1.0164	1.0155	1.0216	-	1.0176	1.0057	1.0054	Level 7	0.9556	0.9653	0.9726	0.9786	0.9698	-	0.9459	0.8226	0.9680
Level 8	1.0021	1.0054	1.0097	1.0100	1.0143	-	1.0134	1.0022	1.0016	Level 8	0.9702	0.9724	0.9807	0.9838	0.9764	-	0.9421	0.7997	0.9733
Level 9	1.0011	1.0029	1.0063	1.0072	1.0109	-	1.0044	1.0005	0.9998	Level 9	0.9658	0.9724	0.9837	0.9859	0.9790	-	0.8306	0.7780	0.9725

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDH9 futures contracts from 2005 to 2013. As EDH9 was delivered in March 2009 and rolled over to a new 10-year contract, results in 2010 are also not available due to being at the beginning of a new period EDH9 contract and the lack of trading activity.

Table A.69: EDM0 median annual variance ratios with time to maturity

EDM0	2006	2007	2008	2009	2010	2011	2012	2013	EDM0	2006	2007	2008	2009	2010	2011	2012	2013
				Ask Variance									**Bid Variance**				
Level 1	1.7080	1.5864	1.5246	1.5296	1.6460	-	1.7190	1.5880	Level 1	1.6998	1.5905	1.5233	1.5316	1.6303	-	1.7160	1.6200
Level 2	1.4207	1.3486	1.2750	1.2861	1.4223	-	1.4672	1.3390	Level 2	1.4380	1.3467	1.2731	1.2872	1.3974	-	1.4038	1.3749
Level 3	1.2618	1.2058	1.1394	1.1634	1.2845	-	1.3486	1.2045	Level 3	1.2809	1.2059	1.1388	1.1657	1.2600	-	1.2807	1.2395
Level 4	1.1372	1.1211	1.0739	1.1044	1.1847	-	1.2896	1.1323	Level 4	1.1782	1.1216	1.0737	1.1044	1.1745	-	1.1963	1.1870
Level 5	1.0865	1.0736	1.0408	1.0690	1.1256	-	1.3254	1.0951	Level 5	1.1145	1.0749	1.0413	1.0687	1.1190	-	1.2048	1.1493
Level 6	1.0572	1.0515	1.0253	1.0460	1.0835	-	1.2786	1.0809	Level 6	1.0883	1.0527	1.0254	1.0469	1.0804	-	1.1749	1.1351
Level 7	1.0498	1.0371	1.0174	1.0313	1.0544	-	1.2381	1.0754	Level 7	1.0774	1.0389	1.0180	1.0324	1.0554	-	1.1361	1.1575
Level 8	1.0499	1.0301	1.0134	1.0222	1.0375	-	1.2043	1.0669	Level 8	1.1066	1.0336	1.0138	1.0229	1.0428	-	1.1073	1.1681
Level 9	1.0542	1.0315	1.0124	1.0189	1.0315	-	1.2185	1.0648	Level 9	1.1095	1.0354	1.0128	1.0194	1.0376	-	1.1774	1.2727
				Bid Ask Covariance									**Correlatinos**				
Level 1	1.6845	1.5735	1.5218	1.5281	1.6237	-	1.6454	1.5313	Level 1	0.5883	0.6287	0.6565	0.6529	0.6134	-	0.5827	0.6173
Level 2	1.3587	1.3152	1.2676	1.2810	1.3908	-	1.2884	1.2607	Level 2	0.6954	0.7426	0.7855	0.7769	0.7156	-	0.7124	0.7273
Level 3	1.1807	1.1722	1.1306	1.1568	1.2423	-	1.1290	1.1195	Level 3	0.7807	0.8292	0.8781	0.8579	0.7936	-	0.7808	0.8068
Level 4	1.0731	1.0840	1.0643	1.0940	1.1534	-	1.0582	1.0467	Level 4	0.8487	0.8916	0.9313	0.9054	0.8514	-	0.8359	0.8425
Level 5	1.0303	1.0385	1.0300	1.0580	1.0992	-	1.0433	1.0173	Level 5	0.8972	0.9303	0.9604	0.9357	0.8937	-	0.8300	0.8701
Level 6	1.0141	1.0182	1.0151	1.0360	1.0593	-	1.0518	1.0051	Level 6	0.9189	0.9499	0.9752	0.9552	0.9256	-	0.8511	0.8810
Level 7	1.0064	1.0087	1.0078	1.0223	1.0353	-	1.0266	0.9983	Level 7	0.9282	0.9626	0.9823	0.9687	0.9475	-	0.8802	0.8639
Level 8	1.0021	1.0043	1.0042	1.0143	1.0205	-	1.0120	0.9980	Level 8	0.9037	0.9675	0.9864	0.9776	0.9590	-	0.9031	0.8561
Level 9	1.0009	1.0021	1.0025	1.0101	1.0136	-	1.0016	0.9975	Level 9	0.9013	0.9658	0.9874	0.9809	0.9638	-	0.8494	0.7857

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM0 futures contracts from 2006 to 2013. As EDM0 was delivered in June 2010 and rolled over to a new 10-year contract, results in 2011 are also not available due to being at the beginning of a new period EDM0 contract and the lack of trading activity.

Table A.70: EDM1 median annual variance ratios with time to maturity

EDM1	2006	2007	2008	2009	2010	2011	2012	2013	EDM1	2006	2007	2008	2009	2010	2011	2012	2013
					Ask Variance									**Bid Variance**			
Level 1	1.4842	1.6763	1.5494	1.5152	1.5631	1.7074	-	1.7384	Level 1	1.5723	1.7119	1.5625	1.5131	1.5635	1.6766	-	1.7685
Level 2	1.4168	1.4676	1.3076	1.2674	1.3293	1.4714	-	1.5636	Level 2	1.5358	1.4890	1.3109	1.2687	1.3309	1.4706	-	1.6090
Level 3	1.2335	1.3422	1.1819	1.1483	1.2088	1.3345	-	1.4836	Level 3	1.4965	1.3318	1.1722	1.1487	1.2042	1.3265	-	1.4601
Level 4	1.1251	1.2166	1.1036	1.0864	1.1392	1.2525	-	1.5137	Level 4	1.5923	1.2277	1.1083	1.0866	1.1330	1.2339	-	1.4472
Level 5	1.0664	1.1435	1.0637	1.0549	1.0936	1.1686	-	1.4991	Level 5	1.6513	1.1595	1.0693	1.0551	1.0881	1.1530	-	1.4042
Level 6	1.0355	1.1002	1.0416	1.0368	1.0628	1.1187	-	1.5001	Level 6	1.4037	1.1172	1.0479	1.0360	1.0599	1.1024	-	1.4591
Level 7	1.0217	1.0704	1.0302	1.0242	1.0420	1.0710	-	1.6362	Level 7	1.2772	1.0863	1.0377	1.0242	1.0411	1.0693	-	1.6763
Level 8	1.0165	1.0567	1.0252	1.0176	1.0286	1.0485	-	1.7507	Level 8	1.1906	1.0815	1.0348	1.0172	1.0305	1.0519	-	2.0538
Level 9	1.0198	1.0606	1.0271	1.0150	1.0232	1.0394	-	1.7547	Level 9	1.1368	1.1017	1.0420	1.0147	1.0268	1.0452	-	2.8666
					Bid Ask Covariance									**Correlatinos**			
Level 1	1.4921	1.6203	1.5252	1.5088	1.5558	1.6724	-	1.5280	Level 1	0.6360	0.5841	0.6400	0.6609	0.6396	0.5964	-	0.5655
Level 2	1.3029	1.3580	1.2702	1.2599	1.3227	1.4599	-	1.2214	Level 2	0.6511	0.6716	0.7628	0.7882	0.7514	0.6800	-	0.6215
Level 3	1.1396	1.1740	1.1332	1.1345	1.1963	1.3118	-	1.0986	Level 3	0.6682	0.7509	0.8531	0.8705	0.8304	0.7539	-	0.6849
Level 4	1.1339	1.0842	1.0658	1.0713	1.1209	1.2115	-	1.0095	Level 4	0.6280	0.8146	0.9022	0.9203	0.8826	0.8104	-	0.6910
Level 5	1.0927	1.0404	1.0294	1.0384	1.0768	1.1307	-	0.9756	Level 5	0.6056	0.8624	0.9352	0.9478	0.9190	0.8673	-	0.7121
Level 6	1.0428	1.0194	1.0137	1.0205	1.0476	1.0842	-	0.9519	Level 6	0.7124	0.8951	0.9543	0.9653	0.9435	0.9071	-	0.6854
Level 7	1.0135	1.0073	1.0058	1.0114	1.0279	1.0476	-	0.9522	Level 7	0.7830	0.9205	0.9637	0.9763	0.9605	0.9352	-	0.5966
Level 8	1.0023	1.0035	1.0029	1.0065	1.0165	1.0276	-	0.9663	Level 8	0.8399	0.9247	0.9663	0.9831	0.9704	0.9506	-	0.4869
Level 9	1.0005	1.0017	1.0014	1.0044	1.0105	1.0179	-	0.9896	Level 9	0.8796	0.9077	0.9597	0.9855	0.9739	0.9567	-	0.3488

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM1 futures contracts from 2006 to 2013. As EDM1 was delivered in June 2011 and rolled over to a new 10-year contract, results in 2012 are also not available due to being at the beginning of a new period EDM1 contract and the lack of trading activity.

Table A.71: EDM2 Median Annual Results

EDM2	2007	2008	2009	2010	2011	2012	2013	EDM2	2007	2008	2009	2010	2011	2012	2013
				Ask Variance								**Bid Variance**			
Level 1	1.7106	1.6212	1.5267	1.5379	1.5588	1.6417	1.5879	Level 1	1.7928	1.6233	1.5235	1.5385	1.5553	1.6315	1.5950
Level 2	1.5102	1.3829	1.2866	1.2963	1.3319	1.4035	1.3387	Level 2	1.4691	1.4051	1.2781	1.2910	1.3293	1.3898	1.3590
Level 3	1.4677	1.2460	1.1641	1.1710	1.2028	1.2709	1.1987	Level 3	1.2888	1.2650	1.1591	1.1645	1.1978	1.2674	1.2035
Level 4	1.5781	1.1583	1.1028	1.1035	1.1316	1.1820	1.1392	Level 4	1.1761	1.1716	1.0995	1.0995	1.1232	1.1824	1.1412
Level 5	1.4779	1.1037	1.0682	1.0693	1.0875	1.1213	1.1195	Level 5	1.1229	1.1203	1.0683	1.0630	1.0815	1.1162	1.1061
Level 6	1.3658	1.0755	1.0469	1.0461	1.0572	1.0768	1.1304	Level 6	1.1272	1.0933	1.0464	1.0416	1.0543	1.0737	1.1052
Level 7	1.3185	1.0612	1.0351	1.0304	1.0382	1.0497	1.1551	Level 7	1.1270	1.0859	1.0327	1.0288	1.0373	1.0509	1.1572
Level 8	1.2854	1.0637	1.0266	1.0203	1.0252	1.0344	1.1937	Level 8	1.2057	1.0829	1.0249	1.0211	1.0261	1.0371	1.2571
Level 9	1.1900	1.0878	1.0247	1.0163	1.0190	1.0265	1.2148	Level 9	1.2212	1.1121	1.0236	1.0187	1.0218	1.0325	1.5554
				Bid Ask Covariance								**Correlatinos**			
Level 1	1.8262	1.5460	1.5085	1.5283	1.5525	1.6286	1.5482	Level 1	0.5578	0.6160	0.6564	0.6500	0.6430	0.6129	0.6270
Level 2	1.4514	1.2710	1.2549	1.2771	1.3194	1.3923	1.3032	Level 2	0.6807	0.7117	0.7824	0.7746	0.7523	0.7195	0.7358
Level 3	1.2535	1.1268	1.1222	1.1477	1.1918	1.2501	1.1454	Level 3	0.7759	0.7905	0.8628	0.8587	0.8349	0.7890	0.8309
Level 4	1.1224	1.0548	1.0601	1.0806	1.1144	1.1637	1.0630	Level 4	0.8503	0.8535	0.9095	0.9095	0.8903	0.8457	0.8763
Level 5	1.0603	1.0231	1.0280	1.0449	1.0706	1.1043	1.0232	Level 5	0.8905	0.8926	0.9361	0.9407	0.9246	0.8959	0.9041
Level 6	1.0284	1.0094	1.0125	1.0258	1.0434	1.0623	1.0063	Level 6	0.8872	0.9147	0.9557	0.9601	0.9485	0.9313	0.9048
Level 7	1.0125	1.0026	1.0055	1.0144	1.0264	1.0371	0.9992	Level 7	0.8874	0.9209	0.9683	0.9721	0.9641	0.9516	0.8642
Level 8	1.0027	0.9997	1.0035	1.0080	1.0157	1.0224	0.9949	Level 8	0.8294	0.9234	0.9757	0.9793	0.9746	0.9642	0.7955
Level 9	1.0015	0.9996	1.0025	1.0048	1.0102	1.0138	0.9935	Level 9	0.8189	0.8992	0.9769	0.9816	0.9786	0.9686	0.6429

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM2 futures contracts from 2007 to 2013. As EDM2 was delivered in June 2012, it rolls over to a new 10-year period contract.

Table A.72: EDM3 median annual variance ratios with time to maturity

EDM3	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDM3	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	20
								Ask Variance													**Bid Variance**					
Level 1	1.6454	-	-	-	-	-	1.6309	1.5507	1.5335	1.5348	1.6292	1.6270	Level 1	1.5911	-	-	-	-	-	1.6711	1.5408	1.5330	1.5328	1.6139	1.6
Level 2	1.4405	-	-	-	-	-	1.4053	1.3057	1.2850	1.2919	1.4221	1.4012	Level 2	1.4035	-	-	-	-	-	1.5067	1.3016	1.2797	1.2871	1.3953	1.4
Level 3	1.2697	-	-	-	-	-	1.3028	1.1762	1.1552	1.1704	1.2820	1.2902	Level 3	1.2168	-	-	-	-	-	1.3456	1.1676	1.1523	1.1654	1.2557	1.2
Level 4	1.1614	-	-	-	-	-	1.2412	1.1063	1.0888	1.1035	1.1823	1.2033	Level 4	1.1245	-	-	-	-	-	1.2838	1.0996	1.0849	1.0983	1.1624	1.1
Level 5	1.1256	-	-	-	-	-	1.1859	1.0693	1.0564	1.0675	1.1202	1.1586	Level 5	1.1123	-	-	-	-	-	1.2079	1.0640	1.0529	1.0634	1.1040	1.1
Level 6	1.1178	-	-	-	-	-	1.1672	1.0532	1.0367	1.0450	1.0754	1.1226	Level 6	1.1234	-	-	-	-	-	1.1981	1.0474	1.0348	1.0418	1.0673	1.0
Level 7	1.1806	-	-	-	-	-	1.1673	1.0419	1.0244	1.0299	1.0470	1.0960	Level 7	1.1667	-	-	-	-	-	1.2055	1.0391	1.0241	1.0286	1.0435	1.1
Level 8	1.5377	-	-	-	-	-	1.2141	1.0427	1.0170	1.0205	1.0298	1.0833	Level 8	1.3108	-	-	-	-	-	1.2350	1.0357	1.0185	1.0208	1.0321	1.1
Level 9	2.1404	-	-	-	-	-	1.3479	1.0503	1.0135	1.0161	1.0234	1.0773	Level 9	1.7377	-	-	-	-	-	1.3821	1.0420	1.0175	1.0188	1.0282	1.1
								Bid Ask Covariance													**Correlatinos**				
Level 1	1.5577	-	-	-	-	-	1.5185	1.5155	1.5252	1.5293	1.6062	-	Level 1	0.6285	-	-	-	-	-	0.5984	0.6490	0.6523	0.6524	0.6196	0.6
Level 2	1.2273	-	-	-	-	-	1.2489	1.2600	1.2689	1.2799	1.3863	-	Level 2	0.7125	-	-	-	-	-	0.6637	0.7683	0.7814	0.7770	0.7167	0.7
Level 3	1.1386	-	-	-	-	-	1.1093	1.1238	1.1350	1.1527	1.2452	-	Level 3	0.8218	-	-	-	-	-	0.7432	0.8564	0.8679	0.8581	0.7964	0.7
Level 4	1.0693	-	-	-	-	-	1.0449	1.0560	1.0684	1.0817	1.1461	-	Level 4	0.8893	-	-	-	-	-	0.7790	0.9094	0.9218	0.9105	0.8603	0.8
Level 5	1.0181	-	-	-	-	-	1.0142	1.0247	1.0357	1.0456	1.0876	-	Level 5	0.8990	-	-	-	-	-	0.8279	0.9398	0.9498	0.9404	0.9058	0.8
Level 6	1.0038	-	-	-	-	-	1.0031	1.0099	1.0188	1.0264	1.0520	-	Level 6	0.8901	-	-	-	-	-	0.8347	0.9547	0.9664	0.9599	0.9369	0.9
Level 7	0.9944	-	-	-	-	-	0.9982	1.0027	1.0096	1.0151	1.0295	-	Level 7	0.8571	-	-	-	-	-	0.8295	0.9624	0.9764	0.9722	0.9583	0.9
Level 8	0.9564	-	-	-	-	-	0.9966	0.9997	1.0048	1.0088	1.0168	-	Level 8	0.7629	-	-	-	-	-	0.8098	0.9655	0.9818	0.9796	0.9689	0.9
Level 9	0.9020	-	-	-	-	-	0.9991	0.9997	1.0025	1.0056	1.0105	-	Level 9	0.5755	-	-	-	-	-	0.7236	0.9597	0.9828	0.9815	0.9726	0.8

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM3 futures contracts from 2002 to 2013. As EDM3 was delivered in June 2003 and rolled over to a new 10-year contract, results from 2003 to 2007 are also not available due to being at the beginning of a new period EDM3 contract and the lack of trading activity.

Table A.73: EDM4 median annual variance ratios with time to maturity

EDM4	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDM4	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
						Ask Variance												**Bid Variance**					
Level 1	1.5548	1.6225	-	-	-	1.6849	1.6886	1.5352	1.5156	1.6017	1.6496	Level 1	1.5846	1.6021	-	-	-	1.6641	1.6168	1.5403	1.5164	1.5983	1.6517
Level 2	1.3010	1.3657	-	-	-	1.4901	1.5148	1.2847	1.2674	1.3848	1.4433	Level 2	1.3075	1.3460	-	-	-	1.4951	1.3892	1.2848	1.2638	1.3682	1.4234
Level 3	1.1693	1.2355	-	-	-	1.4569	1.4279	1.1499	1.1472	1.2547	1.3085	Level 3	1.1783	1.2246	-	-	-	1.3576	1.2387	1.1492	1.1432	1.2286	1.2850
Level 4	1.0981	1.1433	-	-	-	1.4081	1.3706	1.0834	1.0856	1.1623	1.2076	Level 4	1.1040	1.1425	-	-	-	1.3528	1.1564	1.0799	1.0813	1.1447	1.1886
Level 5	1.0630	1.0947	-	-	-	1.4323	1.3370	1.0502	1.0540	1.1061	1.1320	Level 5	1.0651	1.0959	-	-	-	1.3598	1.1083	1.0487	1.0500	1.0926	1.1233
Level 6	1.0458	1.0661	-	-	-	1.5354	1.3400	1.0335	1.0363	1.0684	1.0805	Level 6	1.0482	1.0638	-	-	-	1.4166	1.0926	1.0319	1.0338	1.0600	1.0745
Level 7	1.0397	1.0529	-	-	-	1.6546	1.3477	1.0236	1.0245	1.0437	1.0477	Level 7	1.0430	1.0481	-	-	-	1.5769	1.0773	1.0233	1.0235	1.0407	1.0472
Level 8	1.0454	1.0457	-	-	-	2.0067	1.4448	1.0173	1.0167	1.0287	1.0298	Level 8	1.0474	1.0392	-	-	-	1.9653	1.0756	1.0201	1.0177	1.0290	1.0321
Level 9	1.0603	1.0437	-	-	-	3.4134	1.6001	1.0146	1.0135	1.0232	1.0233	Level 9	1.0624	1.0400	-	-	-	3.2541	1.0996	1.0218	1.0163	1.0269	1.0269
						Bid Ask Covariance												**Correlatinos**					
Level 1	1.5623	1.5982	-	-	-	1.5077	1.5066	1.5310	1.5090	1.5784	-	Level 1	0.6311	0.6242	-	-	-	0.6009	0.6185	0.6492	0.6595	0.6257	0.6054
Level 2	1.2925	1.3461	-	-	-	1.2409	1.2507	1.2706	1.2560	1.3423	-	Level 2	0.7648	0.7429	-	-	-	0.6688	0.7199	0.7784	0.7913	0.7309	0.7025
Level 3	1.1482	1.2099	-	-	-	1.1434	1.1164	1.1335	1.1306	1.2031	-	Level 3	0.8487	0.8166	-	-	-	0.7366	0.8073	0.8702	0.8747	0.8139	0.7782
Level 4	1.0726	1.1304	-	-	-	1.0759	1.0523	1.0639	1.0658	1.1216	-	Level 4	0.9058	0.8753	-	-	-	0.7392	0.8648	0.9260	0.9248	0.8736	0.8413
Level 5	1.0327	1.0806	-	-	-	1.0481	1.0213	1.0303	1.0341	1.0690	-	Level 5	0.9389	0.9125	-	-	-	0.7354	0.9023	0.9536	0.9524	0.9152	0.8902
Level 6	1.0146	1.0506	-	-	-	1.0480	1.0094	1.0128	1.0183	1.0387	-	Level 6	0.9540	0.9400	-	-	-	0.7059	0.9153	0.9691	0.9673	0.9434	0.9306
Level 7	1.0063	1.0333	-	-	-	1.0580	1.0032	1.0055	1.0099	1.0218	-	Level 7	0.9588	0.9541	-	-	-	0.6342	0.9283	0.9773	0.9770	0.9609	0.9549
Level 8	1.0019	1.0236	-	-	-	1.0938	1.0010	1.0021	1.0055	1.0122	-	Level 8	0.9547	0.9623	-	-	-	0.5088	0.9297	0.9803	0.9826	0.9718	0.9689
Level 9	1.0027	1.0214	-	-	-	1.2489	1.0003	1.0010	1.0032	1.0074	-	Level 9	0.9413	0.9615	-	-	-	0.3073	0.9094	0.9787	0.9840	0.9738	0.9738

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM4 futures contracts from 2003 to 2013. As EDM4 was delivered in June 2004 and rolled over to a new 10-year contract, results from 2005 to 2007 are also not available due to being at the beginning of a new period EDM4 contract and the lack of trading activity.

Table A.74: EDM5 median annual variance ratios with time to maturity

EDM5	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDM5	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
					Ask Variance											**Bid Variance**					
Level 1	1.5309	1.5974	-	-	1.5370	1.7342	1.5513	1.5089	1.5507	1.5731	Level 1	1.5352	1.5969	-	-	1.9325	1.6950	1.5454	1.5067	1.5444	1.5702
Level 2	1.2920	1.3827	-	-	1.2628	1.4796	1.2934	1.2523	1.3156	1.3470	Level 2	1.2952	1.3737	-	-	1.4418	1.4898	1.2850	1.2493	1.3020	1.3349
Level 3	1.1774	1.2596	-	-	1.1105	1.3536	1.1564	1.1319	1.1972	1.2282	Level 3	1.1800	1.2569	-	-	1.1867	1.3167	1.1497	1.1287	1.1790	1.2116
Level 4	1.1118	1.1784	-	-	1.0461	1.2458	1.0853	1.0751	1.1282	1.1579	Level 4	1.1109	1.1760	-	-	1.0936	1.2142	1.0842	1.0717	1.1116	1.1396
Level 5	1.0738	1.1266	-	-	1.0218	1.1899	1.0524	1.0468	1.0858	1.1078	Level 5	1.0745	1.1297	-	-	1.0560	1.1301	1.0494	1.0443	1.0721	1.0935
Level 6	1.0523	1.0915	-	-	1.0118	1.1519	1.0350	1.0311	1.0572	1.0690	Level 6	1.0533	1.0950	-	-	1.0407	1.1040	1.0333	1.0306	1.0487	1.0617
Level 7	1.0379	1.0653	-	-	1.0079	1.1687	1.0253	1.0212	1.0367	1.0433	Level 7	1.0393	1.0646	-	-	1.0310	1.0857	1.0274	1.0223	1.0331	1.0407
Level 8	1.0287	1.0488	-	-	1.0077	1.2159	1.0202	1.0151	1.0247	1.0275	Level 8	1.0292	1.0483	-	-	1.0309	1.0709	1.0265	1.0180	1.0261	1.0292
Level 9	1.0255	1.0424	-	-	1.0134	1.3635	1.0182	1.0125	1.0209	1.0213	Level 9	1.0251	1.0407	-	-	1.0446	1.0973	1.0341	1.0178	1.0253	1.0261
					Bid Ask Covariance											**Correlatinos**					
Level 1	1.5309	1.5953	-	-	1.7360	1.5840	1.5411	1.4974	1.5249	1.5599	Level 1	0.6514	0.6262	-	-	0.5175	0.5900	0.6471	0.6637	0.6475	0.6368
Level 2	1.2901	1.3757	-	-	1.3243	1.2595	1.2696	1.2413	1.2780	1.3191	Level 2	0.7721	0.7280	-	-	0.6936	0.6712	0.7782	0.8005	0.7680	0.7491
Level 3	1.1695	1.2529	-	-	1.1077	1.1153	1.1350	1.1174	1.1475	1.1947	Level 3	0.8474	0.7956	-	-	0.8427	0.7595	0.8698	0.8860	0.8482	0.8254
Level 4	1.0986	1.1734	-	-	1.0376	1.0514	1.0618	1.0569	1.0812	1.1180	Level 4	0.9001	0.8503	-	-	0.9144	0.8236	0.9223	0.9331	0.8996	0.8775
Level 5	1.0626	1.1196	-	-	1.0149	1.0211	1.0283	1.0278	1.0456	1.0743	Level 5	0.9307	0.8852	-	-	0.9470	0.8849	0.9529	0.9575	0.9328	0.9145
Level 6	1.0397	1.0827	-	-	1.0063	1.0089	1.0119	1.0135	1.0254	1.0441	Level 6	0.9494	0.9133	-	-	0.9609	0.9058	0.9677	0.9703	0.9536	0.9419
Level 7	1.0255	1.0538	-	-	1.0026	1.0032	1.0046	1.0067	1.0136	1.0249	Level 7	0.9622	0.9393	-	-	0.9700	0.9211	0.9733	0.9781	0.9679	0.9609
Level 8	1.0168	1.0368	-	-	1.0014	1.0019	1.0016	1.0032	1.0076	1.0136	Level 8	0.9716	0.9540	-	-	0.9700	0.9338	0.9742	0.9824	0.9746	0.9716
Level 9	1.0133	1.0285	-	-	1.0008	1.0000	1.0004	1.0017	1.0045	1.0081	Level 9	0.9755	0.9609	-	-	0.9573	0.9113	0.9670	0.9825	0.9753	0.9746

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM5 futures contracts from 2004 to 2013. As EDM5 was delivered in June 2005 and rolled over to a new 10-year contract, results from 2006 to 2007 are also not available due to being at the beginning of a new period EDM5 contract and the lack of trading activity.

Table A.75: EDM6 median annual variance ratios with time to maturity

EDM6	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDM6	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
						Ask Variance											**Bid Variance**				
Level 1	1.5247	1.5296	1.5983	-	-	1.5656	1.6045	1.5337	1.5183	1.5234	Level 1	1.5287	1.5310	1.6034	-	-	1.6064	1.5917	1.5293	1.5132	1.5193
Level 2	1.2817	1.2961	1.3659	-	-	1.5523	1.3453	1.2758	1.2806	1.2824	Level 2	1.2772	1.2953	1.3636	-	-	1.3154	1.3188	1.2751	1.2767	1.2741
Level 3	1.1601	1.1804	1.2345	-	-	1.4114	1.2002	1.1445	1.1595	1.1684	Level 3	1.1593	1.1793	1.2341	-	-	1.1799	1.1702	1.1410	1.1558	1.1591
Level 4	1.0998	1.1222	1.1686	-	-	1.2660	1.1158	1.0806	1.1003	1.1101	Level 4	1.0970	1.1202	1.1685	-	-	1.1047	1.0959	1.0850	1.0936	1.1013
Level 5	1.0661	1.0838	1.1161	-	-	1.1474	1.0726	1.0491	1.0650	1.0740	Level 5	1.0658	1.0840	1.1174	-	-	1.0608	1.0543	1.0559	1.0604	1.0651
Level 6	1.0458	1.0584	1.0807	-	-	1.0777	1.0461	1.0324	1.0427	1.0482	Level 6	1.0463	1.0588	1.0806	-	-	1.0401	1.0360	1.0382	1.0409	1.0426
Level 7	1.0344	1.0401	1.0557	-	-	1.0444	1.0339	1.0230	1.0278	1.0304	Level 7	1.0338	1.0407	1.0570	-	-	1.0320	1.0280	1.0309	1.0294	1.0283
Level 8	1.0255	1.0284	1.0405	-	-	1.0341	1.0284	1.0172	1.0191	1.0191	Level 8	1.0241	1.0287	1.0405	-	-	1.0371	1.0279	1.0292	1.0230	1.0205
Level 9	1.0233	1.0239	1.0357	-	-	1.0397	1.0275	1.0156	1.0162	1.0149	Level 9	1.0226	1.0237	1.0355	-	-	1.0632	1.0360	1.0383	1.0249	1.0179
						Bid Ask Covariance											**Correlatinos**				
Level 1	1.5107	1.5288	1.5988	-	-	1.4083	1.5596	1.5247	1.4969	1.5083	Level 1	0.6542	0.6532	0.6237	-	-	0.6232	0.6283	0.6539	0.6609	0.6582
Level 2	1.2650	1.2916	1.3623	-	-	1.2764	1.2836	1.2554	1.2489	1.2562	Level 2	0.7829	0.7720	0.7334	-	-	0.7606	0.7583	0.7842	0.7833	0.7848
Level 3	1.1352	1.1766	1.2302	-	-	1.1744	1.1391	1.1232	1.1218	1.1398	Level 3	0.8626	0.8480	0.8103	-	-	0.8476	0.8546	0.8764	0.8652	0.8627
Level 4	1.0710	1.1139	1.1614	-	-	1.1096	1.0641	1.0558	1.0601	1.0803	Level 4	0.9115	0.8927	0.8558	-	-	0.9053	0.9125	0.9217	0.9144	0.9080
Level 5	1.0361	1.0765	1.1068	-	-	1.0442	1.0255	1.0238	1.0297	1.0461	Level 5	0.9382	0.9225	0.8949	-	-	0.9427	0.9485	0.9470	0.9430	0.9389
Level 6	1.0190	1.0496	1.0699	-	-	1.0202	1.0112	1.0093	1.0144	1.0260	Level 6	0.9557	0.9445	0.9255	-	-	0.9615	0.9653	0.9632	0.9607	0.9591
Level 7	1.0098	1.0330	1.0471	-	-	1.0086	1.0049	1.0031	1.0068	1.0144	Level 7	0.9673	0.9609	0.9461	-	-	0.9690	0.9728	0.9700	0.9714	0.9725
Level 8	1.0055	1.0212	1.0315	-	-	1.0043	1.0018	1.0004	1.0033	1.0079	Level 8	0.9765	0.9721	0.9611	-	-	0.9642	0.9728	0.9716	0.9775	0.9799
Level 9	1.0037	1.0157	1.0243	-	-	1.0023	1.0006	0.9998	1.0018	1.0046	Level 9	0.9779	0.9769	0.9657	-	-	0.9405	0.9652	0.9631	0.9758	0.9824

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM6 futures contracts from 2004 to 2013. As EDM6 was delivered in June 2006 and rolled over to a new 10-year contract, results from 2007 to 2008 are also not available due to being at the beginning of a new period EDM6 contract and the lack of trading activity.

Table A.76: EDM7 median annual variance ratios with time to maturity

EDM7	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDM7	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
						Ask Variance											**Bid Variance**				
Level 1	1.8662	1.5435	1.5367	1.6748	-	3.0606	1.6679	1.5995	1.5166	1.5208	Level 1	3.3749	1.5479	1.5392	1.6809	-	1.6727	1.6556	1.5850	1.5120	1.5193
Level 2	2.2418	1.2862	1.3016	1.4746	-	4.6666	1.4053	1.3370	1.2702	1.2768	Level 2	6.7905	1.2834	1.3017	1.4703	-	1.3678	1.4278	1.3295	1.2659	1.2734
Level 3	3.8938	1.1631	1.1863	1.3285	-	8.1032	1.2577	1.1868	1.1560	1.1589	Level 3	6.5646	1.1672	1.1856	1.3259	-	1.1980	1.2806	1.1833	1.1474	1.1497
Level 4	6.2682	1.1035	1.1273	1.2304	-	15.0902	1.1569	1.1103	1.0959	1.1016	Level 4	6.0079	1.1019	1.1265	1.2324	-	1.1101	1.1636	1.1218	1.0907	1.0916
Level 5	5.7969	1.0706	1.0895	1.1604	-	29.1226	1.0891	1.0737	1.0627	1.0673	Level 5	5.4610	1.0698	1.0886	1.1647	-	1.0636	1.1040	1.0873	1.0602	1.0600
Level 6	3.8921	1.0496	1.0630	1.1121	-	57.2164	1.0582	1.0536	1.0422	1.0434	Level 6	3.9318	1.0484	1.0627	1.1172	-	1.0422	1.0701	1.0773	1.0435	1.0405
Level 7	2.6019	1.0352	1.0436	1.0783	-	113.4183	1.0426	1.0397	1.0307	1.0272	Level 7	2.5130	1.0335	1.0435	1.0780	-	1.0413	1.0600	1.0649	1.0344	1.0270
Level 8	1.9200	1.0256	1.0315	1.0554	-	225.8286	1.0367	1.0327	1.0241	1.0175	Level 8	1.8281	1.0250	1.0316	1.0546	-	1.0517	1.0622	1.0747	1.0312	1.0196
Level 9	1.6814	1.0233	1.0270	1.0484	-	450.6509	1.0411	1.0321	1.0228	1.0140	Level 9	1.5560	1.0231	1.0266	1.0513	-	1.0946	1.1424	1.1204	1.0383	1.0180
						Bid Ask Covariance											**Correlatinos**				
Level 1	2.3391	1.5355	1.5386	1.6813	-	1.3212	1.6373	1.5416	1.4989	1.5108	Level 1	0.2963	0.6460	0.6497	0.5949	-	0.5993	0.6040	0.6309	0.6614	0.6582
Level 2	1.0177	1.2684	1.2970	1.4671	-	1.0896	1.3328	1.2615	1.2421	1.2538	Level 2	0.1473	0.7792	0.7682	0.6802	-	0.7320	0.7004	0.7522	0.7899	0.7853
Level 3	0.9838	1.1443	1.1777	1.3223	-	0.1413	1.1903	1.1220	1.1186	1.1261	Level 3	0.1523	0.8568	0.8434	0.7542	-	0.8366	0.7809	0.8451	0.8716	0.8698
Level 4	0.9900	1.0794	1.1180	1.2221	-	1.6034	1.0874	1.0544	1.0565	1.0669	Level 4	0.1664	0.9075	0.8877	0.8114	-	0.9017	0.8594	0.8914	0.9168	0.9161
Level 5	0.9964	1.0436	1.0788	1.1501	-	2.1627	1.0406	1.0220	1.0269	1.0358	Level 5	0.1831	0.9348	0.9186	0.8586	-	0.9406	0.9058	0.9197	0.9432	0.9434
Level 6	0.9971	1.0248	1.0525	1.1018	-	2.2797	1.0200	1.0095	1.0122	1.0189	Level 6	0.2543	0.9538	0.9410	0.8951	-	0.9596	0.9345	0.9282	0.9583	0.9611
Level 7	0.9993	1.0139	1.0336	1.0640	-	1.8269	1.0101	1.0040	1.0049	1.0094	Level 7	0.3979	0.9675	0.9583	0.9276	-	0.9605	0.9434	0.9390	0.9668	0.9737
Level 8	1.0000	1.0080	1.0219	1.0401	-	1.4271	1.0043	1.0015	1.0021	1.0048	Level 8	0.5470	0.9757	0.9694	0.9482	-	0.9510	0.9415	0.9305	0.9697	0.9807
Level 9	1.0362	1.0057	1.0157	1.0306	-	1.0044	1.0020	1.0007	1.0009	1.0027	Level 9	0.6427	0.9774	0.9741	0.9512	-	0.9143	0.8754	0.8925	0.9631	0.9823

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM7 futures contracts from 2004 to 2013. As EDM7 was delivered in June 2007 and rolled over to a new 10-year contract, results in 2008 are also not available due to being at the beginning of a new period EDM7 contract and the lack of trading activity.

Table A.77: EDM8 median annual variance ratios with time to maturity

EDM8	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDM8	2005	2006	2007	2008	2009	2010	2011	2012	2013
				Ask Variance										**Bid Variance**					
Level 1	1.5671	1.5344	1.5360	1.5401	-	-	1.6823	1.5573	1.5115	Level 1	1.5951	1.5352	1.5359	1.5400	-	-	1.6669	1.5923	1.5144
Level 2	1.3293	1.2912	1.2864	1.2884	-	-	1.3820	1.3035	1.2690	Level 2	1.3515	1.2899	1.2880	1.2904	-	-	1.3768	1.3620	1.2642
Level 3	1.1924	1.1651	1.1587	1.1584	-	-	1.2107	1.1803	1.1496	Level 3	1.2070	1.1648	1.1590	1.1614	-	-	1.1951	1.2371	1.1445
Level 4	1.1208	1.1084	1.0957	1.0901	-	-	1.1291	1.1305	1.0923	Level 4	1.1407	1.1074	1.0976	1.0897	-	-	1.0953	1.1666	1.0874
Level 5	1.0829	1.0749	1.0665	1.0571	-	-	1.0779	1.1062	1.0610	Level 5	1.1039	1.0760	1.0662	1.0563	-	-	1.0602	1.1607	1.0564
Level 6	1.0620	1.0516	1.0449	1.0383	-	-	1.0511	1.0832	1.0393	Level 6	1.0787	1.0524	1.0454	1.0389	-	-	1.0398	1.1530	1.0371
Level 7	1.0500	1.0362	1.0310	1.0279	-	-	1.0373	1.0588	1.0248	Level 7	1.0650	1.0369	1.0314	1.0280	-	-	1.0315	1.2038	1.0266
Level 8	1.0449	1.0271	1.0225	1.0214	-	-	1.0245	1.0523	1.0167	Level 8	1.0636	1.0274	1.0224	1.0218	-	-	1.0294	1.2950	1.0207
Level 9	1.0489	1.0240	1.0189	1.0197	-	-	1.0243	1.0464	1.0135	Level 9	1.0881	1.0249	1.0189	1.0198	-	-	1.0493	1.5141	1.0192
				Bid Ask Covariance										**Correlatinos**					
Level 1	1.5623	1.5266	1.5352	1.5381	-	-	1.6634	1.5017	1.5076	Level 1	0.6269	0.6514	0.6511	0.6493	-	-	0.5999	0.6280	0.6603
Level 2	1.2994	1.2749	1.2855	1.2856	-	-	1.3548	1.2330	1.2536	Level 2	0.7399	0.7752	0.7764	0.7749	-	-	0.7263	0.7342	0.7910
Level 3	1.1552	1.1428	1.1560	1.1537	-	-	1.1757	1.1116	1.1269	Level 3	0.8285	0.8585	0.8628	0.8611	-	-	0.8368	0.8084	0.8737
Level 4	1.0700	1.0834	1.0913	1.0841	-	-	1.0801	1.0524	1.0644	Level 4	0.8767	0.9030	0.9111	0.9177	-	-	0.9130	0.8572	0.9196
Level 5	1.0318	1.0475	1.0583	1.0490	-	-	1.0413	1.0218	1.0317	Level 5	0.9059	0.9294	0.9379	0.9467	-	-	0.9433	0.8616	0.9466
Level 6	1.0147	1.0271	1.0379	1.0304	-	-	1.0220	1.0080	1.0146	Level 6	0.9271	0.9502	0.9565	0.9626	-	-	0.9617	0.8673	0.9642
Level 7	1.0066	1.0154	1.0244	1.0191	-	-	1.0090	1.0014	1.0064	Level 7	0.9390	0.9644	0.9696	0.9728	-	-	0.9695	0.8307	0.9741
Level 8	1.0030	1.0087	1.0157	1.0127	-	-	1.0035	0.9968	1.0024	Level 8	0.9402	0.9733	0.9781	0.9786	-	-	0.9714	0.7722	0.9797
Level 9	1.0015	1.0054	1.0113	1.0099	-	-	1.0016	0.9946	1.0009	Level 9	0.9190	0.9757	0.9815	0.9805	-	-	0.9530	0.6604	0.9812

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM8 futures contracts from 2005 to 2013. As EDM8 was delivered in June 2008 and rolled over to a new 10-year contract, results in 2009 and 2010 are also not available due to being at the beginning of a new period EDM8 contract and the lack of trading activity.

Table A.78: EDM9 median annual variance ratios with time to maturity

EDM9	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDM9	2005	2006	2007	2008	2009	2010	2011	2012	2013
				Ask Variance										**Bid Variance**					
Level 1	1.4186	1.5975	1.5408	1.5224	1.5595	-	2.2514	1.5767	1.5391	Level 1	1.4388	1.5957	1.5441	1.5227	1.5615	-	1.7027	1.5808	1.5344
Level 2	1.2234	1.3305	1.2909	1.2701	1.3218	-	1.7743	1.3187	1.2846	Level 2	1.2247	1.3241	1.2911	1.2703	1.3218	-	1.6567	1.3420	1.2930
Level 3	1.0970	1.1834	1.1584	1.1402	1.1906	-	1.4352	1.1872	1.1601	Level 3	1.1042	1.1824	1.1552	1.1403	1.1931	-	1.3781	1.2048	1.1652
Level 4	1.0643	1.1135	1.0926	1.0760	1.1225	-	1.2405	1.1217	1.0969	Level 4	1.0785	1.1132	1.0911	1.0765	1.1218	-	1.2059	1.1390	1.1039
Level 5	1.0415	1.0742	1.0598	1.0441	1.0798	-	1.1151	1.0893	1.0654	Level 5	1.0479	1.0736	1.0577	1.0440	1.0803	-	1.1198	1.1242	1.0709
Level 6	1.0271	1.0508	1.0397	1.0287	1.0540	-	1.0643	1.0776	1.0475	Level 6	1.0280	1.0527	1.0403	1.0284	1.0537	-	1.0721	1.1201	1.0477
Level 7	1.0207	1.0360	1.0270	1.0197	1.0380	-	1.0508	1.0640	1.0344	Level 7	1.0226	1.0387	1.0280	1.0196	1.0372	-	1.0484	1.1117	1.0374
Level 8	1.0166	1.0287	1.0191	1.0147	1.0278	-	1.0390	1.0511	1.0260	Level 8	1.0214	1.0310	1.0202	1.0149	1.0278	-	1.0467	1.1228	1.0321
Level 9	1.0220	1.0288	1.0168	1.0129	1.0241	-	1.0637	1.0434	1.0219	Level 9	1.0260	1.0311	1.0174	1.0130	1.0243	-	1.0785	1.1606	1.0350
				Bid Ask Covariance										**Correlatinos**					
Level 1	1.4208	1.5822	1.5390	1.5225	1.5582	-	1.9067	1.5222	1.5164	Level 1	0.6950	0.6267	0.6476	0.6567	0.6404	-	0.5873	0.6326	0.6517
Level 2	1.2121	1.3002	1.2779	1.2678	1.3176	-	1.6592	1.2565	1.2587	Level 2	0.8165	0.7553	0.7746	0.7872	0.7566	-	0.6036	0.7451	0.7734
Level 3	1.0805	1.1493	1.1396	1.1358	1.1846	-	1.3744	1.1294	1.1281	Level 3	0.9057	0.8457	0.8656	0.8769	0.8381	-	0.7256	0.8300	0.8583
Level 4	1.0475	1.0755	1.0730	1.0714	1.1106	-	1.1840	1.0710	1.0610	Level 4	0.9272	0.8983	0.9165	0.9289	0.8915	-	0.8293	0.8780	0.9059
Level 5	1.0225	1.0387	1.0412	1.0382	1.0679	-	1.0807	1.0411	1.0290	Level 5	0.9543	0.9315	0.9454	0.9578	0.9257	-	0.8930	0.8896	0.9338
Level 6	1.0093	1.0197	1.0236	1.0220	1.0423	-	1.0367	1.0237	1.0135	Level 6	0.9728	0.9499	0.9612	0.9723	0.9490	-	0.9328	0.8928	0.9545
Level 7	1.0055	1.0103	1.0134	1.0135	1.0270	-	1.0164	1.0112	1.0049	Level 7	0.9779	0.9627	0.9728	0.9808	0.9641	-	0.9538	0.8995	0.9639
Level 8	1.0025	1.0051	1.0073	1.0086	1.0180	-	1.0111	1.0043	1.0008	Level 8	0.9790	0.9699	0.9802	0.9854	0.9729	-	0.9554	0.8906	0.9689
Level 9	1.0006	1.0024	1.0045	1.0059	1.0130	-	1.0105	1.0018	0.9987	Level 9	0.9747	0.9699	0.9829	0.9872	0.9762	-	0.9272	0.8616	0.9662

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDM9 futures contracts from 2005 to 2013. As EDM9 was delivered in June 2009 and rolled over to a new 10-year contract, results in 2010 are also not available due to being at the beginning of a new period EDM9 contract and the lack of trading activity.

Table A.79: EDU0 median annual variance ratios with time to maturity

EDU0	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**EDU0**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
				Ask Variance									**Bid Variance**				
Level 1	1.8236	1.6267	1.5360	1.5220	1.5916	-	1.6875	1.6727	Level 1	1.8005	1.6314	1.5297	1.5235	1.5834	-	1.6567	1.6395
Level 2	1.5620	1.3780	1.2771	1.2800	1.3754	-	1.3391	1.4509	Level 2	1.5879	1.3990	1.2759	1.2769	1.3659	-	1.2965	1.4141
Level 3	1.3764	1.2294	1.1460	1.1546	1.2451	-	1.1779	1.3341	Level 3	1.3817	1.2442	1.1453	1.1541	1.2359	-	1.1413	1.2781
Level 4	1.2143	1.1425	1.0773	1.0930	1.1665	-	1.1182	1.2820	Level 4	1.2260	1.1485	1.0769	1.0940	1.1575	-	1.0781	1.2090
Level 5	1.1366	1.0922	1.0432	1.0604	1.1161	-	1.0896	1.2659	Level 5	1.1509	1.0938	1.0436	1.0608	1.1080	-	1.0595	1.1701
Level 6	1.0845	1.0634	1.0269	1.0403	1.0816	-	1.0729	1.2384	Level 6	1.1147	1.0663	1.0277	1.0406	1.0754	-	1.0513	1.1784
Level 7	1.0720	1.0480	1.0189	1.0276	1.0544	-	1.0653	1.2215	Level 7	1.0972	1.0510	1.0195	1.0272	1.0521	-	1.0551	1.2300
Level 8	1.0667	1.0401	1.0150	1.0191	1.0378	-	1.0605	1.2135	Level 8	1.0787	1.0464	1.0149	1.0194	1.0398	-	1.0578	1.3271
Level 9	1.0777	1.0437	1.0141	1.0161	1.0313	-	1.0659	1.2208	Level 9	1.0921	1.0516	1.0144	1.0167	1.0373	-	1.1645	1.5371
				Bid Ask Covariance									**Correlatinos**				
Level 1	1.7474	1.5852	1.5298	1.5200	1.5812	-	1.6608	1.5369	Level 1	0.5554	0.6130	0.6537	0.6564	0.6316	-	0.6040	0.6099
Level 2	1.4818	1.3236	1.2689	1.2712	1.3590	-	1.2880	1.2615	Level 2	0.6297	0.7148	0.7838	0.7832	0.7321	-	0.7713	0.7072
Level 3	1.2554	1.1772	1.1344	1.1457	1.2222	-	1.1202	1.1104	Level 3	0.7237	0.8037	0.8732	0.8665	0.8091	-	0.8763	0.7824
Level 4	1.1151	1.0840	1.0642	1.0836	1.1419	-	1.0548	1.0458	Level 4	0.8156	0.8707	0.9286	0.9141	0.8639	-	0.9276	0.8271
Level 5	1.0471	1.0400	1.0303	1.0505	1.0913	-	1.0347	1.0139	Level 5	0.8689	0.9143	0.9582	0.9427	0.9025	-	0.9438	0.8546
Level 6	1.0218	1.0177	1.0145	1.0306	1.0593	-	1.0240	0.9995	Level 6	0.8971	0.9379	0.9730	0.9610	0.9299	-	0.9512	0.8486
Level 7	1.0110	1.0083	1.0072	1.0183	1.0357	-	1.0201	0.9936	Level 7	0.9114	0.9514	0.9809	0.9735	0.9505	-	0.9478	0.8130
Level 8	1.0050	1.0039	1.0038	1.0113	1.0225	-	1.0118	0.9964	Level 8	0.9271	0.9556	0.9853	0.9810	0.9618	-	0.9453	0.7535
Level 9	1.0027	1.0019	1.0021	1.0079	1.0136	-	1.0072	0.9968	Level 9	0.9157	0.9509	0.9858	0.9836	0.9641	-	0.8589	0.6506

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU0 futures contracts from 2006 to 2013. As EDU0 was delivered in September 2010 and rolled over to a new 10-year contract, results in 2011 are also not available due to being at the beginning of a new period EDU0 contract and the lack of trading activity.

Table A.80: EDU1 median annual variance ratios with time to maturity

EDU1	2006	2007	2008	2009	2010	2011	2012	2013	EDU1	2006	2007	2008	2009	2010	2011	2012	2013
				Ask Variance									**Bid Variance**				
Level 1	1.4578	1.7113	1.5701	1.5174	1.5585	1.6375	-	1.6320	Level 1	1.5030	1.7007	1.5704	1.5142	1.5607	1.6280	-	1.7011
Level 2	1.2886	1.5377	1.3285	1.2704	1.3184	1.4229	-	1.4454	Level 2	1.3511	1.4712	1.3324	1.2703	1.3152	1.4185	-	1.4636
Level 3	1.1640	1.3224	1.1862	1.1492	1.1963	1.2845	-	1.3503	Level 3	1.2767	1.3027	1.1922	1.1502	1.1889	1.2750	-	1.2757
Level 4	1.0951	1.2062	1.1138	1.0875	1.1232	1.1990	-	1.2934	Level 4	1.3087	1.2029	1.1172	1.0876	1.1185	1.1791	-	1.1784
Level 5	1.0515	1.1220	1.0707	1.0561	1.0839	1.1302	-	1.3169	Level 5	1.3159	1.1414	1.0778	1.0561	1.0773	1.1191	-	1.1084
Level 6	1.0300	1.0853	1.0492	1.0377	1.0573	1.0880	-	1.3507	Level 6	1.2004	1.1009	1.0575	1.0364	1.0525	1.0825	-	1.1041
Level 7	1.0228	1.0683	1.0401	1.0248	1.0381	1.0580	-	1.4575	Level 7	1.1771	1.0817	1.0457	1.0246	1.0365	1.0566	-	1.1275
Level 8	1.0205	1.0592	1.0384	1.0178	1.0264	1.0386	-	1.5472	Level 8	1.1839	1.0777	1.0427	1.0180	1.0268	1.0395	-	1.1925
Level 9	1.0211	1.0583	1.0452	1.0153	1.0211	1.0297	-	1.8493	Level 9	1.1798	1.1121	1.0491	1.0158	1.0237	1.0365	-	1.3618
				Bid Ask Covariance									**Correlatinos**				
Level 1	1.4711	1.6229	1.5317	1.5080	1.5568	1.6239	-	1.5806	Level 1	0.6653	0.5880	0.6368	0.6604	0.6407	0.6142	-	0.5878
Level 2	1.2569	1.3331	1.2765	1.2579	1.3060	1.4090	-	1.3016	Level 2	0.7402	0.6797	0.7505	0.7872	0.7604	0.7050	-	0.6833
Level 3	1.1320	1.1824	1.1330	1.1340	1.1811	1.2692	-	1.1413	Level 3	0.7832	0.7677	0.8388	0.8694	0.8411	0.7843	-	0.7839
Level 4	1.0935	1.0851	1.0633	1.0696	1.1080	1.1645	-	1.0638	Level 4	0.7641	0.8313	0.8951	0.9195	0.8940	0.8481	-	0.8486
Level 5	1.0580	1.0425	1.0278	1.0372	1.0666	1.1076	-	1.0208	Level 5	0.7599	0.8761	0.9278	0.9469	0.9282	0.8935	-	0.9022
Level 6	1.0222	1.0197	1.0120	1.0193	1.0411	1.0667	-	1.0007	Level 6	0.8331	0.9084	0.9456	0.9649	0.9502	0.9238	-	0.9057
Level 7	1.0013	1.0090	1.0052	1.0101	1.0244	1.0407	-	0.9954	Level 7	0.8495	0.9244	0.9563	0.9760	0.9648	0.9465	-	0.8869
Level 8	0.9966	1.0043	1.0022	1.0055	1.0143	1.0249	-	0.9909	Level 8	0.8447	0.9279	0.9591	0.9823	0.9739	0.9620	-	0.8386
Level 9	1.0040	1.0012	1.0011	1.0038	1.0090	1.0158	-	0.9972	Level 9	0.8476	0.8992	0.9532	0.9845	0.9769	0.9648	-	0.7343

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU1 futures contracts from 2006 to 2013. As EDU1 was delivered in September 2011 and rolled over to a new 10-year contract, results in 2012 are also not available due to being at the beginning of a new period EDU1 contract and the lack of trading activity.

Table A.81: EDU2 median annual variance ratios with time to maturity

EDU2	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**EDU2**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
			Ask Variance							**Bid Variance**			
Level 1	1.6152	1.5287	1.5392	1.5583	1.6027	1.5970	Level 1	1.6283	1.5273	1.5347	1.5582	1.5913	1.5996
Level 2	1.3739	1.2854	1.2908	1.3217	1.3846	1.3313	Level 2	1.3906	1.2817	1.2872	1.3190	1.3717	1.3504
Level 3	1.2434	1.1611	1.1661	1.1937	1.2574	1.1936	Level 3	1.2702	1.1613	1.1589	1.1918	1.2436	1.2181
Level 4	1.1608	1.0995	1.0994	1.1227	1.1723	1.1239	Level 4	1.1812	1.0987	1.0945	1.1166	1.1555	1.1487
Level 5	1.1055	1.0658	1.0647	1.0809	1.1143	1.0955	Level 5	1.1284	1.0653	1.0598	1.0765	1.1023	1.1178
Level 6	1.0753	1.0473	1.0434	1.0541	1.0753	1.0905	Level 6	1.0991	1.0458	1.0404	1.0511	1.0670	1.1225
Level 7	1.0630	1.0351	1.0288	1.0348	1.0474	1.0992	Level 7	1.0808	1.0331	1.0279	1.0340	1.0459	1.1590
Level 8	1.0677	1.0273	1.0195	1.0227	1.0308	1.1175	Level 8	1.0822	1.0259	1.0209	1.0243	1.0327	1.2633
Level 9	1.0870	1.0267	1.0153	1.0178	1.0236	1.1455	Level 9	1.1235	1.0241	1.0184	1.0211	1.0280	1.5544
			Bid Ask Covariance							**Correlatinos**			
Level 1	1.5503	1.5056	1.5271	1.5550	1.5899	1.5666	Level 1	0.6141	0.6548	0.6516	0.6418	0.6284	0.6252
Level 2	1.2778	1.2526	1.2753	1.3120	1.3628	1.2964	Level 2	0.7191	0.7802	0.7769	0.7582	0.7290	0.7405
Level 3	1.1291	1.1221	1.1411	1.1828	1.2349	1.1405	Level 3	0.7873	0.8611	0.8629	0.8391	0.8041	0.8210
Level 4	1.0570	1.0601	1.0751	1.1068	1.1460	1.0622	Level 4	0.8466	0.9101	0.9137	0.8955	0.8654	0.8705
Level 5	1.0233	1.0287	1.0398	1.0654	1.0902	1.0247	Level 5	0.8862	0.9387	0.9436	0.9290	0.9072	0.8946
Level 6	1.0088	1.0124	1.0216	1.0388	1.0545	1.0087	Level 6	0.9098	0.9562	0.9611	0.9514	0.9372	0.8909
Level 7	1.0026	1.0051	1.0122	1.0232	1.0328	1.0002	Level 7	0.9253	0.9680	0.9729	0.9671	0.9561	0.8628
Level 8	0.9997	1.0021	1.0065	1.0140	1.0194	0.9944	Level 8	0.9241	0.9747	0.9795	0.9763	0.9683	0.7916
Level 9	0.9995	1.0016	1.0037	1.0089	1.0125	0.9955	Level 9	0.8901	0.9764	0.9820	0.9794	0.9728	0.6434

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU2 futures contracts from 2008 to 2013. As EDU2 was delivered in September 2012, it rolls over to a new 10-year period contract.

Table A.82: EDU3 median annual variance ratios with time to maturity

EDU3	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDU3	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2
								Ask Variance													**Bid Variance**					
Level 1	2.6197	1.6716	-	-	-	-	1.6696	1.5739	1.5263	1.5366	1.6247	1.6724	Level 1	3.0627	1.6148	-	-	-	-	1.6906	1.5684	1.5228	1.5354	1.6128	1
Level 2	2.1523	1.4467	-	-	-	-	1.4447	1.3403	1.2762	1.2872	1.4173	1.4417	Level 2	2.3837	1.3926	-	-	-	-	1.5038	1.3299	1.2750	1.2841	1.3992	1
Level 3	1.7327	1.2786	-	-	-	-	1.3361	1.1960	1.1486	1.1628	1.2927	1.3036	Level 3	2.0376	1.2744	-	-	-	-	1.3657	1.1882	1.1494	1.1578	1.2589	1
Level 4	1.4812	1.1704	-	-	-	-	1.2748	1.1201	1.0855	1.0980	1.1942	1.2103	Level 4	1.5904	1.1730	-	-	-	-	1.2908	1.1165	1.0829	1.0920	1.1684	1
Level 5	1.3937	1.1180	-	-	-	-	1.2372	1.0789	1.0534	1.0635	1.1239	1.1428	Level 5	1.4479	1.1266	-	-	-	-	1.2602	1.0810	1.0516	1.0588	1.1079	1
Level 6	1.4310	1.0889	-	-	-	-	1.2213	1.0608	1.0355	1.0423	1.0775	1.0858	Level 6	1.6559	1.1024	-	-	-	-	1.2429	1.0599	1.0338	1.0390	1.0687	1
Level 7	1.7364	1.0811	-	-	-	-	1.2724	1.0545	1.0238	1.0279	1.0477	1.0514	Level 7	2.1160	1.1083	-	-	-	-	1.3044	1.0524	1.0241	1.0269	1.0460	1
Level 8	2.6051	1.1047	-	-	-	-	1.3457	1.0596	1.0164	1.0189	1.0314	1.0333	Level 8	2.7633	1.1351	-	-	-	-	1.4158	1.0511	1.0193	1.0198	1.0354	1
Level 9	4.6790	1.1402	-	-	-	-	1.5482	1.0707	1.0132	1.0149	1.0246	1.0248	Level 9	5.0812	1.1915	-	-	-	-	1.6499	1.0709	1.0184	1.0178	1.0310	1
								Bid Ask Covariance													**Correlatinos**				
Level 1	2.6985	1.6137	-	-	-	-	1.5048	1.5102	1.5198	1.5304	1.6000	1.6521	Level 1	0.3307	0.6193	-	-	-	-	0.5915	0.6376	0.6567	0.6513	0.6200	0
Level 2	1.5088	1.3976	-	-	-	-	1.2466	1.2530	1.2677	1.2738	1.3781	1.4071	Level 2	0.4216	0.7181	-	-	-	-	0.6650	0.7519	0.7843	0.7787	0.7147	0
Level 3	0.9524	1.2228	-	-	-	-	1.1014	1.1200	1.1325	1.1458	1.2414	1.2516	Level 3	0.5180	0.7847	-	-	-	-	0.7322	0.8416	0.8701	0.8637	0.7943	0
Level 4	0.9946	1.1048	-	-	-	-	1.0415	1.0517	1.0667	1.0778	1.1448	1.1546	Level 4	0.6482	0.8525	-	-	-	-	0.7747	0.8956	0.9234	0.9157	0.8559	0
Level 5	0.9892	1.0438	-	-	-	-	1.0138	1.0200	1.0337	1.0432	1.0843	1.0918	Level 5	0.7094	0.8876	-	-	-	-	0.7935	0.9251	0.9509	0.9444	0.9026	0
Level 6	1.0035	1.0120	-	-	-	-	1.0054	1.0071	1.0166	1.0240	1.0494	1.0502	Level 6	0.6553	0.9072	-	-	-	-	0.8046	0.9434	0.9673	0.9625	0.9357	0
Level 7	0.9667	1.0039	-	-	-	-	1.0004	1.0008	1.0082	1.0136	1.0283	1.0276	Level 7	0.5660	0.9023	-	-	-	-	0.7667	0.9502	0.9765	0.9738	0.9560	0
Level 8	0.8947	1.0001	-	-	-	-	1.0010	0.9995	1.0039	1.0078	1.0166	1.0148	Level 8	0.4636	0.8810	-	-	-	-	0.7063	0.9514	0.9811	0.9806	0.9658	0
Level 9	1.0768	1.0010	-	-	-	-	1.0007	0.9997	1.0021	1.0050	1.0101	1.0080	Level 9	0.2882	0.8393	-	-	-	-	0.6061	0.9338	0.9819	0.9825	0.9699	0

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU3 futures contracts from 2002 to 2013. As EDU3 was delivered in September 2003 and rolled over to a new 10-year contract, results from 2004 to 2007 are also not available due to being at the beginning of a new period EDU3 contract and the lack of trading activity.

Table A.83: EDU4 median annual variance ratios with time to maturity

EDU4	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDU4	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
						Ask Variance												**Bid Variance**					
Level 1	1.5346	1.5985	-	-	-	1.5565	1.7505	1.5415	1.5094	1.5919	1.6516	Level 1	1.5727	1.6025	-	-	-	1.8012	1.6696	1.5431	1.5074	1.5776	1.6468
Level 2	1.2911	1.3649	-	-	-	1.4240	1.6116	1.2841	1.2586	1.3651	1.4285	Level 2	1.3105	1.3647	-	-	-	1.6405	1.4631	1.2817	1.2591	1.3512	1.4187
Level 3	1.1630	1.2211	-	-	-	1.4100	1.5494	1.1539	1.1413	1.2405	1.2879	Level 3	1.1690	1.2189	-	-	-	1.4242	1.3033	1.1541	1.1395	1.2226	1.2759
Level 4	1.0910	1.1448	-	-	-	1.2757	1.4883	1.0850	1.0818	1.1576	1.1981	Level 4	1.0937	1.1398	-	-	-	1.3226	1.2226	1.0873	1.0793	1.1396	1.1757
Level 5	1.0551	1.1005	-	-	-	1.1899	1.4405	1.0510	1.0521	1.1025	1.1313	Level 5	1.0581	1.0974	-	-	-	1.2389	1.1691	1.0539	1.0495	1.0895	1.1152
Level 6	1.0437	1.0722	-	-	-	1.0923	1.4936	1.0333	1.0346	1.0657	1.0822	Level 6	1.0418	1.0698	-	-	-	1.1484	1.1373	1.0378	1.0335	1.0571	1.0726
Level 7	1.0386	1.0518	-	-	-	1.0639	1.5859	1.0235	1.0232	1.0414	1.0494	Level 7	1.0341	1.0519	-	-	-	1.1032	1.1466	1.0287	1.0238	1.0380	1.0466
Level 8	1.0441	1.0410	-	-	-	1.0547	1.7226	1.0170	1.0160	1.0278	1.0302	Level 8	1.0367	1.0415	-	-	-	1.0764	1.1378	1.0261	1.0184	1.0288	1.0331
Level 9	1.0597	1.0427	-	-	-	1.0778	1.9765	1.0148	1.0128	1.0217	1.0227	Level 9	1.0503	1.0433	-	-	-	1.0961	1.1623	1.0286	1.0169	1.0268	1.0281
						Bid Ask Covariance												**Correlatinos**					
Level 1	1.5438	1.5998	-	-	-	1.3991	1.5538	1.5363	1.5017	1.5641	1.6365	Level 1	0.6359	0.6240	-	-	-	0.5552	0.5990	0.6481	0.6634	0.6339	0.6072
Level 2	1.2774	1.3584	-	-	-	1.2800	1.2647	1.2742	1.2486	1.3288	1.4096	Level 2	0.7631	0.7328	-	-	-	0.6096	0.6835	0.7802	0.7942	0.7401	0.7049
Level 3	1.1369	1.2127	-	-	-	1.0329	1.1292	1.1367	1.1247	1.1939	1.2621	Level 3	0.8554	0.8204	-	-	-	0.7022	0.7673	0.8665	0.8775	0.8179	0.7838
Level 4	1.0649	1.1271	-	-	-	1.0376	1.0540	1.0631	1.0627	1.1105	1.1658	Level 4	0.9143	0.8773	-	-	-	0.7561	0.8179	0.9197	0.9265	0.8775	0.8506
Level 5	1.0290	1.0813	-	-	-	1.0168	1.0239	1.0295	1.0318	1.0640	1.1000	Level 5	0.9451	0.9113	-	-	-	0.8072	0.8554	0.9488	0.9528	0.9179	0.8967
Level 6	1.0117	1.0518	-	-	-	1.0070	1.0097	1.0125	1.0171	1.0361	1.0571	Level 6	0.9599	0.9347	-	-	-	0.8708	0.8793	0.9636	0.9676	0.9460	0.9323
Level 7	1.0035	1.0326	-	-	-	1.0035	1.0032	1.0052	1.0090	1.0199	1.0308	Level 7	0.9671	0.9507	-	-	-	0.9064	0.8721	0.9721	0.9768	0.9633	0.9555
Level 8	1.0009	1.0226	-	-	-	1.0019	1.0003	1.0021	1.0046	1.0109	1.0173	Level 8	0.9646	0.9601	-	-	-	0.9290	0.8789	0.9746	0.9819	0.9720	0.9680
Level 9	0.9987	1.0198	-	-	-	1.0011	1.0003	1.0009	1.0027	1.0066	1.0094	Level 9	0.9521	0.9585	-	-	-	0.9123	0.8604	0.9722	0.9834	0.9739	0.9727

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU4 futures contracts from 2003 to 2013. As EDU4 was delivered in September 2004 and rolled over to a new 10-year contract, results from 2005 to 2007 are also not available due to being at the beginning of a new period EDU4 contract and the lack of trading activity.

Table A.84: EDU5 median annual variance ratios with time to maturity

EDU5	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**EDU5**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
					Ask Variance											**Bid Variance**					
Level 1	1.5216	1.5698	-	-	1.6284	1.6966	1.5595	1.5132	1.5366	1.5513	Level 1	1.5211	1.5752	-	-	1.8680	1.6802	1.5491	1.5108	1.5338	1.5485
Level 2	1.2874	1.3452	-	-	1.3846	1.4117	1.2910	1.2550	1.3052	1.3268	Level 2	1.2879	1.3428	-	-	1.3947	1.4293	1.2872	1.2495	1.2925	1.3178
Level 3	1.1660	1.2273	-	-	1.1526	1.2467	1.1530	1.1307	1.1858	1.2122	Level 3	1.1651	1.2221	-	-	1.2246	1.2595	1.1489	1.1305	1.1677	1.1946
Level 4	1.1059	1.1524	-	-	1.0616	1.1489	1.0842	1.0747	1.1185	1.1469	Level 4	1.1005	1.1522	-	-	1.1567	1.1457	1.0816	1.0723	1.1032	1.1294
Level 5	1.0682	1.1080	-	-	1.0299	1.0893	1.0511	1.0463	1.0795	1.0986	Level 5	1.0680	1.1086	-	-	1.0923	1.0863	1.0488	1.0442	1.0674	1.0864
Level 6	1.0490	1.0773	-	-	1.0152	1.0568	1.0338	1.0312	1.0528	1.0639	Level 6	1.0482	1.0760	-	-	1.0569	1.0505	1.0327	1.0307	1.0451	1.0568
Level 7	1.0349	1.0543	-	-	1.0087	1.0390	1.0245	1.0219	1.0349	1.0399	Level 7	1.0350	1.0540	-	-	1.0387	1.0373	1.0268	1.0225	1.0326	1.0386
Level 8	1.0265	1.0379	-	-	1.0074	1.0322	1.0206	1.0159	1.0238	1.0253	Level 8	1.0261	1.0394	-	-	1.0348	1.0323	1.0263	1.0181	1.0255	1.0277
Level 9	1.0233	1.0324	-	-	1.0130	1.0445	1.0192	1.0135	1.0191	1.0191	Level 9	1.0238	1.0332	-	-	1.0469	1.0413	1.0318	1.0190	1.0257	1.0240
					Bid Ask Covariance											**Correlatinos**					
Level 1	1.5185	1.5706	-	-	1.6839	1.6244	1.5394	1.5067	1.5165	1.5332	Level 1	0.6574	0.6348	-	-	0.5353	0.5952	0.6455	0.6619	0.6520	0.6458
Level 2	1.2809	1.3416	-	-	1.2630	1.3518	1.2742	1.2429	1.2643	1.2938	Level 2	0.7765	0.7447	-	-	0.7170	0.6996	0.7769	0.8003	0.7737	0.7588
Level 3	1.1553	1.2199	-	-	1.0981	1.1713	1.1364	1.1154	1.1367	1.1747	Level 3	0.8583	0.8182	-	-	0.8166	0.7940	0.8704	0.8846	0.8564	0.8371
Level 4	1.0925	1.1437	-	-	1.0311	1.0775	1.0618	1.0549	1.0731	1.1068	Level 4	0.9087	0.8679	-	-	0.8645	0.8729	0.9246	0.9326	0.9064	0.8854
Level 5	1.0566	1.0992	-	-	1.0123	1.0366	1.0276	1.0257	1.0395	1.0650	Level 5	0.9363	0.9020	-	-	0.9155	0.9205	0.9534	0.9577	0.9368	0.9204
Level 6	1.0338	1.0672	-	-	1.0057	1.0165	1.0108	1.0116	1.0210	1.0377	Level 6	0.9540	0.9293	-	-	0.9462	0.9519	0.9684	0.9702	0.9568	0.9463
Level 7	1.0213	1.0444	-	-	1.0020	1.0071	1.0045	1.0050	1.0113	1.0211	Level 7	0.9662	0.9488	-	-	0.9627	0.9640	0.9739	0.9780	0.9684	0.9628
Level 8	1.0140	1.0289	-	-	1.0012	1.0026	1.0018	1.0022	1.0062	1.0116	Level 8	0.9746	0.9621	-	-	0.9664	0.9687	0.9744	0.9822	0.9751	0.9731
Level 9	1.0102	1.0223	-	-	1.0007	1.0006	1.0006	1.0011	1.0036	1.0067	Level 9	0.9768	0.9679	-	-	0.9552	0.9604	0.9691	0.9814	0.9749	0.9765

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU5 futures contracts from 2004 to 2013. As EDU5 was delivered in September 2005 and rolled over to a new 10-year contract, results from 2006 to 2007 are also not available due to being at the beginning of a new period EDU5 contract and the lack of trading activity.

Table A.85: EDU6 median annual variance ratios with time to maturity

EDU6	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDU6	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
					Ask Variance											**Bid Variance**					
Level 1	1.5562	1.5291	1.5721	-	1.5312	1.6116	1.6120	1.5353	1.5179	1.5221	Level 1	1.5389	1.5288	1.5764	-	1.5785	1.6298	1.6152	1.5279	1.5212	1.5212
Level 2	1.2950	1.2855	1.3542	-	1.2745	1.3324	1.3446	1.2777	1.2777	1.2821	Level 2	1.2862	1.2880	1.3550	-	1.3540	1.3241	1.3472	1.2742	1.2731	1.2737
Level 3	1.1711	1.1738	1.2302	-	1.1525	1.1997	1.1926	1.1448	1.1559	1.1658	Level 3	1.1639	1.1728	1.2322	-	1.2165	1.1673	1.1890	1.1424	1.1520	1.1538
Level 4	1.1041	1.1142	1.1603	-	1.0878	1.1148	1.1101	1.0811	1.1003	1.1071	Level 4	1.0996	1.1162	1.1601	-	1.1195	1.0893	1.1103	1.0772	1.0930	1.0975
Level 5	1.0723	1.0799	1.1160	-	1.0497	1.0585	1.0689	1.0494	1.0647	1.0710	Level 5	1.0653	1.0803	1.1157	-	1.0745	1.0502	1.0661	1.0482	1.0615	1.0627
Level 6	1.0521	1.0551	1.0808	-	1.0285	1.0310	1.0430	1.0310	1.0429	1.0463	Level 6	1.0478	1.0545	1.0816	-	1.0566	1.0311	1.0444	1.0323	1.0418	1.0416
Level 7	1.0380	1.0382	1.0561	-	1.0187	1.0189	1.0322	1.0206	1.0288	1.0288	Level 7	1.0391	1.0383	1.0545	-	1.0499	1.0258	1.0355	1.0229	1.0307	1.0282
Level 8	1.0296	1.0269	1.0408	-	1.0158	1.0160	1.0262	1.0149	1.0210	1.0185	Level 8	1.0307	1.0273	1.0399	-	1.0562	1.0304	1.0345	1.0208	1.0252	1.0201
Level 9	1.0271	1.0231	1.0347	-	1.0231	1.0194	1.0251	1.0130	1.0196	1.0145	Level 9	1.0277	1.0228	1.0335	-	1.0972	1.0568	1.0558	1.0257	1.0279	1.0176
					Bid Ask Covariance											**Correlatinos**					
Level 1	1.5183	1.5255	1.5724	-	1.5185	1.3990	1.5836	1.5265	1.5015	1.5112	Level 1	0.6498	0.6541	0.6344	-	0.6340	0.6136	0.6191	0.6545	0.6574	0.6574
Level 2	1.2632	1.2784	1.3517	-	1.2698	1.0964	1.3035	1.2611	1.2425	1.2583	Level 2	0.7775	0.7764	0.7380	-	0.7408	0.7558	0.7423	0.7848	0.7855	0.7851
Level 3	1.1313	1.1664	1.2238	-	1.1376	1.0601	1.1560	1.1257	1.1164	1.1350	Level 3	0.8592	0.8527	0.8116	-	0.8259	0.8574	0.8411	0.8753	0.8681	0.8667
Level 4	1.0649	1.1039	1.1547	-	1.0717	1.0395	1.0743	1.0587	1.0563	1.0753	Level 4	0.9094	0.8959	0.8620	-	0.8944	0.9183	0.9007	0.9283	0.9149	0.9112
Level 5	1.0312	1.0662	1.1074	-	1.0402	1.0194	1.0340	1.0275	1.0267	1.0424	Level 5	0.9387	0.9257	0.8963	-	0.9307	0.9523	0.9380	0.9540	0.9420	0.9410
Level 6	1.0157	1.0412	1.0730	-	1.0234	1.0077	1.0144	1.0130	1.0122	1.0239	Level 6	0.9544	0.9483	0.9245	-	0.9465	0.9699	0.9575	0.9687	0.9598	0.9601
Level 7	1.0079	1.0260	1.0480	-	1.0119	1.0028	1.0061	1.0059	1.0054	1.0130	Level 7	0.9624	0.9631	0.9483	-	0.9528	0.9749	0.9657	0.9776	0.9702	0.9726
Level 8	1.0047	1.0163	1.0311	-	1.0052	1.0015	1.0026	1.0024	1.0025	1.0070	Level 8	0.9702	0.9734	0.9616	-	0.9475	0.9705	0.9666	0.9796	0.9754	0.9803
Level 9	1.0030	1.0117	1.0233	-	1.0054	1.0012	1.0010	1.0011	1.0012	1.0041	Level 9	0.9730	0.9777	0.9676	-	0.9141	0.9463	0.9471	0.9749	0.9729	0.9827

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU6 futures contracts from 2004 to 2013. As EDU6 was delivered in September 2006 and rolled over to a new 10-year contract, results in 2007 are also not available due to being at the beginning of a new period EDU6 contract and the lack of trading activity.

Table A.86: EDU7 median annual variance ratios with time to maturity

EDU7	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDU7	2005	2006	2007	2008	2009	2010	2011	2012	2013
					Ask Variance										**Bid Variance**				
Level 1	1.5482	1.5372	1.6268	-	1.6538	1.7515	1.7125	1.5201	1.5165	Level 1	1.5483	1.5370	1.6240	-	1.5853	1.7000	1.6855	1.5415	1.5127
Level 2	1.2973	1.2931	1.3916	-	1.5290	1.5329	1.4124	1.2733	1.2715	Level 2	1.2978	1.2960	1.3819	-	1.4386	1.5364	1.4242	1.2911	1.2636
Level 3	1.1694	1.1800	1.2580	-	1.2987	1.3177	1.2562	1.1546	1.1560	Level 3	1.1722	1.1812	1.2519	-	1.2724	1.3501	1.2598	1.1555	1.1464
Level 4	1.1005	1.1213	1.1668	-	1.1395	1.1983	1.1675	1.0935	1.0982	Level 4	1.1042	1.1213	1.1673	-	1.1588	1.2109	1.1987	1.0986	1.0895
Level 5	1.0694	1.0868	1.1134	-	1.0765	1.1222	1.1241	1.0643	1.0660	Level 5	1.0719	1.0873	1.1114	-	1.1239	1.1381	1.1845	1.0677	1.0580
Level 6	1.0476	1.0608	1.0811	-	1.0502	1.0788	1.1015	1.0427	1.0424	Level 6	1.0490	1.0605	1.0792	-	1.1051	1.1128	1.2000	1.0508	1.0381
Level 7	1.0341	1.0418	1.0559	-	1.0382	1.0609	1.0856	1.0298	1.0265	Level 7	1.0348	1.0422	1.0565	-	1.0681	1.0750	1.2758	1.0394	1.0261
Level 8	1.0255	1.0306	1.0410	-	1.0421	1.0592	1.0890	1.0228	1.0170	Level 8	1.0266	1.0299	1.0407	-	1.0485	1.0759	1.3752	1.0374	1.0196
Level 9	1.0236	1.0259	1.0373	-	1.0591	1.0589	1.0847	1.0215	1.0136	Level 9	1.0252	1.0254	1.0357	-	1.0608	1.1404	1.6662	1.0496	1.0179
					Bid Ask Covariance										**Correlatinos**				
Level 1	1.5381	1.5352	1.6206	-	1.6112	1.6379	1.5843	1.5039	1.5026	Level 1	0.6459	0.6506	0.6158	-	0.6308	0.5883	0.5933	0.6487	0.6611
Level 2	1.2854	1.2892	1.3771	-	1.4731	1.3530	1.2951	1.2401	1.2491	Level 2	0.7705	0.7716	0.7236	-	0.7016	0.6515	0.7021	0.7745	0.7914
Level 3	1.1478	1.1719	1.2438	-	1.2639	1.1623	1.1410	1.1150	1.1245	Level 3	0.8531	0.8466	0.7988	-	0.7952	0.7407	0.7938	0.8654	0.8723
Level 4	1.0735	1.1091	1.1580	-	1.1199	1.0661	1.0655	1.0560	1.0647	Level 4	0.9057	0.8918	0.8567	-	0.8691	0.8259	0.8343	0.9103	0.9179
Level 5	1.0371	1.0733	1.1038	-	1.0561	1.0368	1.0291	1.0260	1.0338	Level 5	0.9329	0.9197	0.8998	-	0.8954	0.8787	0.8442	0.9366	0.9452
Level 6	1.0192	1.0469	1.0682	-	1.0275	1.0168	1.0121	1.0110	1.0175	Level 6	0.9533	0.9429	0.9266	-	0.9100	0.8986	0.8333	0.9517	0.9633
Level 7	1.0100	1.0294	1.0438	-	1.0146	1.0091	1.0046	1.0044	1.0087	Level 7	0.9664	0.9595	0.9465	-	0.9385	0.9302	0.7838	0.9621	0.9745
Level 8	1.0052	1.0186	1.0293	-	1.0073	1.0064	1.0027	1.0016	1.0044	Level 8	0.9741	0.9709	0.9609	-	0.9548	0.9294	0.7272	0.9639	0.9808
Level 9	1.0033	1.0133	1.0224	-	1.0044	1.0062	1.0028	1.0007	1.0024	Level 9	0.9754	0.9752	0.9655	-	0.9436	0.8773	0.6002	0.9528	0.9824

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU7 futures contracts from 2005 to 2013. As EDU7 was delivered in September 2007 and rolled over to a new 10-year contract, results in 2008 are also not available due to being at the beginning of a new period EDU7 contract and the lack of trading activity.

Table A.87: EDU8 median annual variance ratios with time to maturity

EDU8	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDU8	2005	2006	2007	2008	2009	2010	2011	2012	2013
				Ask Variance										**Bid Variance**					
Level 1	1.5983	1.5239	1.5337	1.5477	-	-	1.7442	1.5576	1.5159	Level 1	1.5984	1.5319	1.5346	1.5473	-	-	1.7049	1.6050	1.5188
Level 2	1.3629	1.2848	1.2838	1.3043	-	-	1.4059	1.3195	1.2704	Level 2	1.3482	1.2859	1.2832	1.3030	-	-	1.4438	1.3605	1.2703
Level 3	1.2088	1.1647	1.1568	1.1718	-	-	1.2385	1.2002	1.1500	Level 3	1.2055	1.1657	1.1574	1.1705	-	-	1.2601	1.2341	1.1464
Level 4	1.1329	1.1031	1.0936	1.0978	-	-	1.1493	1.1392	1.0925	Level 4	1.1455	1.1040	1.0935	1.0936	-	-	1.1423	1.1533	1.0899
Level 5	1.1182	1.0694	1.0632	1.0597	-	-	1.0929	1.1188	1.0614	Level 5	1.1088	1.0707	1.0630	1.0592	-	-	1.0786	1.1458	1.0586
Level 6	1.1011	1.0481	1.0438	1.0409	-	-	1.0790	1.1027	1.0401	Level 6	1.0934	1.0506	1.0440	1.0406	-	-	1.0541	1.1565	1.0403
Level 7	1.0946	1.0338	1.0306	1.0295	-	-	1.0547	1.0832	1.0257	Level 7	1.0771	1.0355	1.0301	1.0298	-	-	1.0503	1.1628	1.0279
Level 8	1.1060	1.0256	1.0217	1.0227	-	-	1.0325	1.0625	1.0172	Level 8	1.0670	1.0260	1.0212	1.0225	-	-	1.0457	1.1959	1.0218
Level 9	1.1220	1.0231	1.0181	1.0200	-	-	1.0328	1.0544	1.0136	Level 9	1.0848	1.0246	1.0181	1.0200	-	-	1.0569	1.2879	1.0214
				Bid Ask Covariance										**Correlatinos**					
Level 1	1.5696	1.5167	1.5343	1.5450	-	-	1.6745	1.5060	1.5055	Level 1	0.6256	0.6528	0.6516	0.6463	-	-	0.5866	0.6230	0.6584
Level 2	1.2937	1.2691	1.2809	1.3001	-	-	1.4774	1.2474	1.2591	Level 2	0.7417	0.7776	0.7793	0.7674	-	-	0.6929	0.7350	0.7872
Level 3	1.1407	1.1423	1.1530	1.1642	-	-	1.2347	1.1112	1.1272	Level 3	0.8295	0.8579	0.8640	0.8543	-	-	0.7936	0.8103	0.8723
Level 4	1.0735	1.0747	1.0868	1.0878	-	-	1.1308	1.0567	1.0621	Level 4	0.8730	0.9058	0.9145	0.9144	-	-	0.8754	0.8670	0.9175
Level 5	1.0353	1.0407	1.0546	1.0497	-	-	1.0613	1.0287	1.0308	Level 5	0.9019	0.9339	0.9407	0.9441	-	-	0.9272	0.8728	0.9446
Level 6	1.0134	1.0219	1.0357	1.0313	-	-	1.0292	1.0132	1.0141	Level 6	0.9146	0.9519	0.9579	0.9610	-	-	0.9486	0.8646	0.9612
Level 7	1.0065	1.0116	1.0224	1.0199	-	-	1.0132	1.0041	1.0058	Level 7	0.9284	0.9658	0.9707	0.9711	-	-	0.9521	0.8600	0.9729
Level 8	1.0014	1.0060	1.0138	1.0130	-	-	1.0064	1.0009	1.0020	Level 8	0.9372	0.9746	0.9792	0.9780	-	-	0.9563	0.8362	0.9786
Level 9	1.0004	1.0034	1.0098	1.0096	-	-	1.0029	0.9990	1.0006	Level 9	0.9218	0.9760	0.9822	0.9804	-	-	0.9462	0.7765	0.9791

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU8 futures contracts from 2005 to 2013. As EDU8 was delivered in September 2008 and rolled over to a new 10-year contract, results in 2009 and 2010 are also not available due to being at the beginning of a new period EDU8 contract and the lack of trading activity.

Table A.88: EDU9 median annual variance ratios with time to maturity

EDU9	2006	2007	2008	2009	2010	2011	2012	2013	EDU9	2006	2007	2008	2009	2010	2011	2012	2013
				Ask Variance									**Bid Variance**				
Level 1	1.6430	1.5560	1.5181	1.5754	-	1.8926	1.6117	1.5388	Level 1	1.6370	1.5584	1.5172	1.5719	-	1.5159	1.5918	1.5463
Level 2	1.3674	1.3020	1.2636	1.3319	-	1.5645	1.3470	1.3013	Level 2	1.3625	1.3019	1.2637	1.3320	-	1.3141	1.3519	1.3152
Level 3	1.2062	1.1636	1.1351	1.1948	-	1.3501	1.1994	1.1718	Level 3	1.1881	1.1625	1.1349	1.1971	-	1.2714	1.2201	1.1864
Level 4	1.1240	1.0942	1.0727	1.1290	-	1.2245	1.1396	1.1100	Level 4	1.1146	1.0929	1.0731	1.1261	-	1.1860	1.1531	1.1290
Level 5	1.0814	1.0593	1.0422	1.0855	-	1.1585	1.1160	1.0784	Level 5	1.0785	1.0582	1.0425	1.0843	-	1.1155	1.1424	1.0939
Level 6	1.0578	1.0407	1.0272	1.0594	-	1.1336	1.0950	1.0584	Level 6	1.0578	1.0399	1.0275	1.0597	-	1.0770	1.1451	1.0728
Level 7	1.0421	1.0284	1.0187	1.0410	-	1.1049	1.0770	1.0425	Level 7	1.0435	1.0280	1.0188	1.0405	-	1.0671	1.1272	1.0652
Level 8	1.0338	1.0212	1.0139	1.0299	-	1.0964	1.0555	1.0327	Level 8	1.0340	1.0213	1.0141	1.0298	-	1.0954	1.1148	1.0606
Level 9	1.0336	1.0194	1.0121	1.0261	-	1.1249	1.0482	1.0280	Level 9	1.0365	1.0197	1.0122	1.0258	-	1.1856	1.1454	1.0743
				Bid Ask Covariance									**Correlatinos**				
Level 1	1.6209	1.5475	1.5165	1.5729	-	1.6409	1.5567	1.5188	Level 1	0.6109	0.6417	0.6591	0.6362	-	0.6620	0.6282	0.6467
Level 2	1.3209	1.2882	1.2617	1.3249	-	1.1914	1.2781	1.2623	Level 2	0.7339	0.7681	0.7913	0.7507	-	0.7615	0.7397	0.7603
Level 3	1.1556	1.1444	1.1312	1.1861	-	1.0593	1.1317	1.1303	Level 3	0.8417	0.8602	0.8811	0.8354	-	0.7870	0.8196	0.8429
Level 4	1.0748	1.0711	1.0671	1.1160	-	1.0503	1.0676	1.0587	Level 4	0.8972	0.9150	0.9318	0.8880	-	0.8443	0.8672	0.8858
Level 5	1.0360	1.0365	1.0357	1.0723	-	1.0395	1.0409	1.0249	Level 5	0.9272	0.9450	0.9592	0.9223	-	0.8969	0.8754	0.9142
Level 6	1.0177	1.0197	1.0198	1.0465	-	1.0424	1.0258	1.0100	Level 6	0.9454	0.9617	0.9732	0.9437	-	0.9285	0.8733	0.9321
Level 7	1.0087	1.0103	1.0118	1.0296	-	1.0239	1.0117	1.0030	Level 7	0.9583	0.9728	0.9815	0.9611	-	0.9375	0.8872	0.9388
Level 8	1.0039	1.0055	1.0073	1.0188	-	1.0104	1.0046	0.9996	Level 8	0.9671	0.9792	0.9861	0.9711	-	0.9155	0.8970	0.9429
Level 9	1.0018	1.0032	1.0051	1.0145	-	1.0342	1.0021	0.9982	Level 9	0.9648	0.9807	0.9879	0.9748	-	0.8483	0.8730	0.9309

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDU9 futures contracts from 2006 to 2013. As EDU9 was delivered in September 2009 and rolled over to a new 10-year contract, results in 2010 are also not available due to being at the beginning of a new period EDU9 contract and the lack of trading activity.

Table A.89: EDZ0 median annual variance ratios with time to maturity

EDZ0	2006	2007	2008	2009	2010	2011	2012	2013	EDZ0	2006	2007	2008	2009	2010	2011	2012	2013
				Ask Variance									**Bid Variance**				
Level 1	2.1281	1.6795	1.5302	1.5198	1.5766	-	-	1.6849	Level 1	2.0724	1.6825	1.5325	1.5189	1.5757	-	-	1.6994
Level 2	1.9210	1.4201	1.2869	1.2732	1.3539	-	-	1.4817	Level 2	1.9749	1.4406	1.2885	1.2723	1.3504	-	-	1.4971
Level 3	1.7140	1.2675	1.1535	1.1523	1.2277	-	-	1.3735	Level 3	1.6068	1.2794	1.1547	1.1543	1.2226	-	-	1.3348
Level 4	1.4537	1.1698	1.0860	1.0914	1.1570	-	-	1.3291	Level 4	1.5008	1.1938	1.0881	1.0910	1.1468	-	-	1.2479
Level 5	1.2397	1.1174	1.0492	1.0576	1.1100	-	-	1.3176	Level 5	1.3287	1.1296	1.0524	1.0584	1.0996	-	-	1.2386
Level 6	1.1258	1.0882	1.0313	1.0386	1.0727	-	-	1.3262	Level 6	1.4271	1.0914	1.0332	1.0390	1.0673	-	-	1.2802
Level 7	1.0708	1.0748	1.0219	1.0264	1.0493	-	-	1.3280	Level 7	1.3668	1.0784	1.0239	1.0263	1.0466	-	-	1.3104
Level 8	1.0487	1.0700	1.0177	1.0187	1.0341	-	-	1.3163	Level 8	1.5197	1.0688	1.0189	1.0189	1.0342	-	-	1.4067
Level 9	1.0464	1.0736	1.0168	1.0158	1.0271	-	-	1.3466	Level 9	1.5607	1.0844	1.0186	1.0160	1.0311	-	-	1.6771
				Bid Ask Covariance									**Correlatinos**				
Level 1	2.0432	1.6152	1.5247	1.5158	1.5692	-	-	1.5055	Level 1	0.4954	0.5944	0.6525	0.6584	0.6346	-	-	0.5884
Level 2	1.9129	1.3303	1.2756	1.2669	1.3445	-	-	1.2248	Level 2	0.5286	0.6942	0.7761	0.7860	0.7405	-	-	0.6679
Level 3	1.4345	1.1674	1.1374	1.1444	1.2117	-	-	1.0726	Level 3	0.6245	0.7816	0.8661	0.8663	0.8179	-	-	0.7492
Level 4	1.0986	1.0845	1.0661	1.0802	1.1359	-	-	1.0032	Level 4	0.6752	0.8377	0.9190	0.9166	0.8720	-	-	0.8014
Level 5	1.0489	1.0395	1.0299	1.0460	1.0891	-	-	0.9652	Level 5	0.7610	0.8852	0.9502	0.9448	0.9094	-	-	0.8074
Level 6	1.0217	1.0188	1.0141	1.0268	1.0565	-	-	0.9463	Level 6	0.7287	0.9163	0.9679	0.9625	0.9370	-	-	0.7812
Level 7	1.0164	1.0090	1.0066	1.0157	1.0345	-	-	0.9608	Level 7	0.7515	0.9273	0.9766	0.9744	0.9555	-	-	0.7631
Level 8	1.0076	1.0046	1.0034	1.0095	1.0204	-	-	0.9755	Level 8	0.6843	0.9356	0.9814	0.9814	0.9669	-	-	0.7109
Level 9	1.0068	1.0020	1.0020	1.0067	1.0126	-	-	0.9850	Level 9	0.6437	0.9221	0.9817	0.9842	0.9698	-	-	0.5963

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ0 futures contracts from 2006 to 2013. As EDZ0 was delivered in December 2010 and rolled over to a new 10-year contract, results in 2011 and 2012 are also not available due to being at the beginning of a new period EDZ0 contract and the lack of trading activity.

Table A.90: EDZ1 median annual variance ratios with time to maturity

EDZ1	2007	2008	2009	2010	2011	2012	2013	EDZ1	2007	2008	2009	2010	2011	2012	2013
				Ask Variance								**Bid Variance**			
Level 1	1.6880	1.5875	1.5188	1.5518	1.5965	-	1.6794	Level 1	1.6716	1.5901	1.5185	1.5488	1.6010	-	1.6724
Level 2	1.4957	1.3346	1.2710	1.3071	1.3653	-	1.4755	Level 2	1.4781	1.3451	1.2716	1.3022	1.3607	-	1.4686
Level 3	1.3423	1.2104	1.1498	1.1808	1.2309	-	1.3535	Level 3	1.3335	1.2035	1.1525	1.1759	1.2263	-	1.3141
Level 4	1.2398	1.1325	1.0900	1.1163	1.1521	-	1.3030	Level 4	1.2042	1.1277	1.0893	1.1087	1.1469	-	1.2171
Level 5	1.1571	1.0867	1.0578	1.0783	1.1033	-	1.3271	Level 5	1.1534	1.0877	1.0571	1.0718	1.0991	-	1.1678
Level 6	1.1196	1.0632	1.0388	1.0527	1.0716	-	1.3454	Level 6	1.1113	1.0643	1.0378	1.0482	1.0681	-	1.1479
Level 7	1.0851	1.0564	1.0262	1.0358	1.0464	-	1.4184	Level 7	1.0909	1.0574	1.0252	1.0340	1.0463	-	1.1685
Level 8	1.0672	1.0561	1.0191	1.0243	1.0304	-	1.4732	Level 8	1.1049	1.0658	1.0187	1.0247	1.0329	-	1.2926
Level 9	1.0633	1.0663	1.0167	1.0193	1.0236	-	1.6408	Level 9	1.1371	1.0870	1.0167	1.0218	1.0285	-	1.5309
				Bid Ask Covariance								**Correlatinos**			
Level 1	1.5784	1.5381	1.5087	1.5440	1.5956	-	1.5631	Level 1	0.5982	0.6289	0.6585	0.6457	0.6246	-	0.5980
Level 2	1.3546	1.2803	1.2571	1.2931	1.3544	-	1.3052	Level 2	0.6765	0.7435	0.7864	0.7679	0.7349	-	0.6810
Level 3	1.1903	1.1325	1.1329	1.1643	1.2198	-	1.1439	Level 3	0.7499	0.8309	0.8677	0.8504	0.8154	-	0.7610
Level 4	1.0819	1.0586	1.0678	1.0956	1.1395	-	1.0643	Level 4	0.8304	0.8868	0.9180	0.9019	0.8719	-	0.8216
Level 5	1.0397	1.0269	1.0355	1.0572	1.0895	-	1.0251	Level 5	0.8670	0.9194	0.9460	0.9330	0.9099	-	0.8563
Level 6	1.0158	1.0109	1.0185	1.0346	1.0579	-	1.0090	Level 6	0.8999	0.9396	0.9636	0.9540	0.9362	-	0.8711
Level 7	1.0098	1.0038	1.0096	1.0206	1.0350	-	1.0009	Level 7	0.9166	0.9457	0.9754	0.9671	0.9557	-	0.8558
Level 8	1.0035	1.0010	1.0054	1.0121	1.0207	-	0.9913	Level 8	0.9050	0.9383	0.9816	0.9759	0.9681	-	0.7737
Level 9	1.0012	1.0005	1.0035	1.0076	1.0129	-	0.9951	Level 9	0.8794	0.9200	0.9836	0.9787	0.9723	-	0.6532

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ1 futures contracts from 2007 to 2013. As EDZ1 was delivered in December 2011 and rolled over to a new 10-year contract, results in 2012 are also not available due to being at the beginning of a new period EDZ1 contract and the lack of trading activity.

Table A.91: EDZ2 median annual variance ratios with time to maturity

EDZ2	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDZ2	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	20
									Ask Variance													**Bid Variance**			
Level 1	1.8889	-	-	-	-	-	1.6345	1.5341	1.5320	1.5493	1.6106	1.6043	Level 1	1.8134	-	-	-	-	-	1.6154	1.5273	1.5311	1.5490	1.5988	1.59
Level 2	2.1697	-	-	-	-	-	1.4041	1.2916	1.2897	1.3113	1.3861	1.3346	Level 2	1.6472	-	-	-	-	-	1.3970	1.2850	1.2832	1.3075	1.3764	1.35
Level 3	2.2494	-	-	-	-	-	1.2595	1.1639	1.1609	1.1840	1.2589	1.1874	Level 3	1.4104	-	-	-	-	-	1.2685	1.1554	1.1574	1.1767	1.2466	1.21
Level 4	1.8216	-	-	-	-	-	1.1766	1.1010	1.0950	1.1177	1.1706	1.1179	Level 4	1.3862	-	-	-	-	-	1.1872	1.0912	1.0906	1.1091	1.1535	1.14
Level 5	1.7101	-	-	-	-	-	1.1165	1.0685	1.0617	1.0773	1.1110	1.0871	Level 5	1.3715	-	-	-	-	-	1.1346	1.0616	1.0568	1.0695	1.1010	1.11
Level 6	1.7070	-	-	-	-	-	1.0873	1.0522	1.0413	1.0526	1.0706	1.0830	Level 6	1.3929	-	-	-	-	-	1.1057	1.0445	1.0387	1.0477	1.0649	1.13
Level 7	2.1599	-	-	-	-	-	1.0780	1.0393	1.0278	1.0342	1.0461	1.0835	Level 7	1.5482	-	-	-	-	-	1.0941	1.0326	1.0266	1.0332	1.0439	1.15
Level 8	3.8863	-	-	-	-	-	1.0762	1.0340	1.0190	1.0231	1.0308	1.0985	Level 8	1.7828	-	-	-	-	-	1.0875	1.0266	1.0199	1.0240	1.0321	1.22
Level 9	6.6023	-	-	-	-	-	1.1084	1.0334	1.0152	1.0178	1.0235	1.1145	Level 9	2.1132	-	-	-	-	-	1.1139	1.0267	1.0177	1.0208	1.0286	1.56
									Bid Ask Covariance													**Correlatinos**			
Level 1	1.6604	-	-	-	-	-	1.5445	1.5113	1.5230	1.5431	1.5961	1.5650	Level 1	0.5515	-	-	-	-	-	0.6191	0.6547	0.6531	0.6456	0.6255	0.62
Level 2	1.2439	-	-	-	-	-	1.2800	1.2560	1.2723	1.2993	1.3645	1.2903	Level 2	0.6071	-	-	-	-	-	0.7158	0.7782	0.7793	0.7648	0.7265	0.73
Level 3	1.0364	-	-	-	-	-	1.1318	1.1221	1.1405	1.1669	1.2363	1.1408	Level 3	0.7090	-	-	-	-	-	0.7883	0.8655	0.8640	0.8498	0.8022	0.82
Level 4	0.9852	-	-	-	-	-	1.0596	1.0579	1.0721	1.0971	1.1460	1.0629	Level 4	0.7214	-	-	-	-	-	0.8423	0.9164	0.9170	0.9016	0.8670	0.87
Level 5	0.9657	-	-	-	-	-	1.0253	1.0273	1.0385	1.0583	1.0871	1.0285	Level 5	0.7291	-	-	-	-	-	0.8813	0.9420	0.9462	0.9350	0.9083	0.89
Level 6	0.9739	-	-	-	-	-	1.0097	1.0111	1.0207	1.0349	1.0532	1.0115	Level 6	0.7179	-	-	-	-	-	0.9044	0.9574	0.9628	0.9544	0.9390	0.88
Level 7	0.9012	-	-	-	-	-	1.0036	1.0046	1.0115	1.0209	1.0311	1.0033	Level 7	0.6459	-	-	-	-	-	0.9140	0.9684	0.9741	0.9679	0.9580	0.86
Level 8	0.7994	-	-	-	-	-	1.0000	1.0016	1.0061	1.0123	1.0183	0.9994	Level 8	0.5609	-	-	-	-	-	0.9195	0.9740	0.9805	0.9766	0.9689	0.81
Level 9	0.7124	-	-	-	-	-	0.9998	1.0009	1.0034	1.0079	1.0114	0.9994	Level 9	0.4732	-	-	-	-	-	0.8978	0.9740	0.9826	0.9796	0.9722	0.63

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ2 futures contracts from 2002 to 2013. As EDZ2 was delivered in December 2002 and rolled over to a new 10-year contract, results from 2003 to 2007 are also not available due to being at the beginning of a new period EDZ2 contract and the lack of trading activity.

Table A.92: EDZ3 median annual variance ratios with time to maturity

EDZ3	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDZ3	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
						Ask Variance												**Bid Variance**					
Level 1	1.5496	-	-	-	-	1.6733	1.5870	1.5263	1.5298	1.6262	1.6494	Level 1	1.5320	-	-	-	-	1.7046	1.5687	1.5281	1.5267	1.6224	1.6370
Level 2	1.3388	-	-	-	-	1.5123	1.3633	1.2816	1.2813	1.4084	1.4347	Level 2	1.3505	-	-	-	-	1.5293	1.3416	1.2801	1.2794	1.3913	1.4372
Level 3	1.2195	-	-	-	-	1.3859	1.2170	1.1493	1.1578	1.2741	1.2920	Level 3	1.2275	-	-	-	-	1.3827	1.1944	1.1463	1.1538	1.2518	1.2762
Level 4	1.1209	-	-	-	-	1.3499	1.1376	1.0835	1.0928	1.1767	1.1867	Level 4	1.1326	-	-	-	-	1.3360	1.1213	1.0820	1.0881	1.1610	1.1735
Level 5	1.0787	-	-	-	-	1.3240	1.0905	1.0514	1.0601	1.1162	1.1215	Level 5	1.0928	-	-	-	-	1.3288	1.0809	1.0491	1.0551	1.1028	1.1057
Level 6	1.0644	-	-	-	-	1.3149	1.0726	1.0339	1.0398	1.0729	1.0724	Level 6	1.0677	-	-	-	-	1.3158	1.0597	1.0339	1.0370	1.0664	1.0662
Level 7	1.0548	-	-	-	-	1.3320	1.0639	1.0225	1.0266	1.0452	1.0425	Level 7	1.0697	-	-	-	-	1.3668	1.0480	1.0245	1.0257	1.0439	1.0419
Level 8	1.0597	-	-	-	-	1.4360	1.0720	1.0162	1.0183	1.0303	1.0256	Level 8	1.0775	-	-	-	-	1.5933	1.0437	1.0197	1.0193	1.0322	1.0278
Level 9	1.0887	-	-	-	-	1.6154	1.1047	1.0135	1.0145	1.0240	1.0190	Level 9	1.1090	-	-	-	-	1.9186	1.0469	1.0202	1.0174	1.0296	1.0243
						Bid Ask Covariance												**Correlatinos**					
Level 1	1.5079	-	-	-	-	1.4910	1.5180	1.5233	1.5209	1.6058	1.6350	Level 1	0.6527	-	-	-	-	0.5867	0.6375	0.6544	0.6550	0.6164	0.6109
Level 2	1.3102	-	-	-	-	1.2396	1.2480	1.2732	1.2690	1.3688	1.4202	Level 2	0.7405	-	-	-	-	0.6539	0.7454	0.7812	0.7816	0.7187	0.6958
Level 3	1.1719	-	-	-	-	1.0994	1.1150	1.1327	1.1403	1.2246	1.2661	Level 3	0.8147	-	-	-	-	0.7232	0.8372	0.8724	0.8667	0.7989	0.7836
Level 4	1.0872	-	-	-	-	1.0299	1.0523	1.0654	1.0734	1.1334	1.1689	Level 4	0.8830	-	-	-	-	0.7485	0.8919	0.9243	0.9190	0.8613	0.8521
Level 5	1.0349	-	-	-	-	1.0126	1.0188	1.0313	1.0397	1.0791	1.0988	Level 5	0.9151	-	-	-	-	0.7526	0.9251	0.9532	0.9478	0.9068	0.9044
Level 6	1.0118	-	-	-	-	1.0077	1.0079	1.0151	1.0224	1.0449	1.0552	Level 6	0.9366	-	-	-	-	0.7600	0.9437	0.9672	0.9643	0.9377	0.9379
Level 7	1.0046	-	-	-	-	1.0020	1.0015	1.0069	1.0126	1.0258	1.0295	Level 7	0.9349	-	-	-	-	0.7317	0.9542	0.9761	0.9750	0.9579	0.9598
Level 8	0.9999	-	-	-	-	0.9997	0.9994	1.0030	1.0074	1.0145	1.0156	Level 8	0.9281	-	-	-	-	0.6276	0.9581	0.9807	0.9810	0.9688	0.9730
Level 9	1.0005	-	-	-	-	1.0007	0.9994	1.0014	1.0046	1.0087	1.0086	Level 9	0.9017	-	-	-	-	0.5212	0.9552	0.9802	0.9829	0.9712	0.9763

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ3 futures contracts from 2003 to 2013. As EDZ3 was delivered in December 2003 and rolled over to a new 10-year contract, results from 2004 to 2007 are also not available due to being at the beginning of a new period EDZ3 contract and the lack of trading activity.

Table A.93: EDZ4 median annual variance ratios with time to maturity

EDZ4	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDZ4	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
						Ask Variance												**Bid Variance**					
Level 1	1.5224	1.5697	-	-	-	2.0394	1.7649	1.5499	1.5057	1.5729	1.6148	Level 1	1.5430	1.5672	-	-	-	1.7941	1.6475	1.5482	1.5023	1.5684	1.6070
Level 2	1.2664	1.3388	-	-	-	1.9041	1.5843	1.2922	1.2553	1.3532	1.3943	Level 2	1.2698	1.3382	-	-	-	1.4780	1.4435	1.2899	1.2552	1.3347	1.3715
Level 3	1.1383	1.2049	-	-	-	1.5862	1.5102	1.1548	1.1365	1.2265	1.2665	Level 3	1.1425	1.1979	-	-	-	1.2416	1.2992	1.1559	1.1358	1.2047	1.2500
Level 4	1.0769	1.1278	-	-	-	1.3262	1.4728	1.0827	1.0782	1.1522	1.1838	Level 4	1.0818	1.1284	-	-	-	1.1357	1.2152	1.0845	1.0758	1.1330	1.1622
Level 5	1.0454	1.0925	-	-	-	1.1896	1.4688	1.0490	1.0493	1.0992	1.1225	Level 5	1.0501	1.0914	-	-	-	1.0797	1.1750	1.0523	1.0473	1.0871	1.1076
Level 6	1.0317	1.0652	-	-	-	1.0955	1.4948	1.0328	1.0331	1.0650	1.0762	Level 6	1.0380	1.0629	-	-	-	1.0591	1.1422	1.0373	1.0318	1.0576	1.0684
Level 7	1.0321	1.0450	-	-	-	1.0513	1.5833	1.0244	1.0226	1.0415	1.0465	Level 7	1.0351	1.0443	-	-	-	1.0394	1.1182	1.0286	1.0222	1.0393	1.0436
Level 8	1.0401	1.0346	-	-	-	1.0343	1.8096	1.0187	1.0157	1.0279	1.0292	Level 8	1.0439	1.0352	-	-	-	1.0348	1.1268	1.0264	1.0172	1.0292	1.0315
Level 9	1.0557	1.0323	-	-	-	1.0351	2.1102	1.0169	1.0129	1.0228	1.0228	Level 9	1.0580	1.0320	-	-	-	1.0462	1.1558	1.0312	1.0159	1.0276	1.0273
						Bid Ask Covariance												**Correlatinos**					
Level 1	1.5020	1.5699	-	-	-	1.5530	1.5315	1.5393	1.4978	1.5517	1.6010	Level 1	0.6481	0.6381	-	-	-	0.5748	0.6070	0.6459	0.6657	0.6376	0.6223
Level 2	1.2547	1.3330	-	-	-	1.1877	1.2565	1.2734	1.2458	1.3103	1.3625	Level 2	0.7875	0.7473	-	-	-	0.6905	0.6928	0.7753	0.7967	0.7493	0.7292
Level 3	1.1213	1.1942	-	-	-	1.0981	1.1208	1.1343	1.1205	1.1760	1.2341	Level 3	0.8752	0.8348	-	-	-	0.8106	0.7697	0.8651	0.8805	0.8301	0.8000
Level 4	1.0556	1.1200	-	-	-	1.0611	1.0548	1.0640	1.0607	1.1019	1.1465	Level 4	0.9244	0.8862	-	-	-	0.8819	0.8229	0.9221	0.9295	0.8826	0.8605
Level 5	1.0250	1.0785	-	-	-	1.0319	1.0270	1.0290	1.0305	1.0608	1.0931	Level 5	0.9523	0.9163	-	-	-	0.9264	0.8510	0.9503	0.9548	0.9199	0.9028
Level 6	1.0098	1.0497	-	-	-	1.0120	1.0075	1.0119	1.0156	1.0343	1.0548	Level 6	0.9634	0.9408	-	-	-	0.9442	0.8755	0.9640	0.9692	0.9455	0.9360
Level 7	1.0022	1.0311	-	-	-	1.0046	1.0029	1.0049	1.0081	1.0189	1.0301	Level 7	0.9661	0.9576	-	-	-	0.9621	0.8943	0.9722	0.9782	0.9622	0.9583
Level 8	0.9986	1.0210	-	-	-	1.0018	1.0009	1.0018	1.0043	1.0104	1.0159	Level 8	0.9580	0.9660	-	-	-	0.9664	0.8875	0.9743	0.9831	0.9716	0.9694
Level 9	0.9958	1.0169	-	-	-	1.0013	0.9997	1.0007	1.0024	1.0063	1.0090	Level 9	0.9451	0.9690	-	-	-	0.9560	0.8652	0.9698	0.9844	0.9732	0.9734

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ4 futures contracts from 2003 to 2013. As EDZ4 was delivered in December 2004 and rolled over to a new 10-year contract, results from 2005 to 2007 are also not available due to being at the beginning of a new period EDZ4 contract and the lack of trading activity.

Table A.94: EDZ5 median annual variance ratios with time to maturity

EDZ5	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDZ5	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
						Ask Variance											**Bid Variance**				
Level 1	1.5171	1.5555	-	-	-	1.7202	1.5713	1.5133	1.5355	1.5454	Level 1	1.5155	1.5514	-	-	-	1.6111	1.5684	1.5140	1.5315	1.5407
Level 2	1.2827	1.3316	-	-	-	1.4703	1.3092	1.2563	1.2929	1.3116	Level 2	1.2769	1.3323	-	-	-	1.3891	1.2963	1.2574	1.2824	1.3009
Level 3	1.1634	1.2083	-	-	-	1.2765	1.1670	1.1331	1.1775	1.1910	Level 3	1.1615	1.2115	-	-	-	1.1995	1.1538	1.1344	1.1603	1.1809
Level 4	1.1000	1.1416	-	-	-	1.1562	1.0904	1.0752	1.1163	1.1274	Level 4	1.1009	1.1441	-	-	-	1.1130	1.0812	1.0739	1.1001	1.1180
Level 5	1.0683	1.1002	-	-	-	1.1053	1.0531	1.0477	1.0762	1.0873	Level 5	1.0680	1.1010	-	-	-	1.0714	1.0457	1.0472	1.0666	1.0774
Level 6	1.0464	1.0716	-	-	-	1.0696	1.0326	1.0320	1.0518	1.0558	Level 6	1.0489	1.0716	-	-	-	1.0466	1.0303	1.0316	1.0459	1.0508
Level 7	1.0338	1.0498	-	-	-	1.0465	1.0231	1.0224	1.0341	1.0348	Level 7	1.0368	1.0499	-	-	-	1.0335	1.0228	1.0243	1.0324	1.0333
Level 8	1.0254	1.0355	-	-	-	1.0425	1.0193	1.0168	1.0237	1.0224	Level 8	1.0273	1.0358	-	-	-	1.0318	1.0207	1.0203	1.0260	1.0241
Level 9	1.0229	1.0299	-	-	-	1.0531	1.0194	1.0151	1.0203	1.0171	Level 9	1.0253	1.0303	-	-	-	1.0539	1.0269	1.0214	1.0269	1.0209
						Bid Ask Covariance											**Correlatinos**				
Level 1	1.5128	1.5525	-	-	-	1.5440	1.5598	1.5074	1.5129	1.5347	Level 1	0.6598	0.6446	-	-	-	0.6207	0.6376	0.6605	0.6529	0.6491
Level 2	1.2714	1.3282	-	-	-	1.3114	1.2765	1.2430	1.2578	1.2853	Level 2	0.7831	0.7506	-	-	-	0.7199	0.7714	0.7953	0.7798	0.7687
Level 3	1.1500	1.2061	-	-	-	1.1654	1.1408	1.1142	1.1323	1.1630	Level 3	0.8609	0.8254	-	-	-	0.8337	0.8667	0.8815	0.8618	0.8468
Level 4	1.0842	1.1372	-	-	-	1.0715	1.0692	1.0536	1.0690	1.0994	Level 4	0.9083	0.8741	-	-	-	0.8985	0.9249	0.9312	0.9090	0.8944
Level 5	1.0474	1.0943	-	-	-	1.0353	1.0307	1.0245	1.0362	1.0601	Level 5	0.9364	0.9083	-	-	-	0.9334	0.9563	0.9549	0.9376	0.9282
Level 6	1.0291	1.0647	-	-	-	1.0154	1.0136	1.0098	1.0196	1.0353	Level 6	0.9533	0.9332	-	-	-	0.9555	0.9706	0.9694	0.9561	0.9517
Level 7	1.0172	1.0415	-	-	-	1.0070	1.0058	1.0040	1.0103	1.0194	Level 7	0.9645	0.9525	-	-	-	0.9676	0.9777	0.9763	0.9686	0.9677
Level 8	1.0108	1.0272	-	-	-	1.0031	1.0022	1.0016	1.0055	1.0106	Level 8	0.9735	0.9654	-	-	-	0.9692	0.9797	0.9801	0.9747	0.9765
Level 9	1.0079	1.0207	-	-	-	0.9994	1.0009	1.0007	1.0030	1.0062	Level 9	0.9753	0.9706	-	-	-	0.9489	0.9738	0.9790	0.9738	0.9795

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ5 futures contracts from 2004 to 2013. As EDZ5 was delivered in December 2005 and rolled over to a new 10-year contract, results from 2006 to 2008 are also not available due to being at the beginning of a new period EDZ5 contract and the lack of trading activity.

Table A.95: EDZ6 median annual variance ratios with time to maturity

EDZ6	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDZ6	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
						Ask Variance											**Bid Variance**				
Level 1	1.5761	1.5259	1.5777	-	-	1.6151	1.6354	1.5424	1.5153	1.5182	Level 1	1.5829	1.5246	1.5773	-	-	1.6118	1.6728	1.5414	1.5092	1.5120
Level 2	1.3175	1.2769	1.3450	-	-	1.4151	1.3946	1.2869	1.2716	1.2779	Level 2	1.3134	1.2829	1.3446	-	-	1.3597	1.4042	1.2907	1.2675	1.2711
Level 3	1.1880	1.1658	1.2301	-	-	1.2639	1.2244	1.1570	1.1581	1.1609	Level 3	1.1802	1.1687	1.2322	-	-	1.2100	1.2334	1.1638	1.1497	1.1499
Level 4	1.1081	1.1079	1.1619	-	-	1.1984	1.1374	1.0903	1.0978	1.1053	Level 4	1.1089	1.1098	1.1615	-	-	1.1519	1.1323	1.1020	1.0907	1.0931
Level 5	1.0712	1.0749	1.1131	-	-	1.1304	1.0833	1.0560	1.0634	1.0690	Level 5	1.0714	1.0768	1.1152	-	-	1.1436	1.0874	1.0699	1.0600	1.0604
Level 6	1.0533	1.0526	1.0805	-	-	1.1473	1.0591	1.0387	1.0417	1.0436	Level 6	1.0508	1.0528	1.0816	-	-	1.1630	1.0556	1.0559	1.0425	1.0401
Level 7	1.0380	1.0356	1.0567	-	-	1.1976	1.0453	1.0268	1.0280	1.0273	Level 7	1.0413	1.0371	1.0568	-	-	1.1978	1.0471	1.0502	1.0315	1.0261
Level 8	1.0284	1.0257	1.0409	-	-	1.3517	1.0394	1.0202	1.0206	1.0178	Level 8	1.0337	1.0260	1.0408	-	-	1.2755	1.0489	1.0594	1.0279	1.0187
Level 9	1.0268	1.0215	1.0352	-	-	2.0365	1.0414	1.0171	1.0190	1.0137	Level 9	1.0330	1.0224	1.0348	-	-	1.5025	1.0850	1.0944	1.0317	1.0169
						Bid Ask Covariance											**Correlatinos**				
Level 1	1.5748	1.5218	1.5751	-	-	1.4722	1.5978	1.5212	1.4965	1.5088	Level 1	0.6317	0.6559	0.6340	-	-	0.6247	0.5978	0.6488	0.6626	0.6614
Level 2	1.2991	1.2725	1.3403	-	-	1.2209	1.3245	1.2582	1.2418	1.2552	Level 2	0.7614	0.7795	0.7437	-	-	0.7358	0.7122	0.7748	0.7890	0.7867
Level 3	1.1454	1.1568	1.2286	-	-	1.1022	1.1658	1.1234	1.1184	1.1335	Level 3	0.8473	0.8556	0.8116	-	-	0.8271	0.8108	0.8593	0.8698	0.8696
Level 4	1.0721	1.0956	1.1534	-	-	1.0868	1.0796	1.0543	1.0589	1.0730	Level 4	0.9018	0.9011	0.8610	-	-	0.8682	0.8832	0.9074	0.9168	0.9148
Level 5	1.0351	1.0599	1.1056	-	-	1.0465	1.0341	1.0210	1.0279	1.0417	Level 5	0.9334	0.9287	0.8967	-	-	0.8764	0.9196	0.9347	0.9434	0.9430
Level 6	1.0151	1.0359	1.0718	-	-	1.0127	1.0160	1.0074	1.0132	1.0229	Level 6	0.9517	0.9498	0.9245	-	-	0.8680	0.9474	0.9471	0.9593	0.9614
Level 7	1.0074	1.0221	1.0481	-	-	1.0056	1.0074	1.0019	1.0059	1.0122	Level 7	0.9604	0.9643	0.9462	-	-	0.8496	0.9550	0.9522	0.9695	0.9746
Level 8	1.0035	1.0139	1.0324	-	-	1.0017	1.0031	0.9994	1.0029	1.0064	Level 8	0.9674	0.9747	0.9608	-	-	0.8109	0.9534	0.9439	0.9728	0.9817
Level 9	1.0020	1.0097	1.0241	-	-	0.9951	1.0013	0.9989	1.0014	1.0036	Level 9	0.9681	0.9781	0.9664	-	-	0.7242	0.9217	0.9137	0.9692	0.9834

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ6 futures contracts from 2004 to 2013. As EDZ6 was delivered in December 2006 and rolled over to a new 10-year contract, results from 2007 to 2008 are also not available due to being at the beginning of a new period EDZ6 contract and the lack of trading activity.

Table A.96: EDZ7 median annual variance ratios with time to maturity

EDZ7	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDZ7	2005	2006	2007	2008	2009	2010	2011	2012	2013
					Ask Variance										**Bid Variance**				
Level 1	1.5513	1.5349	1.5673	-	1.6234	1.7857	1.7544	1.5177	1.5143	Level 1	1.5517	1.5385	1.5690	-	1.6149	1.6705	1.7437	1.5213	1.5182
Level 2	1.3086	1.2933	1.3209	-	1.3454	1.4371	1.5600	1.2734	1.2728	Level 2	1.3105	1.2922	1.3218	-	1.3610	1.3615	1.4776	1.2777	1.2702
Level 3	1.1773	1.1711	1.1896	-	1.2102	1.3867	1.3906	1.1564	1.1529	Level 3	1.1759	1.1721	1.1906	-	1.2254	1.2628	1.3252	1.1555	1.1487
Level 4	1.1059	1.1163	1.1213	-	1.1126	1.2389	1.3244	1.0969	1.0950	Level 4	1.1075	1.1155	1.1219	-	1.1159	1.1925	1.2790	1.1039	1.0904
Level 5	1.0700	1.0823	1.0831	-	1.0713	1.1685	1.2583	1.0668	1.0620	Level 5	1.0747	1.0808	1.0822	-	1.0716	1.1232	1.2788	1.0738	1.0595
Level 6	1.0484	1.0574	1.0578	-	1.0477	1.1619	1.2183	1.0461	1.0401	Level 6	1.0520	1.0577	1.0581	-	1.0412	1.0984	1.2812	1.0575	1.0393
Level 7	1.0351	1.0395	1.0418	-	1.0375	1.1072	1.1878	1.0326	1.0254	Level 7	1.0375	1.0399	1.0420	-	1.0281	1.1032	1.3022	1.0482	1.0273
Level 8	1.0287	1.0296	1.0314	-	1.0373	1.1588	1.1349	1.0241	1.0172	Level 8	1.0294	1.0291	1.0308	-	1.0317	1.1092	1.3709	1.0456	1.0205
Level 9	1.0283	1.0262	1.0285	-	1.0706	1.1449	1.1633	1.0219	1.0137	Level 9	1.0297	1.0257	1.0270	-	1.0663	1.1902	1.5766	1.0559	1.0188
					Bid Ask Covariance										**Correlatinos**				
Level 1	1.5365	1.5334	1.5668	-	1.6184	1.5321	1.5868	1.4907	1.5038	Level 1	0.6445	0.6500	0.6374	-	0.6192	0.5986	0.5735	0.6573	0.6587
Level 2	1.2856	1.2849	1.3198	-	1.3499	1.2046	1.2651	1.2373	1.2522	Level 2	0.7630	0.7739	0.7566	-	0.7348	0.7345	0.6768	0.7826	0.7873
Level 3	1.1433	1.1619	1.1871	-	1.2156	1.0980	1.1374	1.1129	1.1251	Level 3	0.8504	0.8532	0.8399	-	0.8161	0.7919	0.7546	0.8654	0.8705
Level 4	1.0673	1.1011	1.1149	-	1.1131	1.0645	1.0570	1.0510	1.0637	Level 4	0.9029	0.8965	0.8914	-	0.8961	0.8386	0.7819	0.9059	0.9171
Level 5	1.0322	1.0666	1.0762	-	1.0687	1.0232	1.0210	1.0232	1.0333	Level 5	0.9305	0.9252	0.9241	-	0.9332	0.8903	0.7820	0.9312	0.9439
Level 6	1.0156	1.0429	1.0492	-	1.0346	1.0065	1.0100	1.0094	1.0167	Level 6	0.9506	0.9455	0.9450	-	0.9604	0.9104	0.7805	0.9456	0.9622
Level 7	1.0085	1.0265	1.0332	-	1.0186	1.0000	1.0060	1.0026	1.0081	Level 7	0.9639	0.9616	0.9597	-	0.9726	0.9065	0.7679	0.9540	0.9735
Level 8	1.0047	1.0163	1.0223	-	1.0069	1.0023	1.0023	1.0003	1.0038	Level 8	0.9714	0.9717	0.9701	-	0.9692	0.9016	0.7300	0.9564	0.9799
Level 9	1.0027	1.0115	1.0171	-	1.0031	1.0014	1.0012	0.9997	1.0020	Level 9	0.9711	0.9749	0.9737	-	0.9378	0.8402	0.6344	0.9470	0.9815

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ7 futures contracts from 2005 to 2013. As EDZ7 was delivered in December 2007 and rolled over to a new 10-year contract, results in 2008 are also not available due to being at the beginning of a new period EDZ7 contract and the lack of trading activity.

Table A.97: EDZ8 median annual variance ratios with time to maturity

EDZ8	2005	2006	2007	2008	2009	2010	2011	2012	2013	EDZ8	2005	2006	2007	2008	2009	2010	2011	2012	2013
				Ask Variance										**Bid Variance**					
Level 1	1.6782	1.5464	1.5341	1.5424	1.6260	1.7837	1.7597	1.5776	1.5181	Level 1	1.6607	1.5534	1.5354	1.5443	1.6520	1.8207	1.9193	1.6304	1.5154
Level 2	1.4802	1.2961	1.2807	1.2933	1.3733	1.4462	1.5252	1.3211	1.2763	Level 2	1.4131	1.3034	1.2839	1.2942	1.3950	1.4972	1.6075	1.4094	1.2753
Level 3	1.2714	1.1658	1.1536	1.1598	1.2096	1.2208	1.2389	1.1937	1.1494	Level 3	1.2522	1.1721	1.1542	1.1603	1.2359	1.2549	1.3732	1.2683	1.1526
Level 4	1.2082	1.1037	1.0904	1.0869	1.1254	1.1320	1.1488	1.1304	1.0930	Level 4	1.1733	1.1101	1.0903	1.0854	1.1295	1.1526	1.2123	1.2048	1.0956
Level 5	1.1752	1.0725	1.0599	1.0511	1.0707	1.0932	1.0803	1.1199	1.0618	Level 5	1.1183	1.0744	1.0612	1.0521	1.0728	1.1058	1.1312	1.1921	1.0630
Level 6	1.1363	1.0503	1.0413	1.0335	1.0508	1.0771	1.0475	1.0975	1.0409	Level 6	1.0879	1.0539	1.0427	1.0335	1.0508	1.0869	1.0822	1.2003	1.0448
Level 7	1.1066	1.0368	1.0284	1.0227	1.0356	1.0888	1.0274	1.0839	1.0274	Level 7	1.1107	1.0398	1.0288	1.0230	1.0458	1.1117	1.0606	1.2107	1.0331
Level 8	1.1111	1.0288	1.0200	1.0170	1.0341	1.1275	1.0186	1.0739	1.0195	Level 8	1.1491	1.0334	1.0201	1.0170	1.0485	1.1697	1.0657	1.2659	1.0268
Level 9	1.1747	1.0274	1.0169	1.0145	1.0746	1.3961	1.0171	1.0664	1.0162	Level 9	1.3524	1.0336	1.0168	1.0147	1.0891	1.3785	1.1720	1.4131	1.0283
				Bid Ask Covariance										**Correlatinos**					
Level 1	1.5947	1.5388	1.5330	1.5421	1.6520	1.7976	2.0009	1.5106	1.5092	Level 1	0.6021	0.6437	0.6513	0.6476	0.6054	0.5492	0.5210	0.6133	0.6599
Level 2	1.3316	1.2783	1.2765	1.2921	1.3955	1.4601	1.6111	1.2404	1.2584	Level 2	0.7077	0.7672	0.7789	0.7727	0.7169	0.6679	0.6221	0.7095	0.7841
Level 3	1.1893	1.1415	1.1464	1.1559	1.2264	1.2212	1.2836	1.1193	1.1269	Level 3	0.7986	0.8532	0.8664	0.8618	0.8091	0.7969	0.7282	0.7885	0.8676
Level 4	1.0780	1.0732	1.0824	1.0820	1.1245	1.1140	1.1383	1.0601	1.0600	Level 4	0.8523	0.9008	0.9171	0.9213	0.8855	0.8676	0.8249	0.8300	0.9128
Level 5	1.0358	1.0381	1.0502	1.0453	1.0652	1.0532	1.0766	1.0284	1.0284	Level 5	0.8942	0.9307	0.9423	0.9505	0.9323	0.9043	0.8840	0.8389	0.9407
Level 6	1.0164	1.0186	1.0317	1.0270	1.0303	1.0175	1.0376	1.0118	1.0123	Level 6	0.9192	0.9488	0.9591	0.9676	0.9517	0.9200	0.9240	0.8331	0.9571
Level 7	1.0010	1.0093	1.0196	1.0166	1.0195	0.9961	1.0201	1.0042	1.0049	Level 7	0.9004	0.9617	0.9720	0.9775	0.9562	0.8995	0.9429	0.8260	0.9679
Level 8	1.0011	1.0048	1.0120	1.0107	1.0073	0.9898	1.0105	1.0013	1.0010	Level 8	0.8704	0.9676	0.9803	0.9833	0.9538	0.8549	0.9384	0.7900	0.9739
Level 9	1.0005	1.0027	1.0083	1.0078	0.9989	1.1412	1.0050	1.0002	0.9991	Level 9	0.7406	0.9675	0.9835	0.9855	0.9183	0.7254	0.8532	0.7079	0.9725

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ8 futures contracts from 2005 to 2013. As EDZ8 was delivered in December 2008, it rolls over to a new 10-year period contract.

Table A.98: EDZ9 median annual variance ratios with time to maturity

EDZ9	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**EDZ9**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Level 1	1.6009	1.5675	1.5137	1.5611	-	2.6186	1.6529	1.5547	Level 1	1.5972	1.5573	1.5147	1.5613	-	1.6177	1.6177	1.5668
Level 2	1.3764	1.3173	1.2609	1.3282	-	2.1468	1.3654	1.3049	Level 2	1.3590	1.3106	1.2607	1.3254	-	1.3580	1.3529	1.3222
Level 3	1.2204	1.1718	1.1325	1.2034	-	1.6806	1.2142	1.1780	Level 3	1.2023	1.1686	1.1328	1.1993	-	1.2384	1.2240	1.1878
Level 4	1.1329	1.0969	1.0705	1.1316	-	1.4236	1.1366	1.1157	Level 4	1.1348	1.0950	1.0700	1.1325	-	1.1269	1.1672	1.1245
Level 5	1.0802	1.0601	1.0404	1.0906	-	1.2907	1.1086	1.0832	Level 5	1.0944	1.0619	1.0409	1.0911	-	1.0741	1.1519	1.0876
Level 6	1.0567	1.0413	1.0260	1.0626	-	1.2277	1.0899	1.0622	Level 6	1.0671	1.0425	1.0264	1.0632	-	1.0525	1.1469	1.0705
Level 7	1.0436	1.0295	1.0178	1.0432	-	1.1687	1.0696	1.0471	Level 7	1.0535	1.0301	1.0181	1.0443	-	1.0488	1.1458	1.0592
Level 8	1.0358	1.0230	1.0131	1.0314	-	1.1392	1.0518	1.0359	Level 8	1.0453	1.0242	1.0133	1.0319	-	1.0687	1.1448	1.0532
Level 9	1.0352	1.0215	1.0115	1.0275	-	1.1665	1.0450	1.0327	Level 9	1.0492	1.0237	1.0117	1.0271	-	1.1175	1.2033	1.0700
Level 1	1.5800	1.5511	1.5132	1.5587	-	2.0157	1.5628	1.5286	Level 1	0.6261	0.6421	0.6602	0.6405	-	0.6182	0.6182	0.6382
Level 2	1.3244	1.3002	1.2582	1.3170	-	1.0170	1.2743	1.2602	Level 2	0.7358	0.7630	0.7932	0.7545	-	0.7364	0.7391	0.7563
Level 3	1.1544	1.1500	1.1282	1.1864	-	0.8132	1.1248	1.1235	Level 3	0.8317	0.8557	0.8828	0.8338	-	0.8075	0.8170	0.8419
Level 4	1.0715	1.0739	1.0644	1.1220	-	0.9110	1.0679	1.0572	Level 4	0.8812	0.9132	0.9346	0.8830	-	0.8874	0.8568	0.8893
Level 5	1.0341	1.0364	1.0329	1.0766	-	0.9638	1.0441	1.0227	Level 5	0.9138	0.9417	0.9607	0.9165	-	0.9310	0.8681	0.9195
Level 6	1.0157	1.0185	1.0178	1.0491	-	1.0231	1.0297	1.0081	Level 6	0.9371	0.9592	0.9743	0.9405	-	0.9501	0.8720	0.9341
Level 7	1.0065	1.0092	1.0103	1.0306	-	1.0136	1.0142	1.0007	Level 7	0.9492	0.9708	0.9823	0.9576	-	0.9535	0.8728	0.9441
Level 8	1.0029	1.0046	1.0061	1.0196	-	0.9928	1.0067	0.9984	Level 8	0.9567	0.9764	0.9869	0.9691	-	0.9358	0.8735	0.9495
Level 9	1.0013	1.0025	1.0041	1.0141	-	0.9831	1.0016	0.9968	Level 9	0.9531	0.9769	0.9885	0.9736	-	0.8949	0.8310	0.9346

Notes: This table shows the yearly median bid and ask variance, covariance and wavelet correlations at all timescales for EDZ9 futures contracts from 2006 to 2013. As EDZ9 was delivered in December 2009 and rolled over to a new 10-year contract, results in 2010 are also not available due to being at the beginning of a new period EDZ9 contract and the lack of trading activity.

Appendix A.5. High Speeding Quotes Results: Top 10% Days and Most Active Days

Table A.99: The average high-frequency quoting results from the EDH Contracts top 10% of the most active days

Top 10%	EDH2		EDH3		EDH4		EDH5		EDH6		EDH7		EDH8	
	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median
Ask Variance														
Level 1	545.8ms	1.5447	777.7ms	1.5712	1.1sec	1.6365	3.1sec	1.5444	1.4sec	1.5332	985.4ms	1.5401	732.1ms	1.5320
Level 2	1.1sec	1.2978	1.6sec	1.3395	2.3sec	1.4356	6.2sec	1.3052	2.8sec	1.3002	2sec	1.3078	1.5sec	1.2827
Level 3	2.2sec	1.1736	3.1sec	1.2114	4.5sec	1.2917	12.4sec	1.1958	5.5sec	1.1873	3.9sec	1.1906	2.9sec	1.1601
Level 4	4.4sec	1.1084	6.2sec	1.1379	9sec	1.1921	24.7sec	1.1268	11sec	1.1280	7.9sec	1.1328	5.9sec	1.1047
Level 5	8.7sec	1.0715	12.4sec	1.0915	18.1sec	1.1219	49.4sec	1.0886	22.1sec	1.0898	15.8sec	1.0901	11.7sec	1.0730
Level 6	17.5sec	1.0481	24.9sec	1.0600	36.2sec	1.0741	1.6min	1.0618	44.1sec	1.0615	31.5sec	1.0630	23.4sec	1.0517
Level 7	34.9sec	1.0331	49.8sec	1.0385	1.2min	1.0457	3.3min	1.0427	1.5min	1.0418	1.1min	1.0433	46.9sec	1.0360
Level 8	1.2min	1.0222	1.7min	1.0258	2.4min	1.0297	6.6min	1.0305	2.9min	1.0294	2.1min	1.0307	1.6min	1.0258
Level 9	2.3min	1.0183	3.3min	1.0203	4.8min	1.0233	13.2min	1.0257	5.9min	1.0253	4.2min	1.0265	3.1min	1.0220
Bid Variance														
Level 1	545.8ms	1.5402	777.7ms	1.5638	1.1sec	1.6298	3.1sec	1.5407	1.4sec	1.5331	985.4ms	1.5417	732.1ms	1.5333
Level 2	1.1sec	1.2959	1.6sec	1.3334	2.3sec	1.4012	6.2sec	1.3053	2.8sec	1.3018	2sec	1.3053	1.5sec	1.2846
Level 3	2.2sec	1.1687	3.1sec	1.2049	4.5sec	1.2651	12.4sec	1.1941	5.5sec	1.1852	3.9sec	1.1898	2.9sec	1.1611
Level 4	4.4sec	1.1034	6.2sec	1.1285	9sec	1.1696	24.7sec	1.1313	11sec	1.1292	7.9sec	1.1318	5.9sec	1.1042
Level 5	8.7sec	1.0669	12.4sec	1.0847	18.1sec	1.1076	49.4sec	1.0927	22.1sec	1.0892	15.8sec	1.0919	11.7sec	1.0731
Level 6	17.5sec	1.0450	24.9sec	1.0552	36.2sec	1.0676	1.6min	1.0633	44.1sec	1.0623	31.5sec	1.0617	23.4sec	1.0519
Level 7	34.9sec	1.0311	49.8sec	1.0370	1.2min	1.0432	3.3min	1.0425	1.5min	1.0431	1.1min	1.0421	46.9sec	1.0362
Level 8	1.2min	1.0230	1.7min	1.0271	2.4min	1.0307	6.6min	1.0302	2.9min	1.0305	2.1min	1.0305	1.6min	1.0255
Level 9	2.3min	1.0208	3.3min	1.0243	4.8min	1.0286	13.2min	1.0257	5.9min	1.0251	4.2min	1.0263	3.1min	1.0213
Bid–Ask Covariance														
Level 1	545.8ms	1.5392	777.7ms	1.5591	1.1sec	1.6184	3.1sec	1.5407	1.4sec	1.5343	985.4ms	1.5409	732.1ms	1.5309
Level 2	1.1sec	1.2880	1.6sec	1.3242	2.3sec	1.3883	6.2sec	1.3037	2.8sec	1.2981	2sec	1.2991	1.5sec	1.2804
Level 3	2.2sec	1.1595	3.1sec	1.1922	4.5sec	1.2464	12.4sec	1.1866	5.5sec	1.1810	3.9sec	1.1821	2.9sec	1.1555
Level 4	4.4sec	1.0909	6.2sec	1.1131	9sec	1.1480	24.7sec	1.1231	11sec	1.1247	7.9sec	1.1180	5.9sec	1.0975
Level 5	8.7sec	1.0544	12.4sec	1.0684	18.1sec	1.0863	49.4sec	1.0832	22.1sec	1.0828	15.8sec	1.0776	11.7sec	1.0657
Level 6	17.5sec	1.0326	24.9sec	1.0401	36.2sec	1.0500	1.6min	1.0560	44.1sec	1.0551	31.5sec	1.0502	23.4sec	1.0440
Level 7	34.9sec	1.0192	49.8sec	1.0232	1.2min	1.0272	3.3min	1.0357	1.5min	1.0352	1.1min	1.0317	46.9sec	1.0281
Level 8	1.2min	1.0111	1.7min	1.0133	2.4min	1.0148	6.6min	1.0232	2.9min	1.0234	2.1min	1.0203	1.6min	1.0182
Level 9	2.3min	1.0073	3.3min	1.0085	4.8min	1.0085	13.2min	1.0177	5.9min	1.0176	4.2min	1.0151	3.1min	1.0128
Wavelet Correlation														
Level 1	545.8ms	0.6493	777.7ms	0.6395	1.1sec	0.6136	3.1sec	0.6491	1.4sec	0.6523	985.4ms	0.6486	732.1ms	0.6522
Level 2	1.1sec	0.7716	1.6sec	0.7500	2.3sec	0.7137	6.2sec	0.7661	2.8sec	0.7682	2sec	0.7661	1.5sec	0.7784
Level 3	2.2sec	0.8556	3.1sec	0.8299	4.5sec	0.7904	12.4sec	0.8375	5.5sec	0.8438	3.9sec	0.8405	2.9sec	0.8612
Level 4	4.4sec	0.9063	6.2sec	0.8862	9sec	0.8550	24.7sec	0.8839	11sec	0.8856	7.9sec	0.8835	5.9sec	0.9057
Level 5	8.7sec	0.9373	12.4sec	0.9220	18.1sec	0.9028	49.4sec	0.9152	22.1sec	0.9181	15.8sec	0.9158	11.7sec	0.9319
Level 6	17.5sec	0.9569	24.9sec	0.9477	36.2sec	0.9366	1.6min	0.9405	44.1sec	0.9413	31.5sec	0.9419	23.4sec	0.9506
Level 7	34.9sec	0.9698	49.8sec	0.9643	1.2min	0.9586	3.3min	0.9592	1.5min	0.9587	1.1min	0.9596	46.9sec	0.9651
Level 8	1.2min	0.9775	1.7min	0.9736	2.4min	0.9702	6.6min	0.9707	2.9min	0.9704	2.1min	0.9704	1.6min	0.9751
Level 9	2.3min	0.9796	3.3min	0.9763	4.8min	0.9722	13.2min	0.9750	5.9min	0.9755	4.2min	0.9744	3.1min	0.9791

Notes: I extract those days within 2 years prior to the maturity for each EDH contract. This table presents high-frequency quoting results from EDH2 to EDH8 contracts top 10% days, including ask and bid variance, covariance and wavelet correlations at all timescales.

Table A.100: The average high-frequency quoting results from the EDM Contracts top 10% of the most active days

	EDM0		EDM2		EDM3		EDM4		EDM5		EDM6		EDM7		EDM8	
Top 10%	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median
Ask Variance																
Level 1	392.3ms	1.5225	625.5ms	1.5344	979.5ms	1.5760	1.2sec	1.6335	2.2sec	1.5325	1.3sec	1.5267	971.4ms	1.5418	574ms	1.5357
Level 2	784.5ms	1.2761	1.3sec	1.2926	2sec	1.3541	2.5sec	1.4193	4.4sec	1.3050	2.5sec	1.2952	1.9sec	1.3054	1.1sec	1.2847
Level 3	1.6sec	1.1485	2.5sec	1.1706	3.9sec	1.2242	4.9sec	1.2766	8.8sec	1.1904	5sec	1.1829	3.9sec	1.1928	2.3sec	1.1522
Level 4	3.1sec	1.0856	5sec	1.1034	7.8sec	1.1485	9.9sec	1.1769	17.6sec	1.1257	10.1sec	1.1242	7.8sec	1.1334	4.6sec	1.0887
Level 5	6.3sec	1.0538	10sec	1.0690	15.7sec	1.0989	19.7sec	1.1137	35.3sec	1.0864	20.2sec	1.0872	15.5sec	1.0912	9.2sec	1.0585
Level 6	12.6sec	1.0349	20sec	1.0467	31.3sec	1.0633	39.5sec	1.0695	1.2min	1.0611	40.4sec	1.0610	31.1sec	1.0629	18.4sec	1.0407
Level 7	25.1sec	1.0240	40sec	1.0306	1min	1.0396	1.3min	1.0432	2.4min	1.0421	1.3min	1.0424	1min	1.0436	36.7sec	1.0289
Level 8	50.2sec	1.0174	1.3min	1.0207	2.1min	1.0266	2.6min	1.0279	4.7min	1.0296	2.7min	1.0298	2.1min	1.0313	1.2min	1.0208
Level 9	1.7min	1.0152	2.7min	1.0166	4.2min	1.0208	5.3min	1.0224	9.4min	1.0255	5.4min	1.0249	4.1min	1.0265	2.4min	1.0180
Bid Variance																
Level 1	392.3ms	1.5229	625.5ms	1.5380	979.5ms	1.5679	1.2sec	1.6255	2.2sec	1.5375	1.3sec	1.5264	971.4ms	1.5413	574ms	1.5357
Level 2	784.5ms	1.2757	1.3sec	1.2883	2sec	1.3431	2.5sec	1.3965	4.4sec	1.3073	2.5sec	1.2955	1.9sec	1.3055	1.1sec	1.2864
Level 3	1.6sec	1.1493	2.5sec	1.1657	3.9sec	1.2137	4.9sec	1.2556	8.8sec	1.1931	5sec	1.1821	3.9sec	1.1922	2.3sec	1.1535
Level 4	3.1sec	1.0854	5sec	1.0996	7.8sec	1.1378	9.9sec	1.1616	17.6sec	1.1268	10.1sec	1.1235	7.8sec	1.1304	4.6sec	1.0896
Level 5	6.3sec	1.0535	10sec	1.0642	15.7sec	1.0888	19.7sec	1.1013	35.3sec	1.0871	20.2sec	1.0856	15.5sec	1.0910	9.2sec	1.0589
Level 6	12.6sec	1.0357	20sec	1.0441	31.3sec	1.0570	39.5sec	1.0644	1.2min	1.0611	40.4sec	1.0609	31.1sec	1.0639	18.4sec	1.0405
Level 7	25.1sec	1.0245	40sec	1.0308	1min	1.0388	1.3min	1.0410	2.4min	1.0417	1.3min	1.0423	1min	1.0435	36.7sec	1.0289
Level 8	50.2sec	1.0178	1.3min	1.0220	2.1min	1.0288	2.6min	1.0290	4.7min	1.0303	2.7min	1.0305	2.1min	1.0311	1.2min	1.0212
Level 9	1.7min	1.0154	2.7min	1.0196	4.2min	1.0255	5.3min	1.0257	9.4min	1.0252	5.4min	1.0244	4.1min	1.0264	2.4min	1.0181
Bid–Ask Covariance																
Level 1	392.3ms	1.5211	625.5ms	1.5325	979.5ms	1.5597	1.2sec	1.6158	2.2sec	1.5345	1.3sec	1.5254	971.4ms	1.5397	574ms	1.5350
Level 2	784.5ms	1.2707	1.3sec	1.2818	2sec	1.3300	2.5sec	1.3874	4.4sec	1.3035	2.5sec	1.2920	1.9sec	1.3002	1.1sec	1.2835
Level 3	1.6sec	1.1417	2.5sec	1.1551	3.9sec	1.1984	4.9sec	1.2382	8.8sec	1.1879	5sec	1.1795	3.9sec	1.1837	2.3sec	1.1502
Level 4	3.1sec	1.0770	5sec	1.0863	7.8sec	1.1211	9.9sec	1.1408	17.6sec	1.1210	10.1sec	1.1205	7.8sec	1.1220	4.6sec	1.0843
Level 5	6.3sec	1.0421	10sec	1.0510	15.7sec	1.0717	19.7sec	1.0850	35.3sec	1.0797	20.2sec	1.0800	15.5sec	1.0801	9.2sec	1.0524
Level 6	12.6sec	1.0234	20sec	1.0314	31.3sec	1.0423	39.5sec	1.0473	1.2min	1.0528	40.4sec	1.0535	31.1sec	1.0528	18.4sec	1.0339
Level 7	25.1sec	1.0134	40sec	1.0180	1min	1.0241	1.3min	1.0260	2.4min	1.0346	1.3min	1.0346	1min	1.0337	36.7sec	1.0222
Level 8	50.2sec	1.0080	1.3min	1.0105	2.1min	1.0137	2.6min	1.0138	4.7min	1.0227	2.7min	1.0231	2.1min	1.0219	1.2min	1.0144
Level 9	1.7min	1.0056	2.7min	1.0069	4.2min	1.0087	5.3min	1.0080	9.4min	1.0169	5.4min	1.0176	4.1min	1.0155	2.4min	1.0103
Wavelet Correlation																
Level 1	392.3ms	0.6567	625.5ms	0.6502	979.5ms	0.6378	1.2sec	0.6152	2.2sec	0.6504	1.3sec	0.6551	971.4ms	0.6488	574ms	0.6512
Level 2	784.5ms	0.7839	1.3sec	0.7762	2sec	0.7445	2.5sec	0.7161	4.4sec	0.7649	2.5sec	0.7719	1.9sec	0.7660	1.1sec	0.7773
Level 3	1.6sec	0.8701	2.5sec	0.8579	3.9sec	0.8239	4.9sec	0.7965	8.8sec	0.8381	5sec	0.8459	3.9sec	0.8388	2.3sec	0.8669
Level 4	3.1sec	0.9213	5sec	0.9094	7.8sec	0.8789	9.9sec	0.8608	17.6sec	0.8875	10.1sec	0.8901	7.8sec	0.8846	4.6sec	0.9178
Level 5	6.3sec	0.9492	10sec	0.9396	15.7sec	0.9184	19.7sec	0.9080	35.3sec	0.9199	20.2sec	0.9212	15.5sec	0.9166	9.2sec	0.9444
Level 6	12.6sec	0.9656	20sec	0.9577	31.3sec	0.9461	39.5sec	0.9395	1.2min	0.9425	40.4sec	0.9426	31.1sec	0.9400	18.4sec	0.9610
Level 7	25.1sec	0.9761	40sec	0.9701	1min	0.9627	1.3min	0.9607	2.4min	0.9600	1.3min	0.9594	1min	0.9583	36.7sec	0.9719
Level 8	50.2sec	0.9825	1.3min	0.9785	2.1min	0.9720	2.6min	0.9718	4.7min	0.9706	2.7min	0.9704	2.1min	0.9699	1.2min	0.9793
Level 9	1.7min	0.9848	2.7min	0.9808	4.2min	0.9751	5.3min	0.9750	9.4min	0.9754	5.4min	0.9762	4.1min	0.9743	2.4min	0.9822

Notes: I extract those days within 2 years prior to the maturity for each EDM contract. This table presents high-frequency quoting results from EDM0, EDM2 – EDM8 contracts top 10% days, including ask and bid variance, covariance and wavelet correlations at all timescales.

Table A.101: The average high-frequency quoting results from the EDU Contracts top 10% of the most active days

Top 10%	EDU1		EDU2		EDU3		EDU4		EDU5		EDU6		EDU7		EDU8	
	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median
Ask Variance																
Level 1	394.7ms	1.5283	636ms	1.5427	1.2sec	1.6100	1.1sec	1.6309	1.9sec	1.5496	1.2sec	1.5395	979.3ms	1.5381	454.9ms	1.5270
Level 2	789.4ms	1.2874	1.3sec	1.2952	2.3sec	1.3944	2.2sec	1.4176	3.8sec	1.3130	2.3sec	1.3026	2sec	1.2931	909.8ms	1.2708
Level 3	1.6sec	1.1638	2.5sec	1.1700	4.7sec	1.2700	4.4sec	1.2829	7.7sec	1.1956	4.7sec	1.1896	3.9sec	1.1794	1.8sec	1.1425
Level 4	3.2sec	1.1019	5.1sec	1.1046	9.3sec	1.1771	8.8sec	1.1823	15.3sec	1.1324	9.4sec	1.1314	7.8sec	1.1213	3.6sec	1.0804
Level 5	6.3sec	1.0686	10.2sec	1.0679	18.6sec	1.1161	17.5sec	1.1177	30.7sec	1.0921	18.8sec	1.0942	15.7sec	1.0873	7.3sec	1.0515
Level 6	12.6sec	1.0461	20.4sec	1.0459	37.2sec	1.0719	35sec	1.0732	1min	1.0652	37.6sec	1.0654	31.3sec	1.0609	14.6sec	1.0351
Level 7	25.3sec	1.0310	40.7sec	1.0303	1.2min	1.0454	1.2min	1.0445	2min	1.0460	1.3min	1.0451	1min	1.0424	29.1sec	1.0243
Level 8	50.5sec	1.0209	1.4min	1.0203	2.5min	1.0295	2.3min	1.0281	4.1min	1.0329	2.5min	1.0320	2.1min	1.0309	58.2sec	1.0177
Level 9	1.7min	1.0170	2.7min	1.0161	5min	1.0236	4.7min	1.0213	8.2min	1.0277	5min	1.0268	4.2min	1.0260	1.9min	1.0152
Bid Variance																
Level 1	394.7ms	1.5280	636ms	1.5362	1.2sec	1.6006	1.1sec	1.6239	1.9sec	1.5506	1.2sec	1.5416	979.3ms	1.5386	454.9ms	1.5269
Level 2	789.4ms	1.2845	1.3sec	1.2945	2.3sec	1.3776	2.2sec	1.3989	3.8sec	1.3108	2.3sec	1.3028	2sec	1.2927	909.8ms	1.2708
Level 3	1.6sec	1.1627	2.5sec	1.1670	4.7sec	1.2430	4.4sec	1.2635	7.7sec	1.1938	4.7sec	1.1886	3.9sec	1.1804	1.8sec	1.1438
Level 4	3.2sec	1.1016	5.1sec	1.1000	9.3sec	1.1543	8.8sec	1.1656	15.3sec	1.1306	9.4sec	1.1323	7.8sec	1.1201	3.6sec	1.0805
Level 5	6.3sec	1.0672	10.2sec	1.0642	18.6sec	1.1008	17.5sec	1.1050	30.7sec	1.0939	18.8sec	1.0942	15.7sec	1.0874	7.3sec	1.0511
Level 6	12.6sec	1.0447	20.4sec	1.0426	37.2sec	1.0652	35sec	1.0673	1min	1.0643	37.6sec	1.0654	31.3sec	1.0624	14.6sec	1.0350
Level 7	25.3sec	1.0305	40.7sec	1.0294	1.2min	1.0440	1.2min	1.0432	2min	1.0457	1.3min	1.0444	1min	1.0430	29.1sec	1.0242
Level 8	50.5sec	1.0222	1.4min	1.0215	2.5min	1.0322	2.3min	1.0305	4.1min	1.0330	2.5min	1.0319	2.1min	1.0306	58.2sec	1.0177
Level 9	1.7min	1.0191	2.7min	1.0189	5min	1.0295	4.7min	1.0273	8.2min	1.0278	5min	1.0264	4.2min	1.0254	1.9min	1.0151
Bid–Ask Covariance																
Level 1	394.7ms	1.5242	636ms	1.5324	1.2sec	1.5884	1.1sec	1.6136	1.9sec	1.5496	1.2sec	1.5383	979.3ms	1.5379	454.9ms	1.5264
Level 2	789.4ms	1.2803	1.3sec	1.2833	2.3sec	1.3538	2.2sec	1.3881	3.8sec	1.3089	2.3sec	1.2998	2sec	1.2892	909.8ms	1.2693
Level 3	1.6sec	1.1530	2.5sec	1.1560	4.7sec	1.2198	4.4sec	1.2459	7.7sec	1.1914	4.7sec	1.1836	3.9sec	1.1737	1.8sec	1.1404
Level 4	3.2sec	1.0889	5.1sec	1.0897	9.3sec	1.1339	8.8sec	1.1543	15.3sec	1.1255	9.4sec	1.1258	7.8sec	1.1110	3.6sec	1.0756
Level 5	6.3sec	1.0522	10.2sec	1.0531	18.6sec	1.0801	17.5sec	1.0915	30.7sec	1.0846	18.8sec	1.0853	15.7sec	1.0773	7.3sec	1.0451
Level 6	12.6sec	1.0322	20.4sec	1.0323	37.2sec	1.0468	35sec	1.0520	1min	1.0585	37.6sec	1.0555	31.3sec	1.0517	14.6sec	1.0287
Level 7	25.3sec	1.0192	40.7sec	1.0190	1.2min	1.0274	1.2min	1.0278	2min	1.0379	1.3min	1.0354	1min	1.0332	29.1sec	1.0182
Level 8	50.5sec	1.0116	1.4min	1.0113	2.5min	1.0158	2.3min	1.0151	4.1min	1.0253	2.5min	1.0237	2.1min	1.0214	58.2sec	1.0116
Level 9	1.7min	1.0074	2.7min	1.0074	5min	1.0097	4.7min	1.0087	8.2min	1.0190	5min	1.0178	4.2min	1.0151	1.9min	1.0083
Wavelet Correlation																
Level 1	394.7ms	0.6545	636ms	0.6510	1.2sec	0.6248	1.1sec	0.6158	1.9sec	0.6449	1.2sec	0.6487	979.3ms	0.6499	454.9ms	0.6549
Level 2	789.4ms	0.7785	1.3sec	0.7725	2.3sec	0.7259	2.2sec	0.7148	3.8sec	0.7629	2.3sec	0.7676	2sec	0.7736	909.8ms	0.7869
Level 3	1.6sec	0.8601	2.5sec	0.8569	4.7sec	0.8045	4.4sec	0.7915	7.7sec	0.8377	4.7sec	0.8413	3.9sec	0.8471	1.8sec	0.8743
Level 4	3.2sec	0.9077	5.1sec	0.9091	9.3sec	0.8663	8.8sec	0.8579	15.3sec	0.8845	9.4sec	0.8832	7.8sec	0.8928	3.6sec	0.9255
Level 5	6.3sec	0.9370	10.2sec	0.9397	18.6sec	0.9085	17.5sec	0.9050	30.7sec	0.9142	18.8sec	0.9139	15.7sec	0.9196	7.3sec	0.9514
Level 6	12.6sec	0.9572	20.4sec	0.9592	37.2sec	0.9388	35sec	0.9369	1min	0.9396	37.6sec	0.9386	31.3sec	0.9412	14.6sec	0.9662
Level 7	25.3sec	0.9704	40.7sec	0.9714	1.2min	0.9578	1.2min	0.9586	2min	0.9563	1.3min	0.9575	1min	0.9588	29.1sec	0.9763
Level 8	50.5sec	0.9783	1.4min	0.9789	2.5min	0.9688	2.3min	0.9704	4.1min	0.9680	2.5min	0.9691	2.1min	0.9703	58.2sec	0.9826
Level 9	1.7min	0.9812	2.7min	0.9815	5min	0.9714	4.7min	0.9734	8.2min	0.9729	5min	0.9743	4.2min	0.9752	1.9min	0.9851

Notes: I extract those days within 2 years prior to the maturity for each EDU contract. This table presents high-frequency quoting results from EDU1 to EDU8 contracts top 10% days, including ask and bid variance, covariance and wavelet correlations at all timescales.

Table A.102: The average high-frequency quoting results from the EDZ Contracts top 10% of the most active days

	EDZ1		EDZ2		EDZ3		EDZ4		EDZ5		EDZ6		EDZ7	
Top 10%	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median
Ask Variance														
Level 1	484.7ms	1.5503	682.1ms	1.5326	1.2sec	1.6304	941.1ms	1.5965	1.6sec	1.5322	1sec	1.5426	887.8ms	1.5538
Level 2	969.4ms	1.3017	1.4sec	1.2797	2.4sec	1.4195	1.9sec	1.3852	3.2sec	1.3028	2.1sec	1.3135	1.8sec	1.3069
Level 3	1.9sec	1.1781	2.7sec	1.1599	4.8sec	1.2782	3.8sec	1.2574	6.4sec	1.1917	4.2sec	1.1966	3.6sec	1.1813
Level 4	3.9sec	1.1138	5.5sec	1.0967	9.5sec	1.1796	7.5sec	1.1772	12.8sec	1.1310	8.4sec	1.1363	7.1sec	1.1247
Level 5	7.8sec	1.0773	10.9sec	1.0621	19sec	1.1162	15.1sec	1.1180	25.5sec	1.0917	16.8sec	1.0956	14.2sec	1.0866
Level 6	15.5sec	1.0518	21.8sec	1.0417	38sec	1.0715	30.1sec	1.0747	51.1sec	1.0644	33.5sec	1.0659	28.4sec	1.0624
Level 7	31sec	1.0352	43.7sec	1.0280	1.3min	1.0438	1min	1.0455	1.7min	1.0439	1.1min	1.0455	56.8sec	1.0440
Level 8	1min	1.0239	1.5min	1.0190	2.5min	1.0282	2min	1.0289	3.4min	1.0315	2.2min	1.0325	1.9min	1.0318
Level 9	2.1min	1.0190	2.9min	1.0152	5.1min	1.0216	4min	1.0225	6.8min	1.0265	4.5min	1.0270	3.8min	1.0279
Bid Variance														
Level 1	484.7ms	1.5478	682.1ms	1.5288	1.2sec	1.6260	941.1ms	1.5899	1.6sec	1.5292	1sec	1.5396	887.8ms	1.5519
Level 2	969.4ms	1.3000	1.4sec	1.2795	2.4sec	1.3989	1.9sec	1.3588	3.2sec	1.3047	2.1sec	1.3086	1.8sec	1.3053
Level 3	1.9sec	1.1727	2.7sec	1.1577	4.8sec	1.2593	3.8sec	1.2295	6.4sec	1.1932	4.2sec	1.1942	3.6sec	1.1819
Level 4	3.9sec	1.1070	5.5sec	1.0939	9.5sec	1.1626	7.5sec	1.1565	12.8sec	1.1312	8.4sec	1.1349	7.1sec	1.1228
Level 5	7.8sec	1.0700	10.9sec	1.0584	19sec	1.1025	15.1sec	1.1020	25.5sec	1.0926	16.8sec	1.0946	14.2sec	1.0876
Level 6	15.5sec	1.0474	21.8sec	1.0394	38sec	1.0653	30.1sec	1.0661	51.1sec	1.0643	33.5sec	1.0648	28.4sec	1.0627
Level 7	31sec	1.0333	43.7sec	1.0273	1.3min	1.0427	1min	1.0430	1.7min	1.0446	1.1min	1.0444	56.8sec	1.0440
Level 8	1min	1.0243	1.5min	1.0200	2.5min	1.0304	2min	1.0303	3.4min	1.0322	2.2min	1.0321	1.9min	1.0318
Level 9	2.1min	1.0214	2.9min	1.0177	5.1min	1.0273	4min	1.0271	6.8min	1.0279	4.5min	1.0272	3.8min	1.0275
Bid–Ask Covariance														
Level 1	484.7ms	1.5436	682.1ms	1.5258	1.2sec	1.6120	941.1ms	1.5762	1.6sec	1.5308	1sec	1.5391	887.8ms	1.5531
Level 2	969.4ms	1.2922	1.4sec	1.2726	2.4sec	1.3850	1.9sec	1.3519	3.2sec	1.3012	2.1sec	1.3045	1.8sec	1.3023
Level 3	1.9sec	1.1627	2.7sec	1.1457	4.8sec	1.2351	3.8sec	1.2237	6.4sec	1.1874	4.2sec	1.1920	3.6sec	1.1755
Level 4	3.9sec	1.0945	5.5sec	1.0815	9.5sec	1.1427	7.5sec	1.1401	12.8sec	1.1254	8.4sec	1.1267	7.1sec	1.1149
Level 5	7.8sec	1.0568	10.9sec	1.0480	19sec	1.0823	15.1sec	1.0899	25.5sec	1.0848	16.8sec	1.0853	14.2sec	1.0795
Level 6	15.5sec	1.0341	21.8sec	1.0284	38sec	1.0474	30.1sec	1.0526	51.1sec	1.0567	33.5sec	1.0555	28.4sec	1.0526
Level 7	31sec	1.0203	43.7sec	1.0174	1.3min	1.0265	1min	1.0287	1.7min	1.0373	1.1min	1.0358	56.8sec	1.0343
Level 8	1min	1.0120	1.5min	1.0106	2.5min	1.0145	2min	1.0154	3.4min	1.0253	2.2min	1.0235	1.9min	1.0225
Level 9	2.1min	1.0076	2.9min	1.0072	5.1min	1.0085	4min	1.0087	6.8min	1.0185	4.5min	1.0175	3.8min	1.0167
Wavelet Correlation														
Level 1	484.7ms	0.6461	682.1ms	0.6541	1.2sec	0.6150	941.1ms	0.6290	1.6sec	0.6540	1sec	0.6495	887.8ms	0.6444
Level 2	969.4ms	0.7692	1.4sec	0.7815	2.4sec	0.7148	1.9sec	0.7359	3.2sec	0.7664	2.1sec	0.7642	1.8sec	0.7661
Level 3	1.9sec	0.8527	2.7sec	0.8638	4.8sec	0.7941	3.8sec	0.8134	6.4sec	0.8381	4.2sec	0.8374	3.6sec	0.8461
Level 4	3.9sec	0.9034	5.5sec	0.9142	9.5sec	0.8601	7.5sec	0.8647	12.8sec	0.8840	8.4sec	0.8811	7.1sec	0.8907
Level 5	7.8sec	0.9346	10.9sec	0.9448	19sec	0.9070	15.1sec	0.9074	25.5sec	0.9152	16.8sec	0.9136	14.2sec	0.9195
Level 6	15.5sec	0.9547	21.8sec	0.9621	38sec	0.9387	30.1sec	0.9380	51.1sec	0.9396	33.5sec	0.9392	28.4sec	0.9410
Level 7	31sec	0.9678	43.7sec	0.9734	1.3min	0.9591	1min	0.9588	1.7min	0.9573	1.1min	0.9575	56.8sec	0.9579
Level 8	1min	0.9763	1.5min	0.9804	2.5min	0.9705	2min	0.9706	3.4min	0.9688	2.2min	0.9689	1.9min	0.9692
Level 9	2.1min	0.9790	2.9min	0.9827	5.1min	0.9734	4min	0.9736	6.8min	0.9729	4.5min	0.9735	3.8min	0.9732

Notes: I extract those days within 2 years prior to the maturity for each EDZ contract. This table presents high-frequency quoting results from EDZ1 to EDZ7 contracts top 10% days, including ask and bid variance, covariance and wavelet correlations at all timescales.

Table A.103: High-frequency quoting results of the most active day for EDH contracts

	EDH2		EDH3		EDH4		EDH5		EDH6		EDH7		EDH8	
Most active day	**April 1, 2011**		**August 9, 2011**		**June 24, 2013**		**August 6, 2004**		**September 1, 2005**		**July 19, 2006**		**January 23, 2008**	
	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median
Ask Variance														
Level 1	362.9ms	1.6513	485.8ms	1.5421	2.4sec	1.7502	2.3sec	1.4836	897.1ms	1.4821	698.6ms	1.4610	496.8ms	1.5466
Level 2	725.7ms	1.3179	971.6ms	1.3135	4.7sec	1.5949	4.6sec	1.2480	1.8sec	1.2592	1.4sec	1.2238	993.5ms	1.2686
Level 3	1.5sec	1.1213	1.9sec	1.1967	9.5sec	1.3984	9.2sec	1.1429	3.6sec	1.1406	2.8sec	1.1159	2sec	1.1303
Level 4	2.9sec	1.0477	3.9sec	1.1208	19sec	1.2524	18.3sec	1.0950	7.2sec	1.0765	5.6sec	1.0696	4sec	1.0719
Level 5	5.8sec	1.0222	7.8sec	1.0782	37.9sec	1.1454	36.6sec	1.0642	14.4sec	1.0468	11.2sec	1.0464	7.9sec	1.0481
Level 6	11.6sec	1.0131	15.5sec	1.0514	1.3min	1.0801	1.2min	1.0421	28.7sec	1.0312	22.4sec	1.0311	15.9sec	1.0352
Level 7	23.2sec	1.0085	31.1sec	1.0331	2.5min	1.0467	2.4min	1.0282	57.4sec	1.0239	44.7sec	1.0208	31.8sec	1.0249
Level 8	46.4sec	1.0061	1min	1.0227	5.1min	1.0295	4.9min	1.0194	1.9min	1.0236	1.5min	1.0148	1.1min	1.0177
Level 9	1.5min	1.0052	2.1min	1.0191	10.1min	1.0218	9.8min	1.0169	3.8min	1.0316	3min	1.0125	2.1min	1.0145
Bid Variance														
Level 1	362.9ms	1.6512	485.8ms	1.5392	2.4sec	1.7325	2.3sec	1.4872	897.1ms	1.4834	698.6ms	1.4599	496.8ms	1.5458
Level 2	725.7ms	1.3183	971.6ms	1.3088	4.7sec	1.5070	4.6sec	1.2481	1.8sec	1.2592	1.4sec	1.2228	993.5ms	1.2680
Level 3	1.5sec	1.1213	1.9sec	1.1911	9.5sec	1.3345	9.2sec	1.1408	3.6sec	1.1401	2.8sec	1.1161	2sec	1.1293
Level 4	2.9sec	1.0479	3.9sec	1.1142	19sec	1.1937	18.3sec	1.0918	7.2sec	1.0766	5.6sec	1.0705	4sec	1.0705
Level 5	5.8sec	1.0225	7.8sec	1.0696	37.9sec	1.1063	36.6sec	1.0621	14.4sec	1.0457	11.2sec	1.0476	7.9sec	1.0474
Level 6	11.6sec	1.0130	15.5sec	1.0446	1.3min	1.0566	1.2min	1.0409	28.7sec	1.0285	22.4sec	1.0320	15.9sec	1.0349
Level 7	23.2sec	1.0086	31.1sec	1.0306	2.5min	1.0332	2.4min	1.0271	57.4sec	1.0189	44.7sec	1.0207	31.8sec	1.0247
Level 8	46.4sec	1.0065	1min	1.0232	5.1min	1.0240	4.9min	1.0189	1.9min	1.0136	1.5min	1.0146	1.1min	1.0176
Level 9	1.5min	1.0058	2.1min	1.0208	10.1min	1.0319	9.8min	1.0166	3.8min	1.0113	3min	1.0124	2.1min	1.0145
Bid–Ask Covariance														
Level 1	362.9ms	1.6508	485.8ms	1.5394	2.4sec	1.7379	2.3sec	1.4848	897.1ms	1.4825	698.6ms	1.4597	496.8ms	1.5459
Level 2	725.7ms	1.3173	971.6ms	1.3084	4.7sec	1.5281	4.6sec	1.2469	1.8sec	1.2587	1.4sec	1.2219	993.5ms	1.2674
Level 3	1.5sec	1.1200	1.9sec	1.1895	9.5sec	1.3408	9.2sec	1.1399	3.6sec	1.1394	2.8sec	1.1145	2sec	1.1282
Level 4	2.9sec	1.0460	3.9sec	1.1110	19sec	1.1910	18.3sec	1.0905	7.2sec	1.0748	5.6sec	1.0676	4sec	1.0689
Level 5	5.8sec	1.0202	7.8sec	1.0657	37.9sec	1.1039	36.6sec	1.0603	14.4sec	1.0437	11.2sec	1.0441	7.9sec	1.0444
Level 6	11.6sec	1.0106	15.5sec	1.0390	1.3min	1.0530	1.2min	1.0384	28.7sec	1.0264	22.4sec	1.0282	15.9sec	1.0313
Level 7	23.2sec	1.0059	31.1sec	1.0223	2.5min	1.0276	2.4min	1.0242	57.4sec	1.0168	44.7sec	1.0174	31.8sec	1.0209
Level 8	46.4sec	1.0035	1min	1.0128	5.1min	1.0143	4.9min	1.0155	1.9min	1.0118	1.5min	1.0114	1.1min	1.0134
Level 9	1.5min	1.0025	2.1min	1.0086	10.1min	1.0101	9.8min	1.0122	3.8min	1.0096	3min	1.0085	2.1min	1.0094
Wavelet Correlation														
Level 1	362.9ms	0.6056	485.8ms	0.6497	2.4sec	0.5772	2.3sec	0.6724	897.1ms	0.6741	698.6ms	0.6850	496.8ms	0.6469
Level 2	725.7ms	0.7585	971.6ms	0.7640	4.7sec	0.6636	4.6sec	0.8012	1.8sec	0.7941	1.4sec	0.8178	993.5ms	0.7887
Level 3	1.5sec	0.8918	1.9sec	0.8396	9.5sec	0.7493	9.2sec	0.8766	3.6sec	0.8771	2.8sec	0.8959	2sec	0.8855
Level 4	2.9sec	0.9543	3.9sec	0.8975	19sec	0.8378	18.3sec	0.9160	7.2sec	0.9288	5.6sec	0.9342	4sec	0.9341
Level 5	5.8sec	0.9780	7.8sec	0.9349	37.9sec	0.9039	36.6sec	0.9416	14.4sec	0.9563	11.2sec	0.9545	7.9sec	0.9548
Level 6	11.6sec	0.9871	15.5sec	0.9573	1.3min	0.9464	1.2min	0.9607	28.7sec	0.9723	22.4sec	0.9690	15.9sec	0.9663
Level 7	23.2sec	0.9914	31.1sec	0.9703	2.5min	0.9679	2.4min	0.9736	57.4sec	0.9814	44.7sec	0.9798	31.8sec	0.9759
Level 8	46.4sec	0.9935	1min	0.9773	5.1min	0.9766	4.9min	0.9814	1.9min	0.9866	1.5min	0.9856	1.1min	0.9827
Level 9	1.5min	0.9942	2.1min	0.9796	10.1min	0.9691	9.8min	0.9836	3.8min	0.9888	3min	0.9877	2.1min	0.9857

Notes: I extract those days within 2 years prior to the maturity for each EDH contract. This table presents high-frequency quoting results from the most active day for EDH2 to EDH8 contracts, including ask and bid variance, covariance and wavelet correlations at all timescales.

Table A.104: High-frequency quoting results of the most active day for EDM contracts

	EDM2		EDM3		EDM4		EDM5		EDM6		EDM7		EDM8	
Most active day	**April 1, 2011**		**August 10, 2011**		**June 24, 2013**		**November 5, 2004**		**September 1, 2005**		**September 21, 2006**		**January 22, 2008**	
	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median
Ask Variance														
Level 1	418.4ms	0.6796	417.4ms	1.5256	853.2ms	1.4249	1.7sec	1.4451	832.8ms	1.5049	703.2ms	1.4568	383.3ms	1.5621
Level 2	836.7ms	0.8091	834.8ms	1.2835	1.7sec	1.1754	3.4sec	1.2136	1.7sec	1.2306	1.4sec	1.2157	766.6ms	1.2782
Level 3	1.7sec	0.8919	1.7sec	1.1700	3.4sec	1.0818	6.9sec	1.1101	3.3sec	1.1174	2.8sec	1.1044	1.5sec	1.1433
Level 4	3.3sec	0.9357	3.3sec	1.0994	6.8sec	1.0437	13.7sec	1.0720	6.7sec	1.0657	5.6sec	1.0626	3.1sec	1.0756
Level 5	6.7sec	0.9601	6.7sec	1.0627	13.7sec	1.0262	27.4sec	1.0490	13.3sec	1.0354	11.3sec	1.0441	6.1sec	1.0466
Level 6	13.4sec	0.9743	13.4sec	1.0402	27.3sec	1.0165	54.9sec	1.0351	26.6sec	1.0208	22.5sec	1.0291	12.3sec	1.0324
Level 7	26.8sec	0.9832	26.7sec	1.0258	54.6sec	1.0101	1.8min	1.0247	53.3sec	1.0134	45sec	1.0199	24.5sec	1.0228
Level 8	53.6sec	0.9881	53.4sec	1.0176	1.8min	1.0064	3.7min	1.0173	1.8min	1.0097	1.5min	1.0141	49.1sec	1.0164
Level 9	1.8min	0.9894	1.8min	1.0145	3.6min	1.0048	7.3min	1.0143	3.6min	1.0084	3min	1.0124	1.6min	1.0136
Bid Variance														
Level 1	418.4ms	1.4715	417.4ms	1.5226	853.2ms	1.4253	1.7sec	1.4443	832.8ms	1.5070	703.2ms	1.4581	383.3ms	1.5595
Level 2	836.7ms	1.2360	834.8ms	1.2804	1.7sec	1.1749	3.4sec	1.2152	1.7sec	1.2327	1.4sec	1.2148	766.6ms	1.2770
Level 3	1.7sec	1.1212	1.7sec	1.1645	3.4sec	1.0810	6.9sec	1.1121	3.3sec	1.1186	2.8sec	1.1041	1.5sec	1.1426
Level 4	3.3sec	1.0687	3.3sec	1.0952	6.8sec	1.0429	13.7sec	1.0734	6.7sec	1.0675	5.6sec	1.0611	3.1sec	1.0755
Level 5	6.7sec	1.0416	6.7sec	1.0575	13.7sec	1.0256	27.4sec	1.0488	13.3sec	1.0382	11.3sec	1.0422	6.1sec	1.0467
Level 6	13.4sec	1.0264	13.4sec	1.0353	27.3sec	1.0160	54.9sec	1.0347	26.6sec	1.0242	22.5sec	1.0281	12.3sec	1.0330
Level 7	26.8sec	1.0171	26.7sec	1.0232	54.6sec	1.0100	1.8min	1.0245	53.3sec	1.0200	45sec	1.0191	24.5sec	1.0231
Level 8	53.6sec	1.0121	53.4sec	1.0172	1.8min	1.0067	3.7min	1.0171	1.8min	1.0230	1.5min	1.0136	49.1sec	1.0162
Level 9	1.8min	1.0107	1.8min	1.0159	3.6min	1.0055	7.3min	1.0141	3.6min	1.0352	3min	1.0116	1.6min	1.0135
Bid–Ask Covariance														
Level 1	418.4ms	1.4724	417.4ms	1.5225	853.2ms	1.4245	1.7sec	1.4446	832.8ms	1.5057	703.2ms	1.4565	383.3ms	1.5604
Level 2	836.7ms	1.2352	834.8ms	1.2792	1.7sec	1.1740	3.4sec	1.2136	1.7sec	1.2313	1.4sec	1.2128	766.6ms	1.2767
Level 3	1.7sec	1.1191	1.7sec	1.1632	3.4sec	1.0798	6.9sec	1.1098	3.3sec	1.1174	2.8sec	1.1015	1.5sec	1.1412
Level 4	3.3sec	1.0658	3.3sec	1.0921	6.8sec	1.0411	13.7sec	1.0709	6.7sec	1.0654	5.6sec	1.0587	3.1sec	1.0728
Level 5	6.7sec	1.0377	6.7sec	1.0535	13.7sec	1.0235	27.4sec	1.0468	13.3sec	1.0351	11.3sec	1.0392	6.1sec	1.0435
Level 6	13.4sec	1.0219	13.4sec	1.0304	27.3sec	1.0136	54.9sec	1.0327	26.6sec	1.0202	22.5sec	1.0244	12.3sec	1.0293
Level 7	26.8sec	1.0123	26.7sec	1.0169	54.6sec	1.0075	1.8min	1.0222	53.3sec	1.0127	45sec	1.0155	24.5sec	1.0194
Level 8	53.6sec	1.0072	53.4sec	1.0094	1.8min	1.0041	3.7min	1.0146	1.8min	1.0094	1.5min	1.0100	49.1sec	1.0126
Level 9	1.8min	1.0049	1.8min	1.0061	3.6min	1.0024	7.3min	1.0111	3.6min	1.0091	3min	1.0075	1.6min	1.0091
Wavelet Correlation														
Level 1	418.4ms	0.6796	417.4ms	0.6568	853.2ms	0.7016	1.7sec	0.6924	832.8ms	0.6636	703.2ms	0.6858	383.3ms	0.6412
Level 2	836.7ms	0.8091	834.8ms	0.7810	1.7sec	0.8512	3.4sec	0.8229	1.7sec	0.8112	1.4sec	0.8232	766.6ms	0.7831
Level 3	1.7sec	0.8919	1.7sec	0.8587	3.4sec	0.9250	6.9sec	0.8992	3.3sec	0.8940	2.8sec	0.9057	1.5sec	0.8752
Level 4	3.3sec	0.9357	3.3sec	0.9131	6.8sec	0.9589	13.7sec	0.9316	6.7sec	0.9367	5.6sec	0.9424	3.1sec	0.9298
Level 5	6.7sec	0.9601	6.7sec	0.9457	13.7sec	0.9751	27.4sec	0.9534	13.3sec	0.9632	11.3sec	0.9595	6.1sec	0.9554
Level 6	13.4sec	0.9743	13.4sec	0.9659	27.3sec	0.9842	54.9sec	0.9665	26.6sec	0.9763	22.5sec	0.9726	12.3sec	0.9681
Level 7	26.8sec	0.9832	26.7sec	0.9773	54.6sec	0.9901	1.8min	0.9761	53.3sec	0.9804	45sec	0.9813	24.5sec	0.9774
Level 8	53.6sec	0.9881	53.4sec	0.9830	1.8min	0.9933	3.7min	0.9832	1.8min	0.9775	1.5min	0.9865	49.1sec	0.9840
Level 9	1.8min	0.9894	1.8min	0.9843	3.6min	0.9945	7.3min	0.9861	3.6min	0.9660	3min	0.9885	1.6min	0.9867

Notes: I extract those days within 2 years prior to the maturity for each EDM contract. This table presents high-frequency quoting results from the most active day for EDM2 to EDM8 contracts, including ask and bid variance, covariance and wavelet correlations at all timescales.

Table A.105: High-frequency quoting results of the most active day for EDU contracts

	EDU0		EDU1		EDU2		EDU3		EDU4		EDU5		EDU6		EDU7		EDU8	
Most active day	**May 7, 2010**		**April 1, 2011**		**April 1, 2011**		**August 9, 2011**		**June 24, 2013**		**November 5, 2004**		**September 1, 2005**		**March 1, 2007**		**March 14, 2008**	
	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median
Ask Variance																		
Level 1	334.7ms	1.4545	444.9ms	1.5117	419.2ms	1.4678	1.2sec	1.6088	698.4ms	1.4327	1.2sec	1.4737	792.2ms	1.5079	825.8ms	1.4067	320.3ms	1.5803
Level 2	669.4ms	1.2340	889.8ms	1.2579	838.5ms	1.2321	2.4sec	1.3352	1.4sec	1.1868	2.4sec	1.2567	1.6sec	1.2341	1.7sec	1.1830	640.7ms	1.3000
Level 3	1.3sec	1.1216	1.8sec	1.1303	1.7sec	1.1187	4.8sec	1.1948	2.8sec	1.0890	4.8sec	1.1402	3.2sec	1.1211	3.3sec	1.0878	1.3sec	1.1556
Level 4	2.7sec	1.0699	3.6sec	1.0797	3.4sec	1.0668	9.5sec	1.1170	5.6sec	1.0469	9.6sec	1.0878	6.3sec	1.0675	6.6sec	1.0483	2.6sec	1.0837
Level 5	5.4sec	1.0435	7.1sec	1.0533	6.7sec	1.0398	19sec	1.0811	11.2sec	1.0282	19.2sec	1.0611	12.7sec	1.0360	13.2sec	1.0274	5.1sec	1.0440
Level 6	10.7sec	1.0288	14.2sec	1.0350	13.4sec	1.0247	38.1sec	1.0528	22.3sec	1.0177	38.4sec	1.0440	25.4sec	1.0205	26.4sec	1.0154	10.3sec	1.0274
Level 7	21.4sec	1.0191	28.5sec	1.0231	26.8sec	1.0160	1.3min	1.0325	44.7sec	1.0110	1.3min	1.0323	50.7sec	1.0131	52.9sec	1.0094	20.5sec	1.0194
Level 8	42.8sec	1.0131	56.9sec	1.0156	53.7sec	1.0112	2.5min	1.0222	1.5min	1.0070	2.6min	1.0235	1.7min	1.0095	1.8min	1.0061	41sec	1.0143
Level 9	1.4min	1.0111	1.9min	1.0124	1.8min	1.0094	5.1min	1.0185	3min	1.0053	5.1min	1.0193	3.4min	1.0082	3.5min	1.0050	1.4min	1.0108
Bid Variance																		
Level 1	334.7ms	1.4534	444.9ms	1.5061	419.2ms	1.4582	1.2sec	1.5732	698.4ms	1.4294	1.2sec	1.4753	792.2ms	1.5100	825.8ms	1.4067	320.3ms	1.5812
Level 2	669.4ms	1.2306	889.8ms	1.2516	838.5ms	1.2261	2.4sec	1.3168	1.4sec	1.1822	2.4sec	1.2577	1.6sec	1.2341	1.7sec	1.1833	640.7ms	1.3003
Level 3	1.3sec	1.1199	1.8sec	1.1266	1.7sec	1.1147	4.8sec	1.1852	2.8sec	1.0862	4.8sec	1.1417	3.2sec	1.1209	3.3sec	1.0872	1.3sec	1.1558
Level 4	2.7sec	1.0697	3.6sec	1.0745	3.4sec	1.0640	9.5sec	1.1137	5.6sec	1.0456	9.6sec	1.0891	6.3sec	1.0685	6.6sec	1.0479	2.6sec	1.0812
Level 5	5.4sec	1.0444	7.1sec	1.0480	6.7sec	1.0383	19sec	1.0782	11.2sec	1.0272	19.2sec	1.0618	12.7sec	1.0383	13.2sec	1.0275	5.1sec	1.0407
Level 6	10.7sec	1.0293	14.2sec	1.0310	13.4sec	1.0240	38.1sec	1.0508	22.3sec	1.0168	38.4sec	1.0436	25.4sec	1.0237	26.4sec	1.0157	10.3sec	1.0244
Level 7	21.4sec	1.0191	28.5sec	1.0205	26.8sec	1.0158	1.3min	1.0320	44.7sec	1.0108	1.3min	1.0314	50.7sec	1.0190	52.9sec	1.0094	20.5sec	1.0168
Level 8	42.8sec	1.0130	56.9sec	1.0145	53.7sec	1.0114	2.5min	1.0240	1.5min	1.0075	2.6min	1.0227	1.7min	1.0202	1.8min	1.0058	41sec	1.0121
Level 9	1.4min	1.0112	1.9min	1.0126	1.8min	1.0103	5.1min	1.0227	3min	1.0067	5.1min	1.0186	3.4min	1.0292	3.5min	1.0045	1.4min	1.0099
Bid–Ask Covariance																		
Level 1	334.7ms	1.4527	444.9ms	1.5076	419.2ms	1.4613	1.2sec	1.5781	698.4ms	1.4303	1.2sec	1.4742	792.2ms	1.5088	825.8ms	1.4064	320.3ms	1.5805
Level 2	669.4ms	1.2298	889.8ms	1.2520	838.5ms	1.2263	2.4sec	1.3077	1.4sec	1.1832	2.4sec	1.2563	1.6sec	1.2336	1.7sec	1.1826	640.7ms	1.2995
Level 3	1.3sec	1.1173	1.8sec	1.1234	1.7sec	1.1127	4.8sec	1.1719	2.8sec	1.0856	4.8sec	1.1392	3.2sec	1.1200	3.3sec	1.0865	1.3sec	1.1547
Level 4	2.7sec	1.0655	3.6sec	1.0706	3.4sec	1.0606	9.5sec	1.0944	5.6sec	1.0435	9.6sec	1.0857	6.3sec	1.0665	6.6sec	1.0470	2.6sec	1.0809
Level 5	5.4sec	1.0394	7.1sec	1.0440	6.7sec	1.0331	19sec	1.0589	11.2sec	1.0248	19.2sec	1.0577	12.7sec	1.0350	13.2sec	1.0263	5.1sec	1.0402
Level 6	10.7sec	1.0245	14.2sec	1.0267	13.4sec	1.0179	38.1sec	1.0347	22.3sec	1.0143	38.4sec	1.0391	25.4sec	1.0193	26.4sec	1.0143	10.3sec	1.0232
Level 7	21.4sec	1.0151	28.5sec	1.0159	26.8sec	1.0097	1.3min	1.0188	44.7sec	1.0081	1.3min	1.0265	50.7sec	1.0120	52.9sec	1.0081	20.5sec	1.0151
Level 8	42.8sec	1.0092	56.9sec	1.0095	53.7sec	1.0057	2.5min	1.0110	1.5min	1.0044	2.6min	1.0177	1.7min	1.0085	1.8min	1.0046	41sec	1.0101
Level 9	1.4min	1.0069	1.9min	1.0059	1.8min	1.0038	5.1min	1.0079	3min	1.0026	5.1min	1.0131	3.4min	1.0076	3.5min	1.0032	1.4min	1.0068
Wavelet Correlation																		
Level 1	334.7ms	0.6880	444.9ms	0.6640	419.2ms	0.6858	1.2sec	0.6356	698.4ms	0.6996	1.2sec	0.6778	792.2ms	1.5088	825.8ms	1.4064	320.3ms	0.6324
Level 2	669.4ms	0.8126	889.8ms	0.7990	838.5ms	0.8156	2.4sec	0.7594	1.4sec	0.8458	2.4sec	0.7951	1.6sec	1.2336	1.7sec	1.1826	640.7ms	0.7690
Level 3	1.3sec	0.8930	1.8sec	0.8876	1.7sec	0.8971	4.8sec	0.8438	2.8sec	0.9206	4.8sec	0.8759	3.2sec	1.1200	3.3sec	1.0865	1.3sec	0.8652
Level 4	2.7sec	0.9348	3.6sec	0.9307	3.4sec	0.9398	9.5sec	0.8979	5.6sec	0.9564	9.6sec	0.9182	6.3sec	1.0665	6.6sec	1.0470	2.6sec	0.9249
Level 5	5.4sec	0.9575	7.1sec	0.9542	6.7sec	0.9631	19sec	0.9275	11.2sec	0.9735	19.2sec	0.9418	12.7sec	1.0350	13.2sec	1.0263	5.1sec	0.9609
Level 6	10.7sec	0.9716	14.2sec	0.9700	13.4sec	0.9766	38.1sec	0.9517	22.3sec	0.9834	38.4sec	0.9582	25.4sec	1.0193	26.4sec	1.0143	10.3sec	0.9762
Level 7	21.4sec	0.9813	28.5sec	0.9799	26.8sec	0.9845	1.3min	0.9690	44.7sec	0.9893	1.3min	0.9696	50.7sec	1.0120	52.9sec	1.0081	20.5sec	0.9835
Level 8	42.8sec	0.9872	56.9sec	0.9857	53.7sec	0.9887	2.5min	0.9766	1.5min	0.9926	2.6min	0.9778	1.7min	1.0085	1.8min	1.0046	41sec	0.9880
Level 9	1.4min	0.9889	1.9min	0.9875	1.8min	0.9898	5.1min	0.9778	3min	0.9934	5.1min	0.9817	3.4min	1.0076	3.5min	1.0032	1.4min	0.9902

Notes: I extract those days within 2 years prior to the maturity for each EDU contract. This table presents high-frequency quoting results from the most active day for EDU0 to EDU8 contracts, including ask and bid variance, covariance and wavelet correlations at all timescales.

Table A.106: High-frequency quoting results of the most active day for EDZ contracts

	EDZ1		EDZ2		EDZ3		EDZ4		EDZ5		EDZ6		EDZ7	
Most active day	**April 1, 2011**		**April 1, 2011**		**June 24, 2013**		**June 24, 2013**		**September 1, 2005**		**April 27, 2006**		**August 9, 2007**	
	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median	Time scale	Median
Ask Variance														
Level 1	453.3ms	1.5012	409.4ms	1.5749	880.9ms	1.5416	623ms	1.4362	1sec	1.4785	747.1ms	1.5245	600.1ms	1.6026
Level 2	906.7ms	1.2306	818.7ms	1.3476	1.8sec	1.2771	1.2sec	1.1952	2.1sec	1.2623	1.5sec	1.2160	1.2sec	1.3016
Level 3	1.8sec	1.1086	1.6sec	1.1862	3.5sec	1.1450	2.5sec	1.0980	4.1sec	1.1412	3sec	1.0831	2.4sec	1.1366
Level 4	3.6sec	1.0594	3.3sec	1.0828	7sec	1.0817	5sec	1.0526	8.3sec	1.0770	6sec	1.0375	4.8sec	1.0710
Level 5	7.3sec	1.0383	6.5sec	1.0406	14.1sec	1.0483	10sec	1.0317	16.5sec	1.0474	12sec	1.0212	9.6sec	1.0450
Level 6	14.5sec	1.0257	13.1sec	1.0244	28.2sec	1.0301	19.9sec	1.0200	33sec	1.0315	23.9sec	1.0135	19.2sec	1.0312
Level 7	29sec	1.0173	26.2sec	1.0161	56.4sec	1.0187	39.9sec	1.0128	1.1min	1.0246	47.8sec	1.0095	38.4sec	1.0217
Level 8	58sec	1.0118	52.4sec	1.0110	1.9min	1.0122	1.3min	1.0085	2.2min	1.0235	1.6min	1.0071	1.3min	1.0158
Level 9	1.9min	1.0093	1.7min	1.0086	3.8min	1.0097	2.7min	1.0067	4.4min	1.0300	3.2min	1.0064	2.6min	1.0140
Bid Variance														
Level 1	453.3ms	1.5007	409.4ms	1.5731	880.9ms	1.5458	623ms	1.4308	1sec	1.4786	747.1ms	1.5242	600.1ms	1.6050
Level 2	906.7ms	1.2289	818.7ms	1.3447	1.8sec	1.2793	1.2sec	1.1939	2.1sec	1.2617	1.5sec	1.2157	1.2sec	1.3026
Level 3	1.8sec	1.1075	1.6sec	1.1822	3.5sec	1.1430	2.5sec	1.0981	4.1sec	1.1404	3sec	1.0827	2.4sec	1.1366
Level 4	3.6sec	1.0587	3.3sec	1.0807	7sec	1.0763	5sec	1.0516	8.3sec	1.0753	6sec	1.0370	4.8sec	1.0702
Level 5	7.3sec	1.0375	6.5sec	1.0388	14.1sec	1.0446	10sec	1.0301	16.5sec	1.0456	12sec	1.0211	9.6sec	1.0448
Level 6	14.5sec	1.0246	13.1sec	1.0228	28.2sec	1.0285	19.9sec	1.0189	33sec	1.0290	23.9sec	1.0137	19.2sec	1.0316
Level 7	29sec	1.0164	26.2sec	1.0151	56.4sec	1.0189	39.9sec	1.0123	1.1min	1.0196	47.8sec	1.0096	38.4sec	1.0221
Level 8	58sec	1.0115	52.4sec	1.0108	1.9min	1.0138	1.3min	1.0087	2.2min	1.0140	1.6min	1.0072	1.3min	1.0158
Level 9	1.9min	1.0097	1.7min	1.0090	3.8min	1.0115	2.7min	1.0076	4.4min	1.0127	3.2min	1.0064	2.6min	1.0136
Bid–Ask Covariance														
Level 1	453.3ms	1.4999	409.4ms	1.5731	880.9ms	1.5405	623ms	1.4322	1sec	1.4783	747.1ms	1.5242	600.1ms	1.6036
Level 2	906.7ms	1.2271	818.7ms	1.3444	1.8sec	1.2717	1.2sec	1.1919	2.1sec	1.2616	1.5sec	1.2156	1.2sec	1.3017
Level 3	1.8sec	1.1044	1.6sec	1.1817	3.5sec	1.1353	2.5sec	1.0945	4.1sec	1.1401	3sec	1.0825	2.4sec	1.1358
Level 4	3.6sec	1.0545	3.3sec	1.0784	7sec	1.0703	5sec	1.0478	8.3sec	1.0749	6sec	1.0367	4.8sec	1.0694
Level 5	7.3sec	1.0331	6.5sec	1.0356	14.1sec	1.0381	10sec	1.0260	16.5sec	1.0448	12sec	1.0205	9.6sec	1.0432
Level 6	14.5sec	1.0208	13.1sec	1.0192	28.2sec	1.0220	19.9sec	1.0145	33sec	1.0279	23.9sec	1.0128	19.2sec	1.0293
Level 7	29sec	1.0127	26.2sec	1.0114	56.4sec	1.0125	39.9sec	1.0081	1.1min	1.0189	47.8sec	1.0085	38.4sec	1.0194
Level 8	58sec	1.0076	52.4sec	1.0070	1.9min	1.0072	1.3min	1.0045	2.2min	1.0141	1.6min	1.0059	1.3min	1.0127
Level 9	1.9min	1.0046	1.7min	1.0046	3.8min	1.0045	2.7min	1.0027	4.4min	1.0139	3.2min	1.0047	2.6min	1.0096
Wavelet Correlation														
Level 1	453.3ms	1.4999	409.4ms	1.5731	880.9ms	0.6469	623ms	0.6989	1sec	0.6763	747.1ms	0.6561	600.1ms	0.6230
Level 2	906.7ms	1.2271	818.7ms	1.3444	1.8sec	0.7817	1.2sec	0.8376	2.1sec	0.7926	1.5sec	0.8226	1.2sec	0.7677
Level 3	1.8sec	1.1044	1.6sec	1.1817	3.5sec	0.8749	2.5sec	0.9106	4.1sec	0.8769	3sec	0.9236	2.4sec	0.8798
Level 4	3.6sec	1.0545	3.3sec	1.0784	7sec	0.9291	5sec	0.9509	8.3sec	0.9299	6sec	0.9643	4.8sec	0.9344
Level 5	7.3sec	1.0331	6.5sec	1.0356	14.1sec	0.9573	10sec	0.9708	16.5sec	0.9564	12sec	0.9793	9.6sec	0.9571
Level 6	14.5sec	1.0208	13.1sec	1.0192	28.2sec	0.9723	19.9sec	0.9814	33sec	0.9719	23.9sec	0.9865	19.2sec	0.9693
Level 7	29sec	1.0127	26.2sec	1.0114	56.4sec	0.9815	39.9sec	0.9878	1.1min	0.9808	47.8sec	0.9905	38.4sec	0.9784
Level 8	58sec	1.0076	52.4sec	1.0070	1.9min	0.9864	1.3min	0.9913	2.2min	0.9862	1.6min	0.9928	1.3min	0.9844
Level 9	1.9min	1.0046	1.7min	1.0046	3.8min	0.9887	2.7min	0.9925	4.4min	0.9875	3.2min	0.9936	2.6min	0.9866

Notes: I extract those days within 2 years prior to the maturity for each EDZ contract. This table presents high-frequency quoting results from the most active day for EDZ1 to EDZ7 contracts, including ask and bid variance, covariance and wavelet correlations at all timescales.

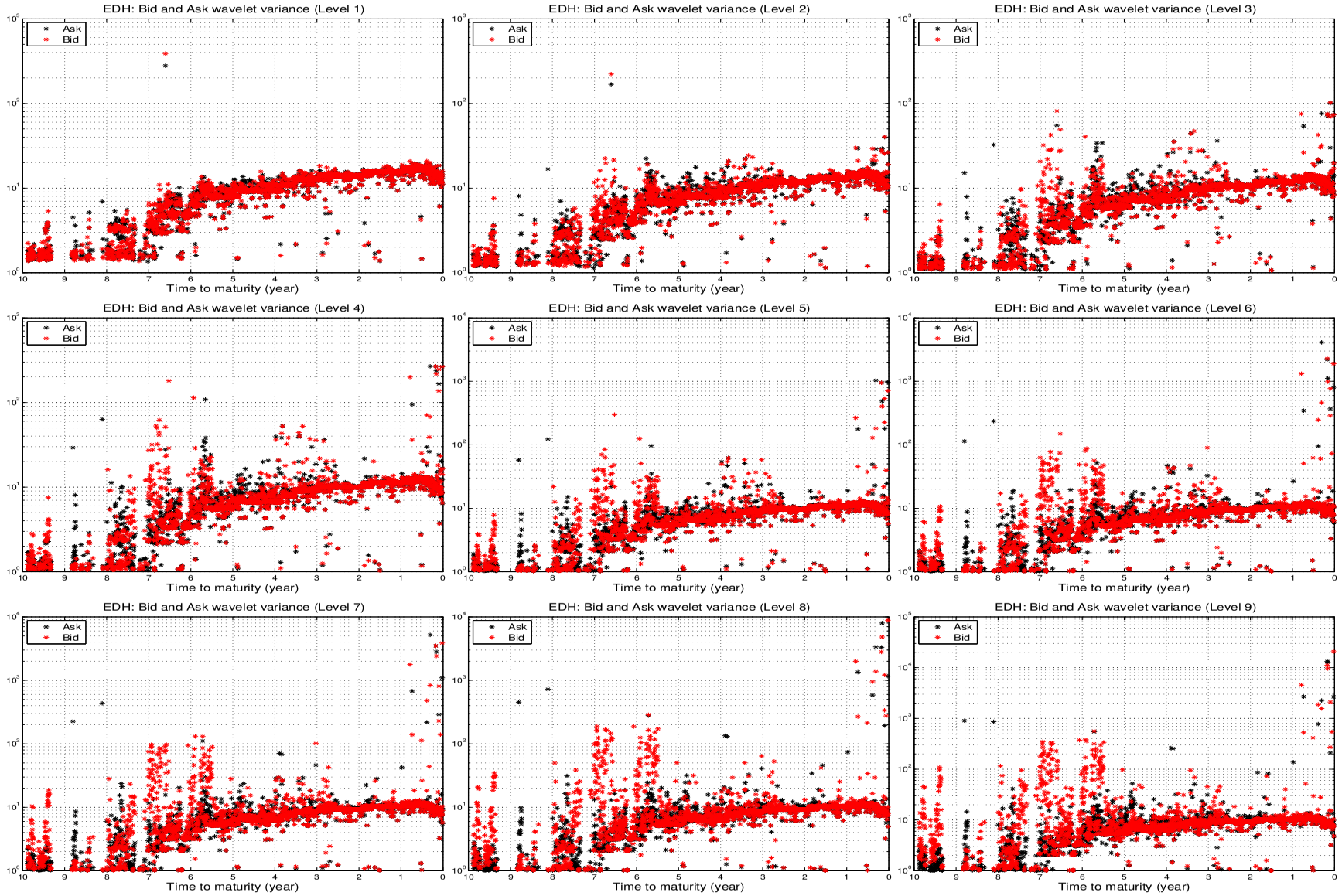


Figure A.1: The term structure of 10 EDH Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

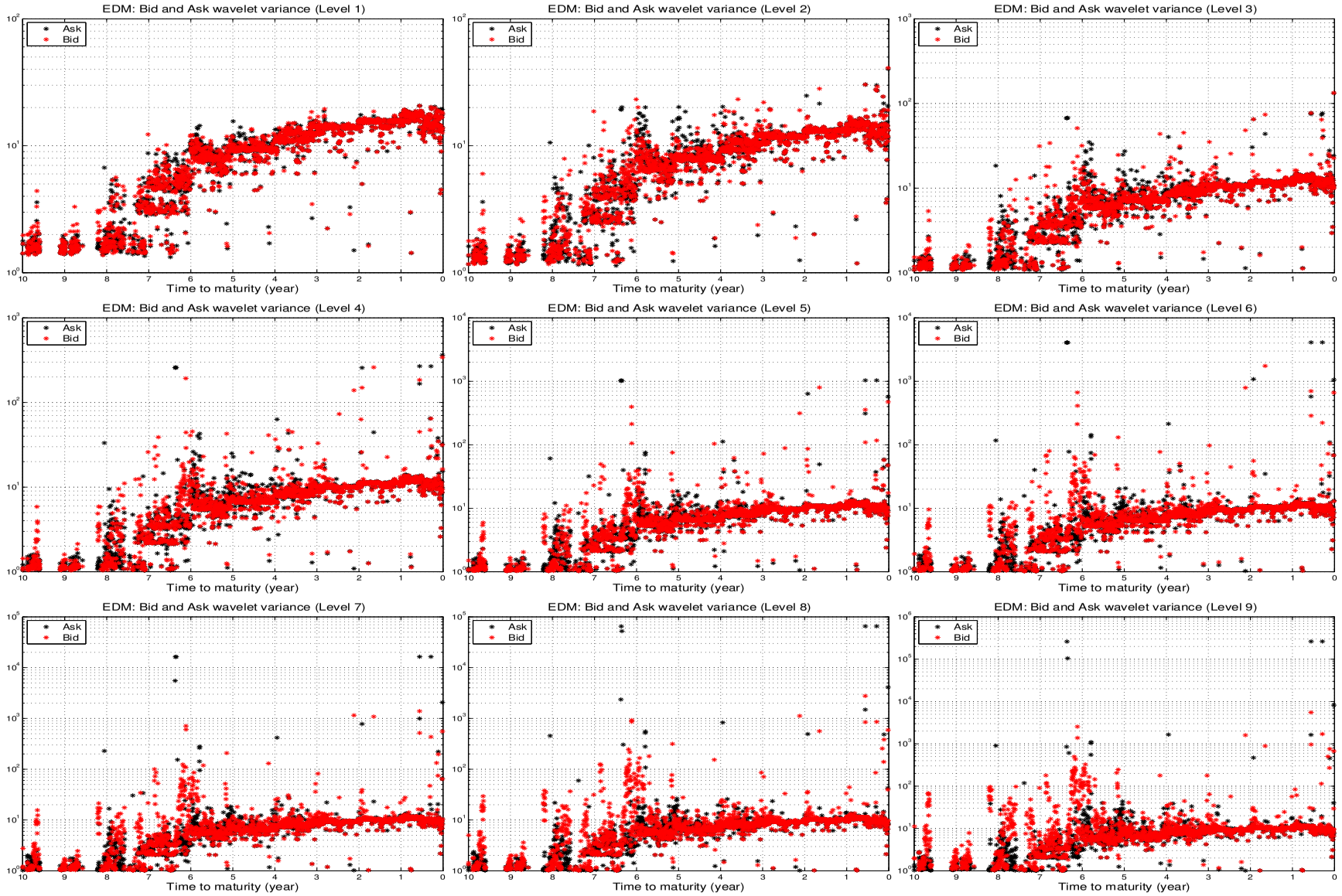


Figure A.2: The term structure of 10 EDM Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

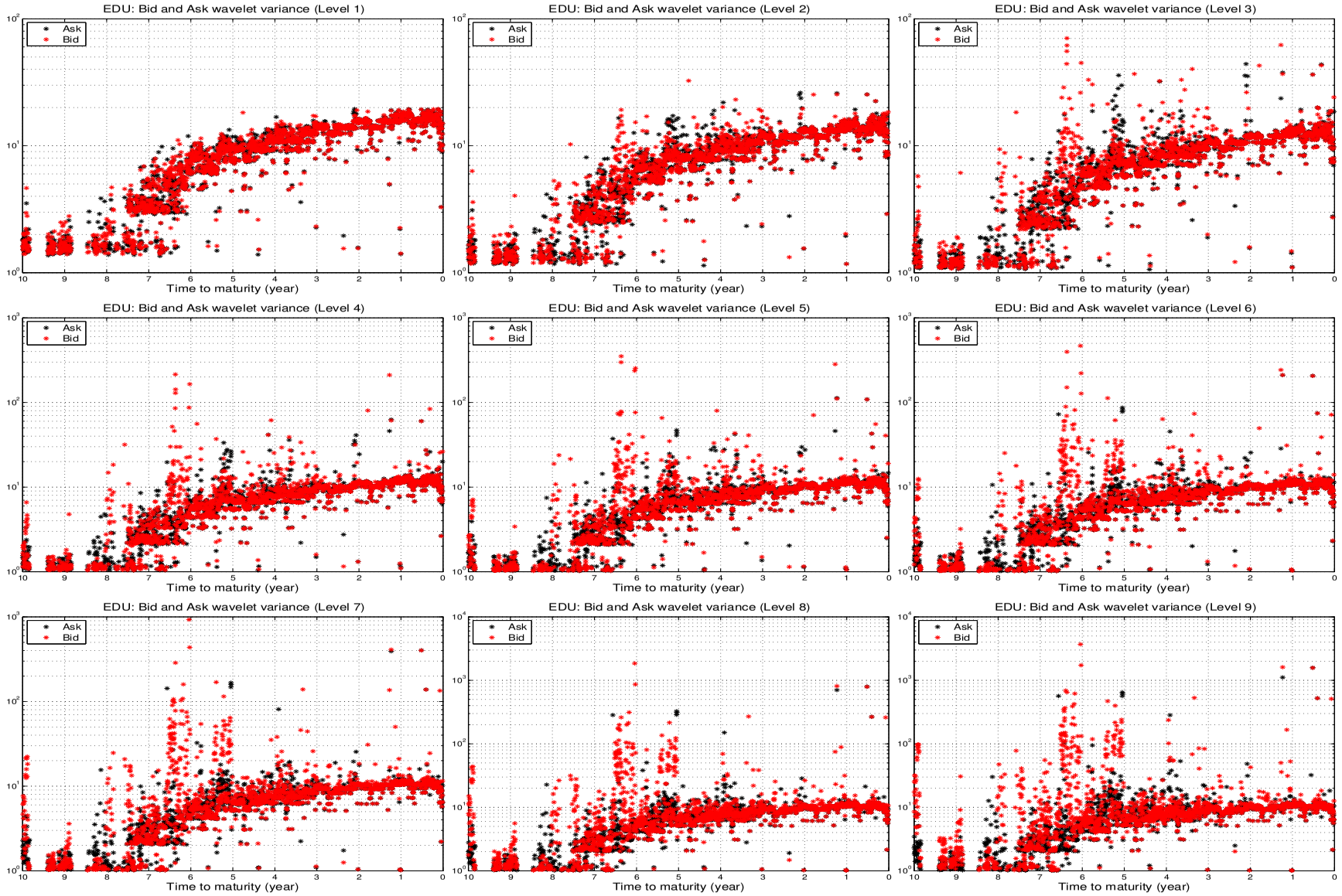


Figure A.3: The term structure of 10 EDU Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

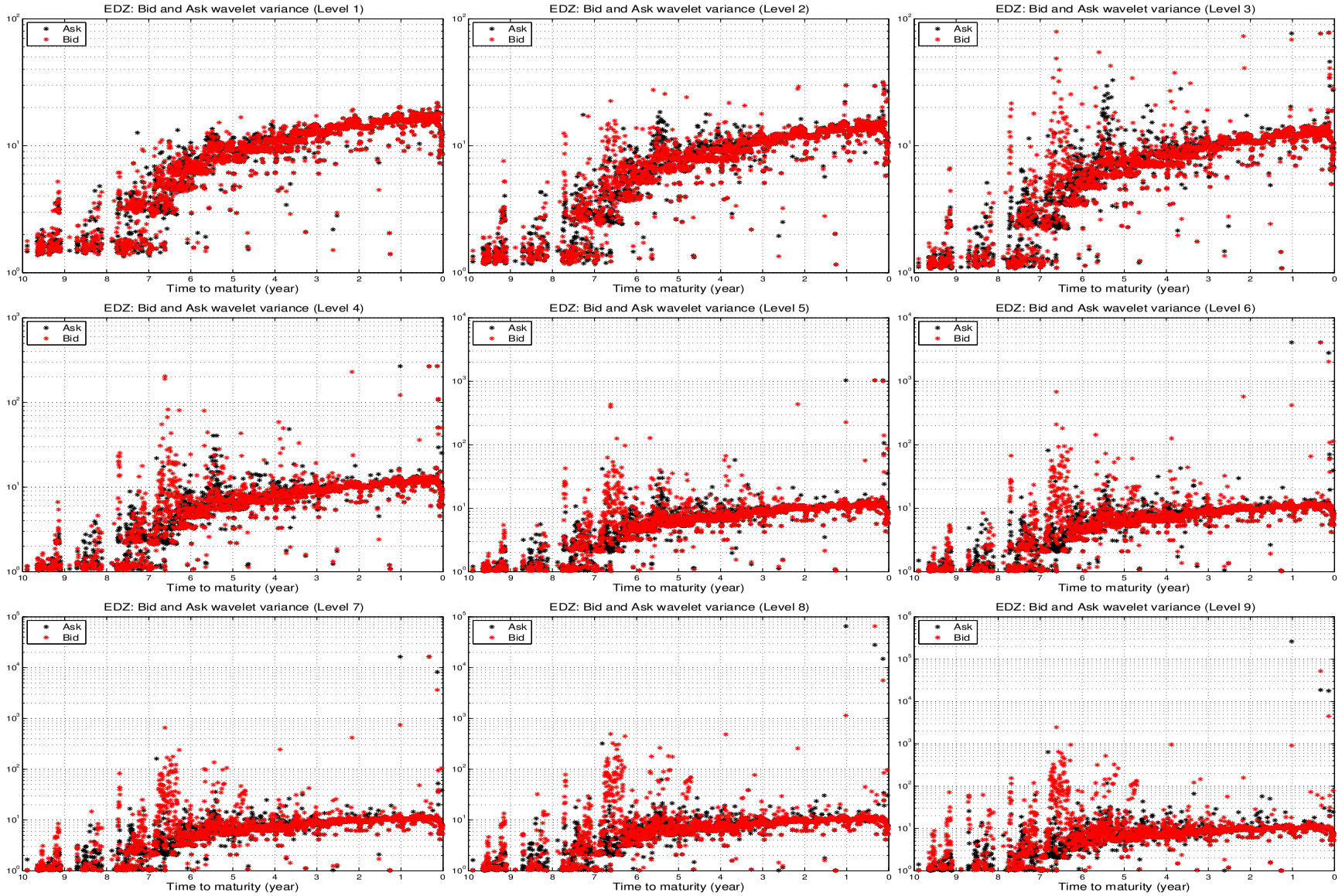


Figure A.4: The term structure of 10 EDZ Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

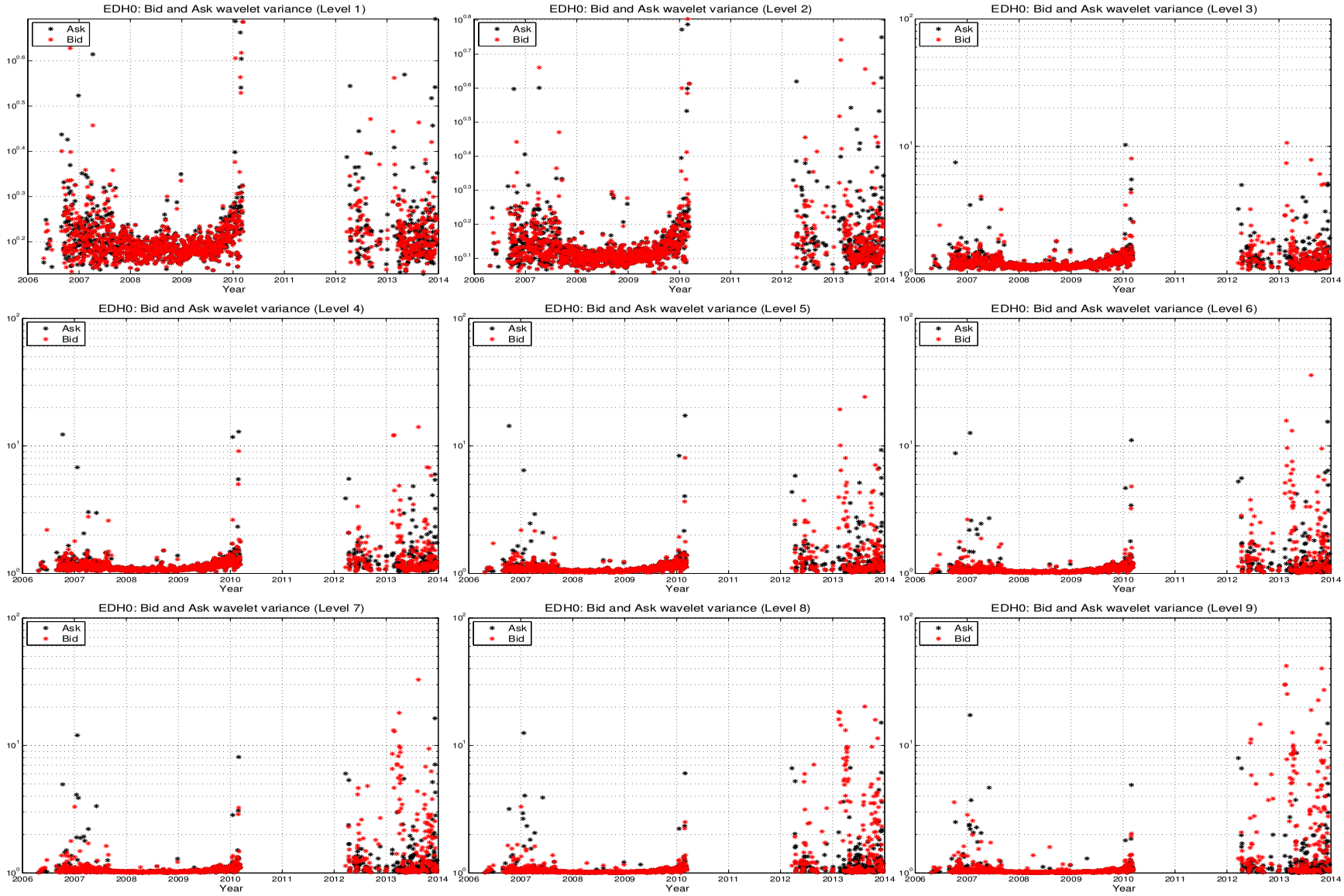


Figure A.5: The term structure of EDH0 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

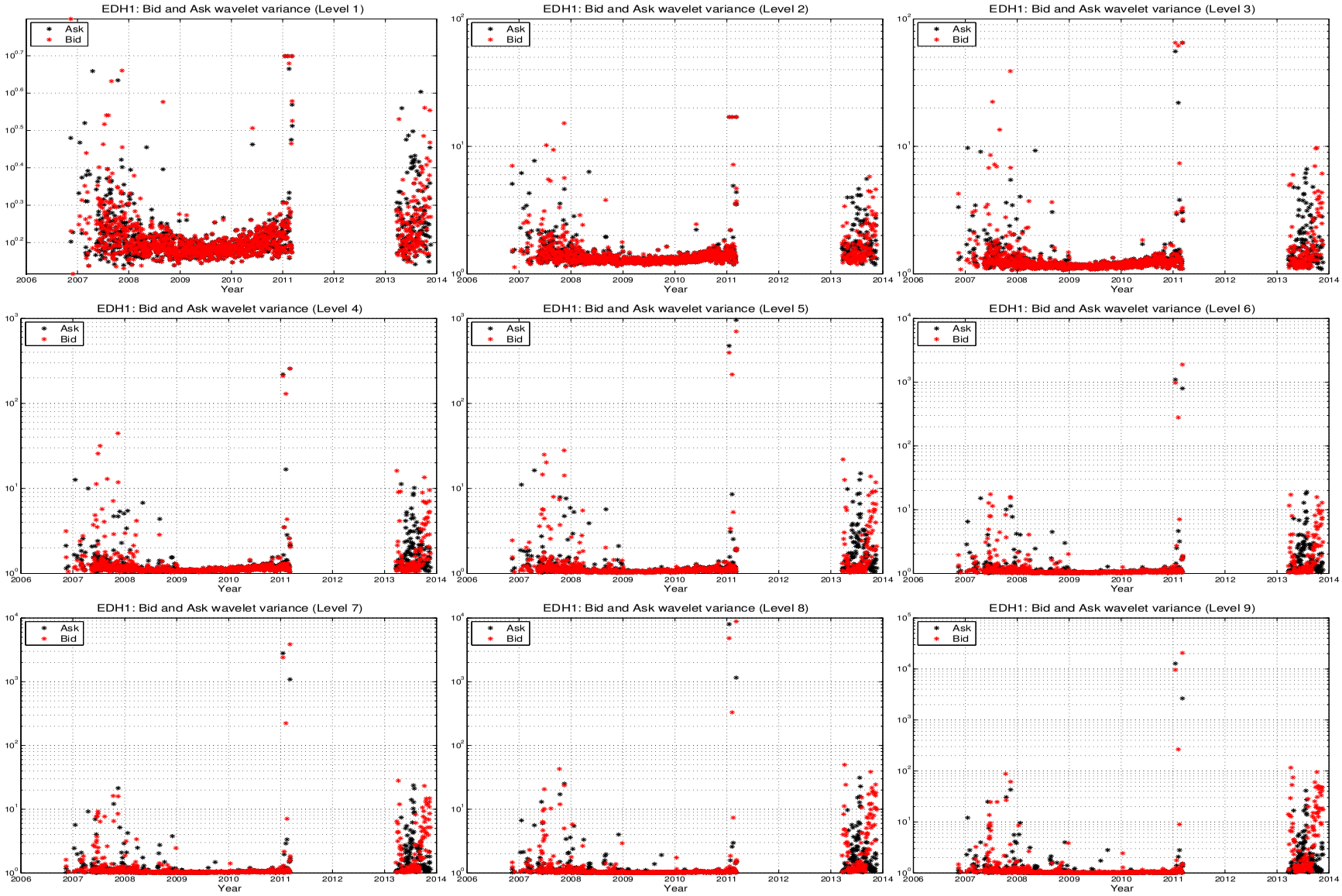


Figure A.6: The term structure of EDH1 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

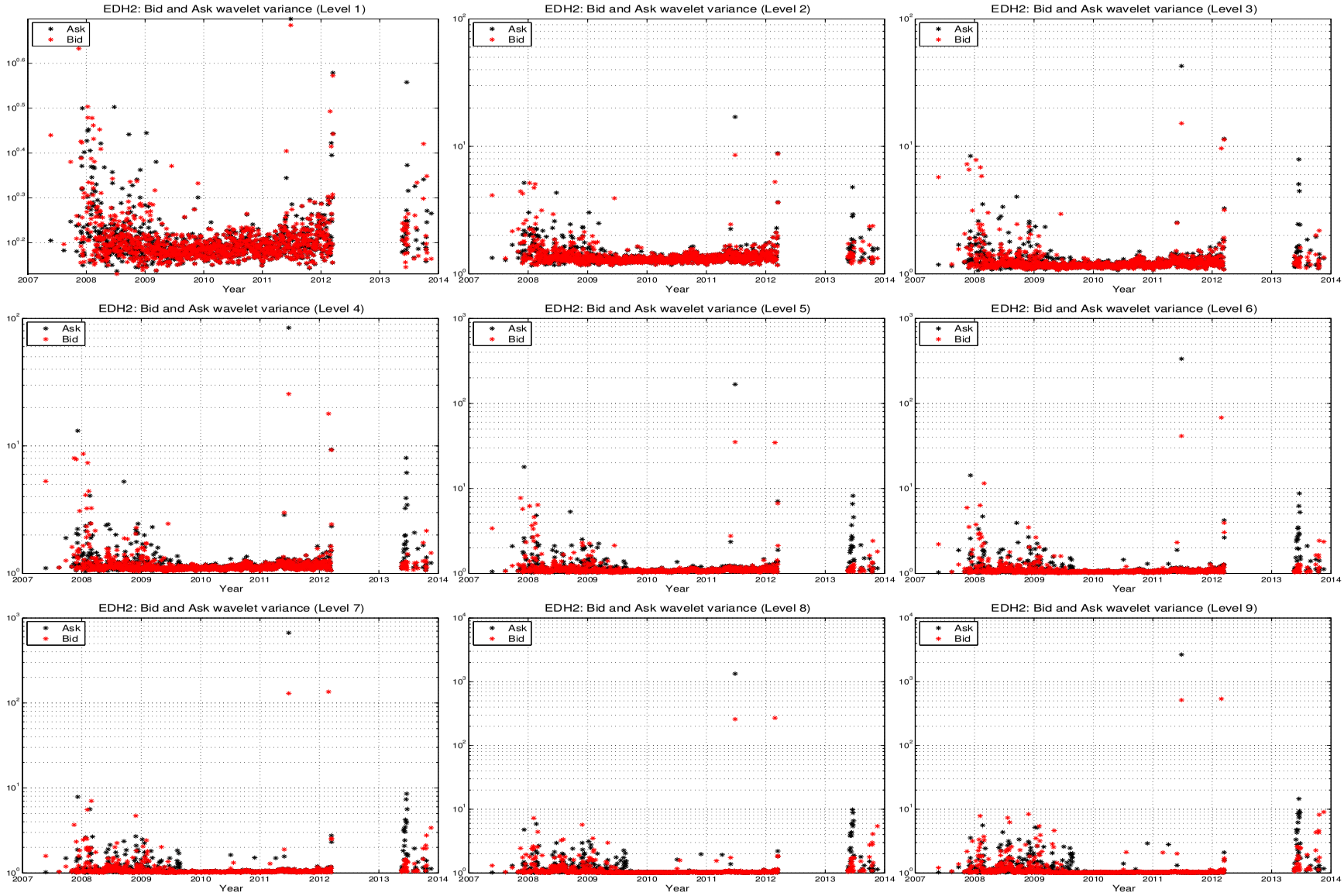


Figure A.7: The term structure of EDH2 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

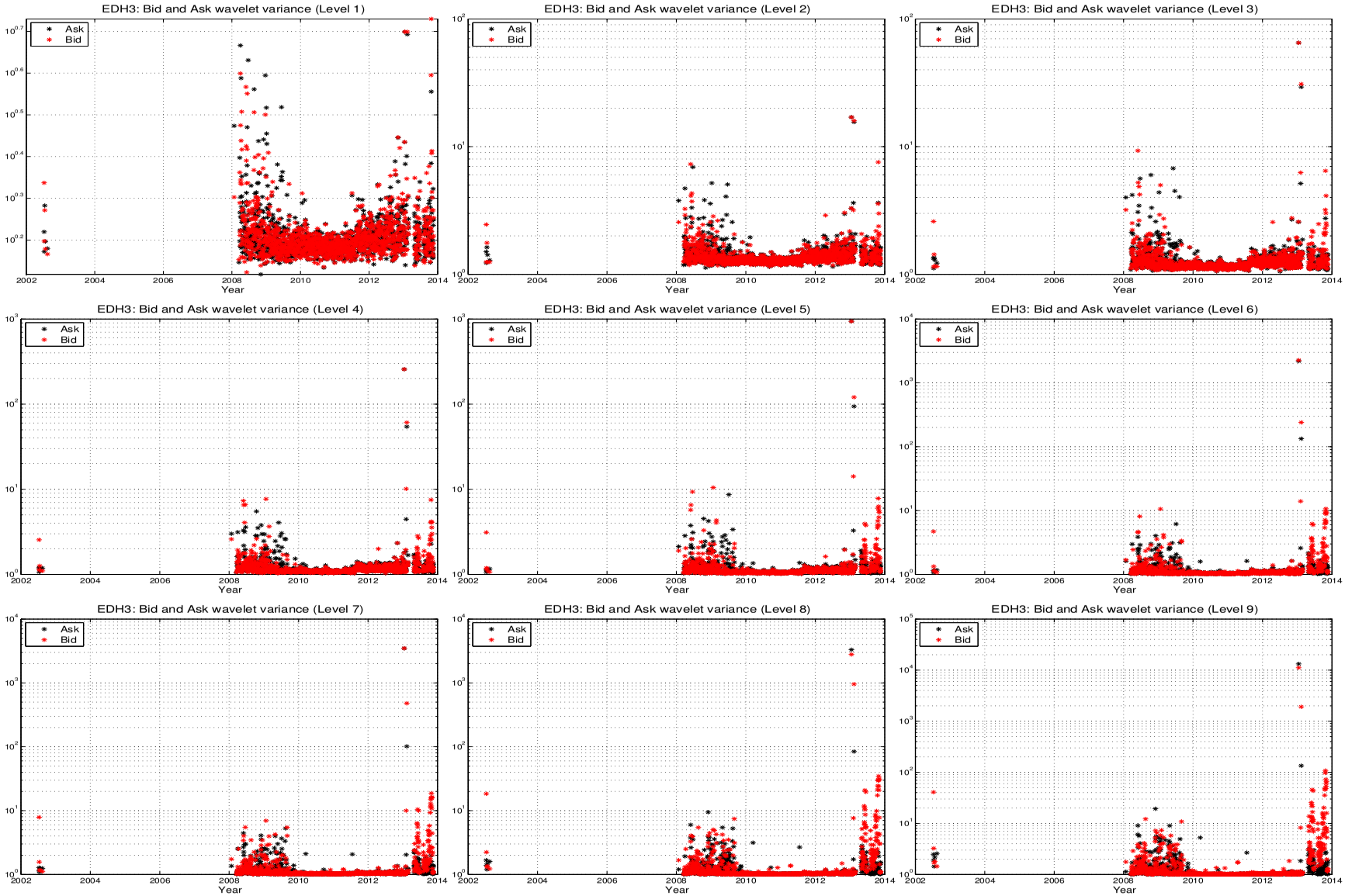


Figure A.8: The term structure of EDH3 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

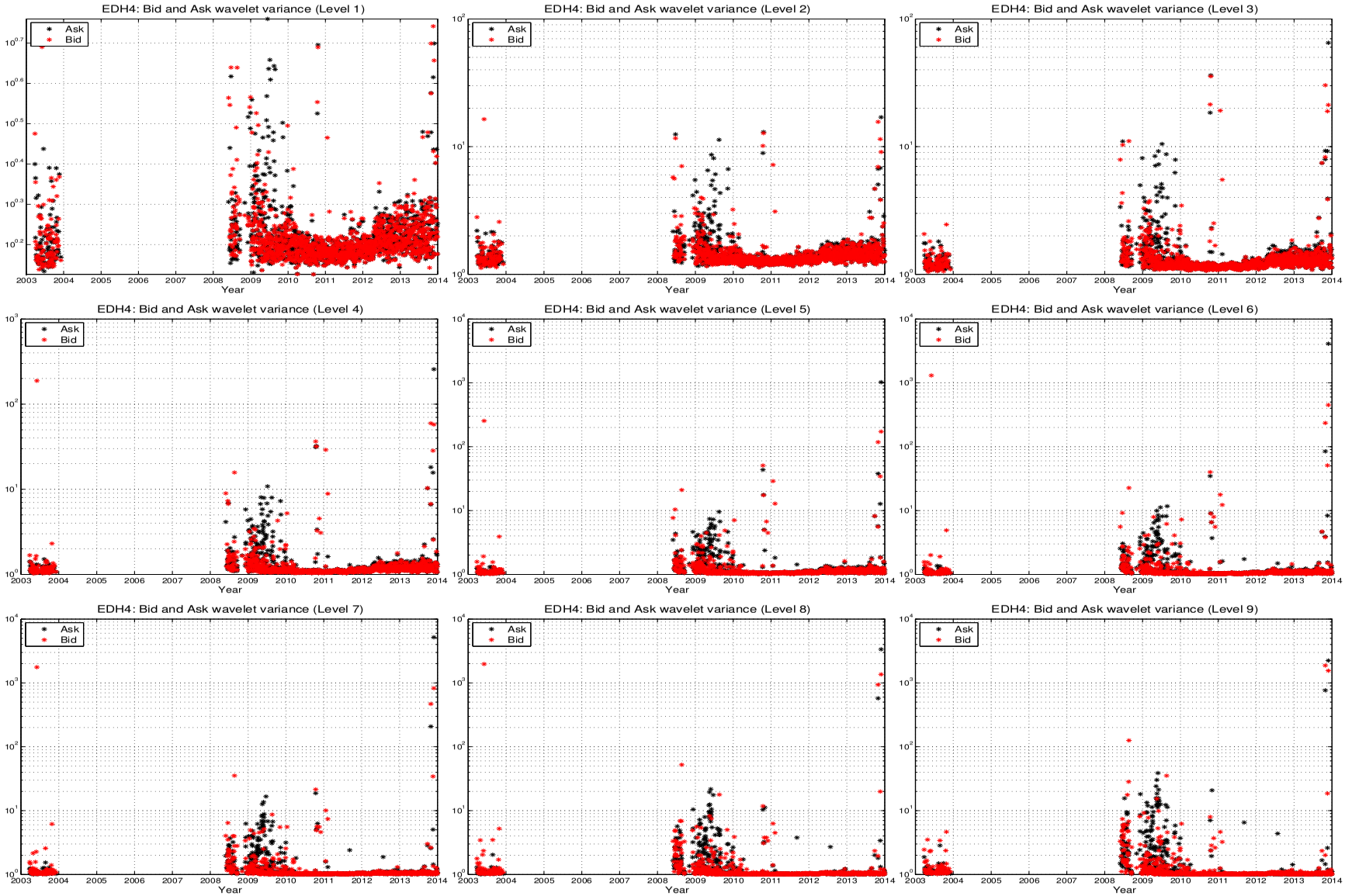


Figure A.9: The term structure of EDH4 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

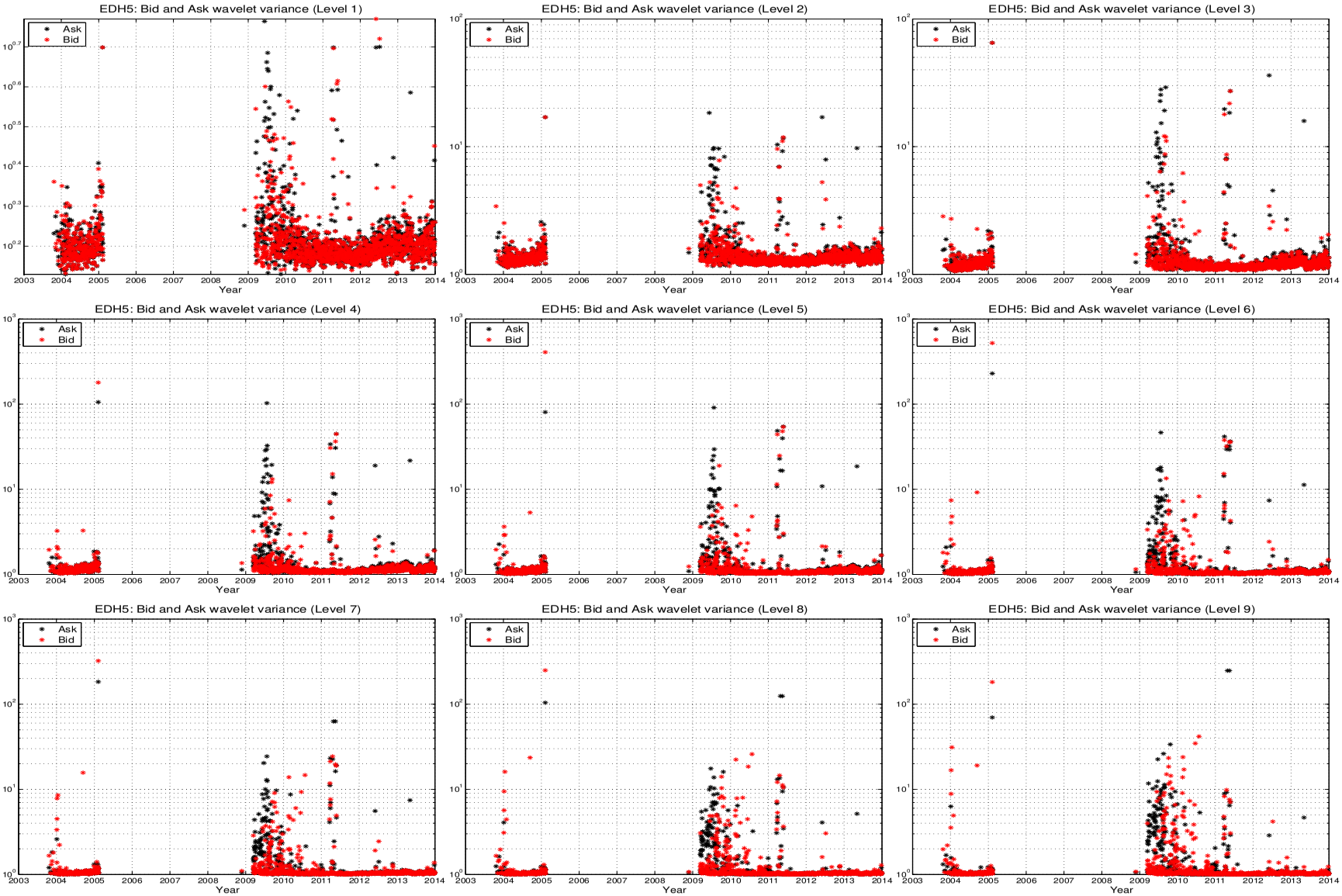


Figure A.10: The term structure of EDH5 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

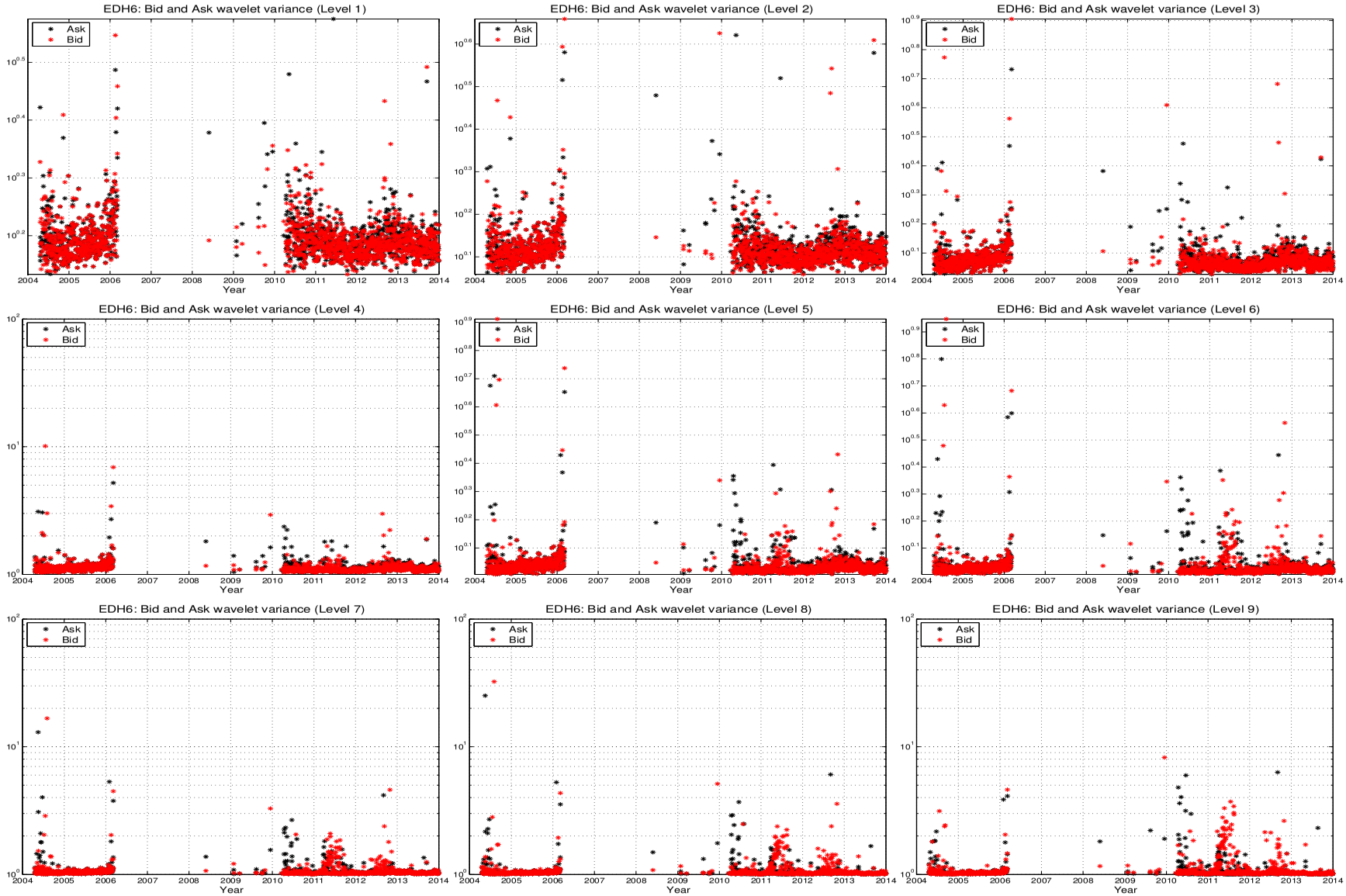


Figure A.11: The term structure of EDH6 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

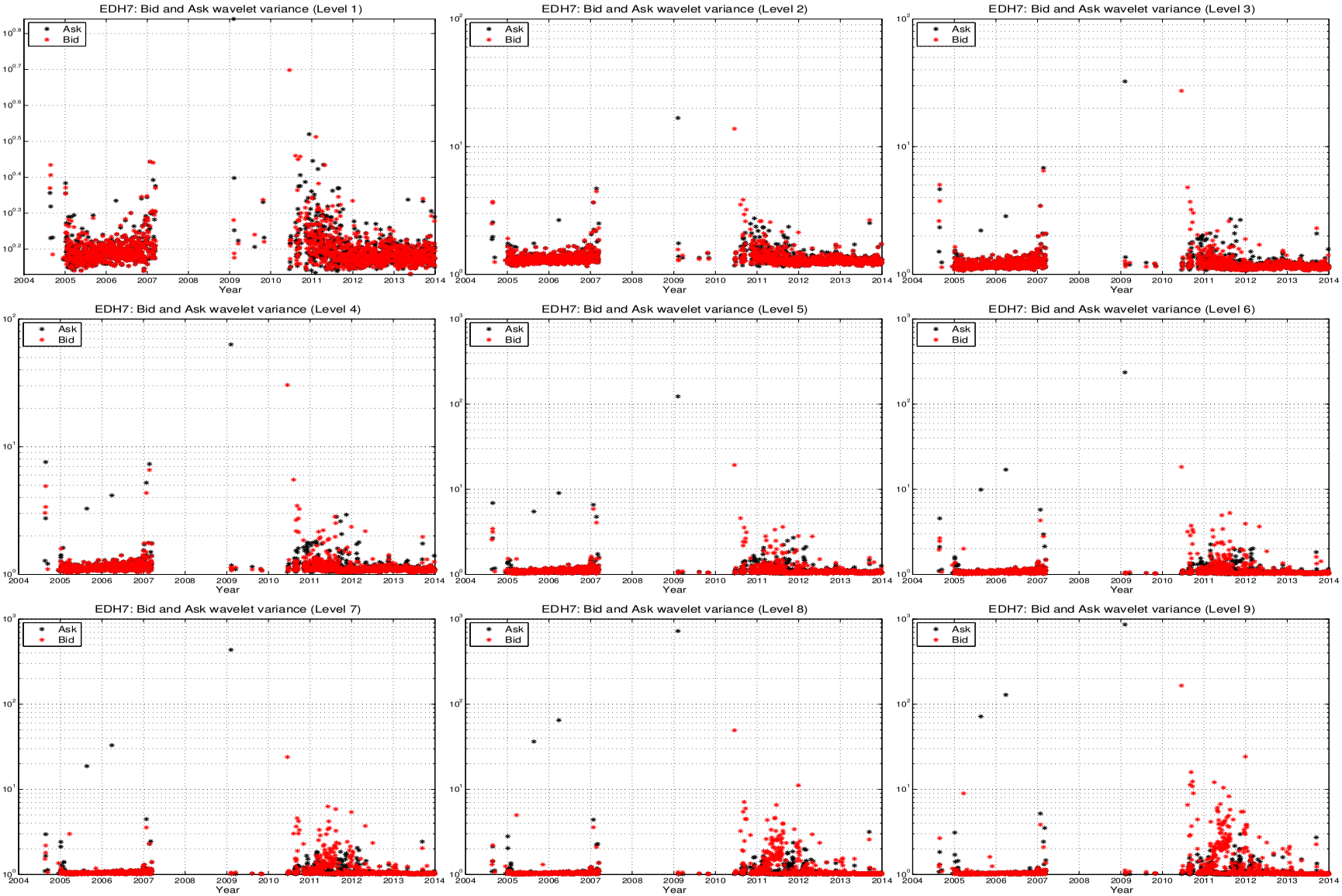


Figure A.12: The term structure of EDH7 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

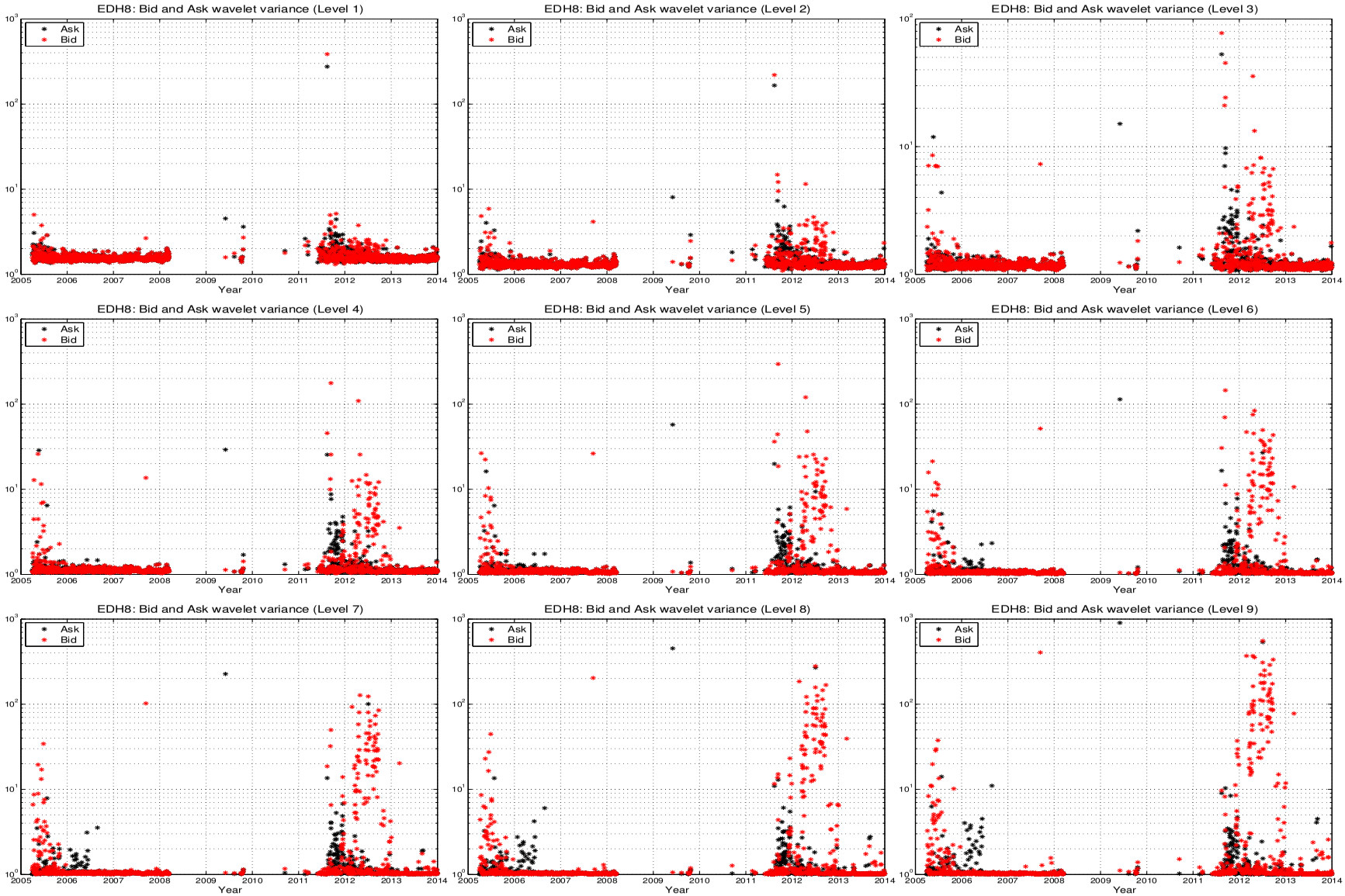


Figure A.13: The term structure of EDH8 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

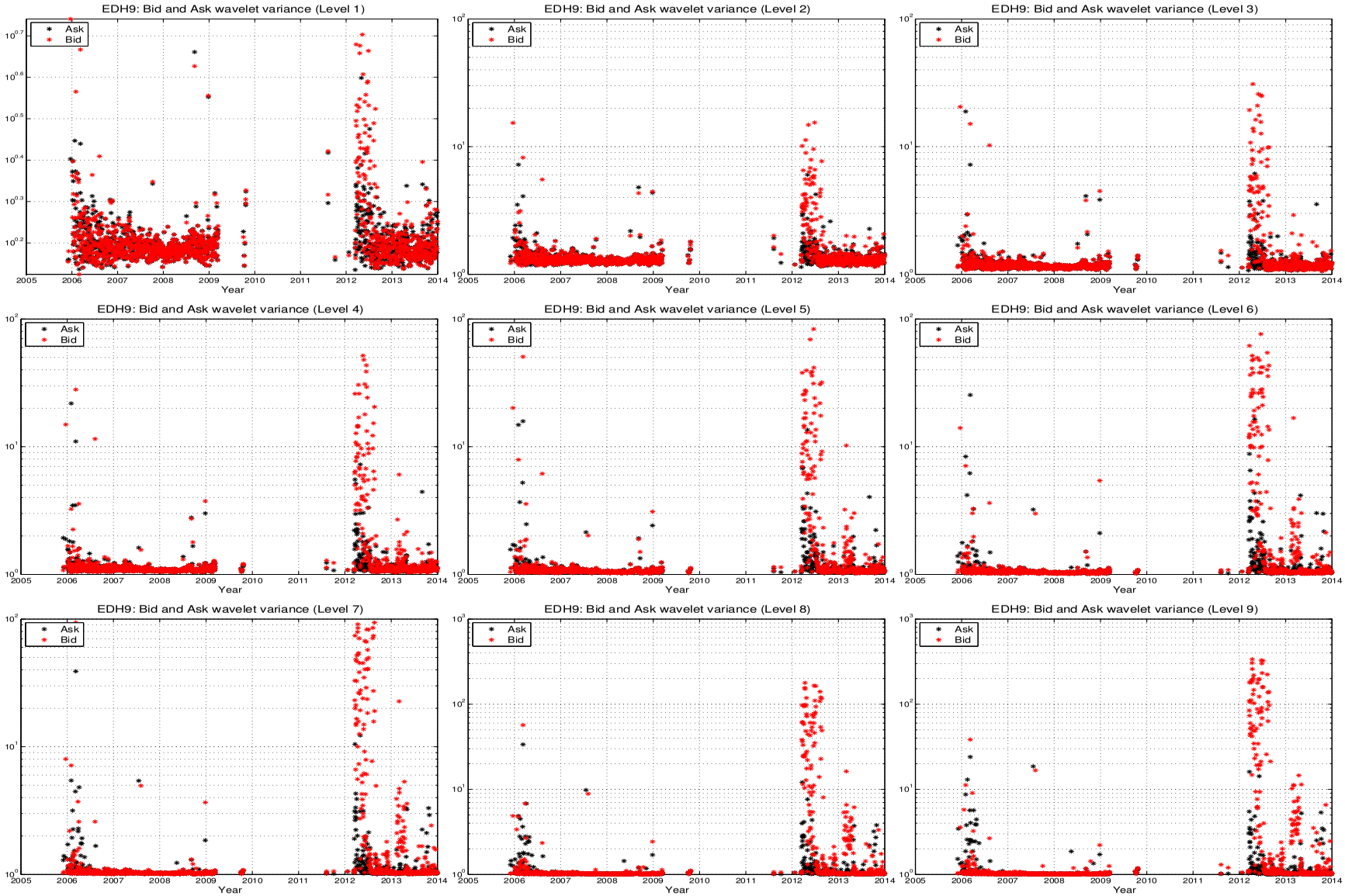


Figure A.14: The term structure of EDH9 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

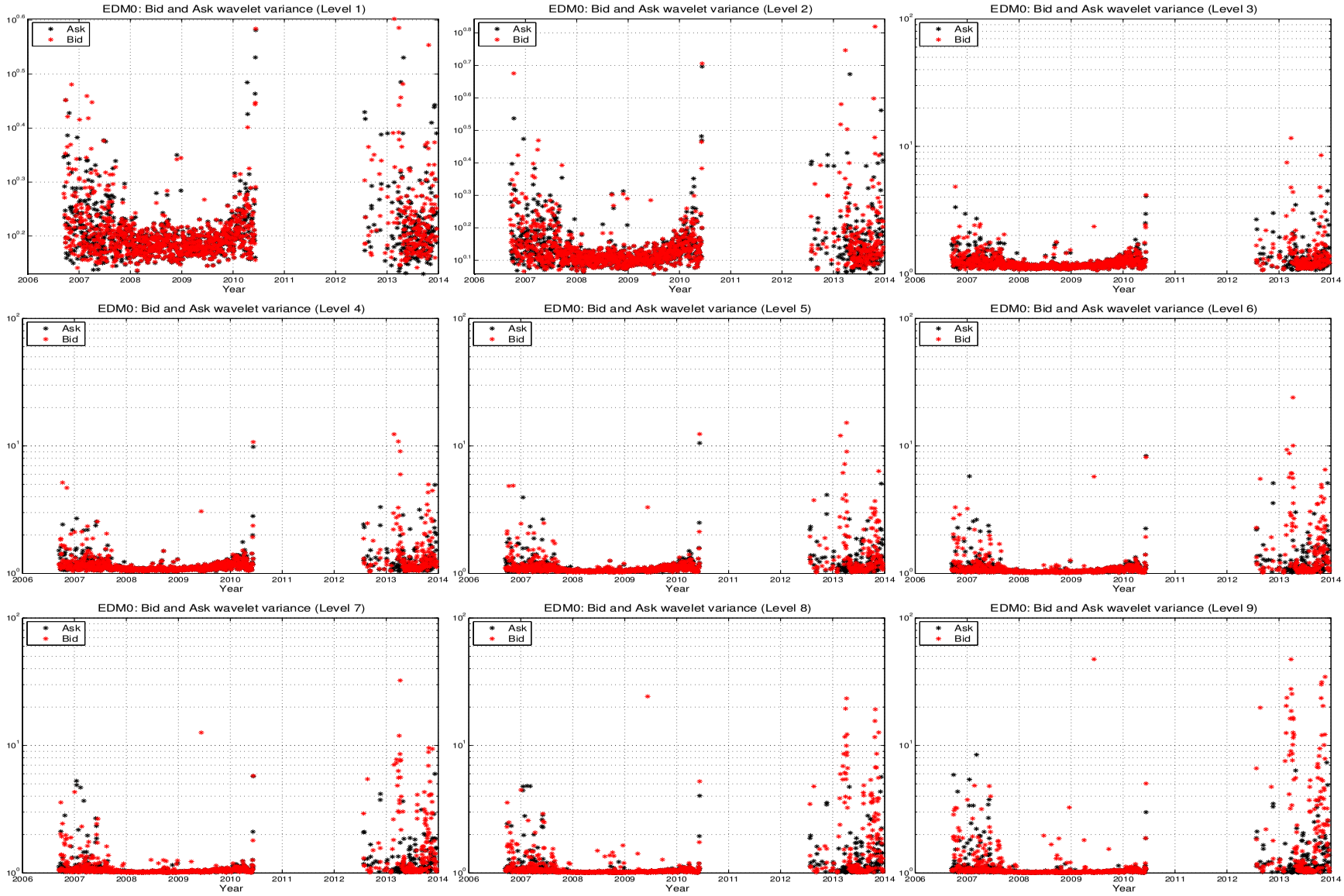


Figure A.15: The term structure of EDM0 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

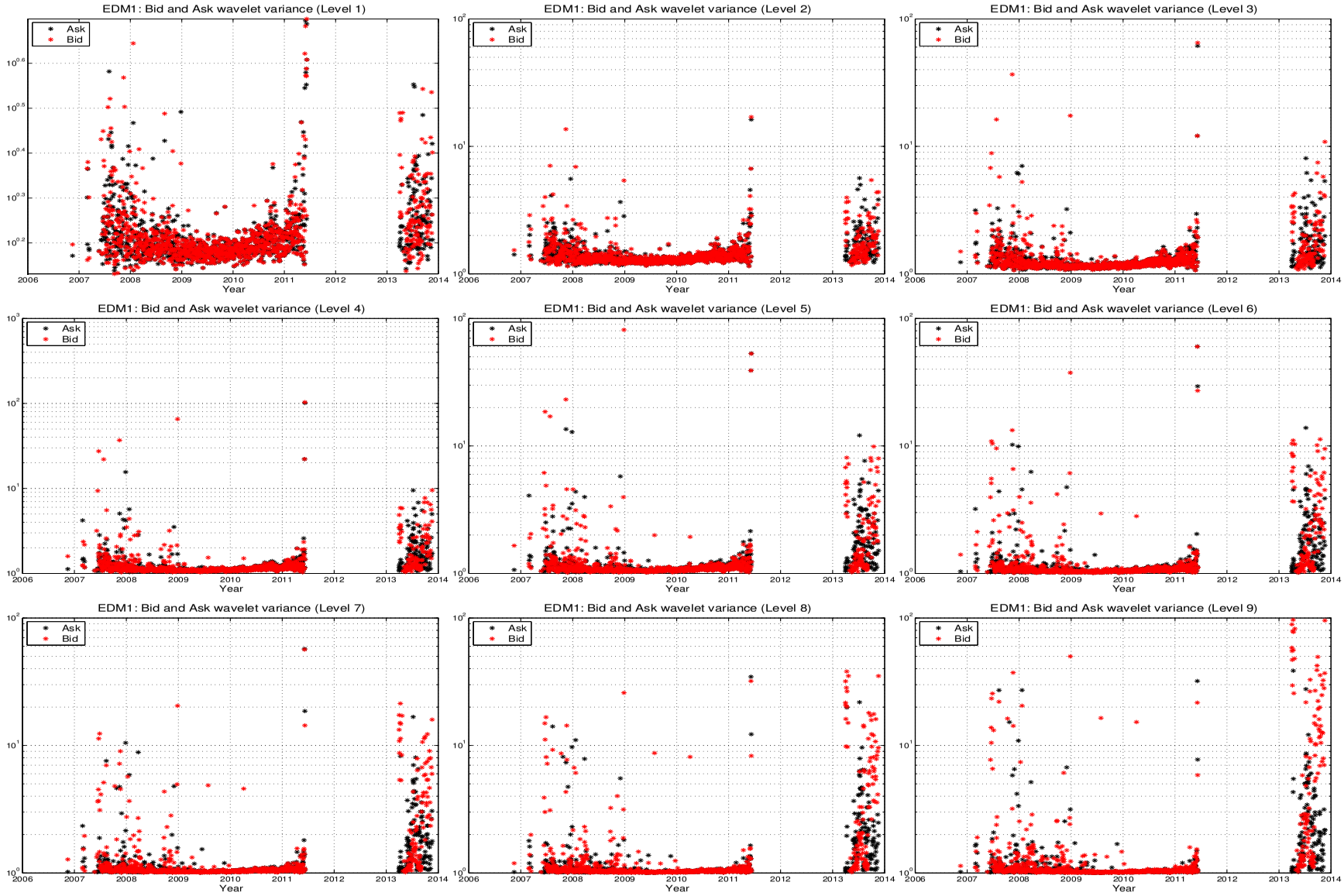


Figure A.16: The term structure of EDM1 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

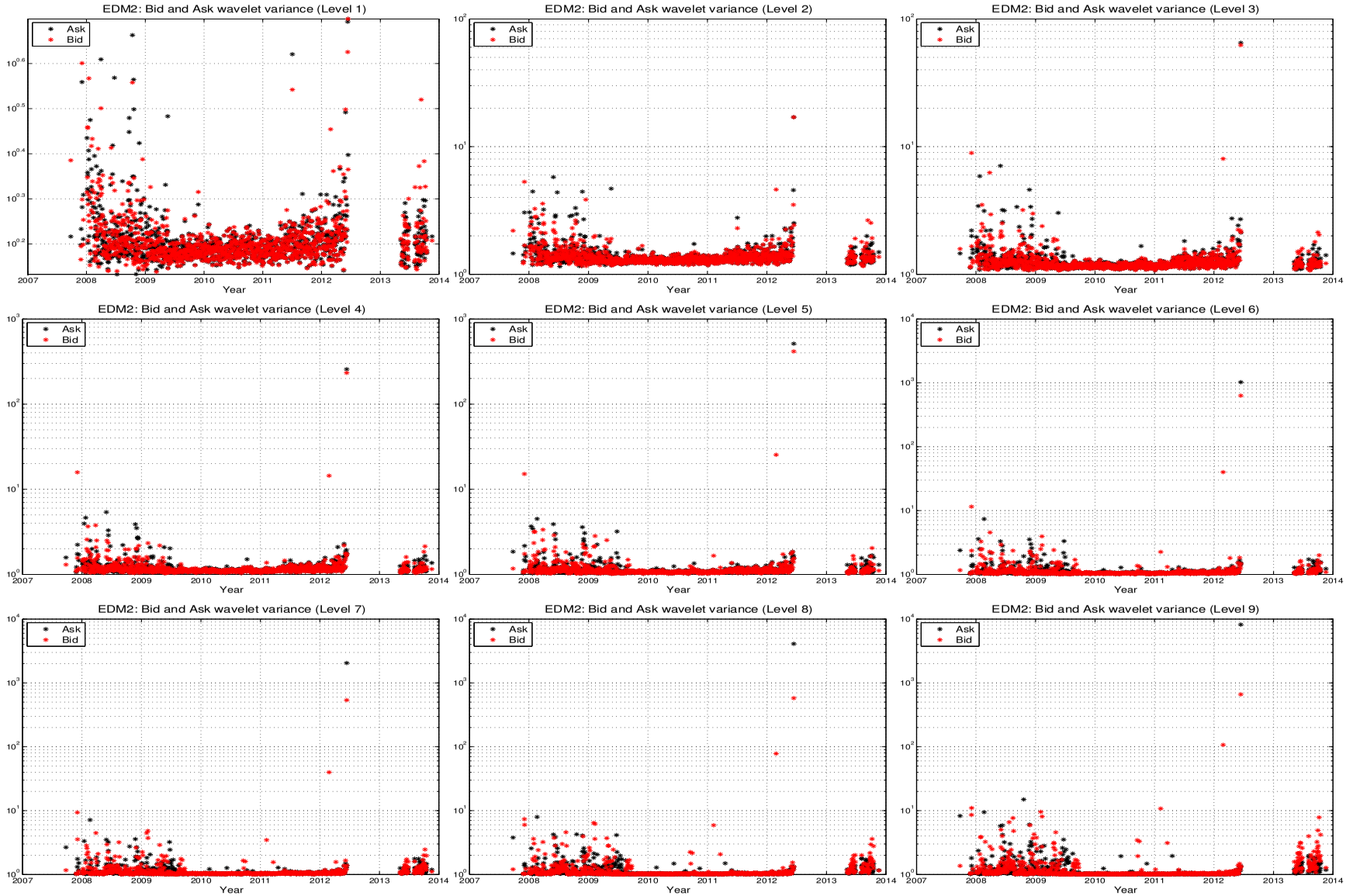


Figure A.17: The term structure of EDM2 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

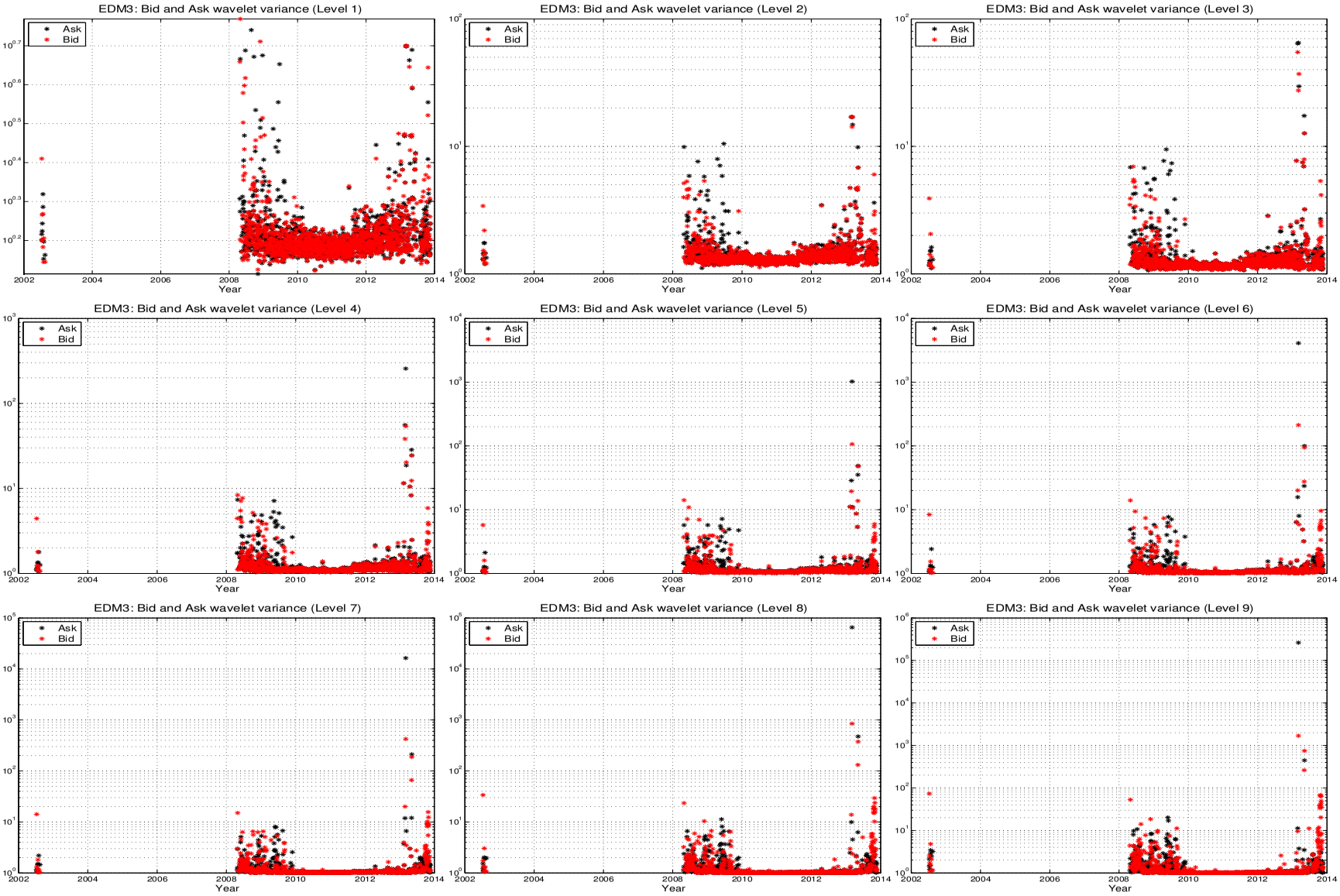


Figure A.18: The term structure of EDM3 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

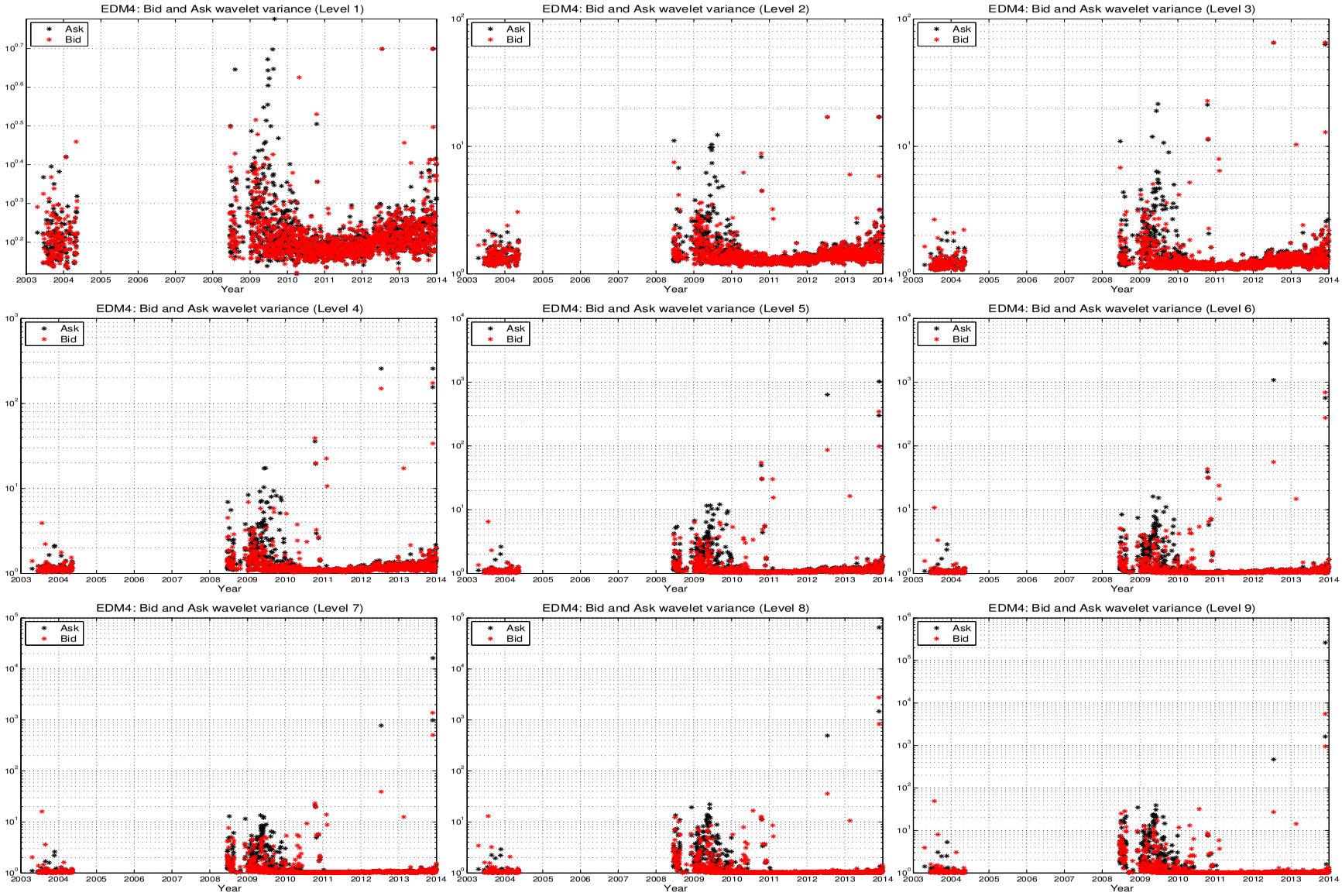


Figure A.19: The term structure of EDM4 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

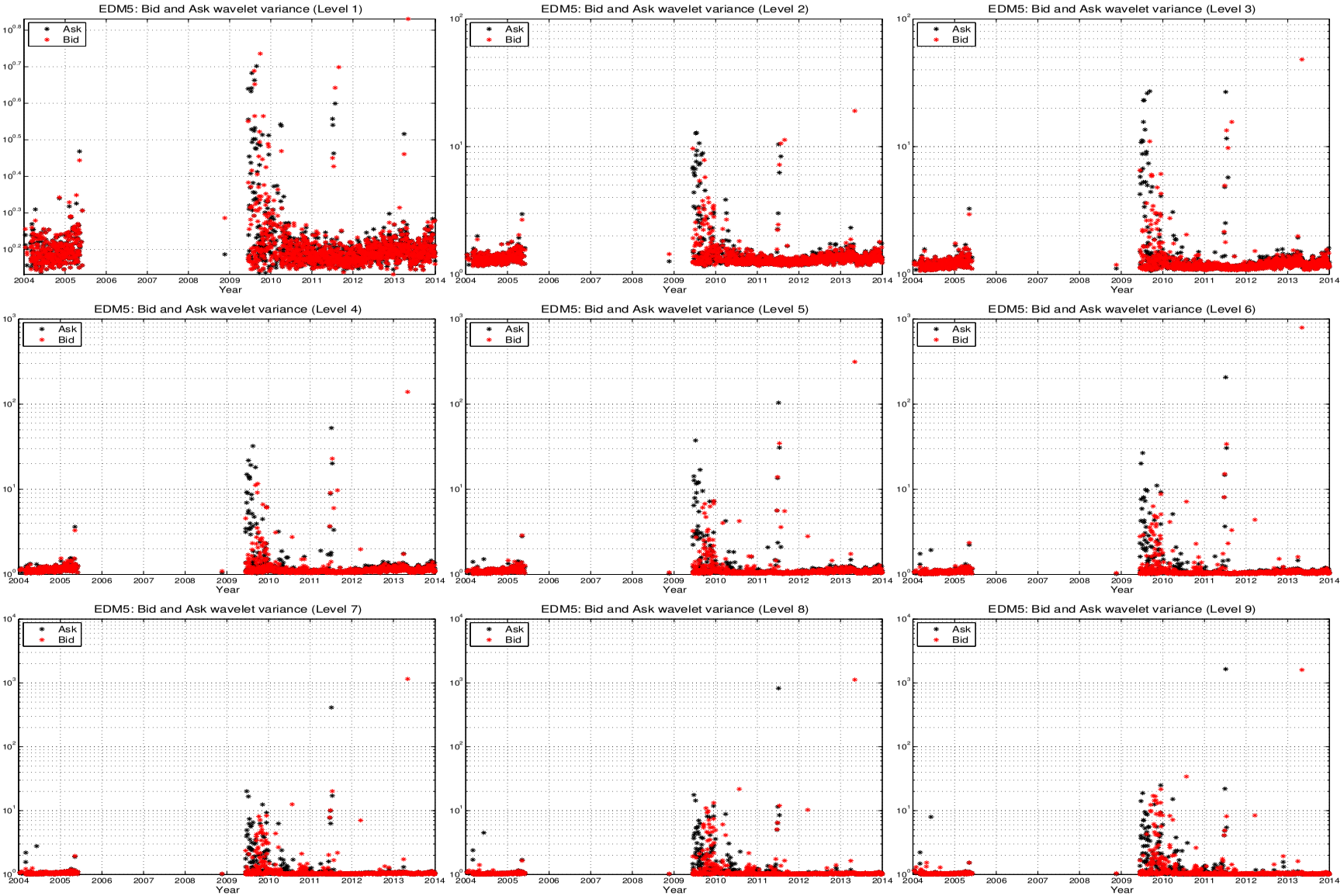


Figure A.20: The term structure of EDM5 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

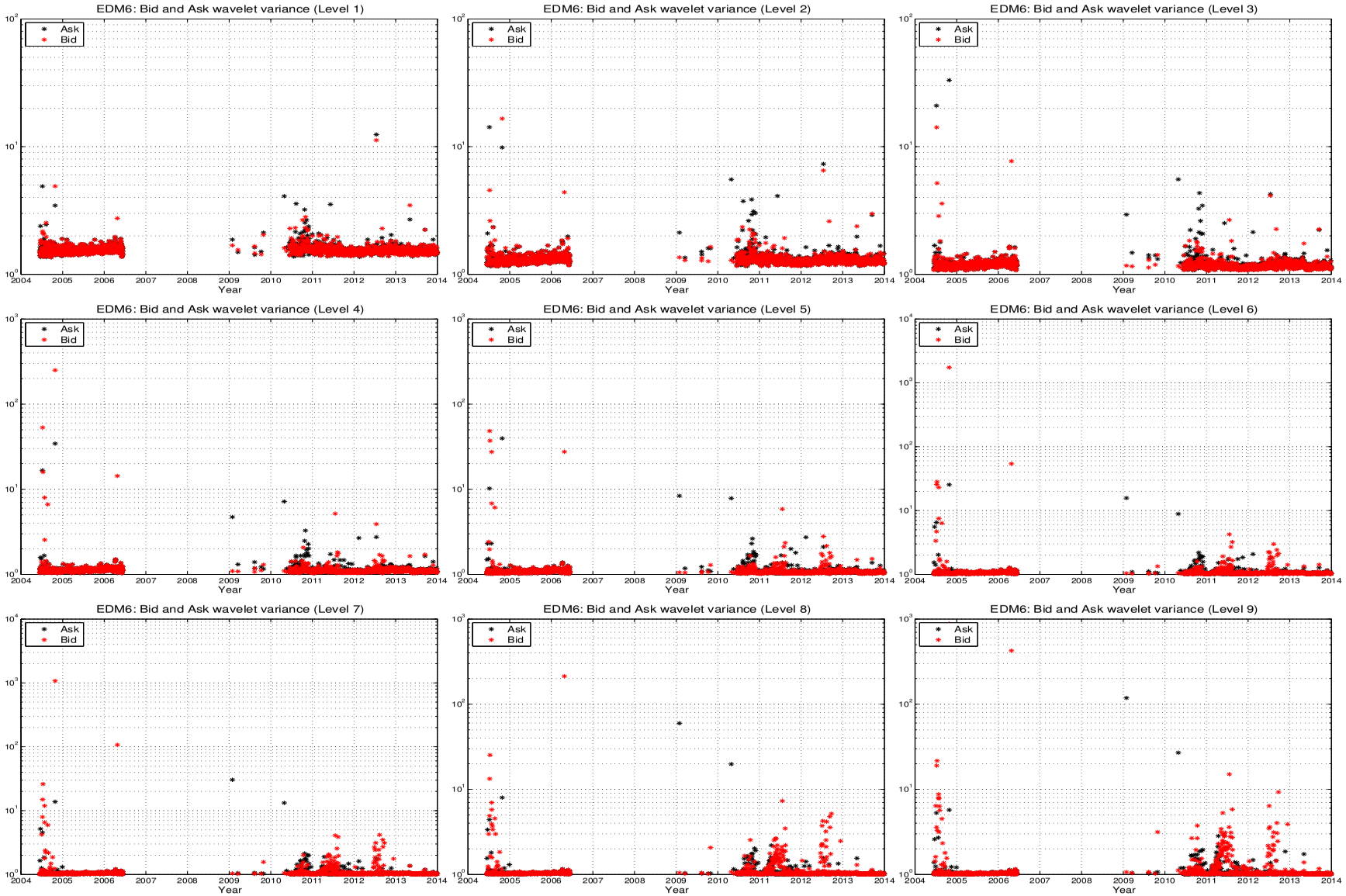


Figure A.21: The term structure of EDM6 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

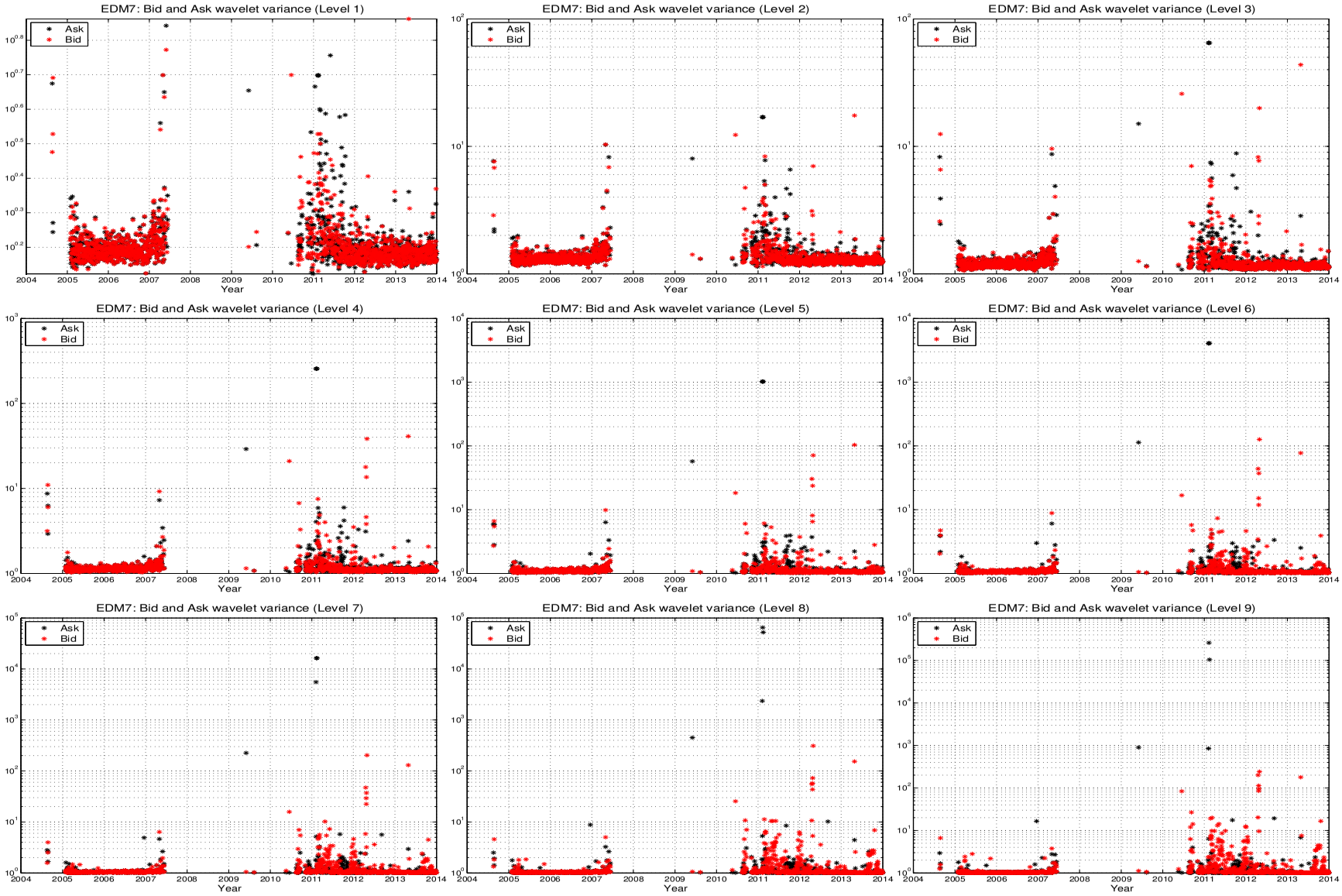


Figure A.22: The term structure of EDM7 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

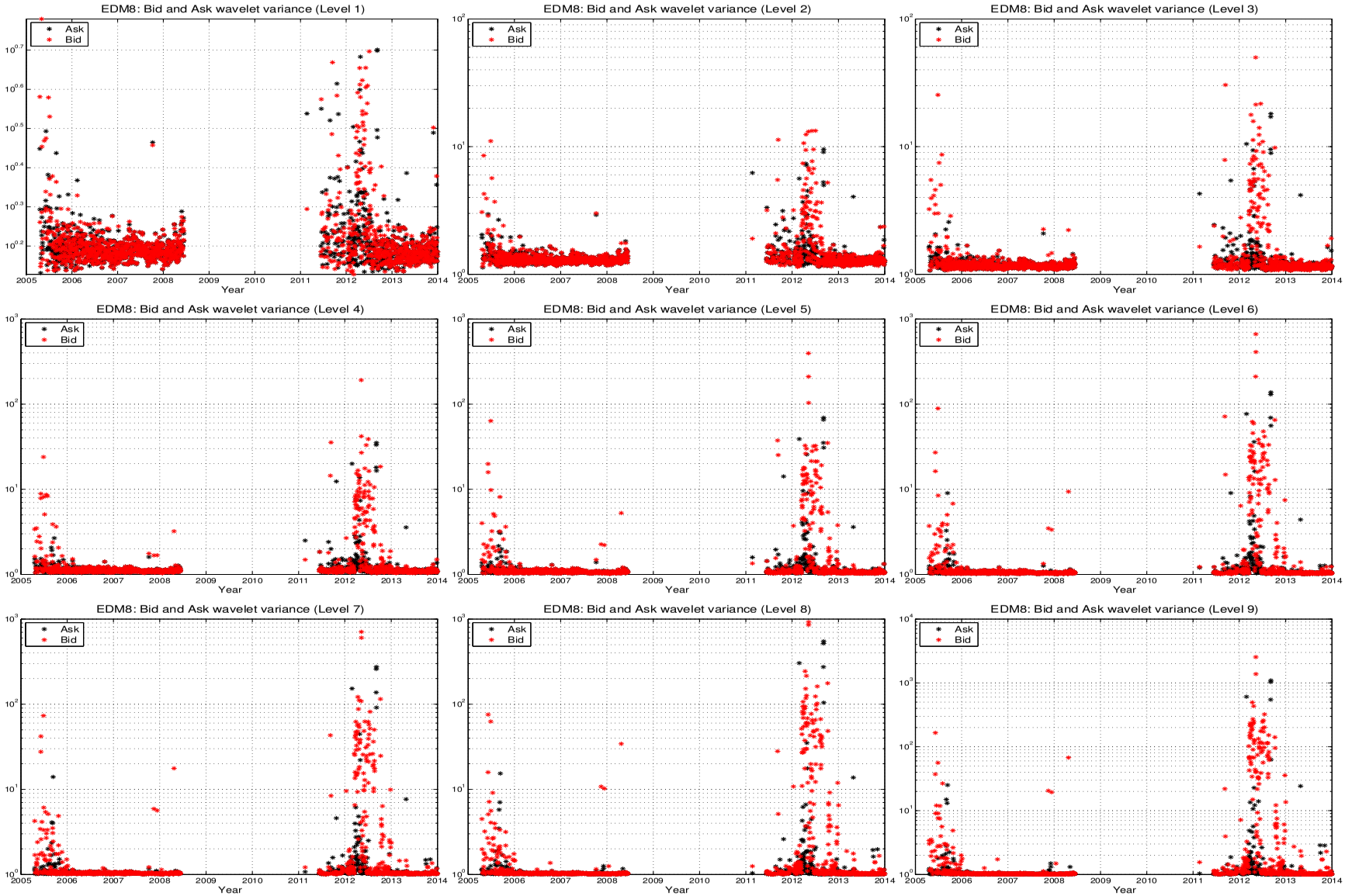


Figure A.23: The term structure of EDM8 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

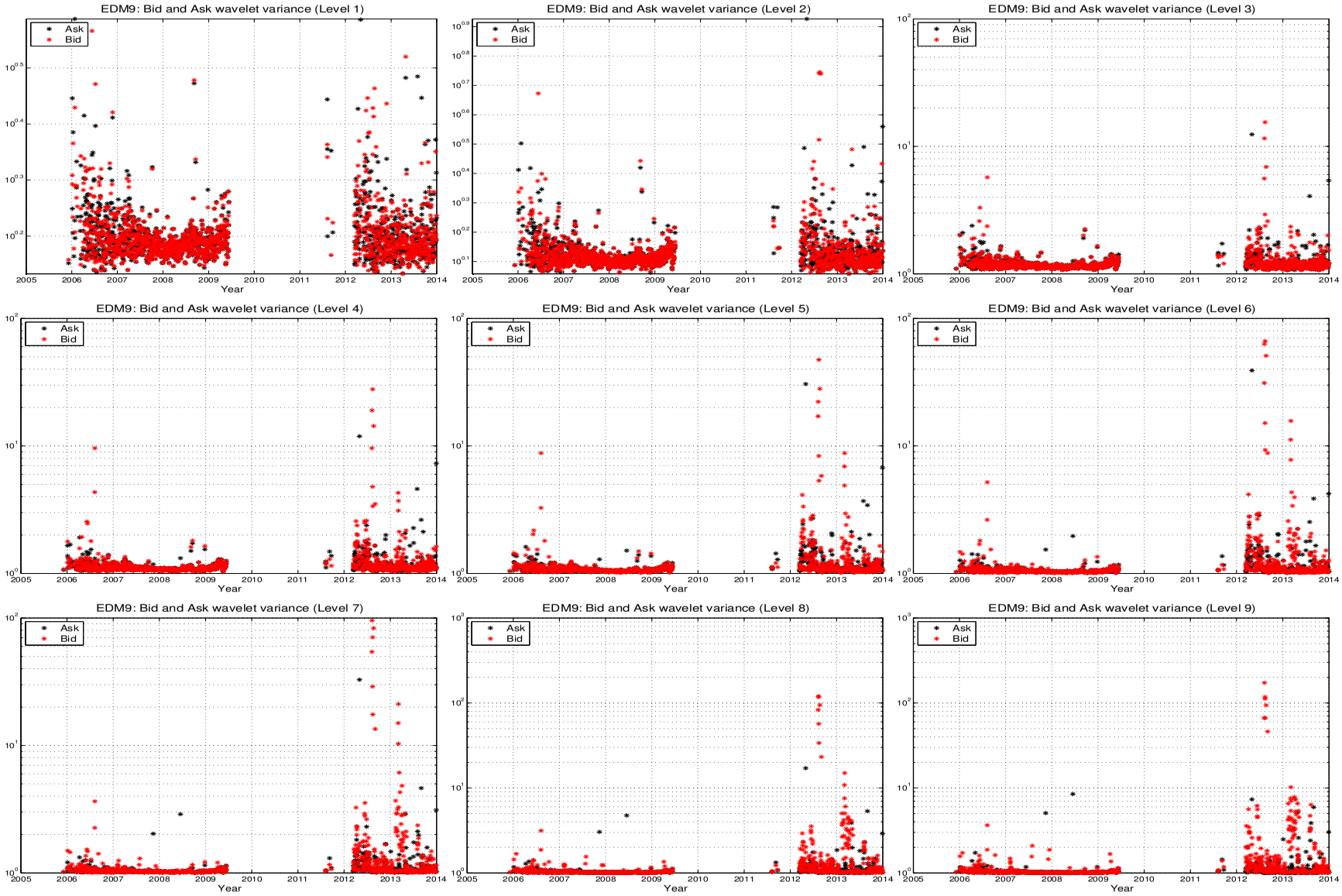


Figure A.24: The term structure of EDM9 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

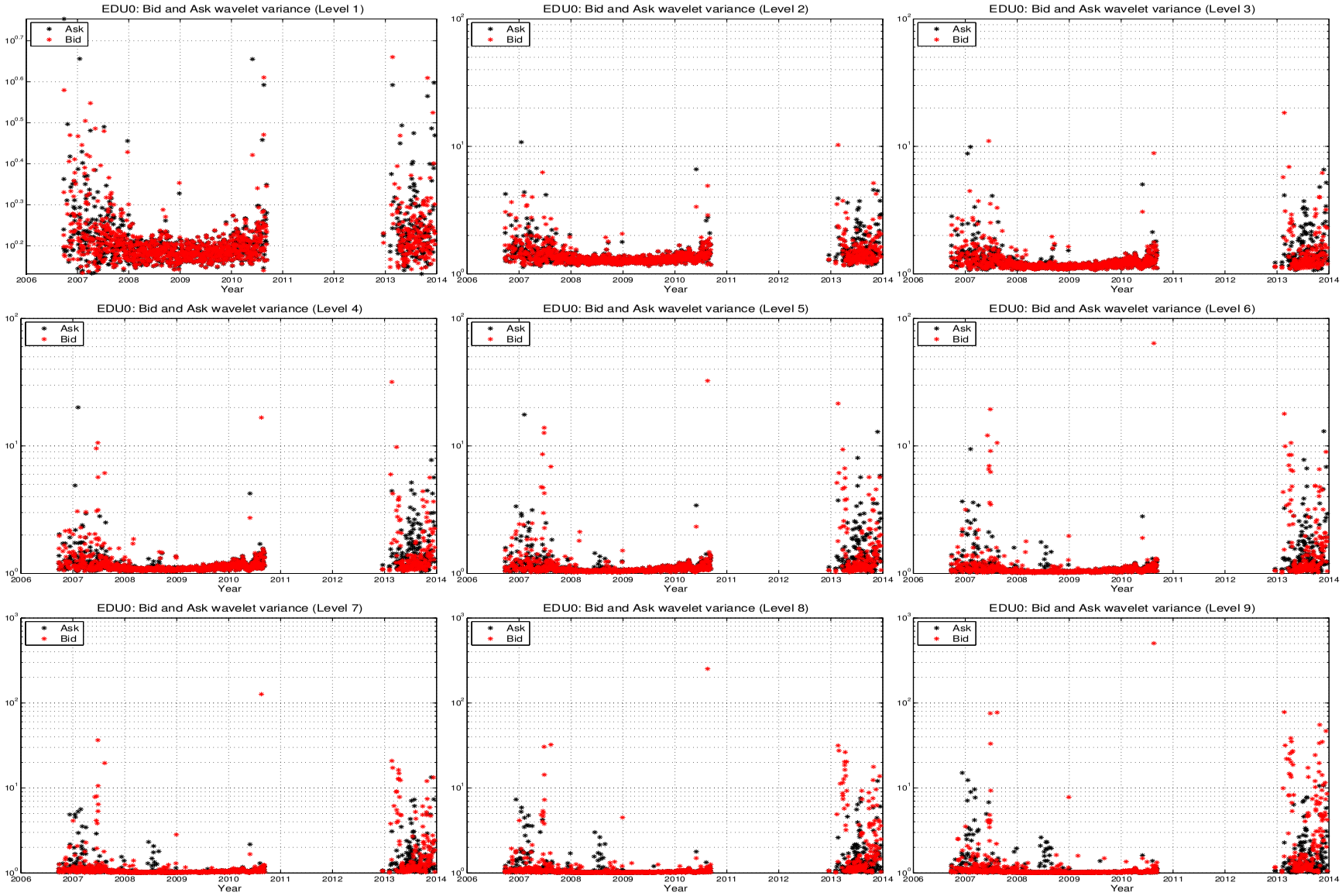


Figure A.25: The term structure of EDU0 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

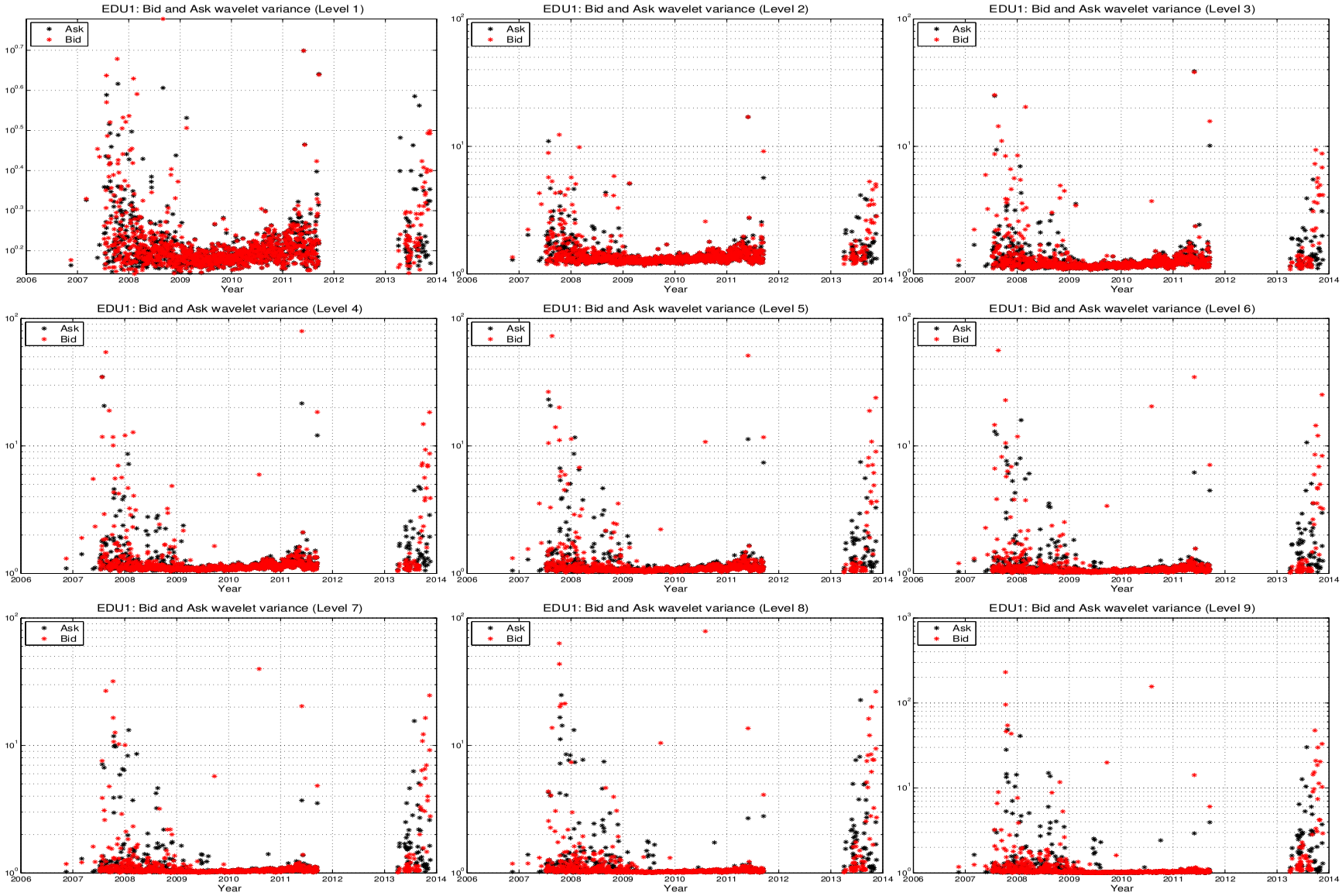


Figure A.26: The term structure of EDU1 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

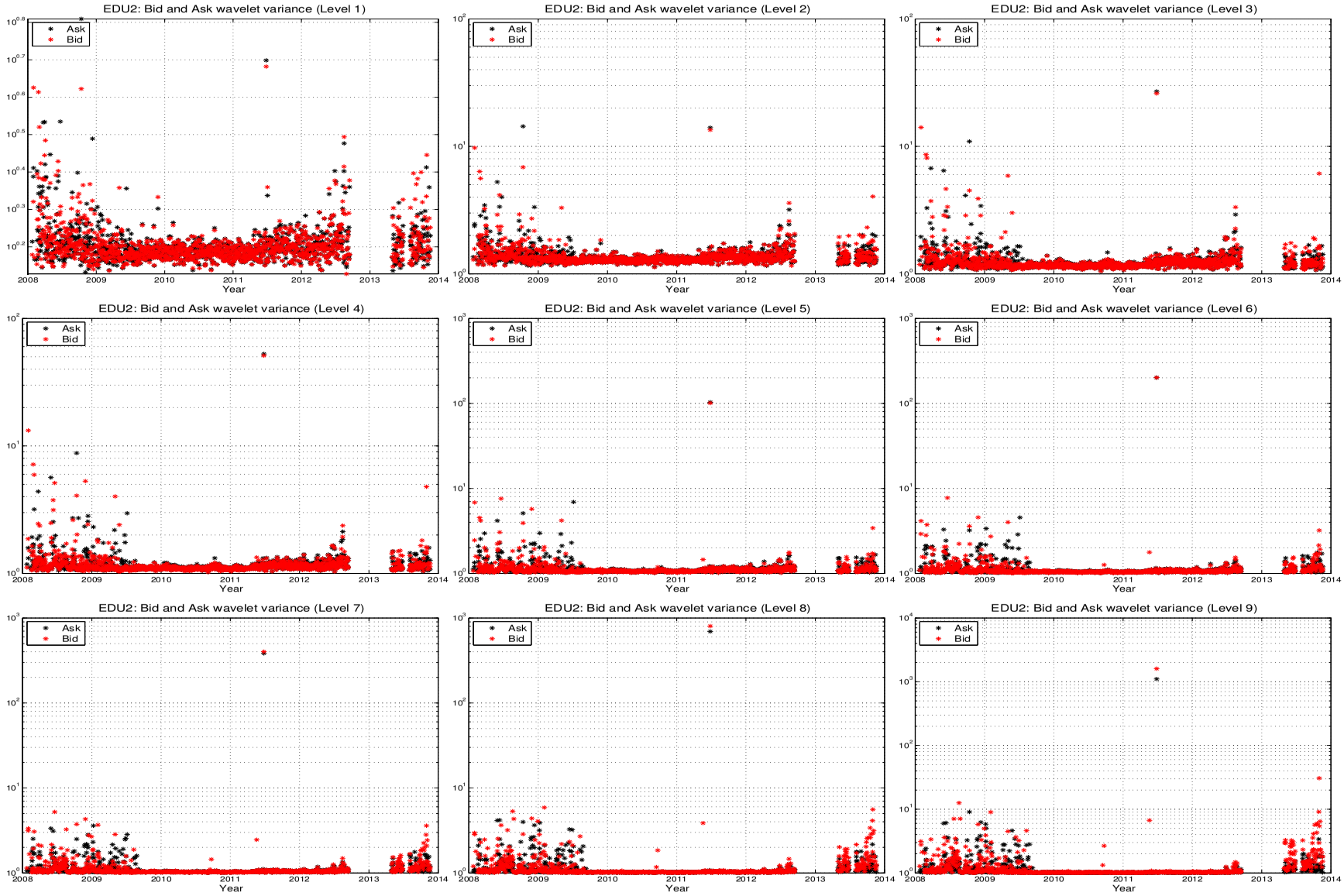


Figure A.27: The term structure of EDU2 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

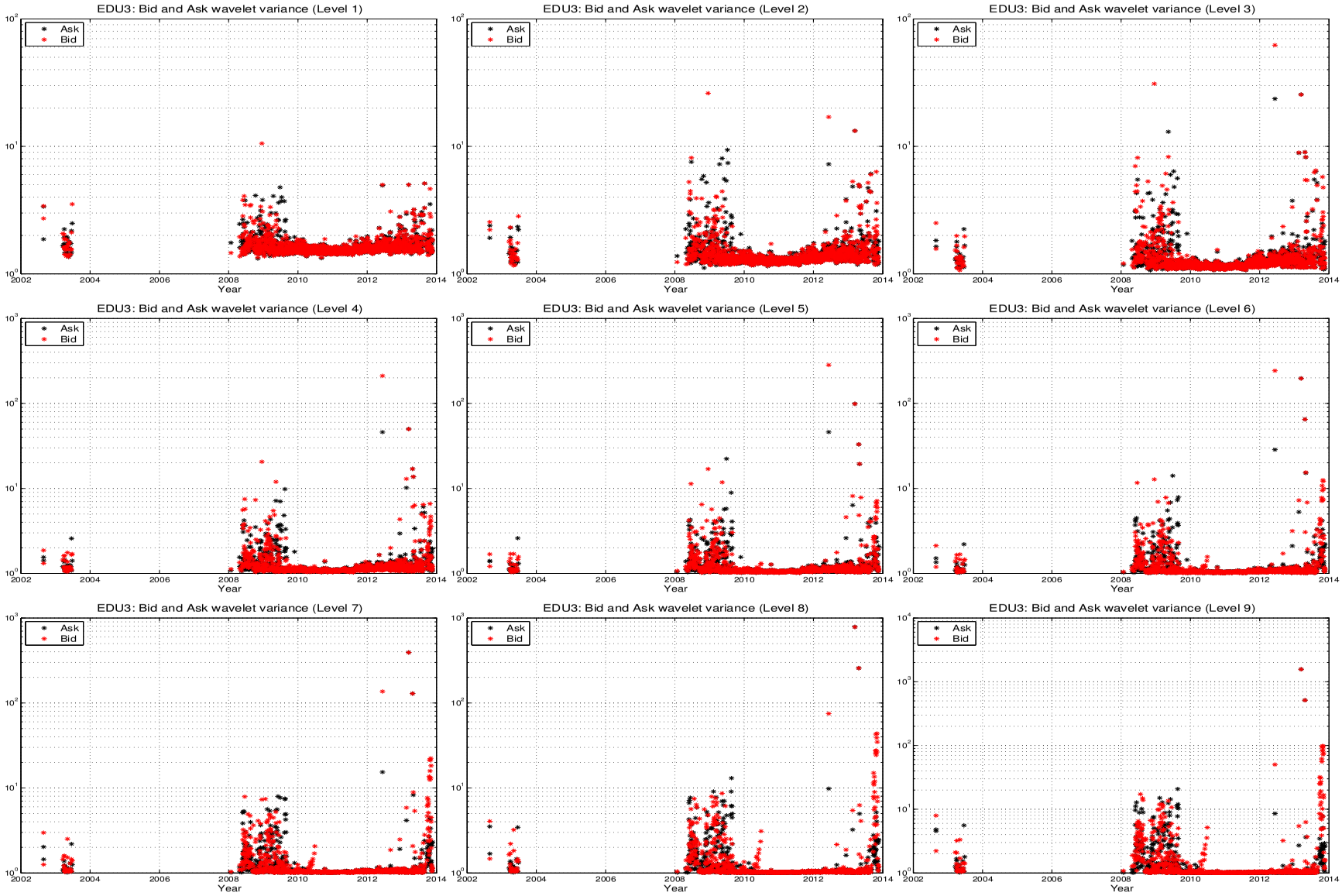


Figure A.28: The term structure of EDU3 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

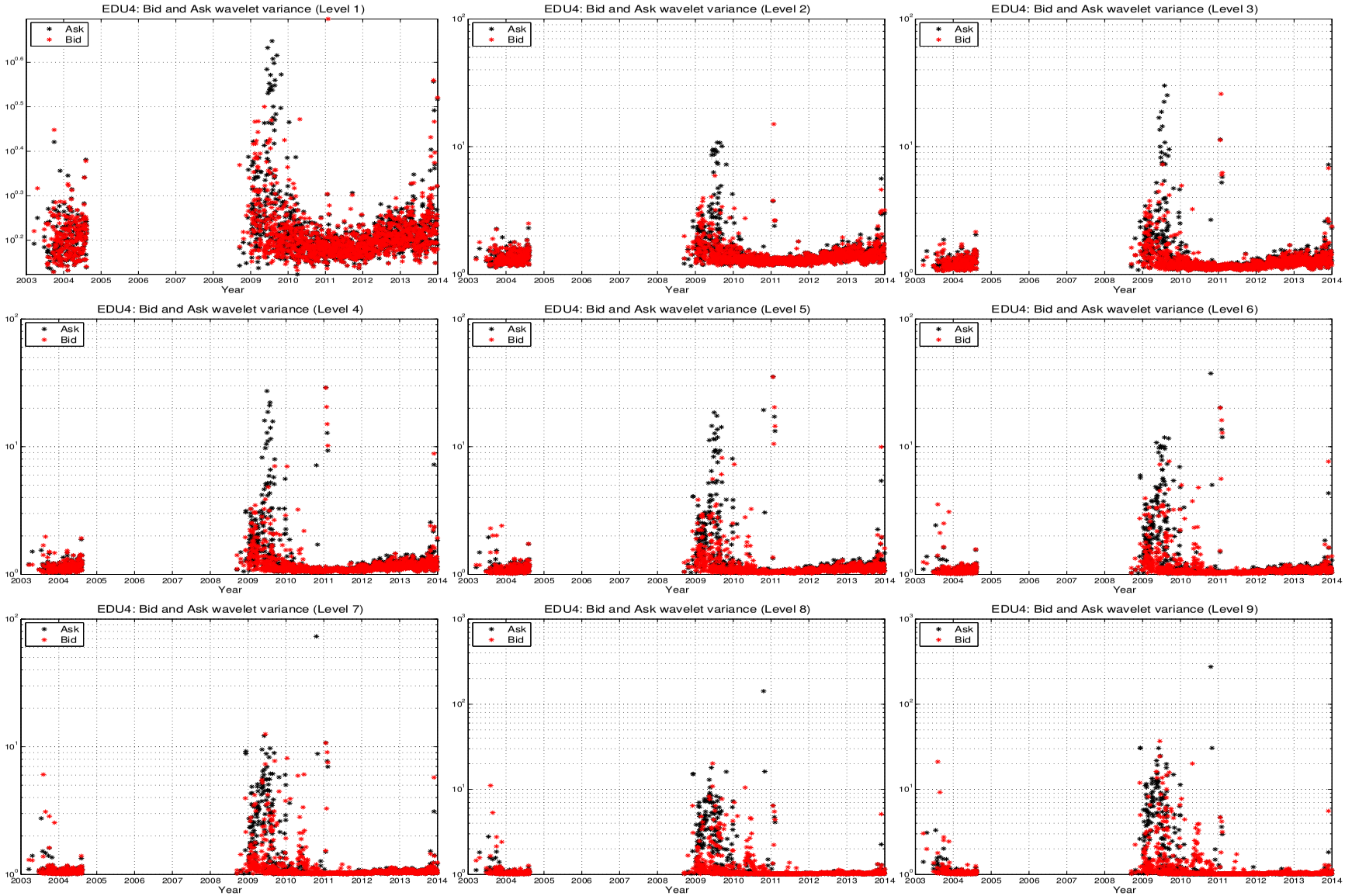


Figure A.29: The term structure of EDU4 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

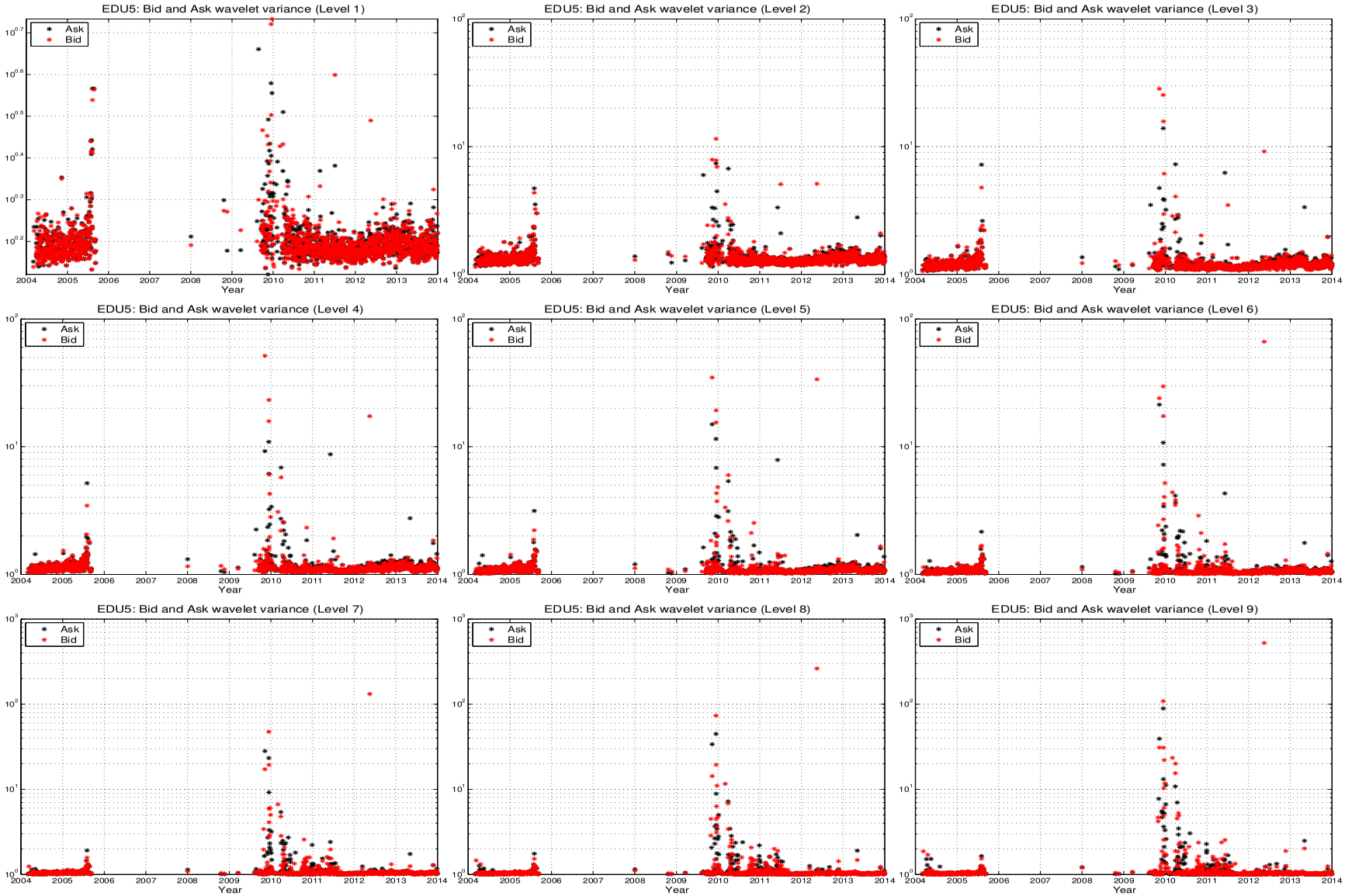


Figure A.30: The term structure of EDU5 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

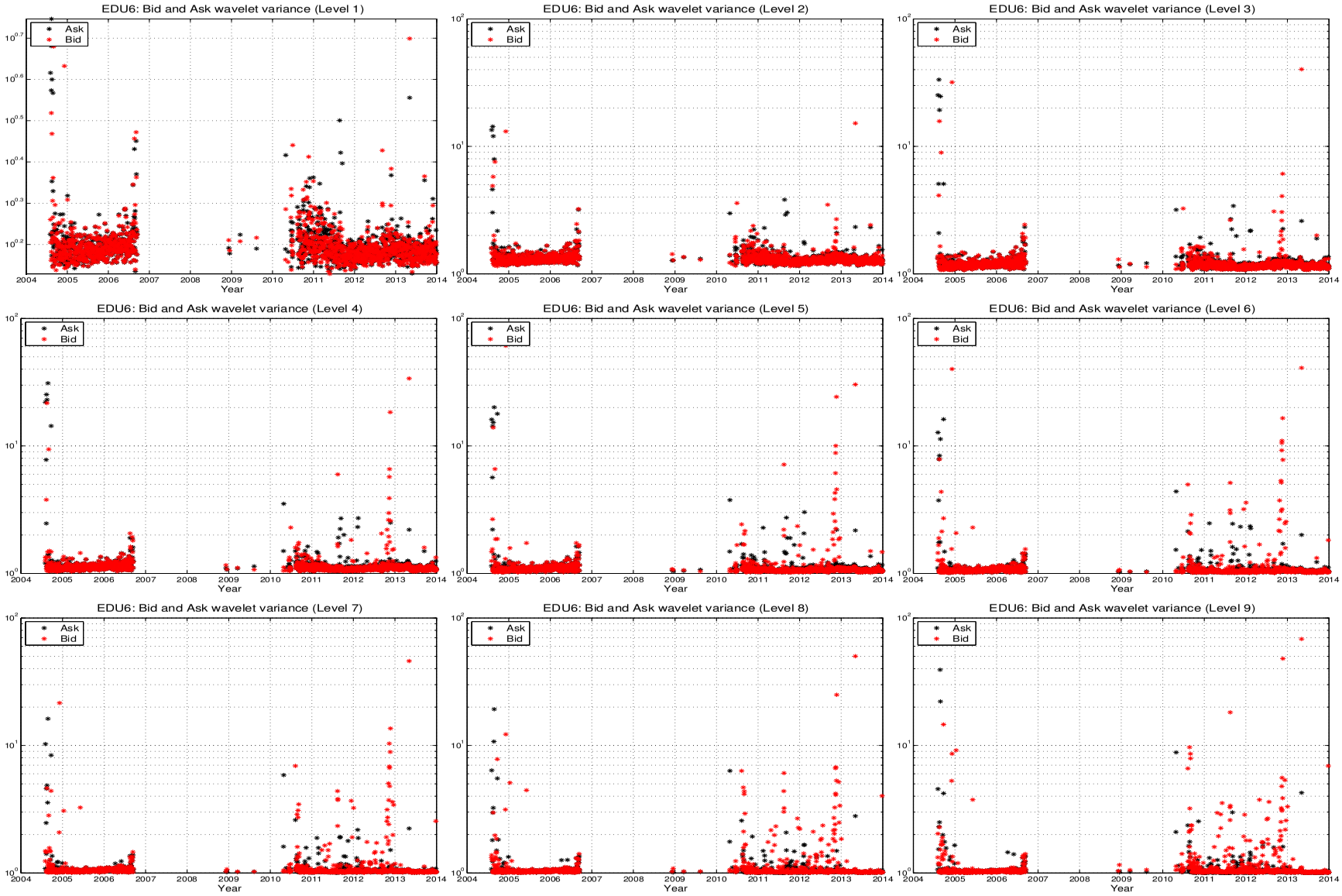


Figure A.31: The term structure of EDU6 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

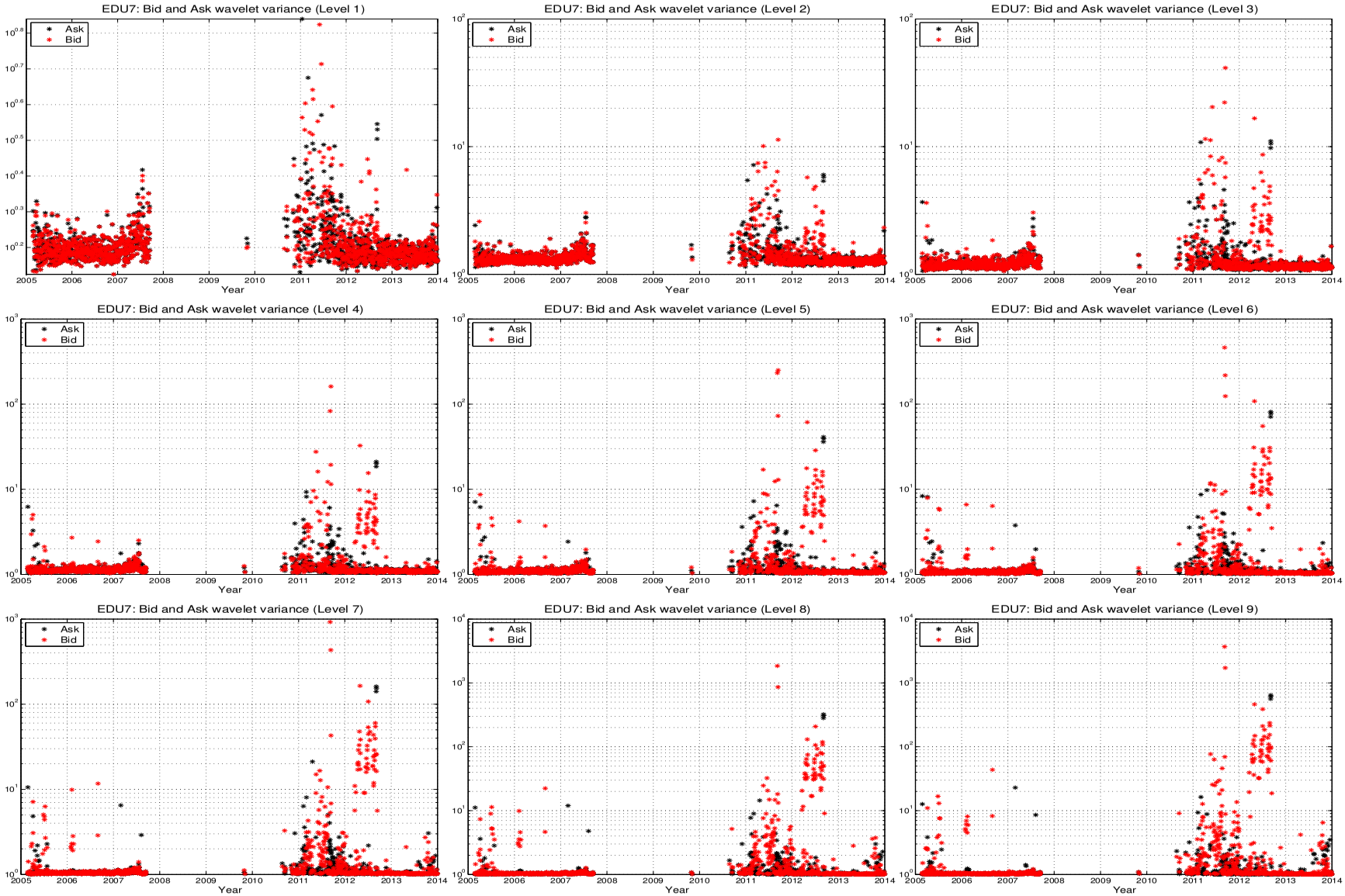


Figure A.32: The term structure of EDU7 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

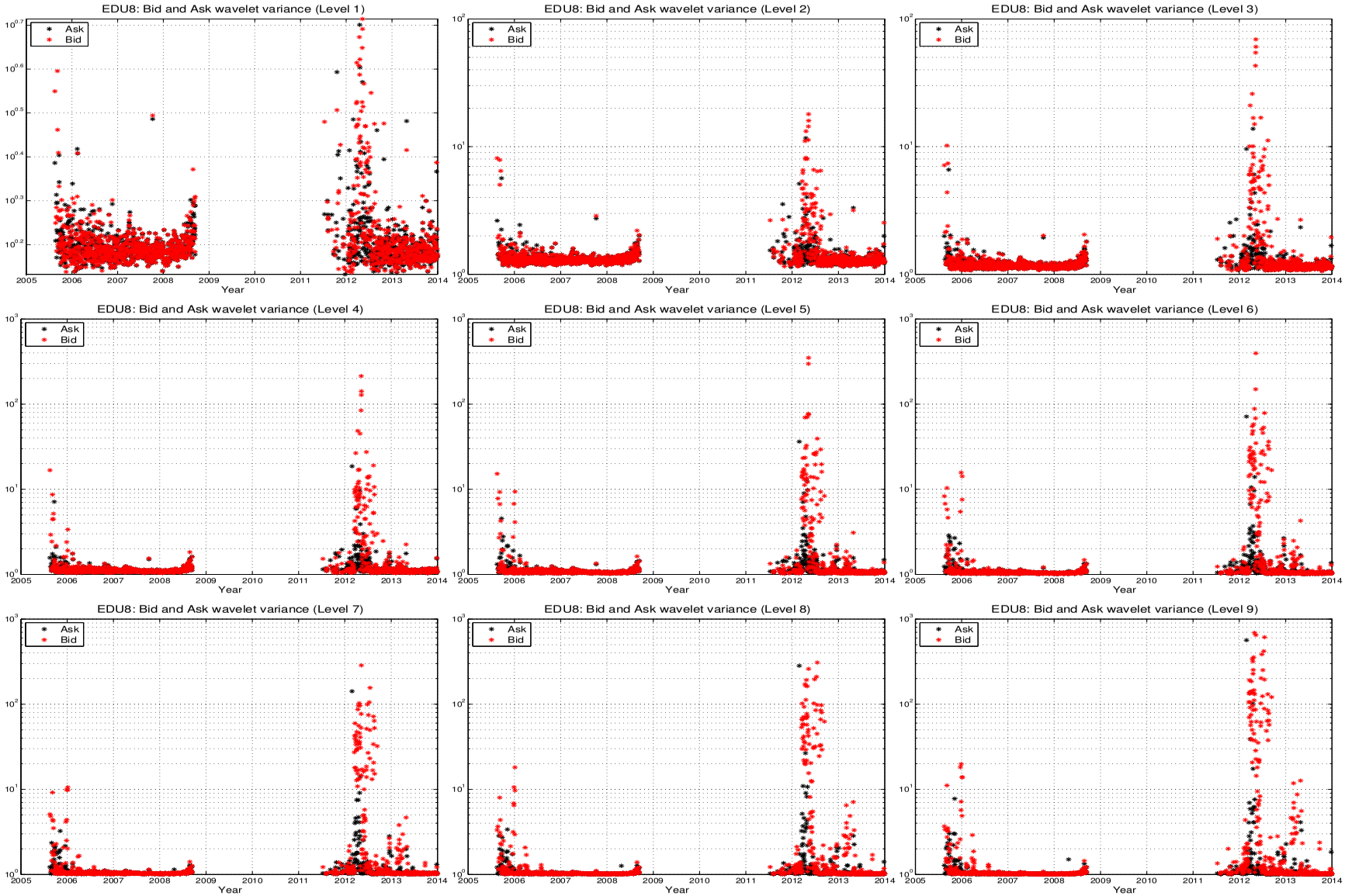


Figure A.33: The term structure of EDU8 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

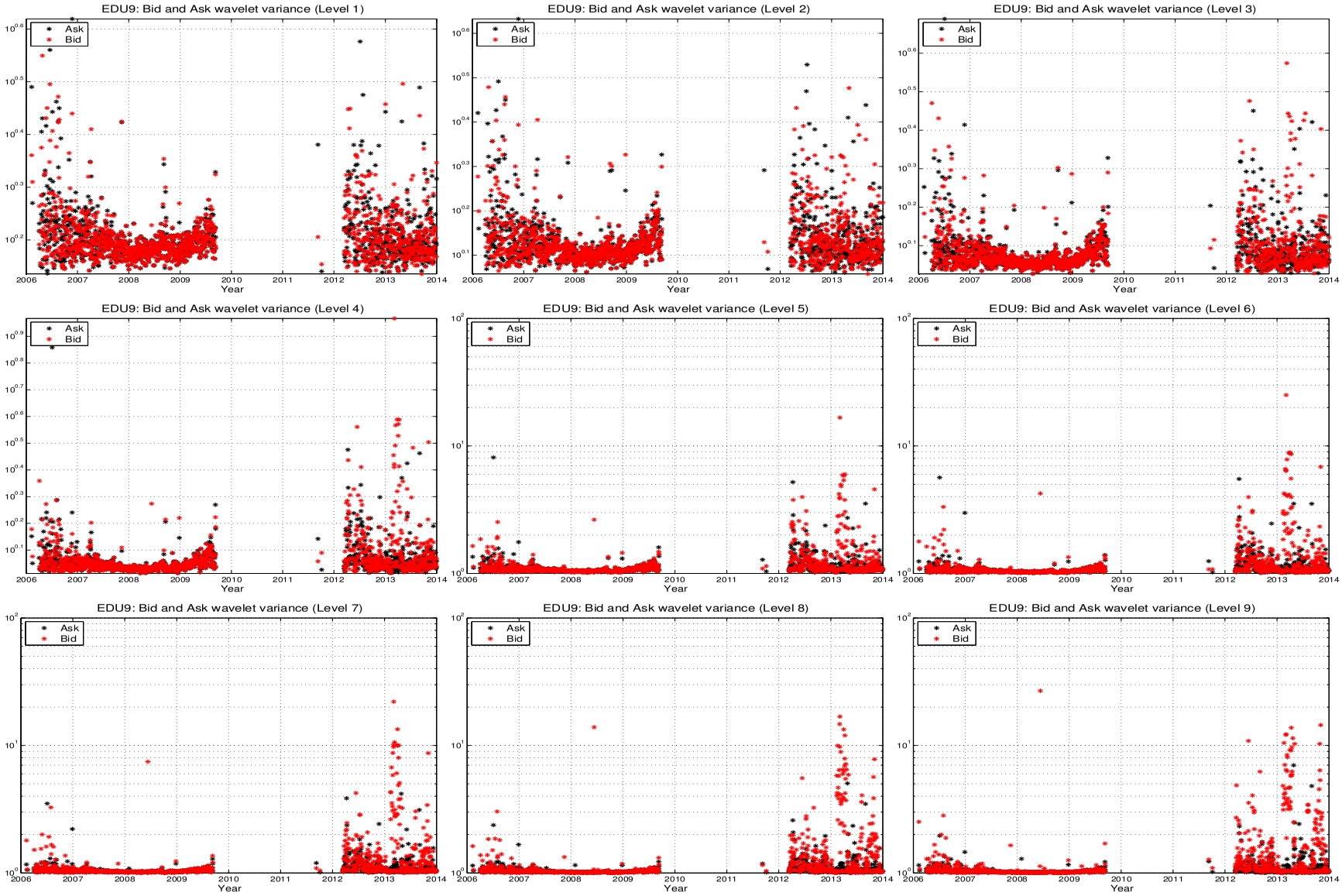


Figure A.34: The term structure of EDU9 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

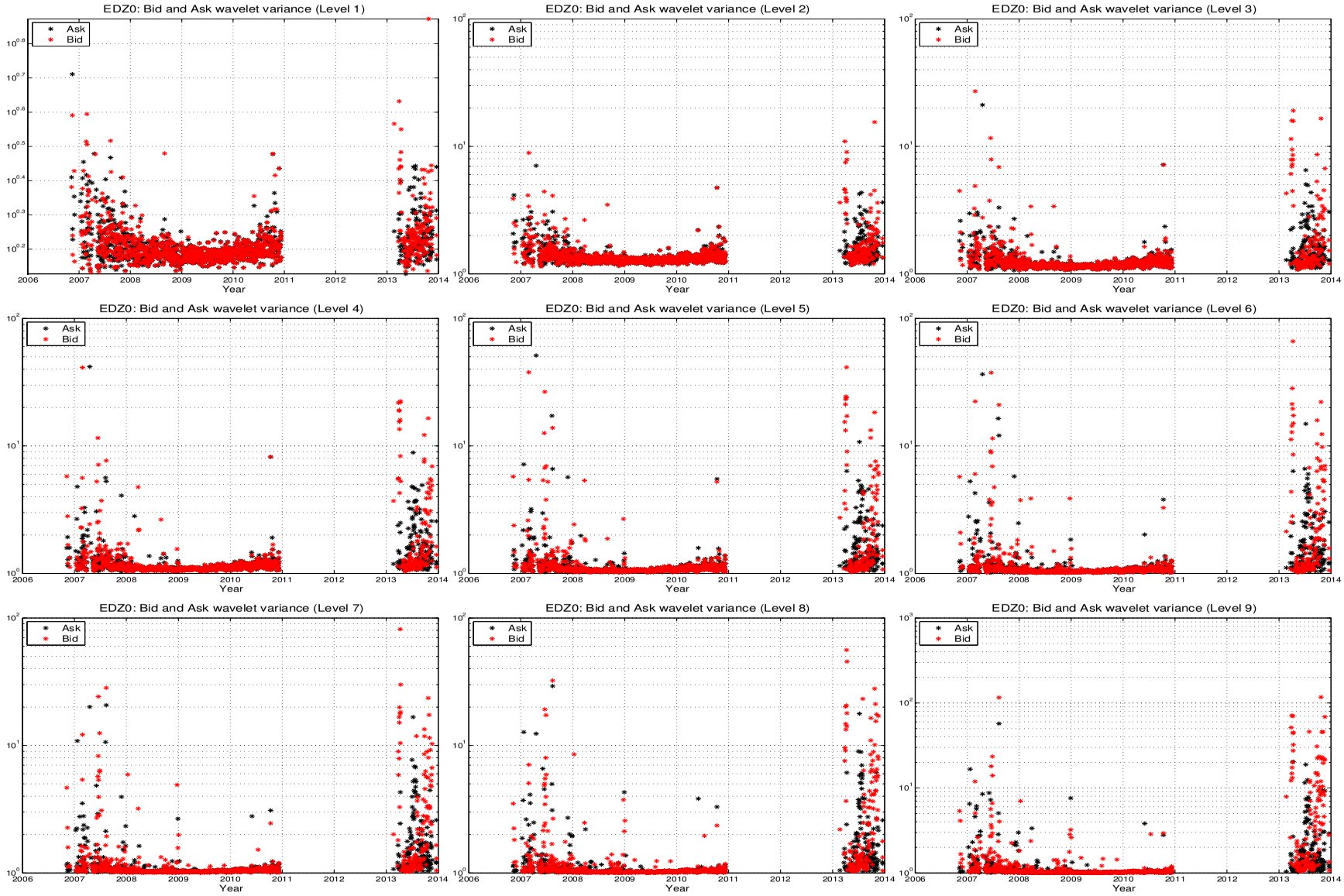


Figure A.35: The term structure of EDZ0 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

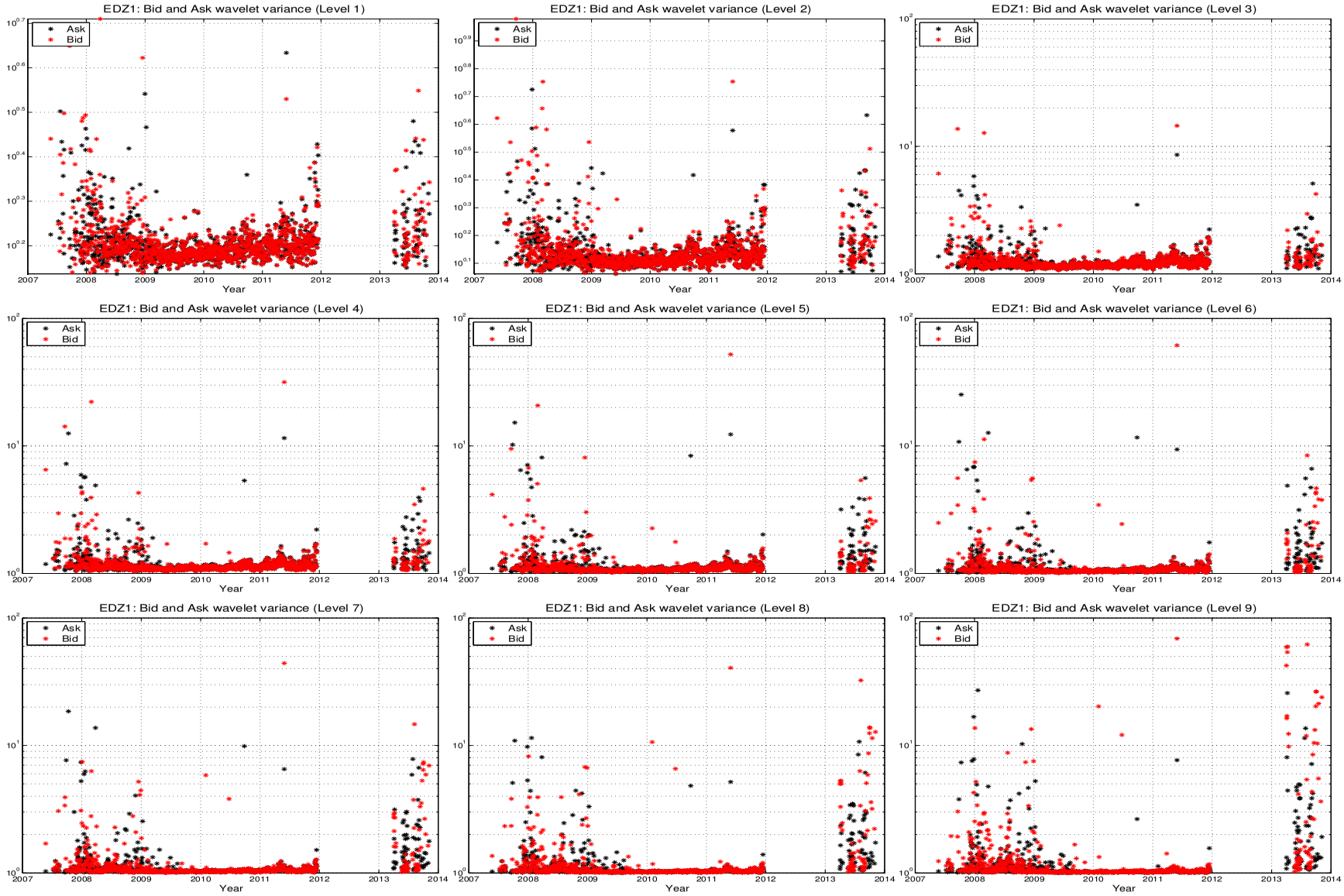


Figure A.36: The term structure of EDZ1 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

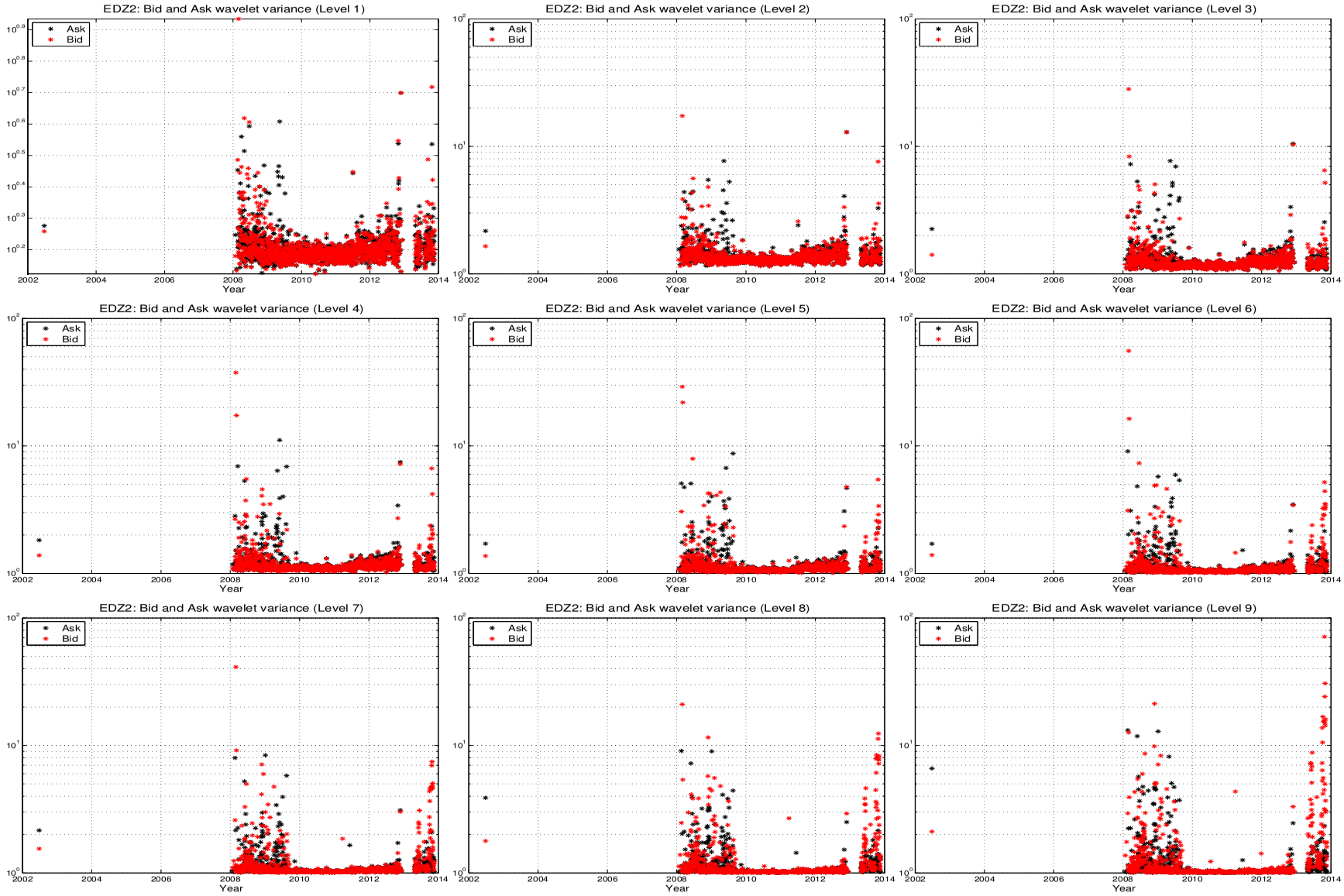


Figure A.37: The term structure of EDZ2 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

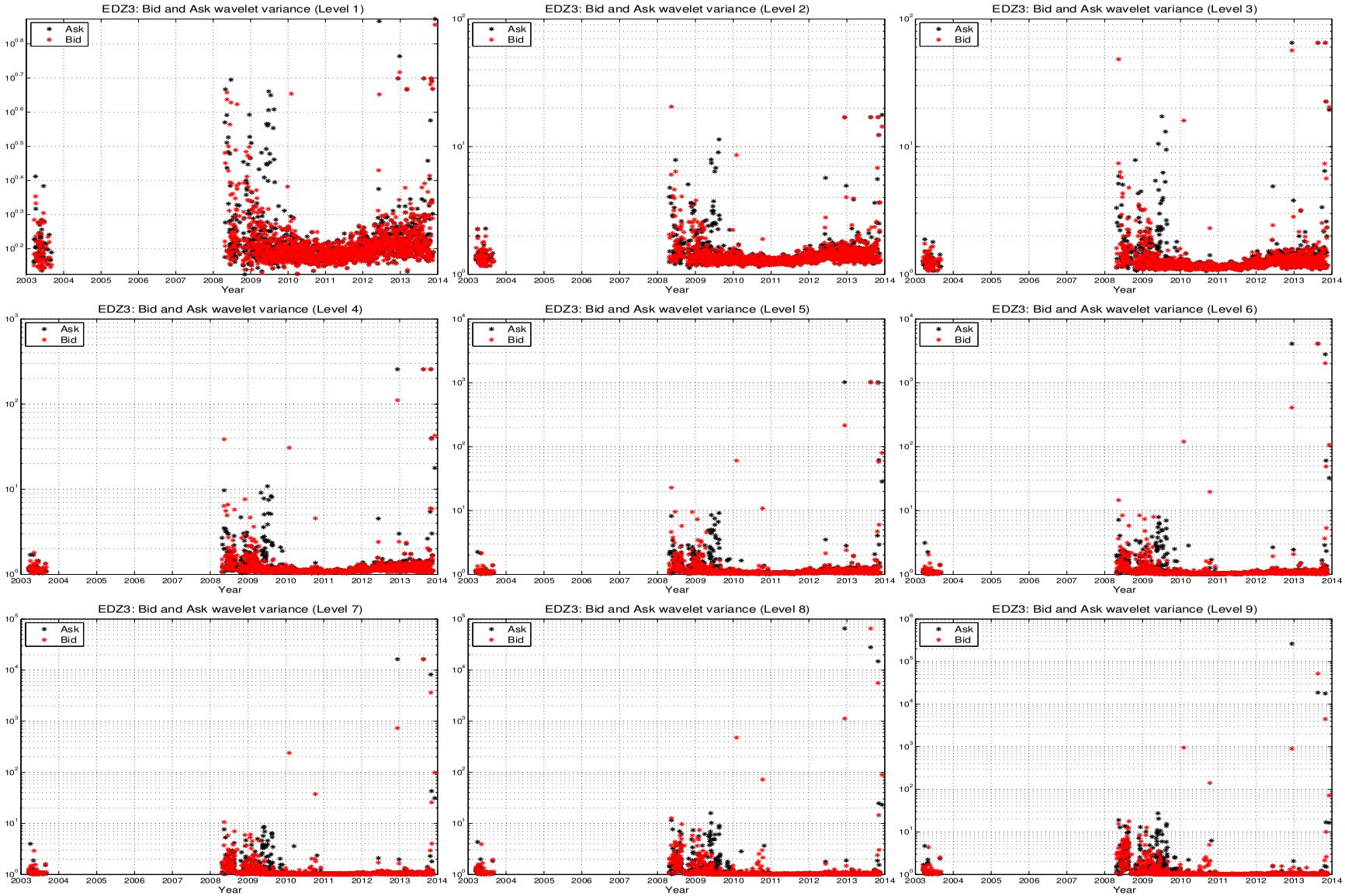


Figure A.38: The term structure of EDZ3 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

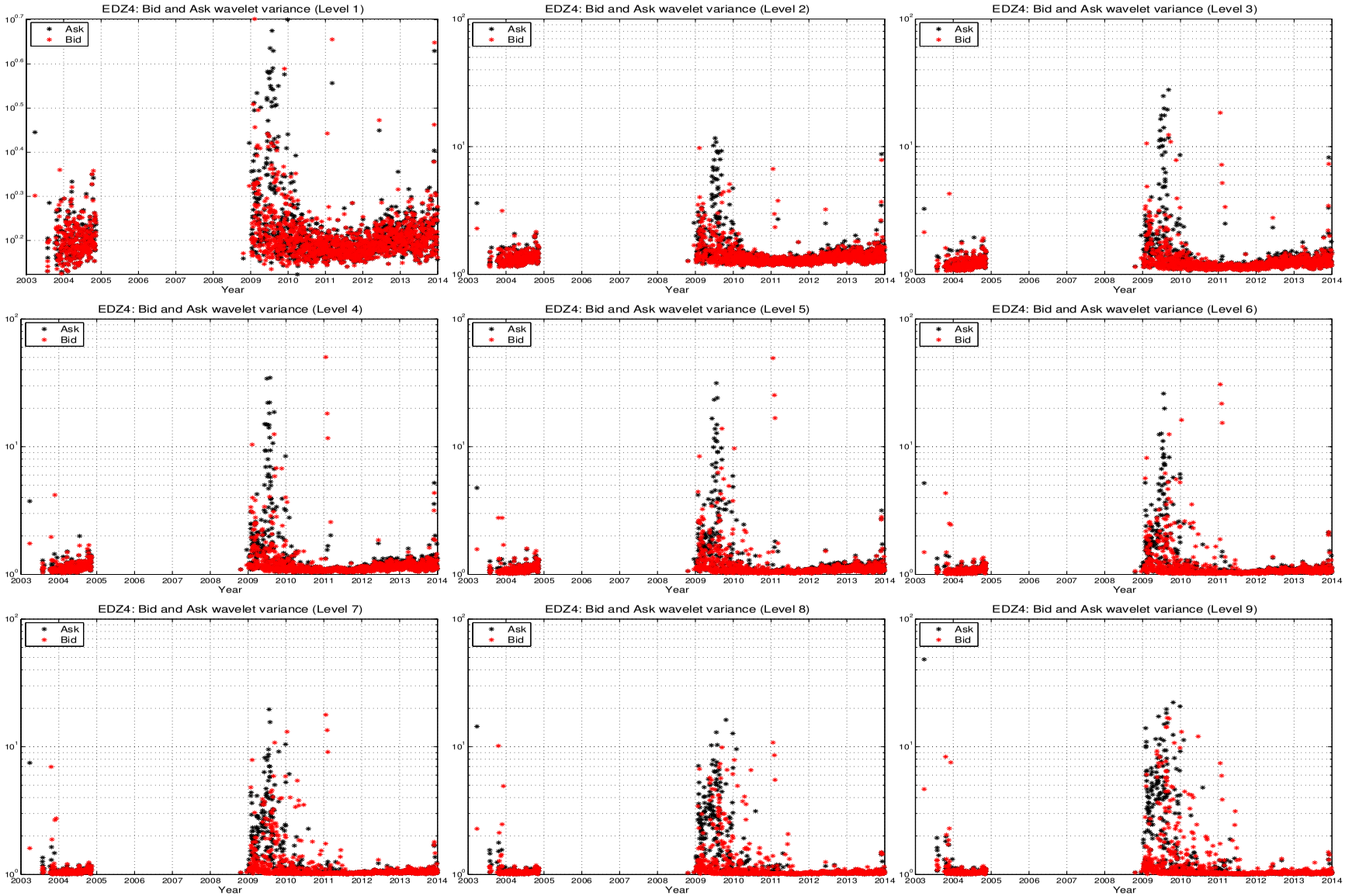


Figure A.39: The term structure of EDZ4 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

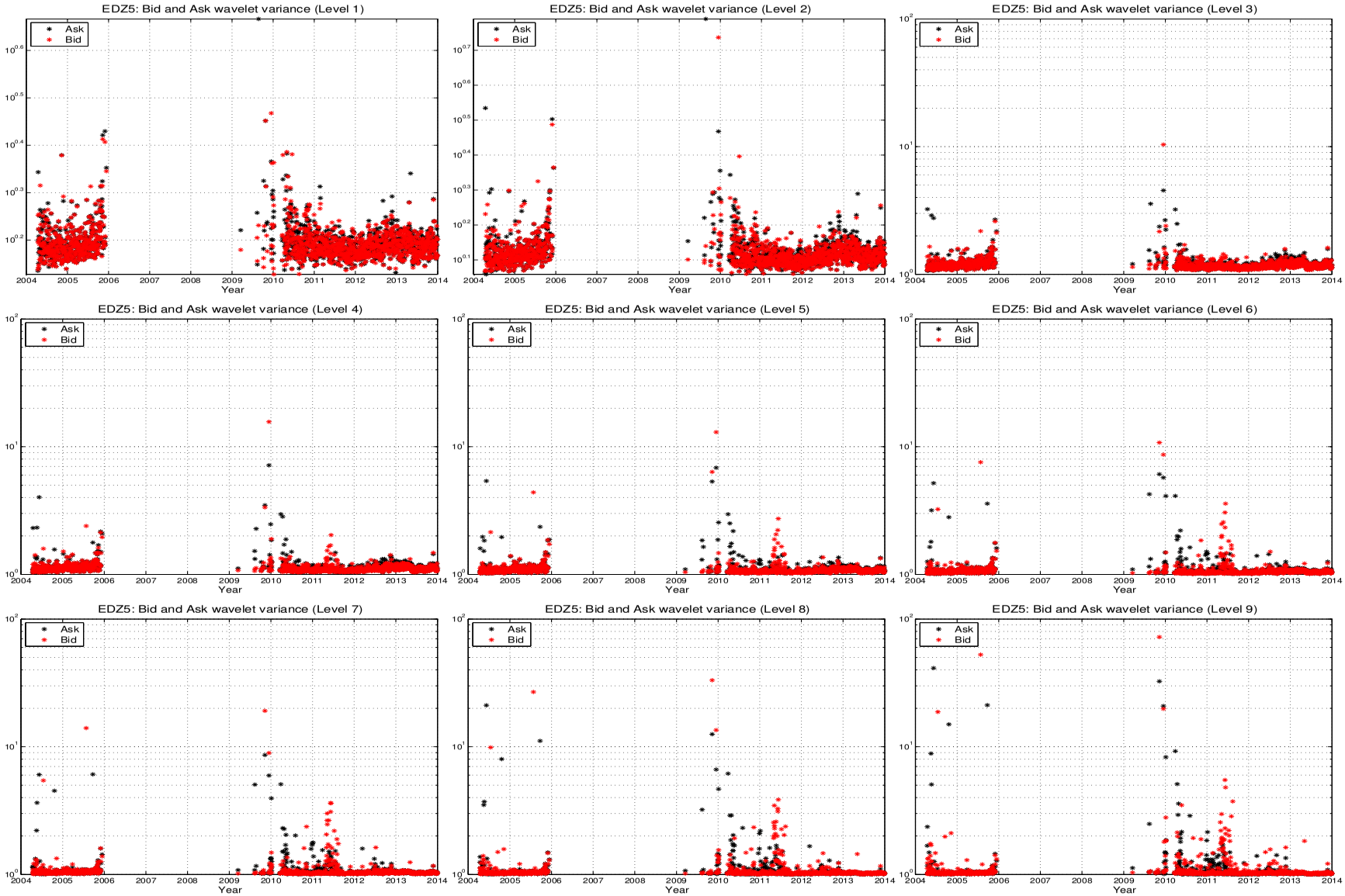


Figure A.40: The term structure of EDZ5 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

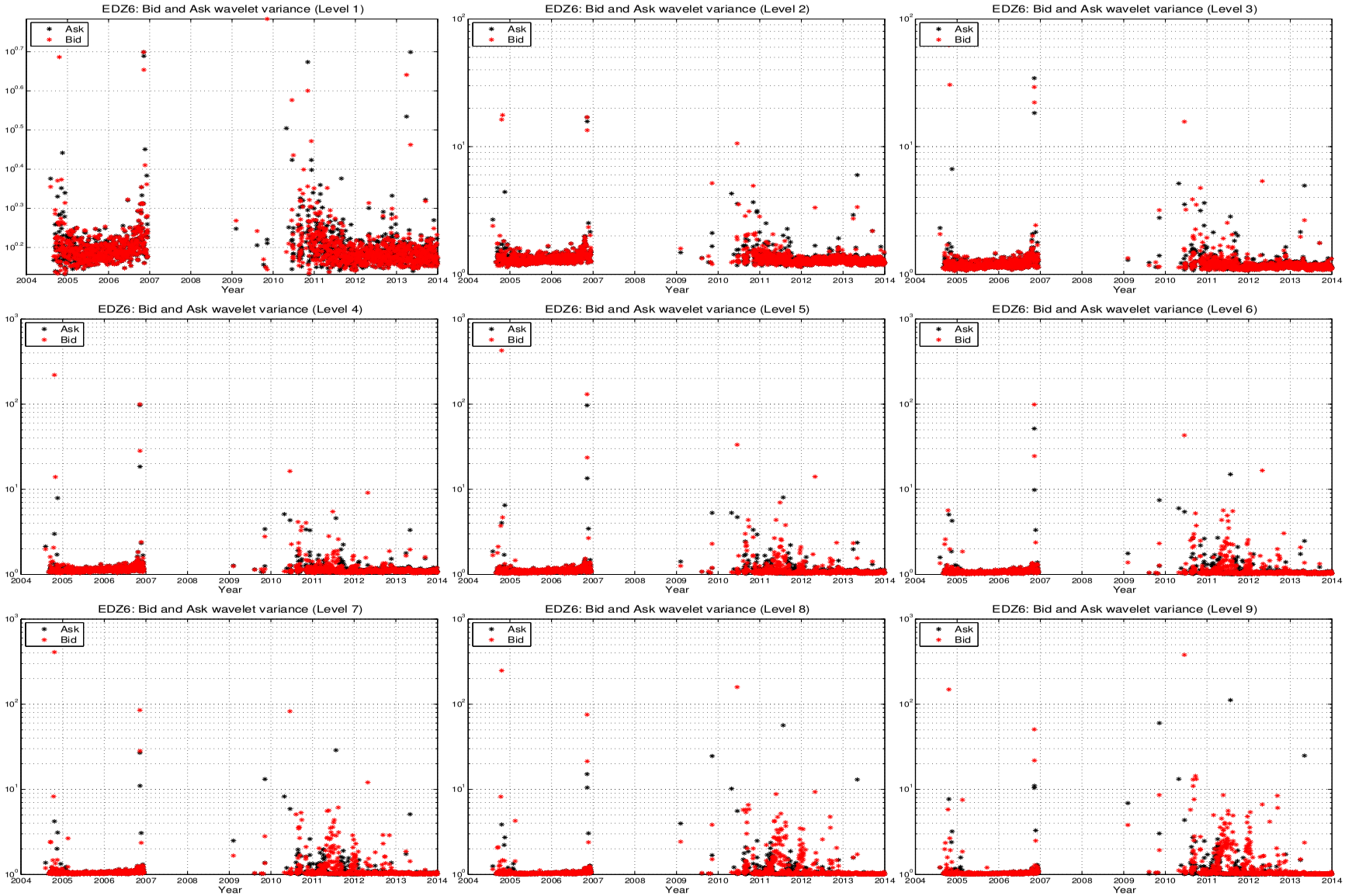


Figure A.41: The term structure of EDZ6 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

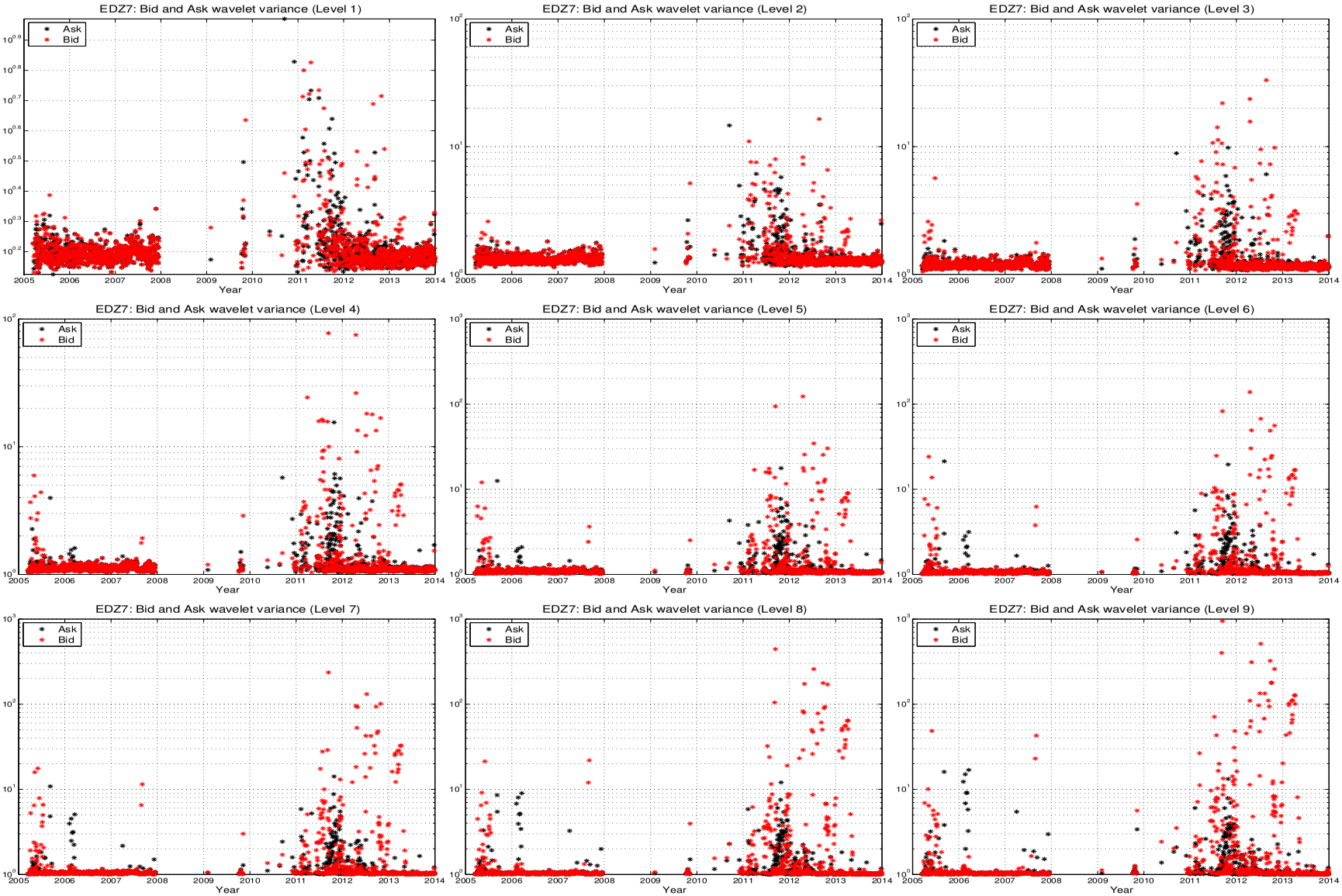


Figure A.42: The term structure of EDZ7 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

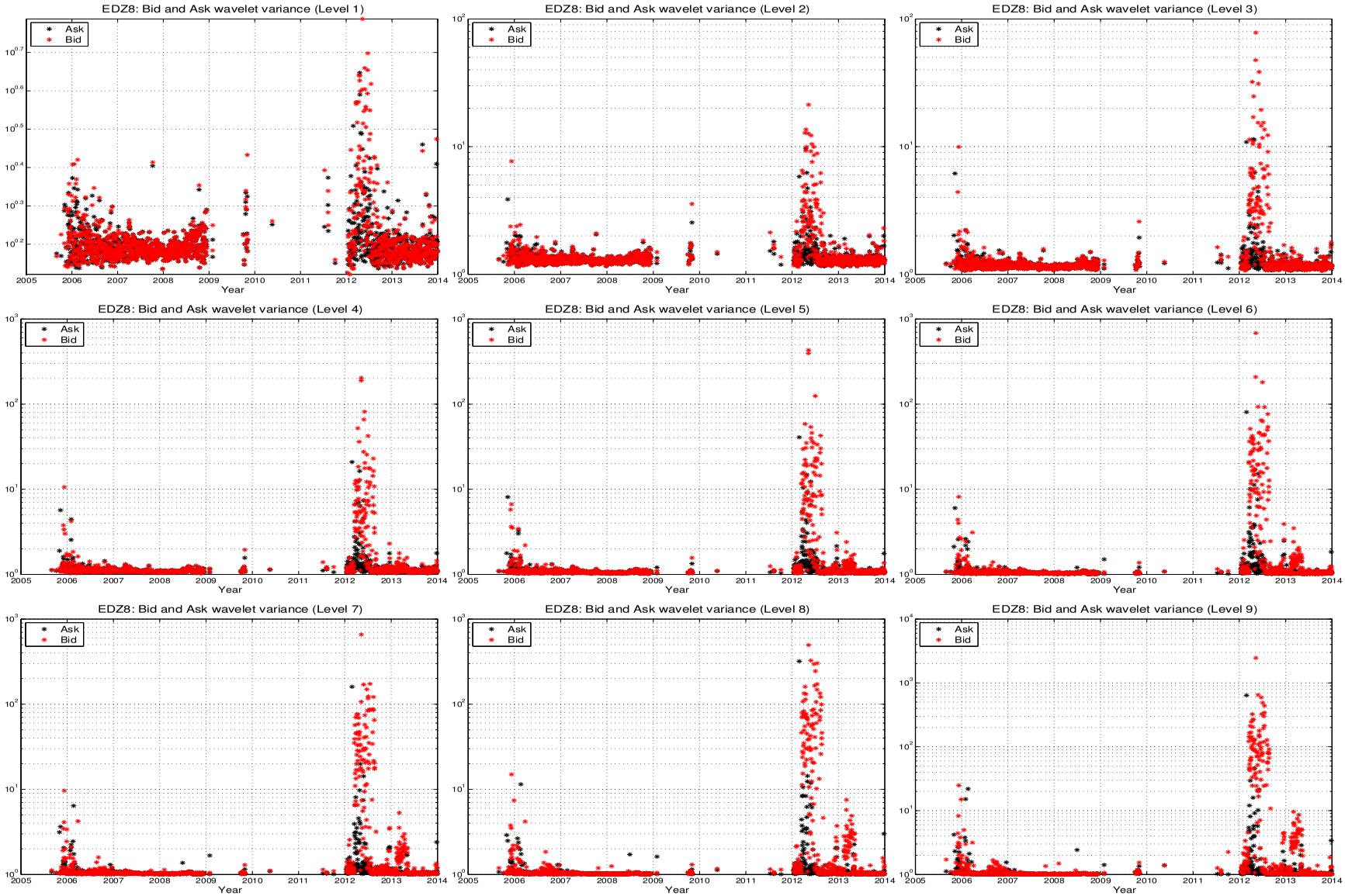


Figure A.43: The term structure of EDZ8 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

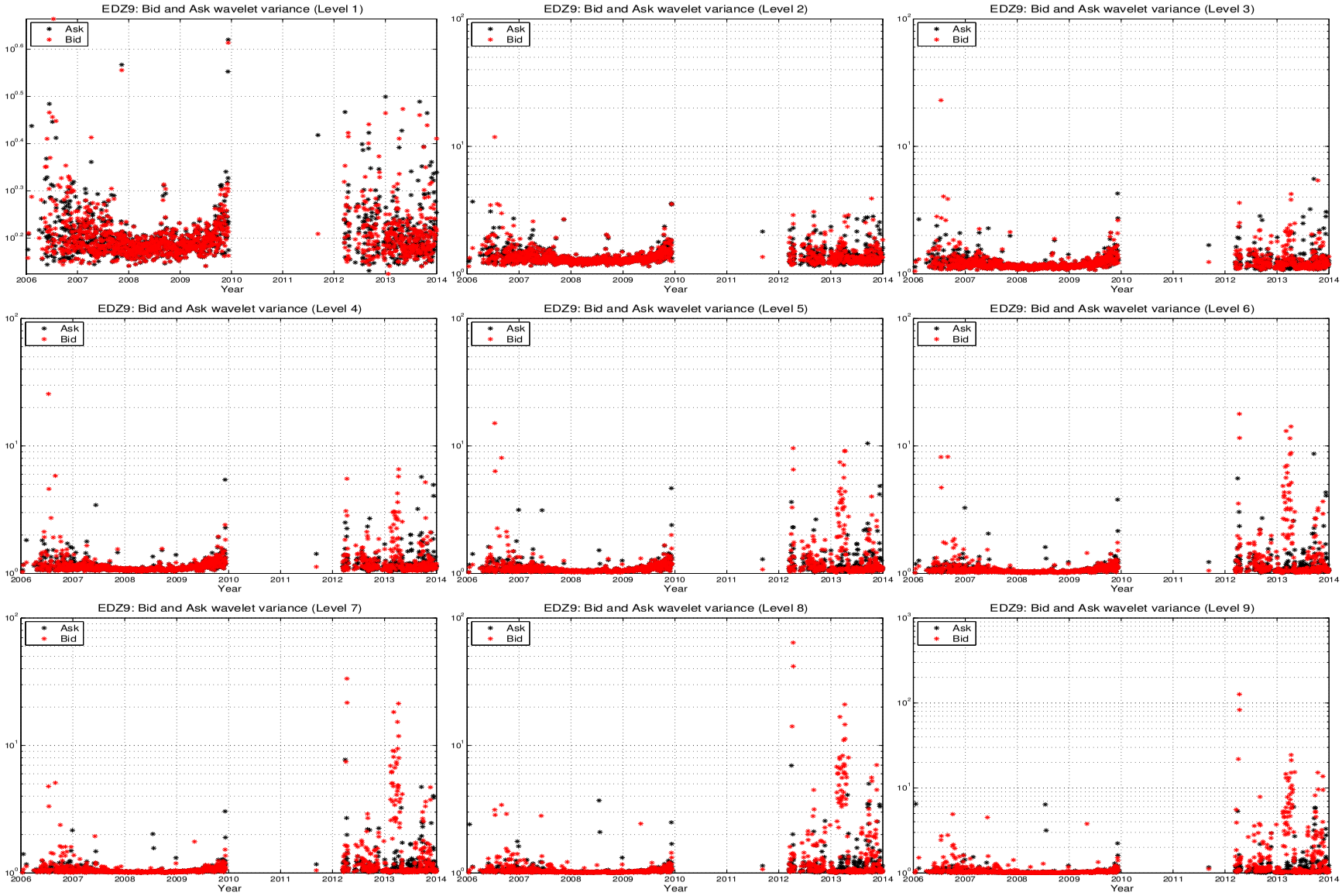
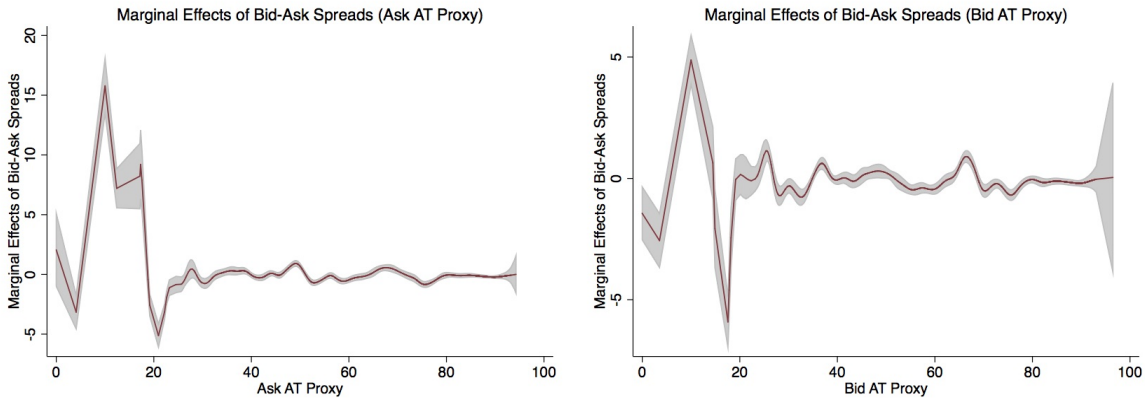


Figure A.44: The term structure of EDZ9 Eurodollar future contracts wavelet bid/ask variance for levels 1-9

Notes: The black markers reports the ask variance ratios and red markets report the bid variance ratios. I eliminate days with less than 5,000 bid or ask quotes. Level 1 refers to the highest frequency timestamp and level 9 is the lowest frequency timestamp.

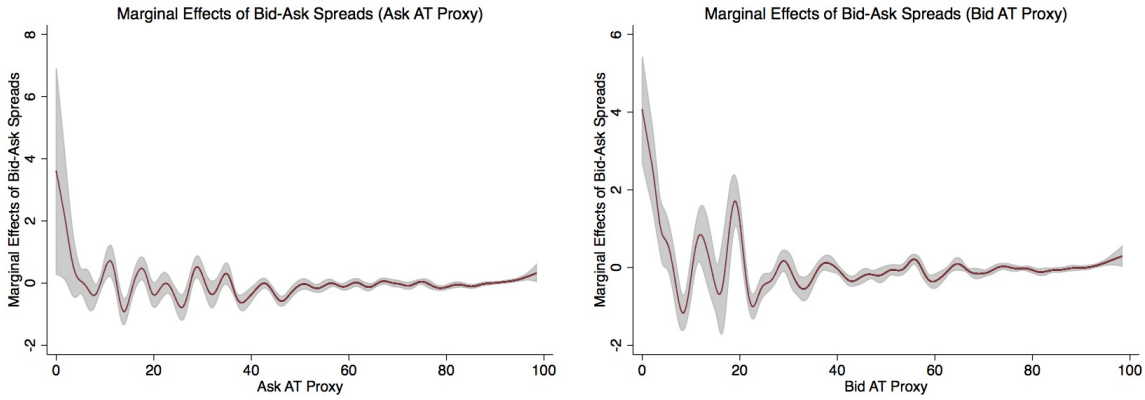
Appendix B. Supplemental Materials for Chapter 4 – High Frequency Trading and Execution Risk Dynamics: Evidence from Eurodollar Limited Order Book Data

Appendix B.1. The Impacts of AT Proxy Thresholded at 200ms using the Robinson estimator in Stata 13



(a) Volume weighted average

(b) Volume weighted average

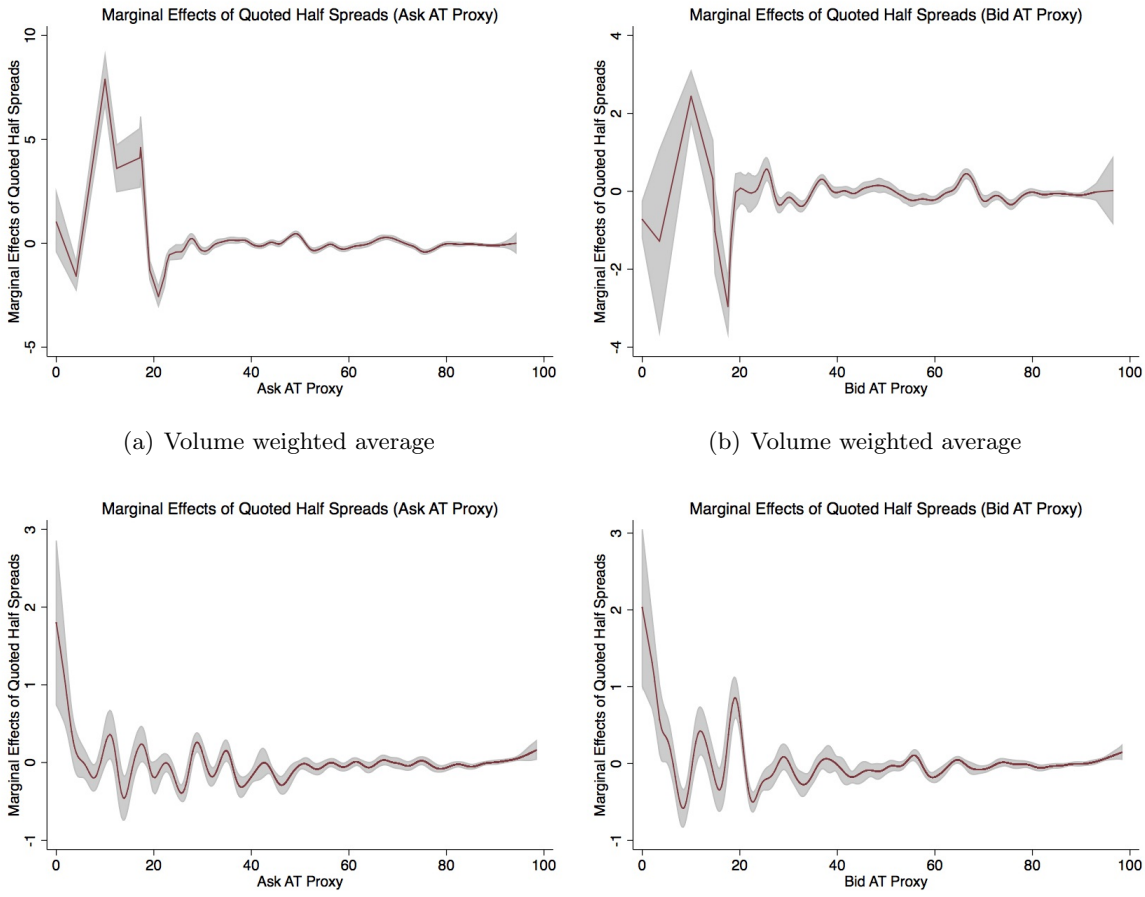


(c) Panel

(d) Panel

Figure B.45: Marginal Effects of Bid-Ask Spreads in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on bid-ask spreads using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of bid-ask spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.



(a) Volume weighted average

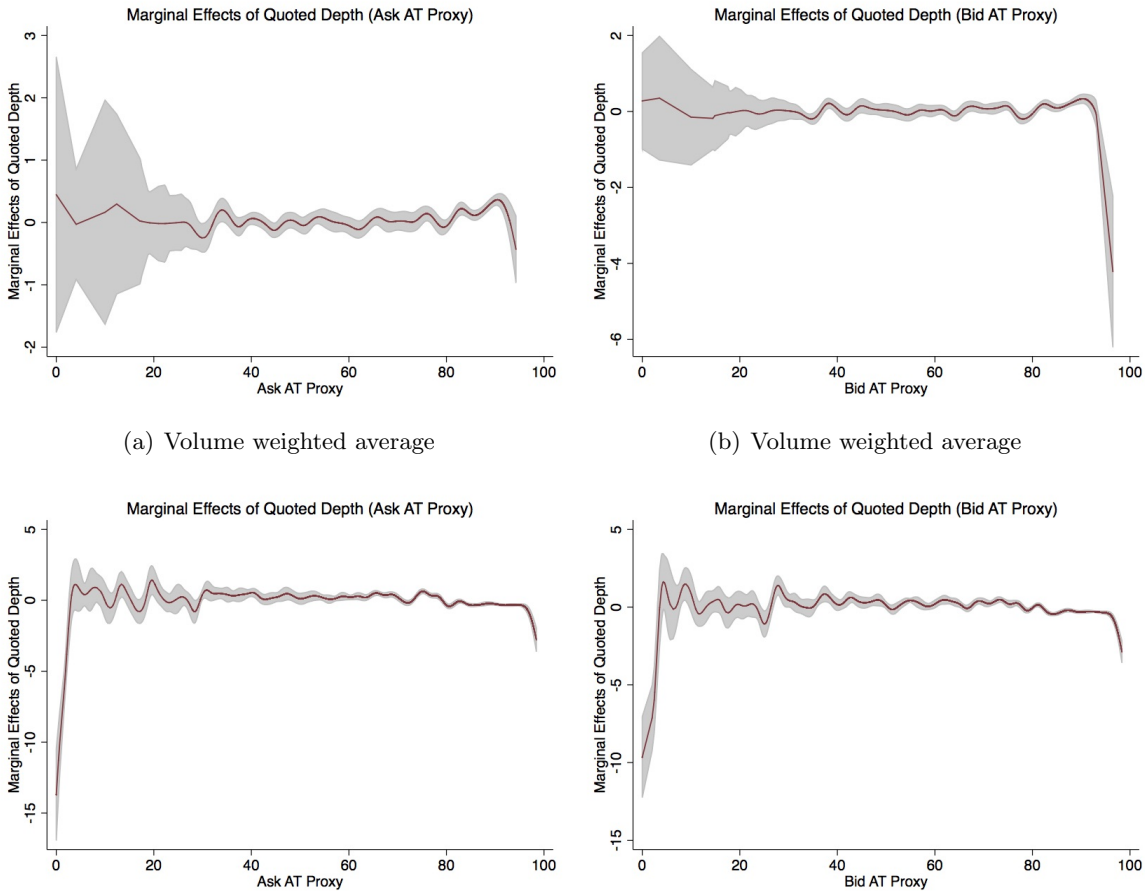
(b) Volume weighted average

(c) Panel

(d) Panel

Figure B.46: Marginal Effects of Quoted Half Spreads in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on quoted half spreads using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of quoted half spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.



(a) Volume weighted average

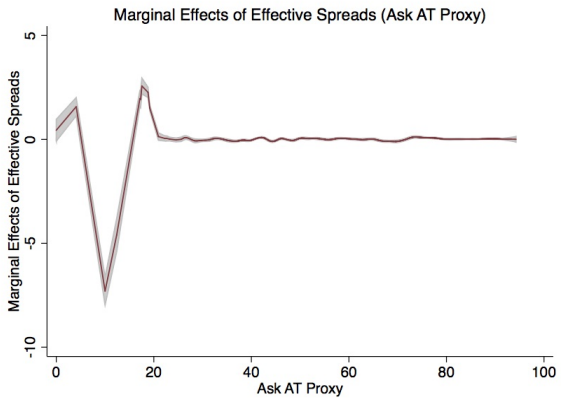
(b) Volume weighted average

(c) Panel

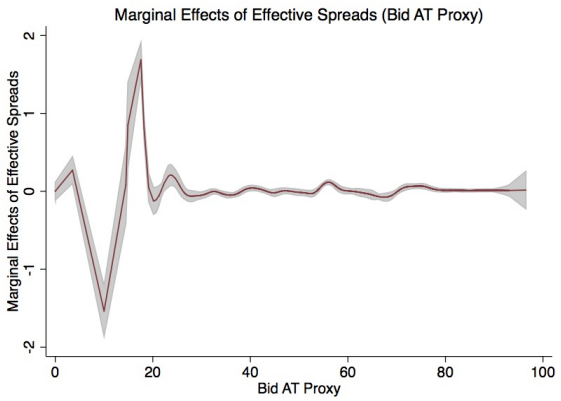
(d) Panel

Figure B.47: Marginal Effects of Quoted Depth in Stata (AT Proxy Thresholded at 200ms)

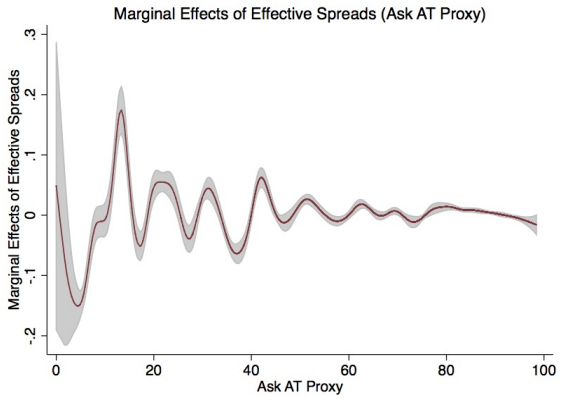
Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on quoted depth using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of quoted depth marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.



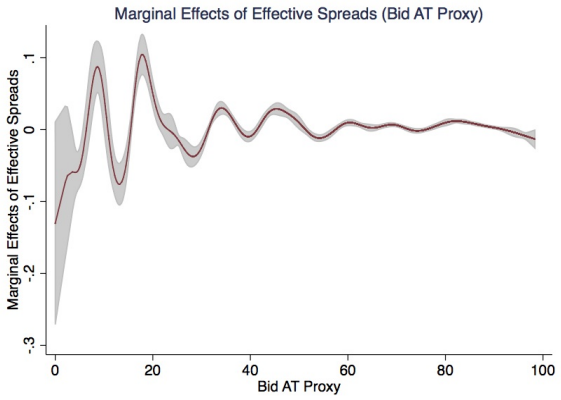
(a) Volume weighted average



(b) Volume weighted average



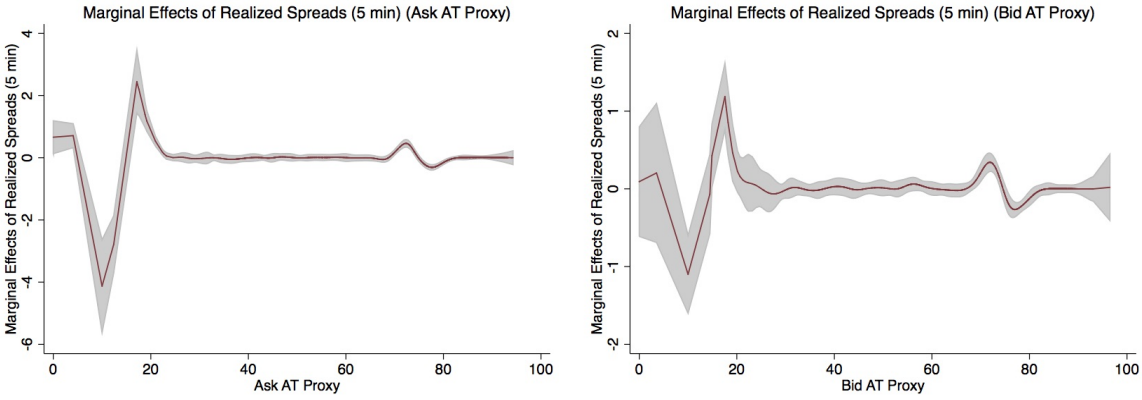
(c) Panel



(d) Panel

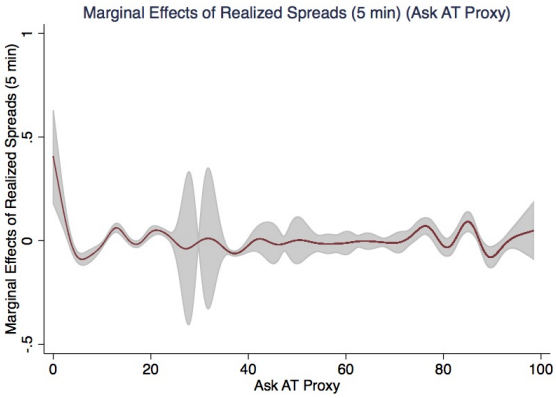
Figure B.48: Marginal Effects of Effective Spreads in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on effective spreads using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of effective spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.

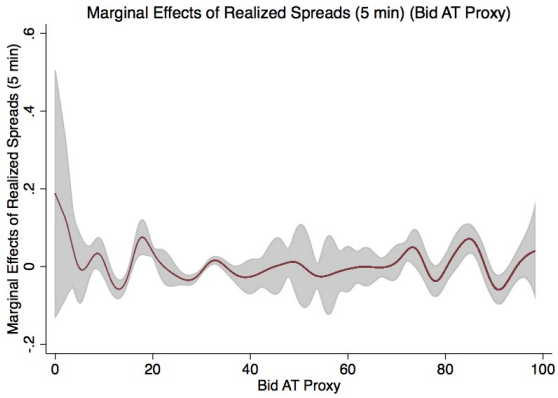


(a) Volume weighted average

(b) Volume weighted average



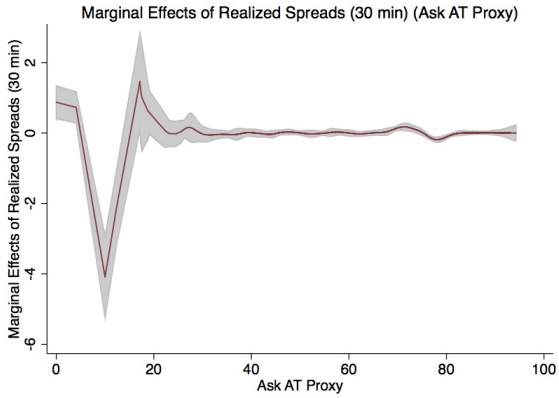
(c) Panel



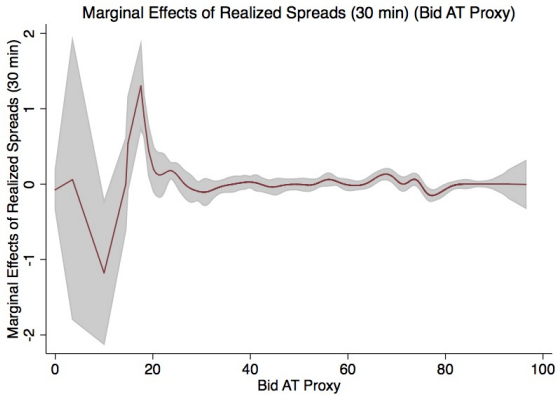
(d) Panel

Figure B.49: Marginal Effects of Realized Spreads (5 min) in Stata (AT Proxy Thresholded at 200ms)

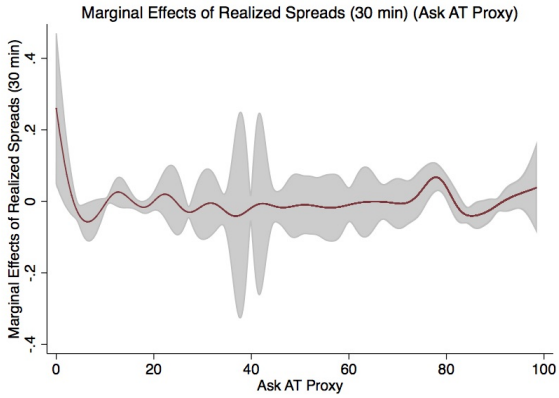
Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on realized spreads (5 min) using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of realized spreads (5 min) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.



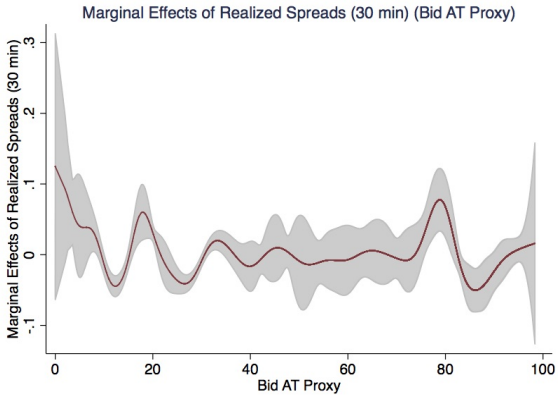
(a) Volume weighted average



(b) Volume weighted average



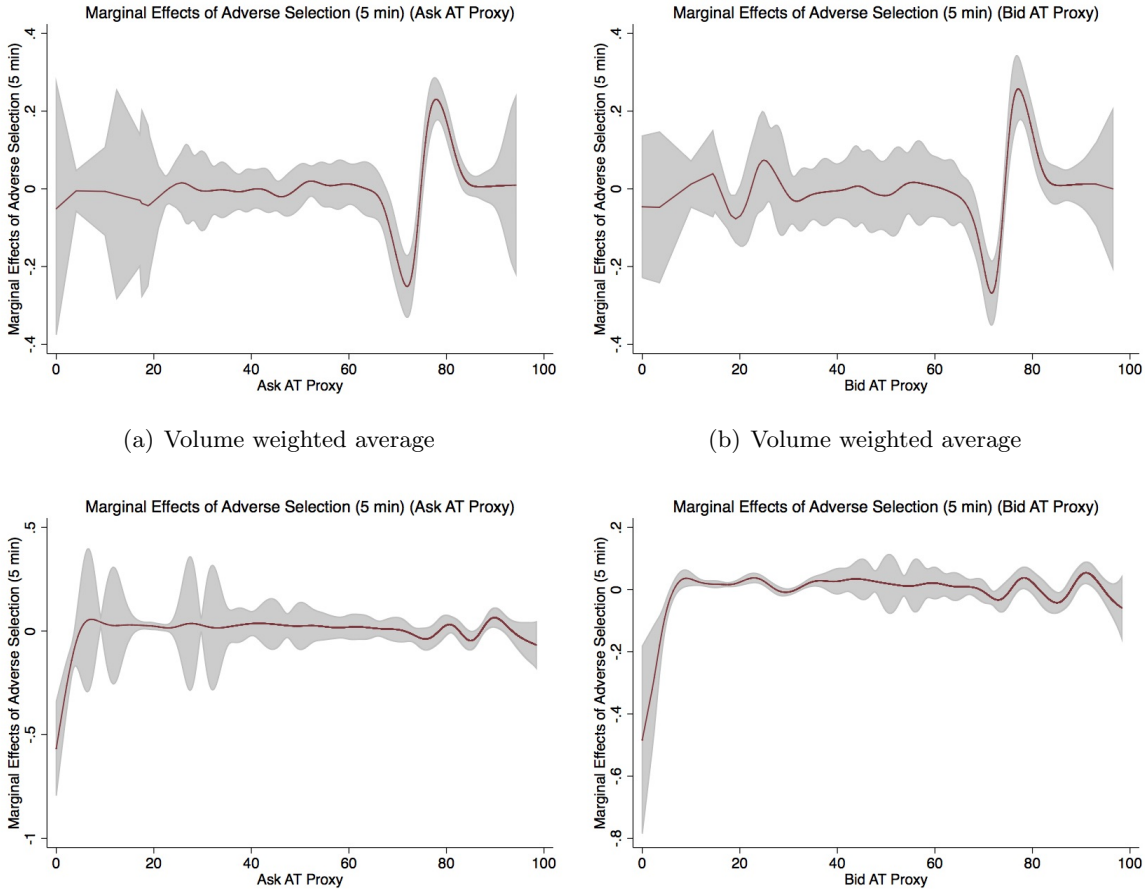
(c) Panel



(d) Panel

Figure B.50: Marginal Effects of Realized Spreads (30 min) in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on realized spreads (30 min) using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of realized spreads (30 min) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.



(a) Volume weighted average

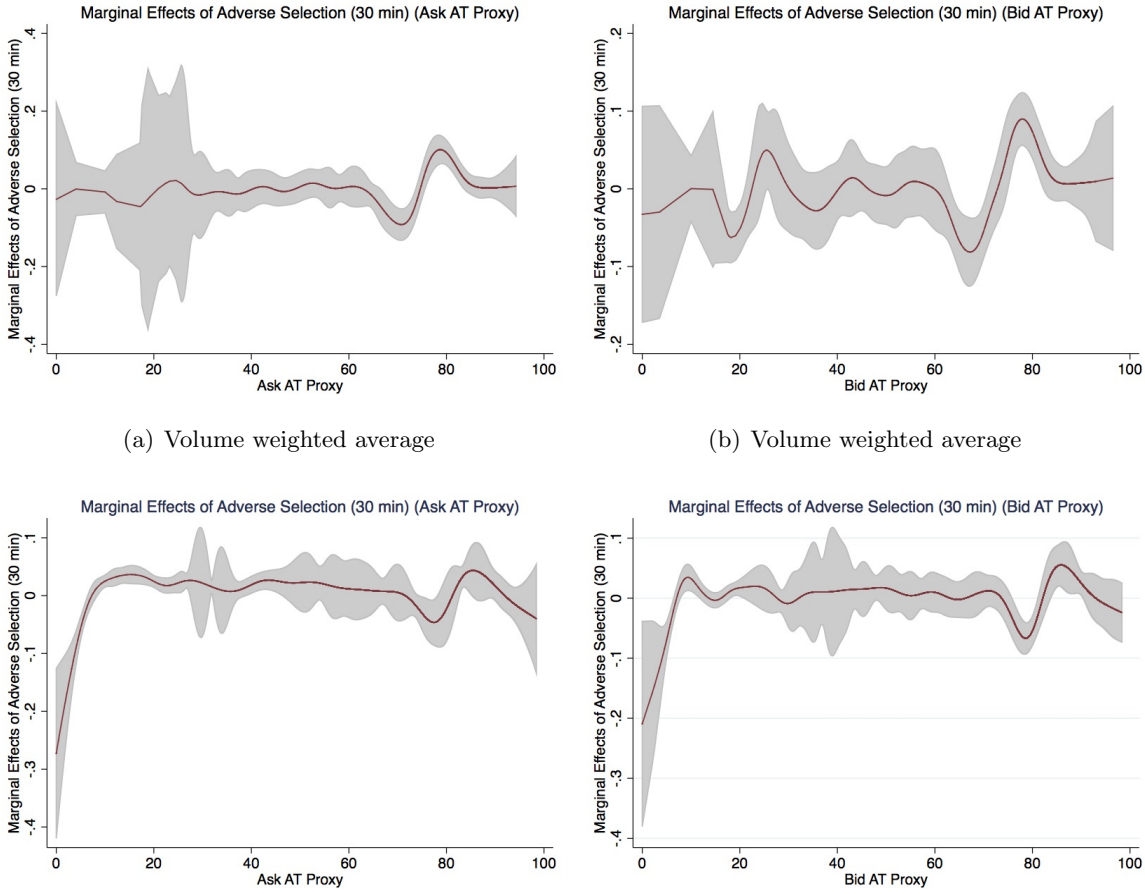
(b) Volume weighted average

(c) Panel

(d) Panel

Figure B.51: Marginal Effects of Adverse Selection (5 min) in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on adverse selection (5 min) using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of adverse selection (5 min) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.



(a) Volume weighted average

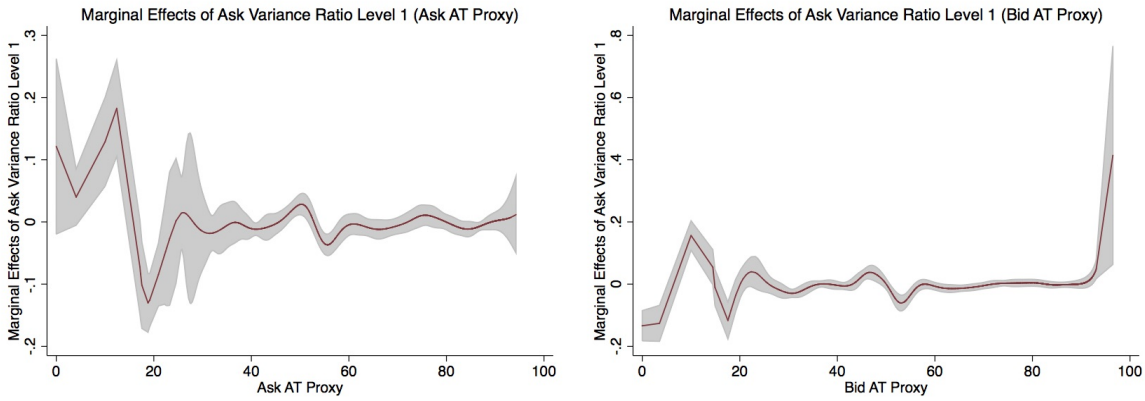
(b) Volume weighted average

(c) Panel

(d) Panel

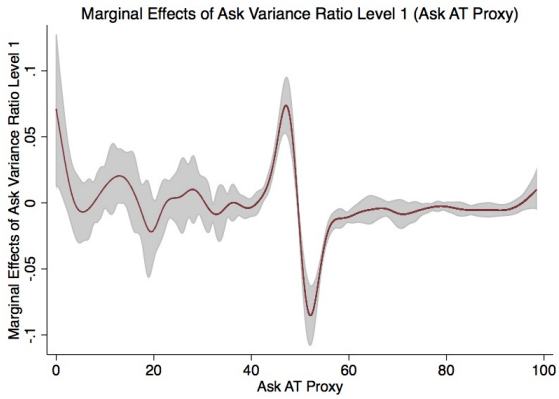
Figure B.52: Marginal Effects of Adverse Selection (30 min) in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on adverse selection (30 min) using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of adverse selection (30 min) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.

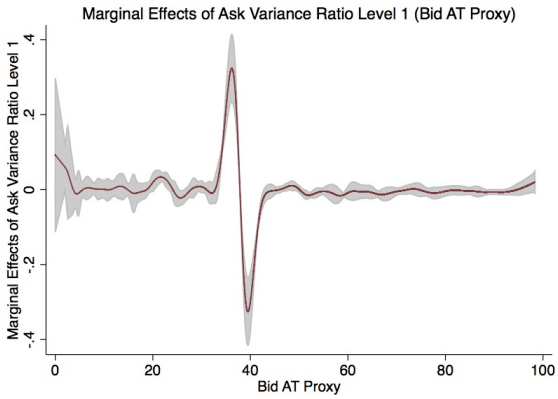


(a) Volume weighted average

(b) Volume weighted average



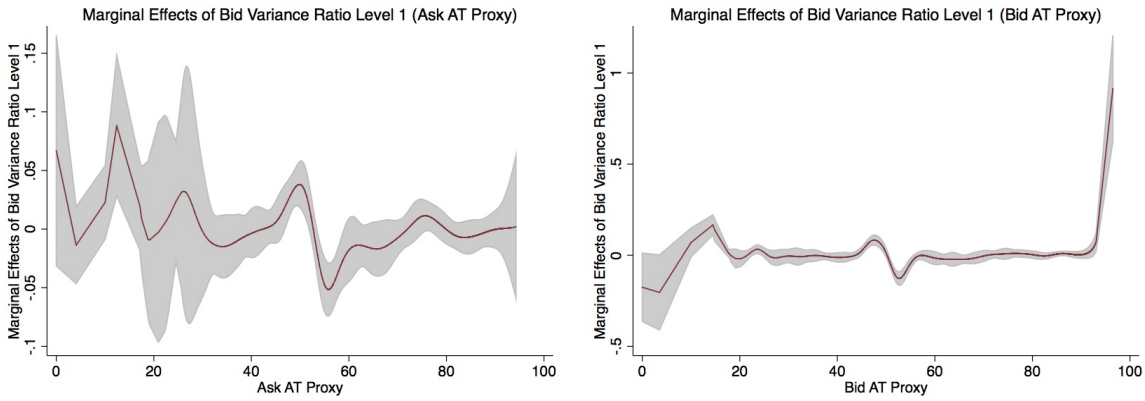
(c) Panel



(d) Panel

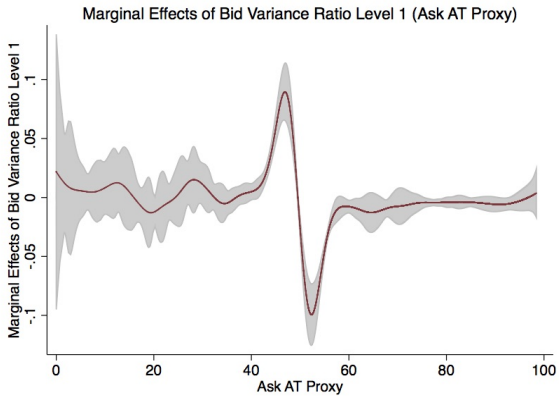
Figure B.53: Marginal Effects of Ask Variance Ratio Level 1 in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on ask variance at timescale level 1 using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of ask variance at timescale level 1 marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.

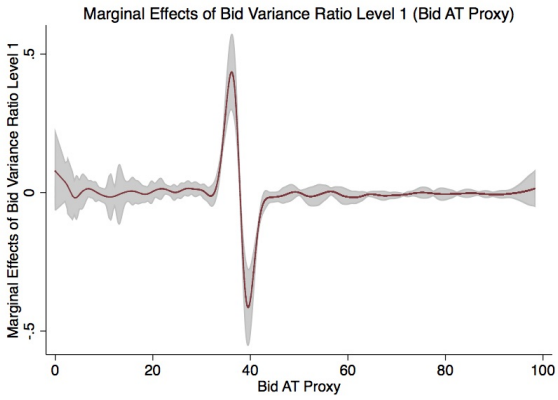


(a) Volume weighted average

(b) Volume weighted average



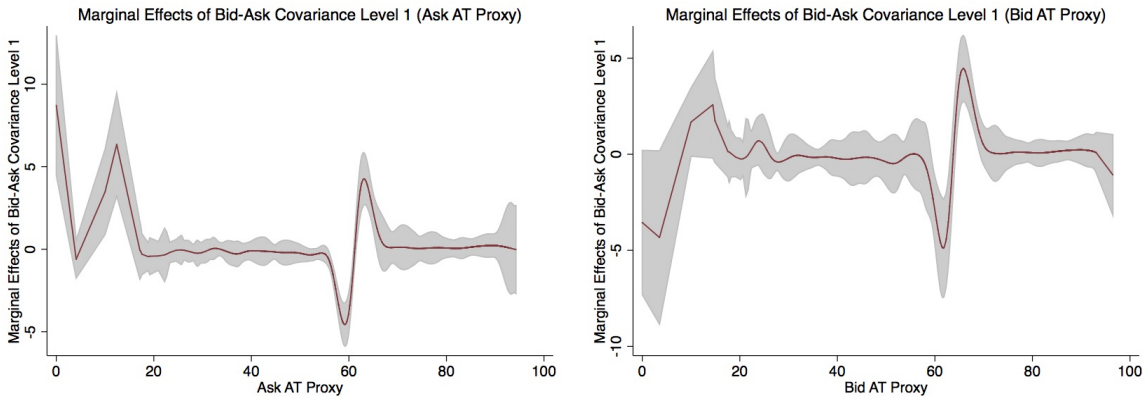
(c) Panel



(d) Panel

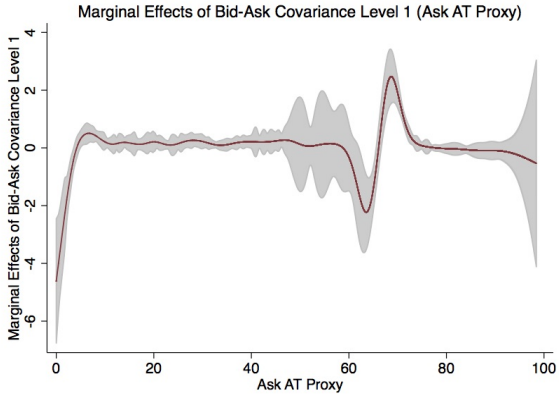
Figure B.54: Marginal Effects of Bid Variance Ratio Level 1 in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on bid variance at timescale level 1 using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of bid variance at timescale level 1 marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.

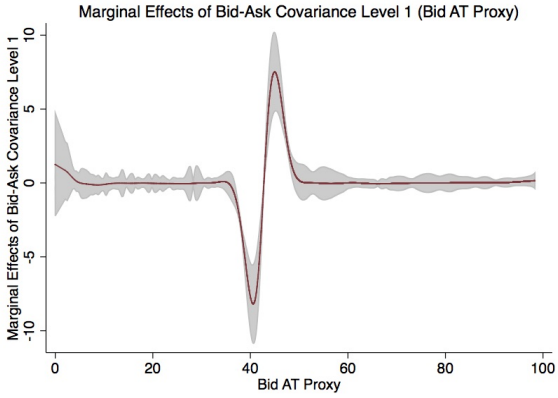


(a) Volume weighted average

(b) Volume weighted average



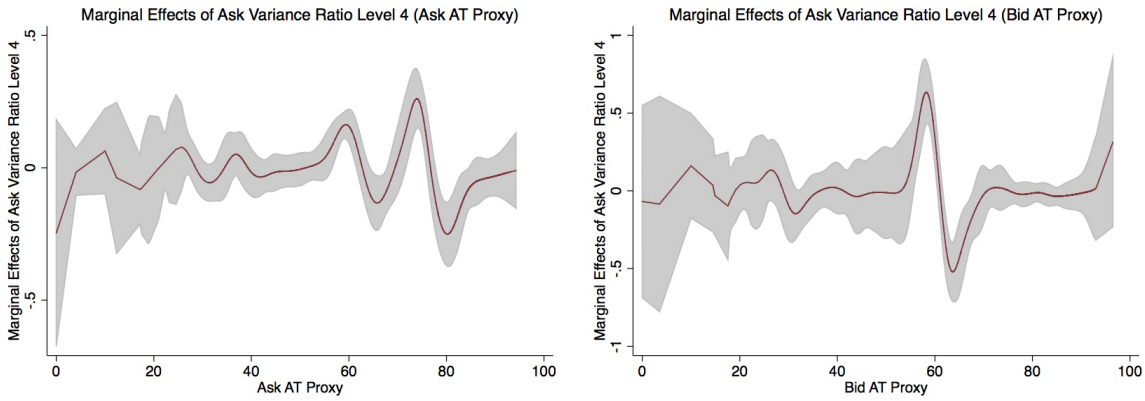
(c) Panel



(d) Panel

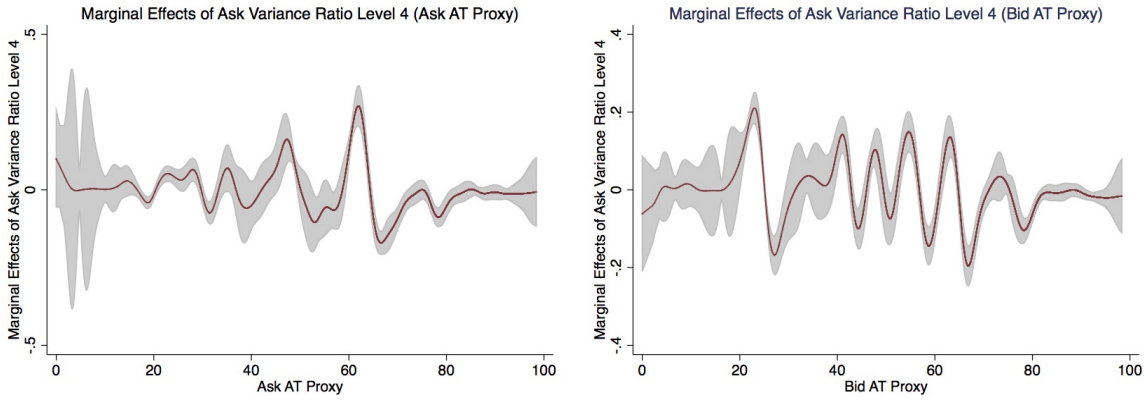
Figure B.55: Marginal Effects of Bid-Ask Covariance Ratio Level 1 in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on bid-ask covariance at timescale level 1 using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of bid-ask covariance at timescale level 1 marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.



(a) Volume weighted average

(b) Volume weighted average

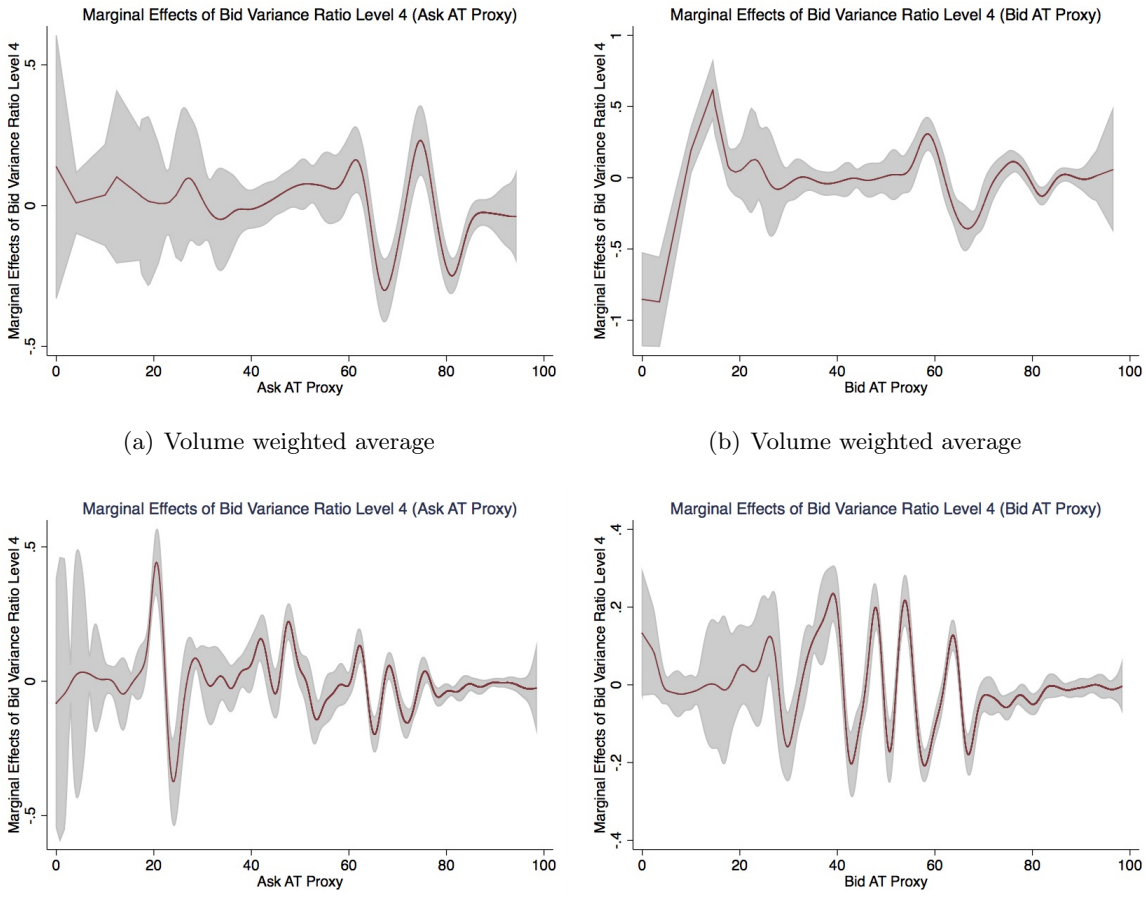


(c) Panel

(d) Panel

Figure B.56: Marginal Effects of Ask Variance Ratio Level 4 in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on ask variance at timescale level 4 using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of ask variance at timescale level 4 marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.



(a) Volume weighted average

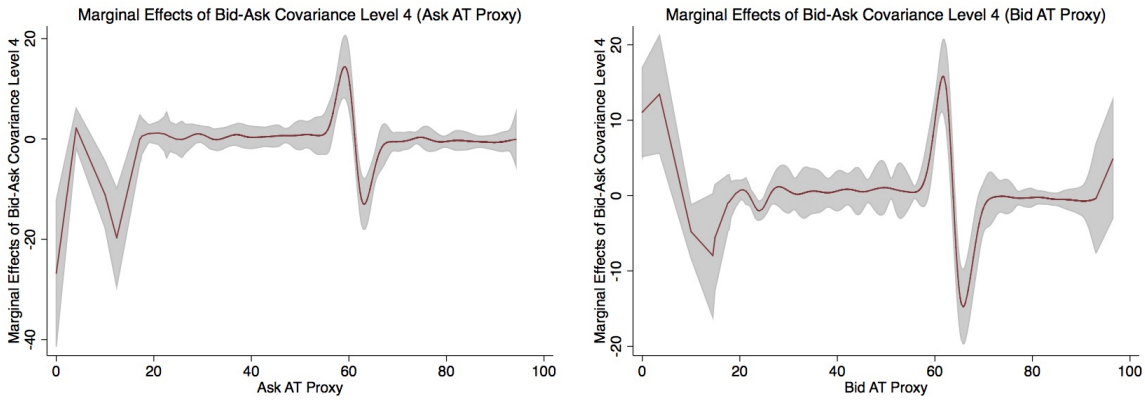
(b) Volume weighted average

(c) Panel

(d) Panel

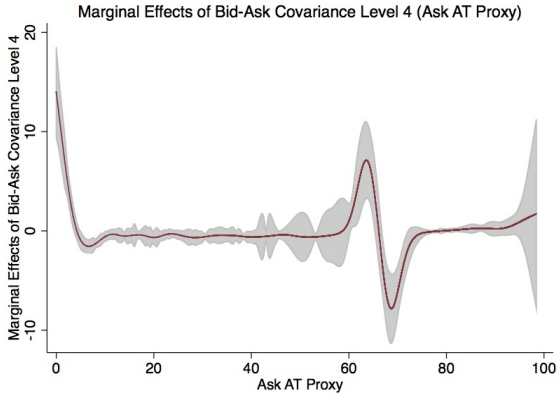
Figure B.57: Marginal Effects of Bid Variance Ratio Level 4 in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on bid variance at timescale level 4 using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of bid variance at timescale level 4 marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.

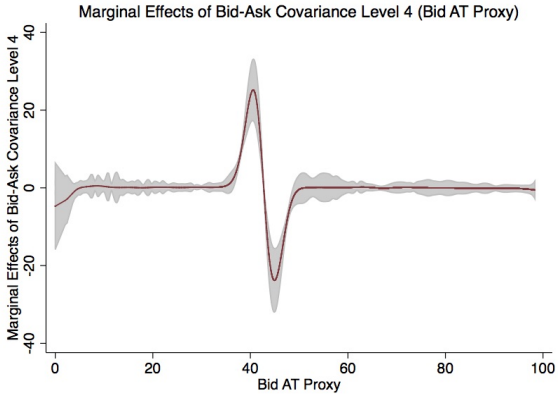


(a) Volume weighted average

(b) Volume weighted average



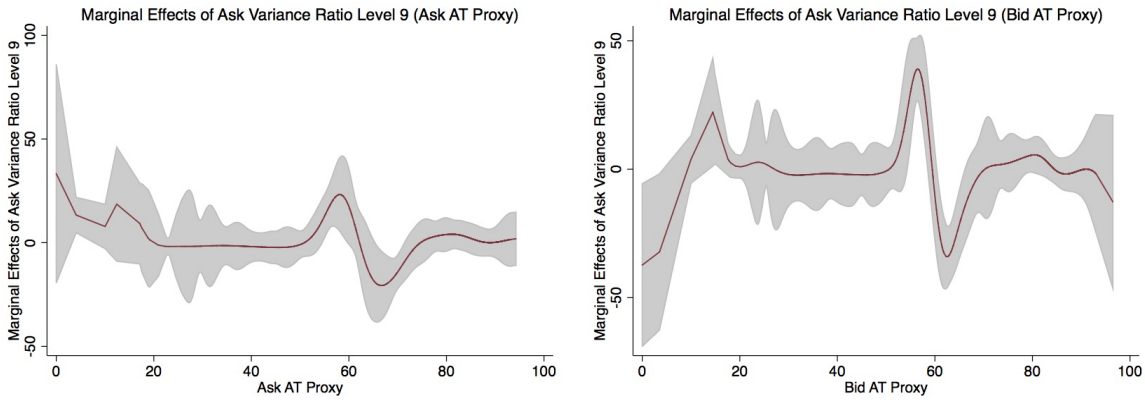
(c) Panel



(d) Panel

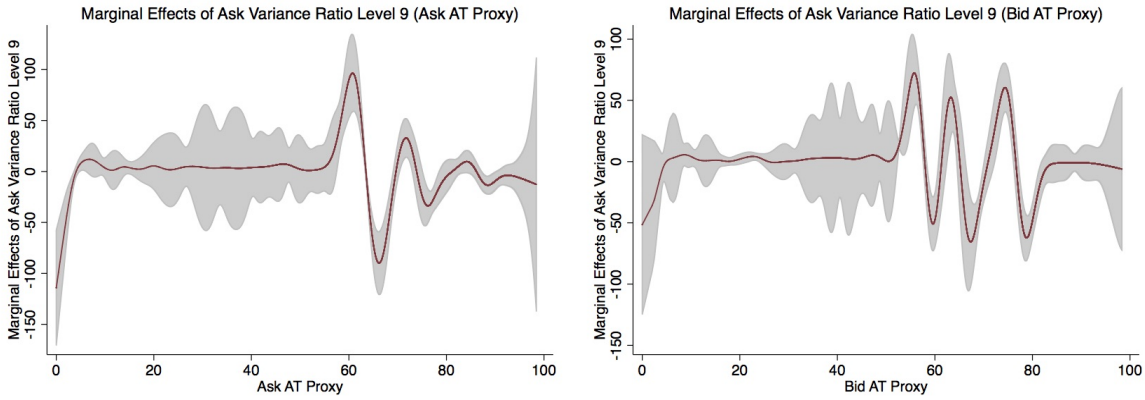
Figure B.58: Marginal Effects of Bid-Ask Covariance Ratio Level 4 in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on bid-ask covariance at timescale level 4 using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of bid-ask covariance at timescale level 4 marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.



(a) Volume weighted average

(b) Volume weighted average

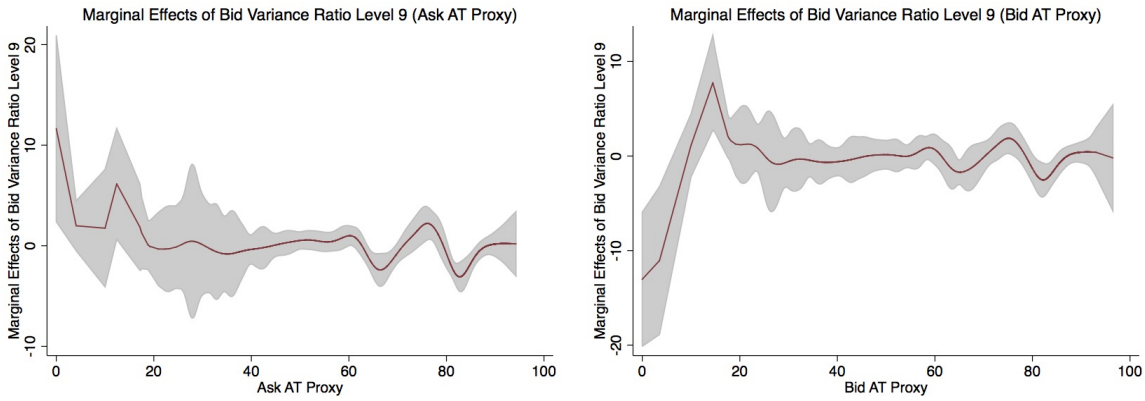


(c) Panel

(d) Panel

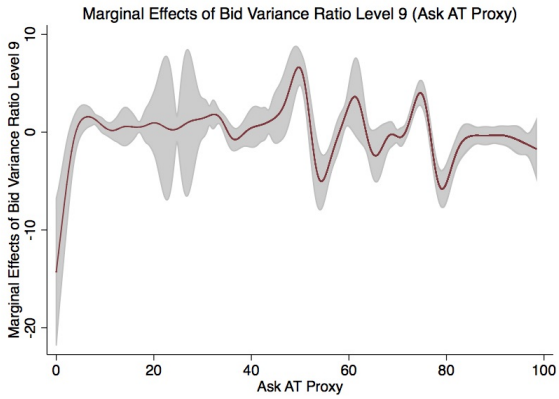
Figure B.59: Marginal Effects of Ask Variance Ratio Level 9 in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on ask variance at timescale level 9 using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of ask variance at timescale level 9 marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.

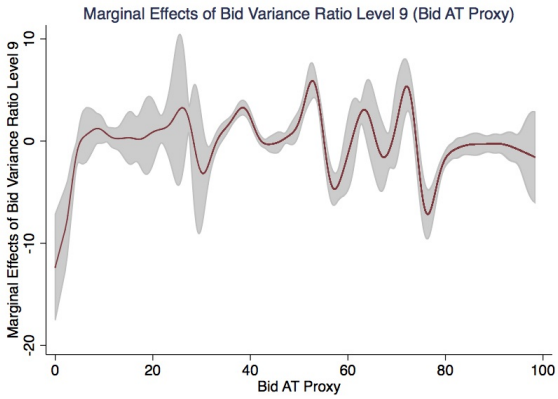


(a) Volume weighted average

(b) Volume weighted average



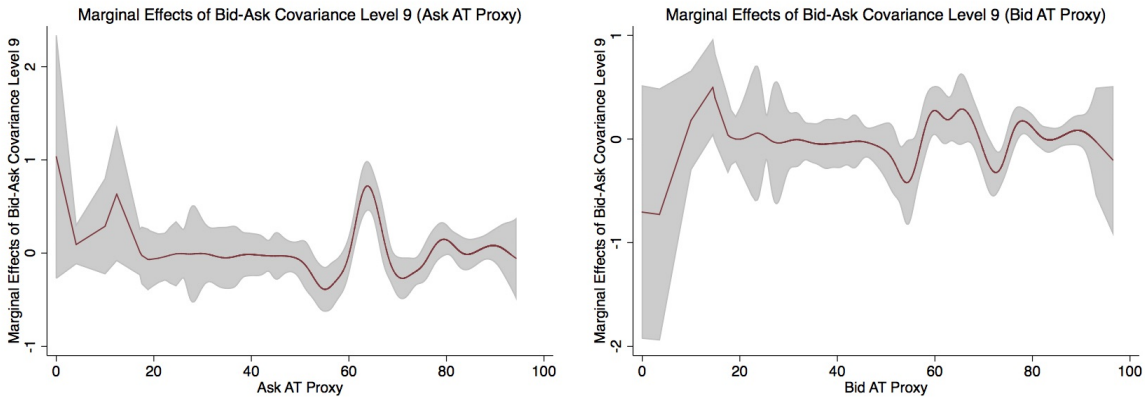
(c) Panel



(d) Panel

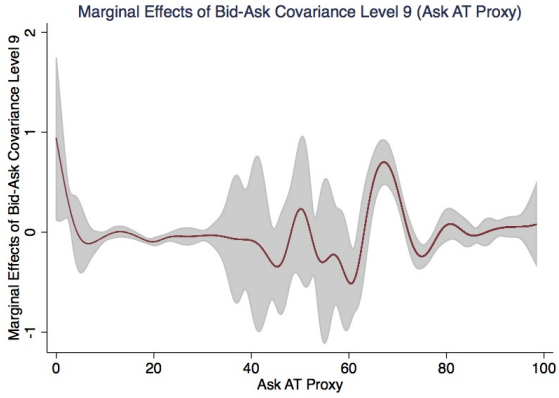
Figure B.60: Marginal Effects of Bid Variance Ratio Level 9 in Stata (AT Proxy Thresholded at 200ms)

Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on bid variance at timescale level 9 using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of bid variance at timescale level 9 marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.

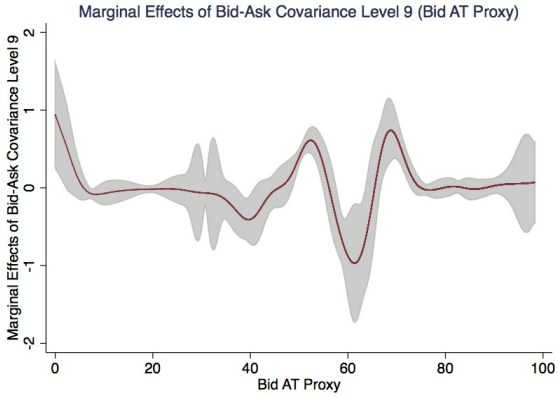


(a) Volume weighted average

(b) Volume weighted average



(c) Panel



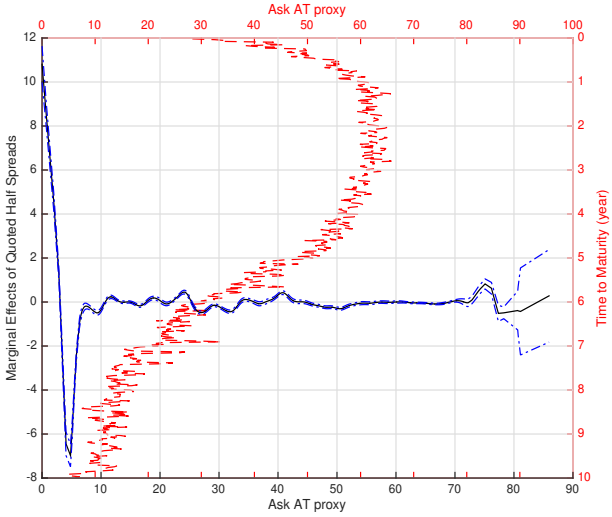
(d) Panel

Figure B.61: Marginal Effects of Bid-Ask Covariance Ratio Level 9 in Stata (AT Proxy Thresholded at 200ms)

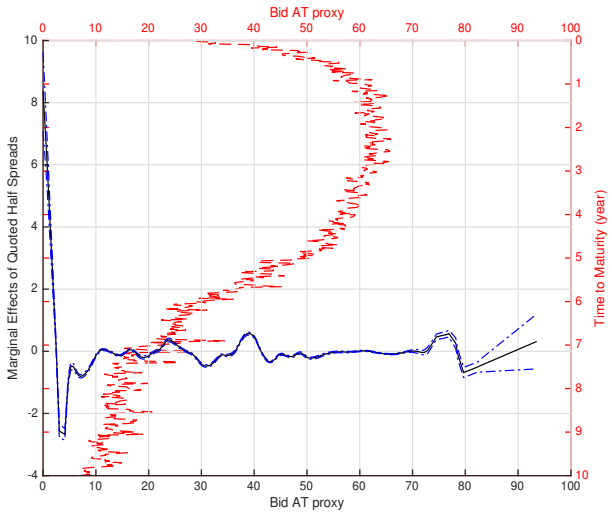
Notes: This plot shows the impacts of AT proxy thresholded at 200 ms on bid-ask covariance at timescale level 9 using the semi-parametric Robinson estimator via Stata *semipar* command. The red line depicts the marginal effects in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The grey spread represents the 95% lower and upper confidence bounds of bid-ask covariance at timescale level 9 marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on log total messages, and the panel dataset adopts algorithmic trading proxy instrumented on both log total messages and log time to maturity.

Appendix B.2. Marginal Effects of AT Proxy

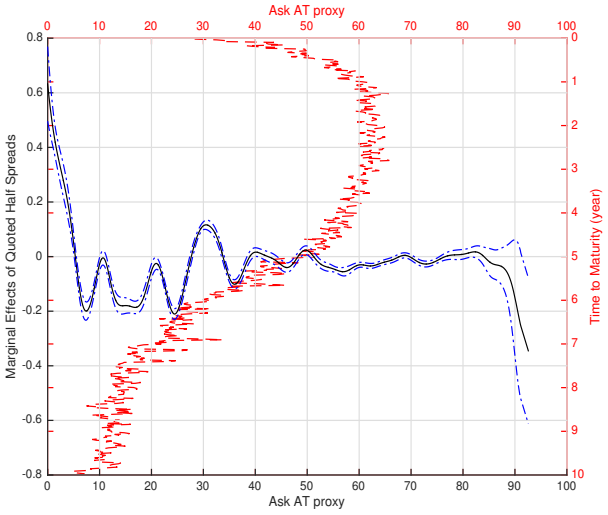
Appendix B.2.1. Marginal Effects of AT Proxy Thresholded at 25ms



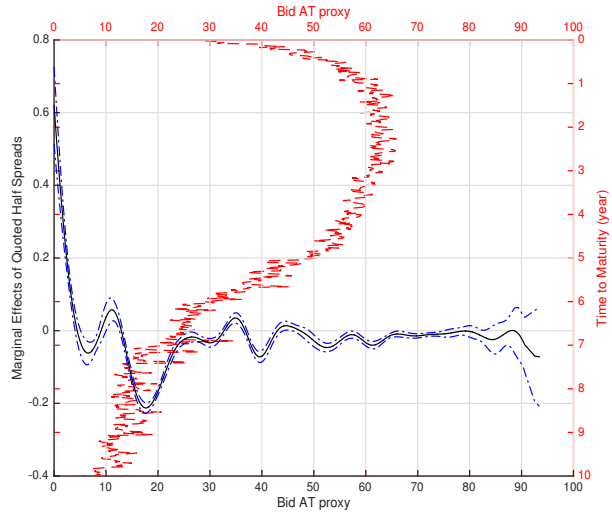
(a) Quoted Half Spreads - VWA



(b) Quoted Half Spreads - VWA



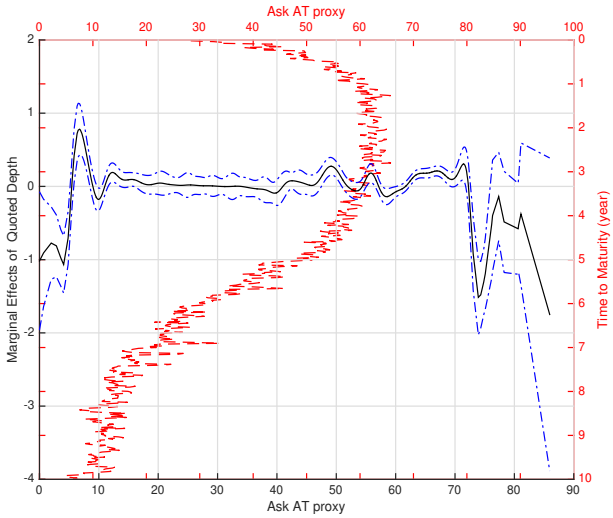
(c) Quoted Half Spreads - Panel



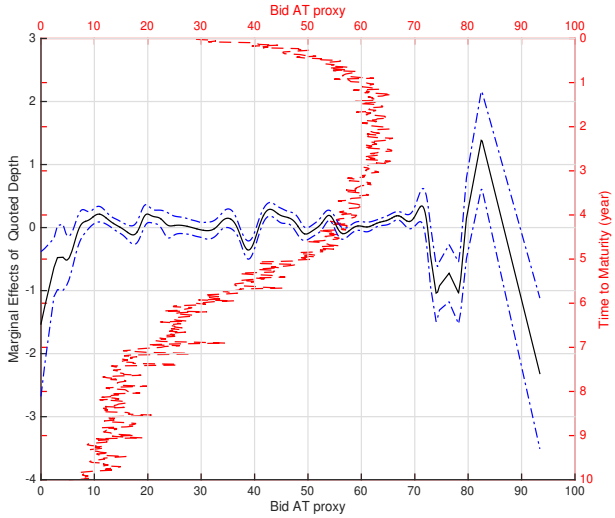
(d) Quoted Half Spreads - Panel

Figure B.62: Marginal Effects of Quoted Half Spreads

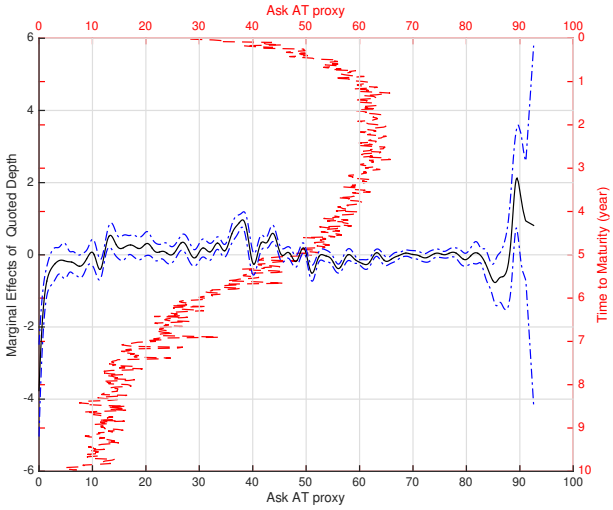
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted half spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted half spreads marginal effects.



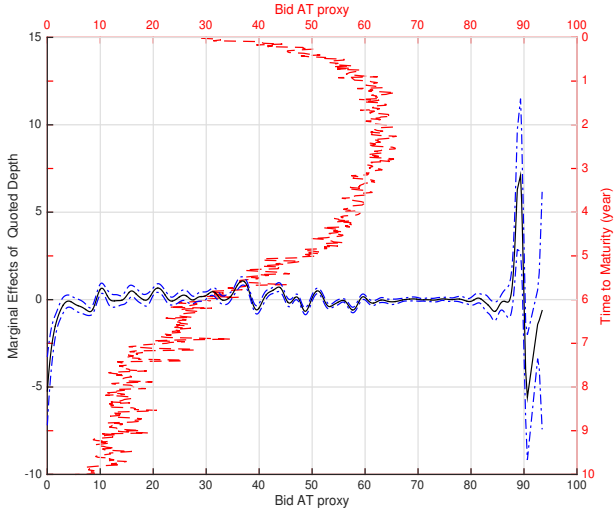
(a) Quoted Depth - VWA



(b) Quoted Depth - VWA



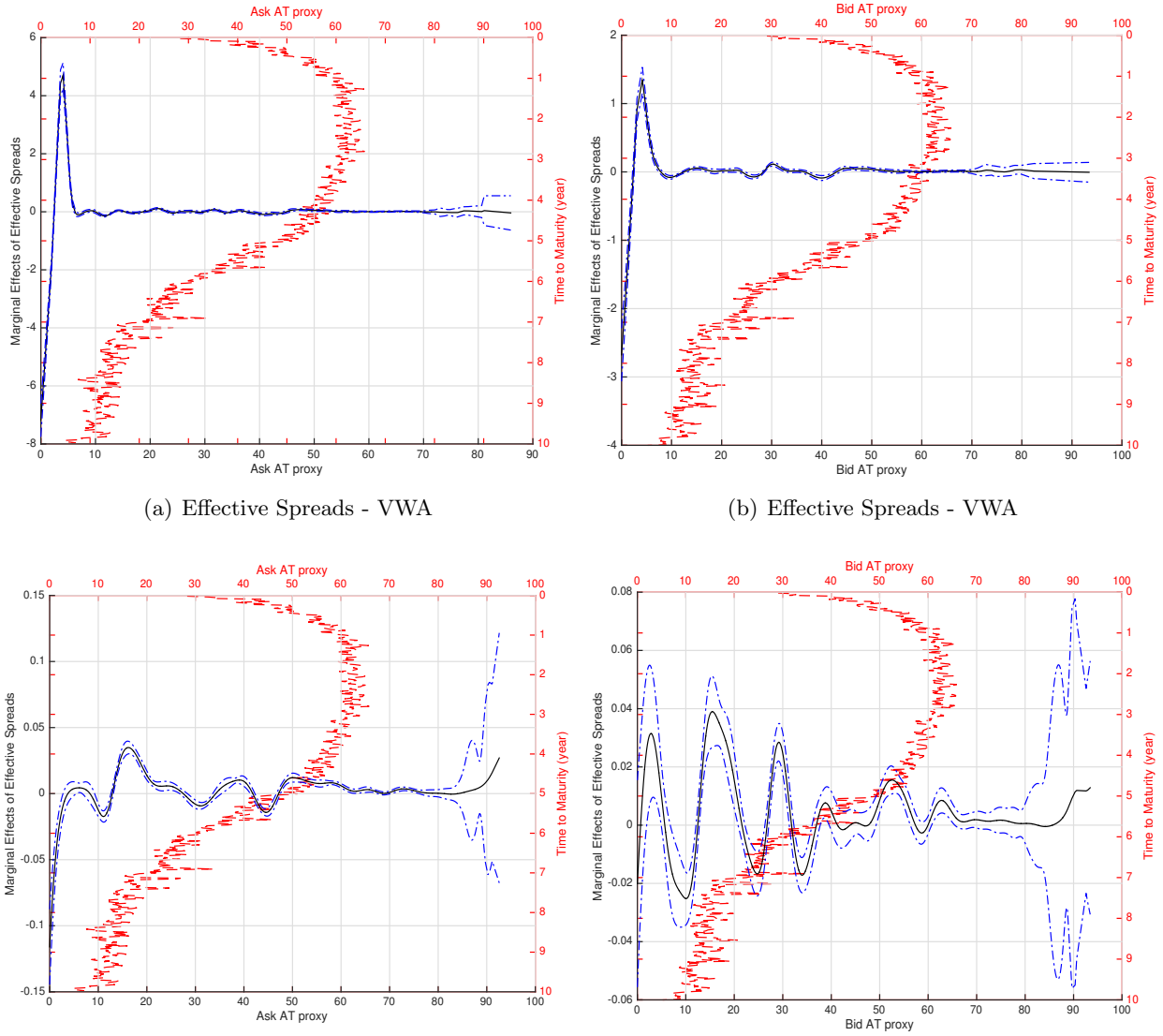
(c) Quoted Depth - Panel



(d) Quoted Depth - Panel

Figure B.63: Marginal Effects of Quoted Depth

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted depth in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted depth marginal effects.



(a) Effective Spreads - VWA

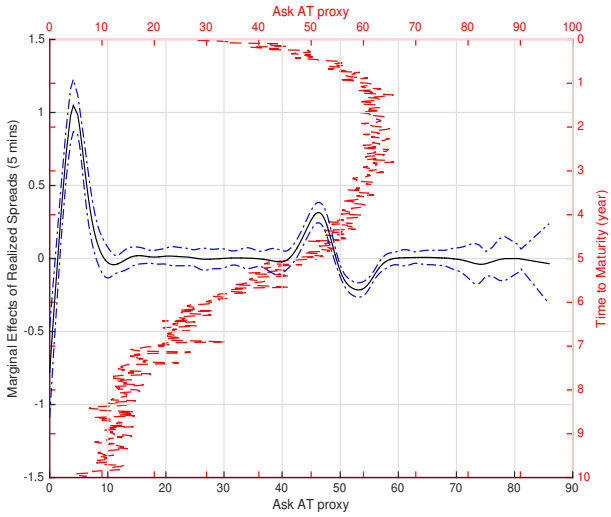
(b) Effective Spreads - VWA

(c) Effective Spreads - Panel

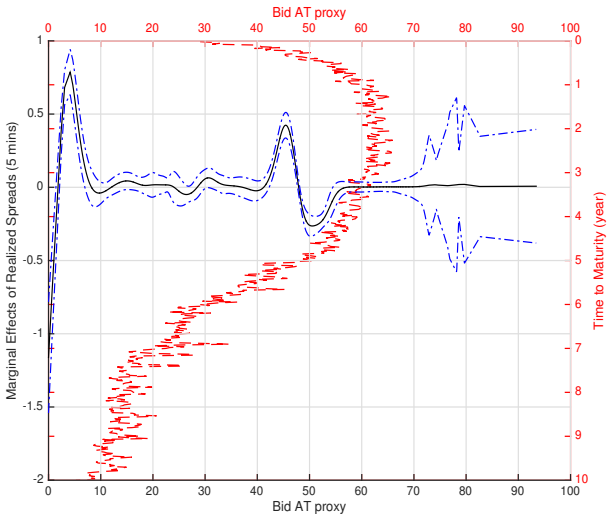
(d) Effective Spreads - Panel

Figure B.64: Marginal Effects of Effective Spreads

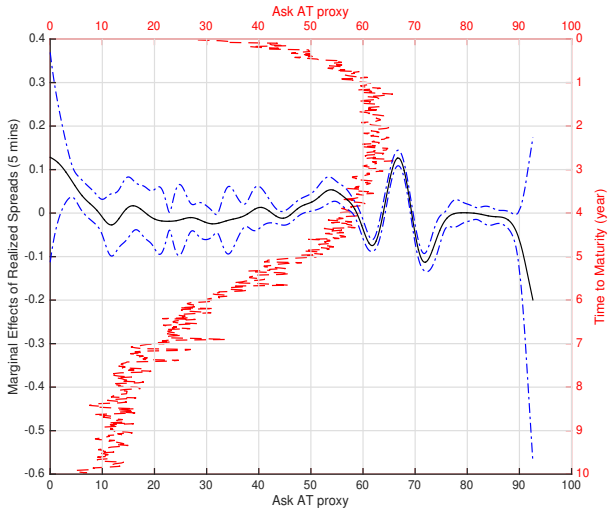
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on effective spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of effective spreads marginal effects.



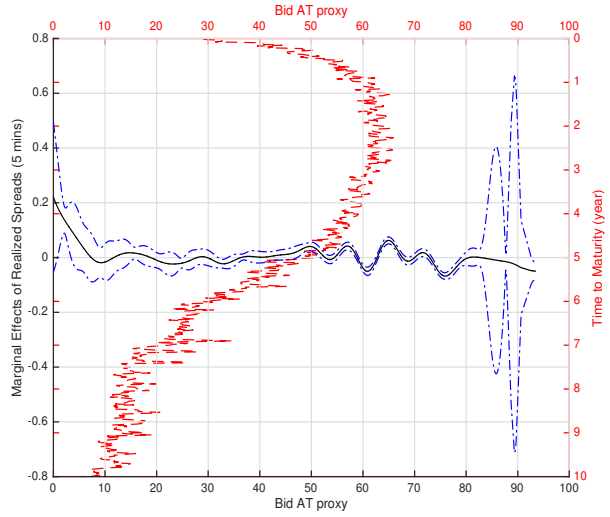
(a) Realized Spreads (5 mins) - VWA



(b) Realized Spreads (5 mins) - VWA



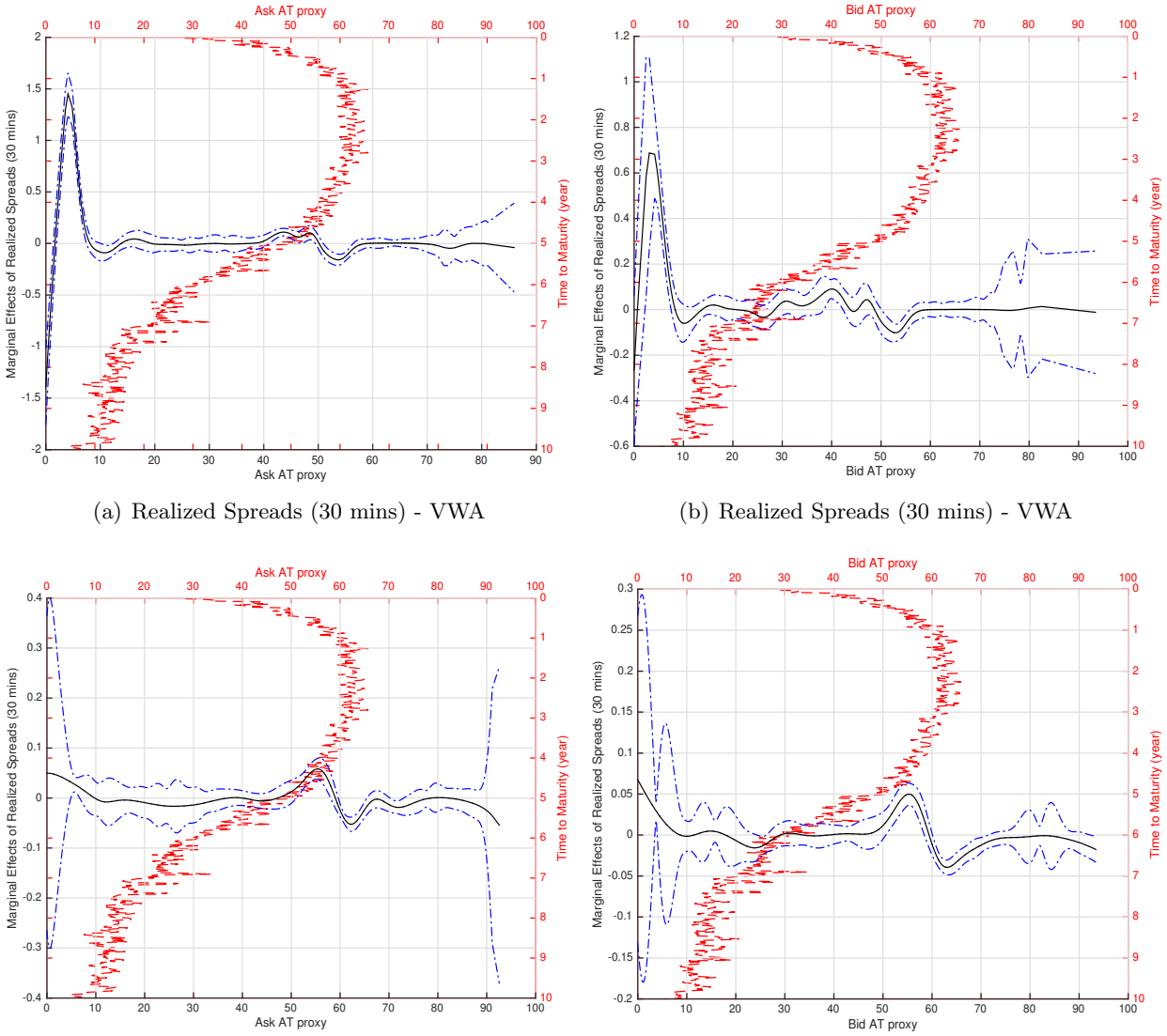
(c) Realized Spreads (5 mins) - Panel



(d) Realized Spreads (5 mins) - Panel

Figure B.65: Marginal Effects of Realized Spreads (5 mins)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (5 mins) marginal effects.



(a) Realized Spreads (30 mins) - VWA

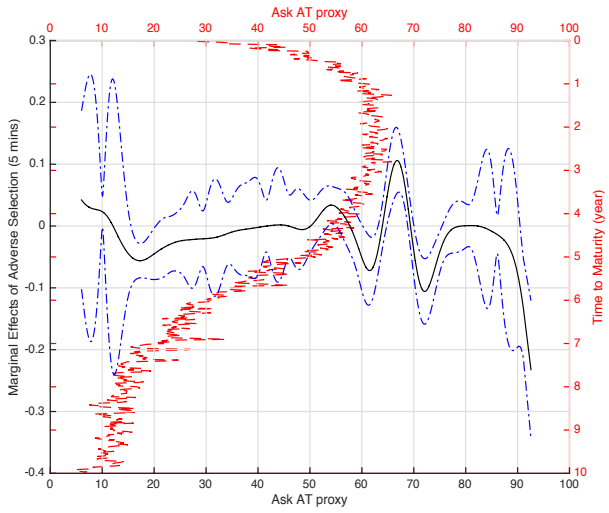
(b) Realized Spreads (30 mins) - VWA

(c) Realized Spreads (30 mins) - Panel

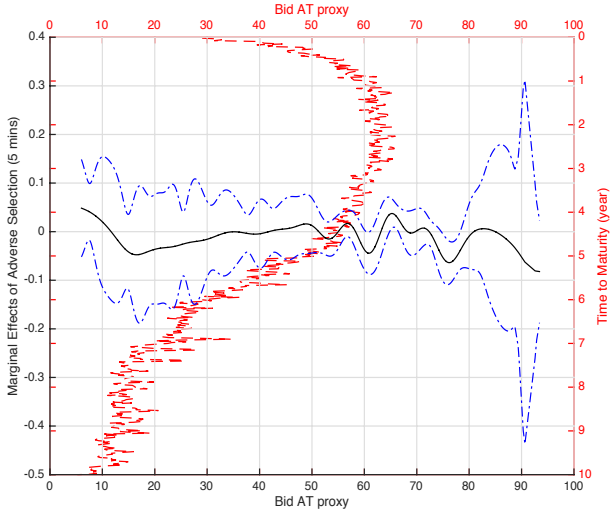
(d) Realized Spreads (30 mins) - Panel

Figure B.66: Marginal Effects of Realized Spreads (30 mins)

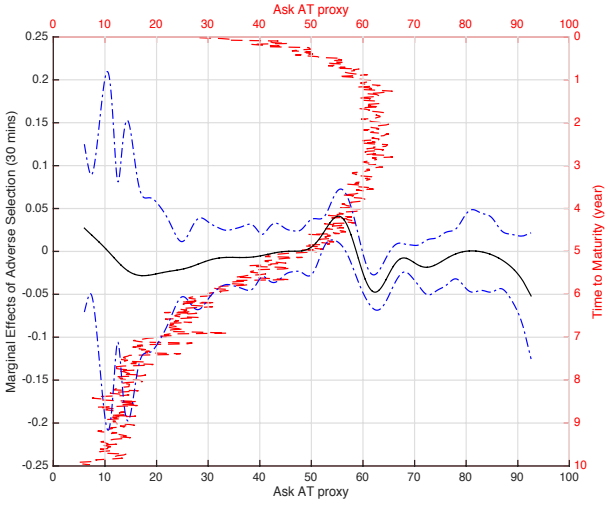
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (30 mins) marginal effects.



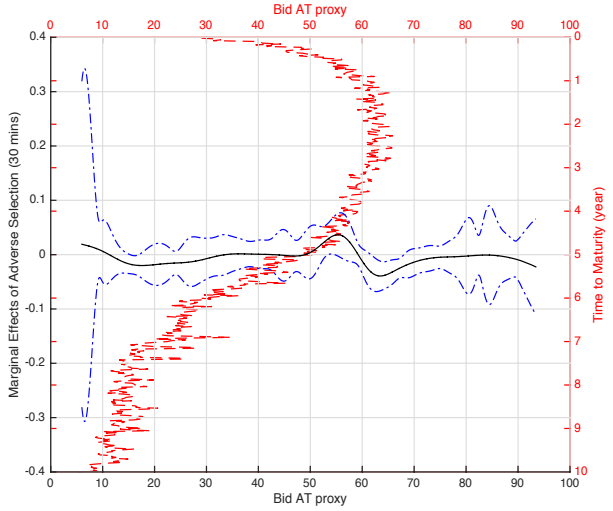
(a) Adverse Selection (5 mins) - Panel



(b) Adverse Selection (5 mins) - Panel



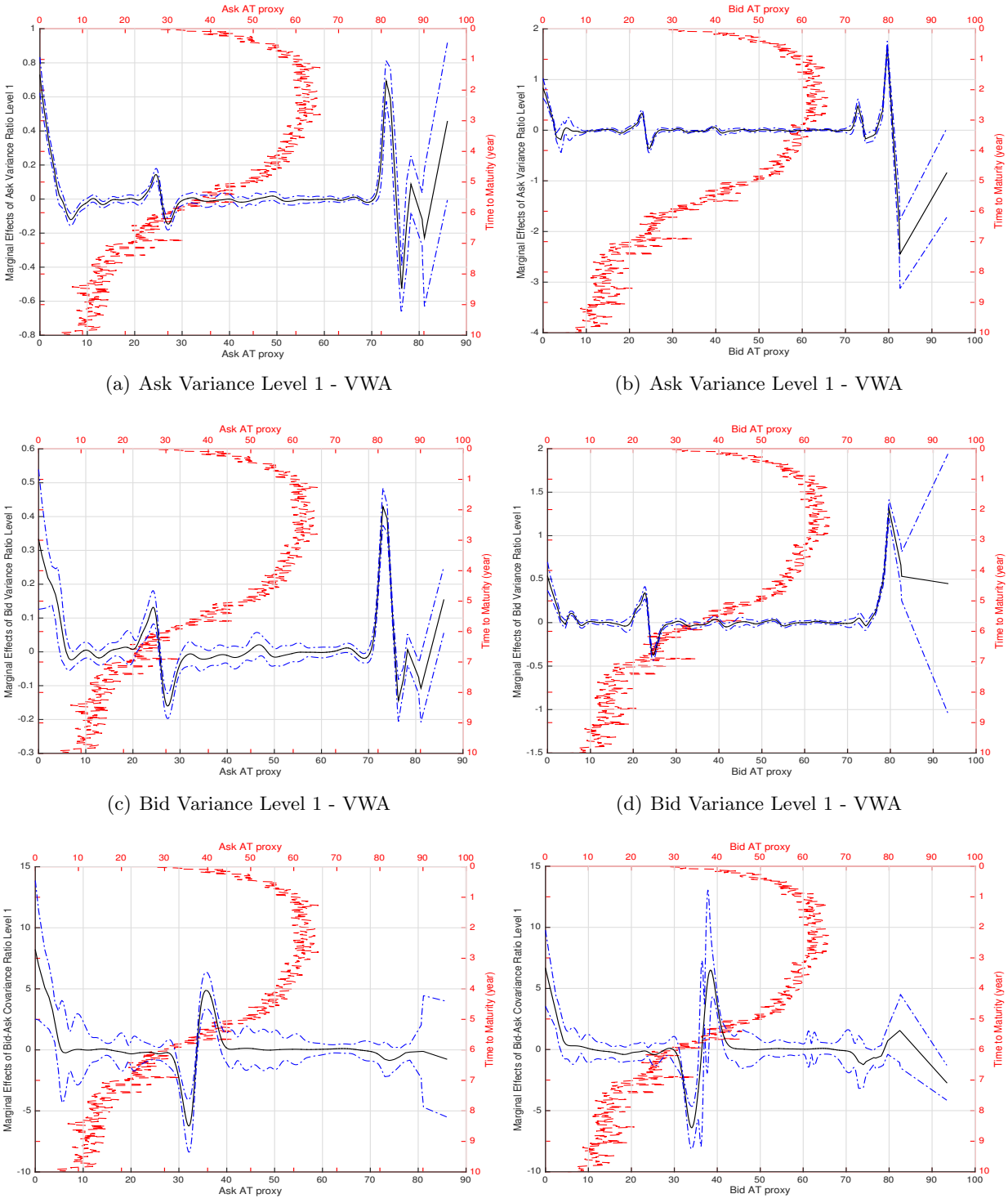
(c) Adverse Selection (30 mins) - Panel



(d) Adverse Selection (30 mins) - Panel

Figure B.67: Marginal Effects of Adverse Selection (5 mins and 30 mins)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (5 mins) in Subplots (a) to (b) and, on adverse selection (30 mins) in Subplots (c) and (d), both with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects.



(a) Ask Variance Level 1 - VWA

(b) Ask Variance Level 1 - VWA

(c) Bid Variance Level 1 - VWA

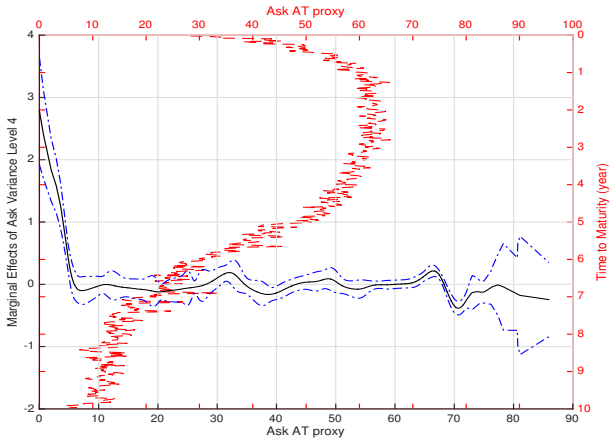
(d) Bid Variance Level 1 - VWA

(e) Bid Ask Covariance Level 1 - VWA

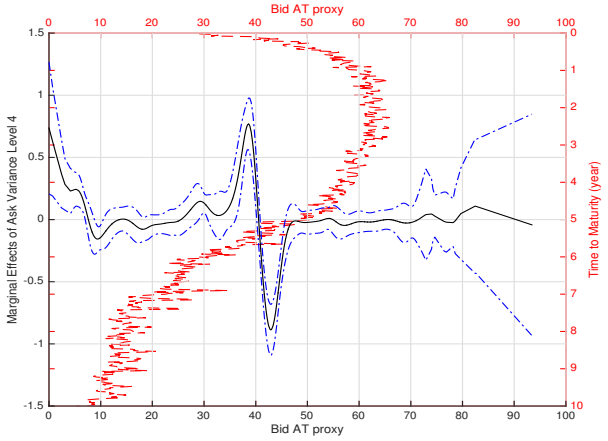
(f) Bid Ask Covariance Level 1 - VWA

Figure B.68: Marginal Effects of Variance and Covariance at Timescale Level 1

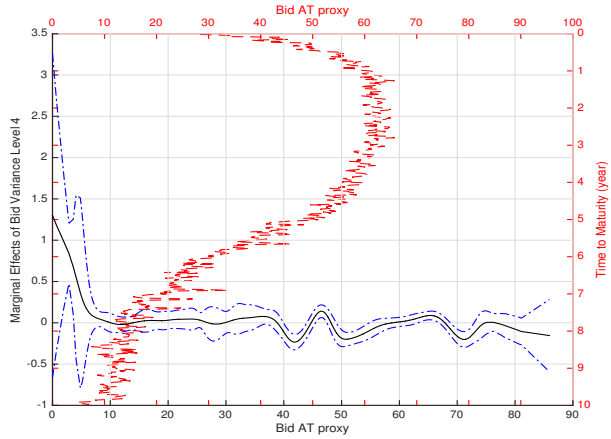
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on variance ratio in Subplots (a) to (d) and, on covariance ratio in Subplots (e) and (f), both at timescale 1 with the volume weighted average dataset. The blue dashed lines are the 95% lower and upper confidence bounds of marginal effects.



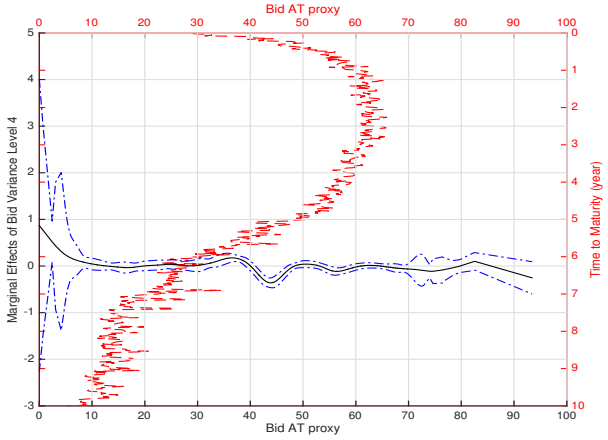
(a) Ask Variance Level 4 - VWA



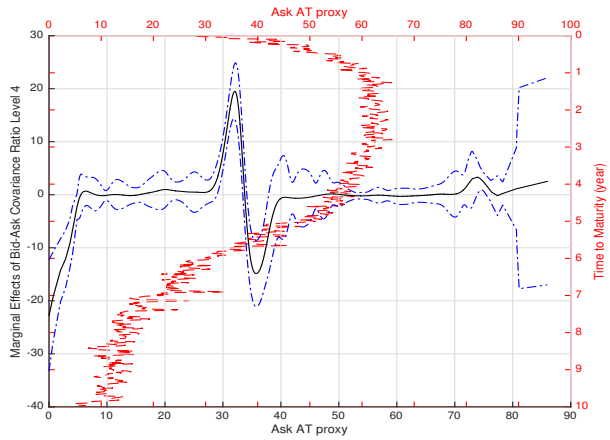
(b) Ask Variance Level 4 - VWA



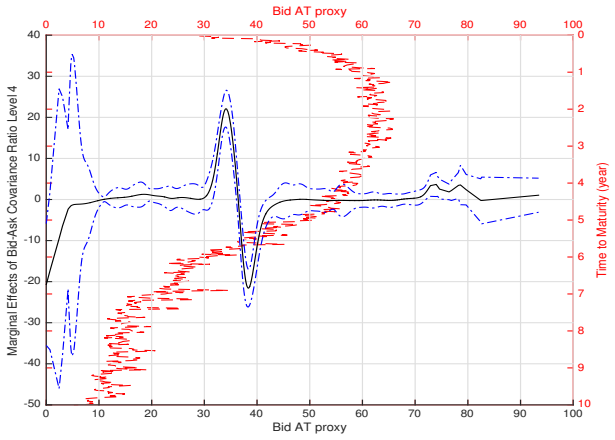
(c) Bid Variance Level 4 - VWA



(d) Bid Variance Level 4 - VWA



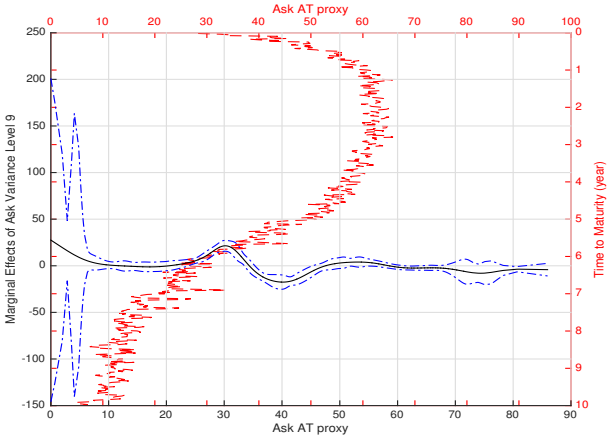
(e) Bid Ask Covariance Level 4 - VWA



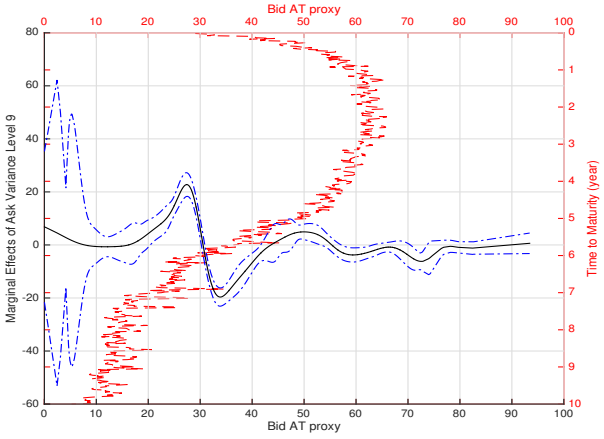
(f) Bid Ask Covariance Level 4 - VWA

Figure B.69: Marginal Effects of Variance and Covariance at Timescale Level 4

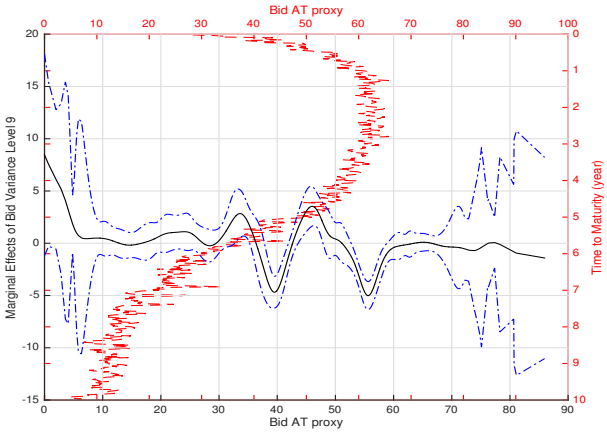
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on variance ratio in Subplots (a) to (d) and, on covariance ratio in Subplots (e) and (f), both at timescale 4 with the volume weighted average dataset. The blue dashed lines are the 95% lower and upper confidence bounds of marginal effects.



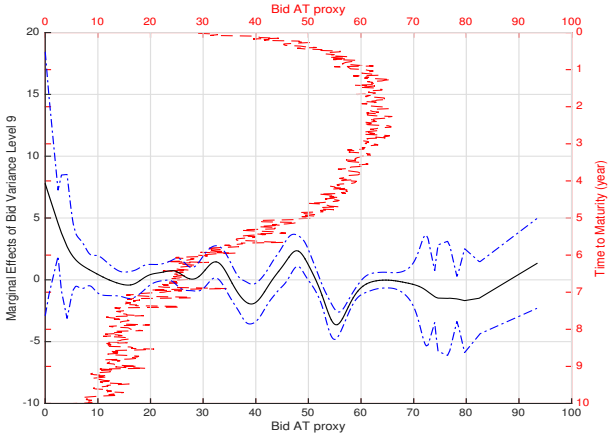
(a) Ask Variance Level 9 - VWA



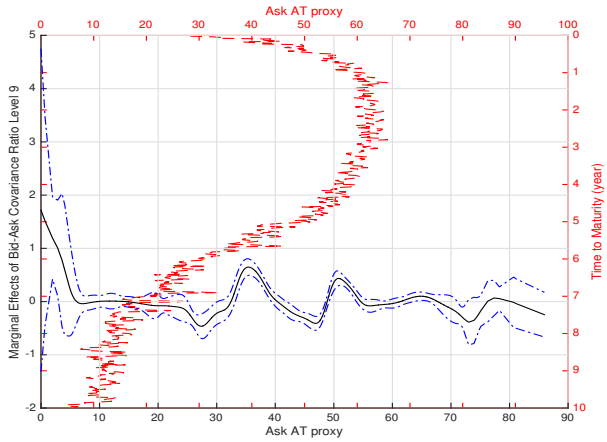
(b) Ask Variance Level 9 - VWA



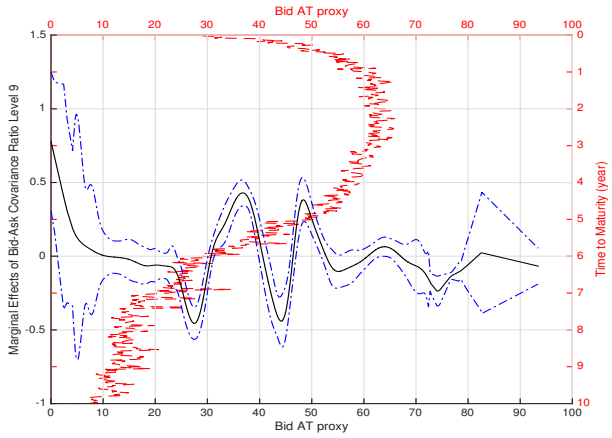
(c) Bid Variance Level 9 - VWA



(d) Bid Variance Level 9 - VWA



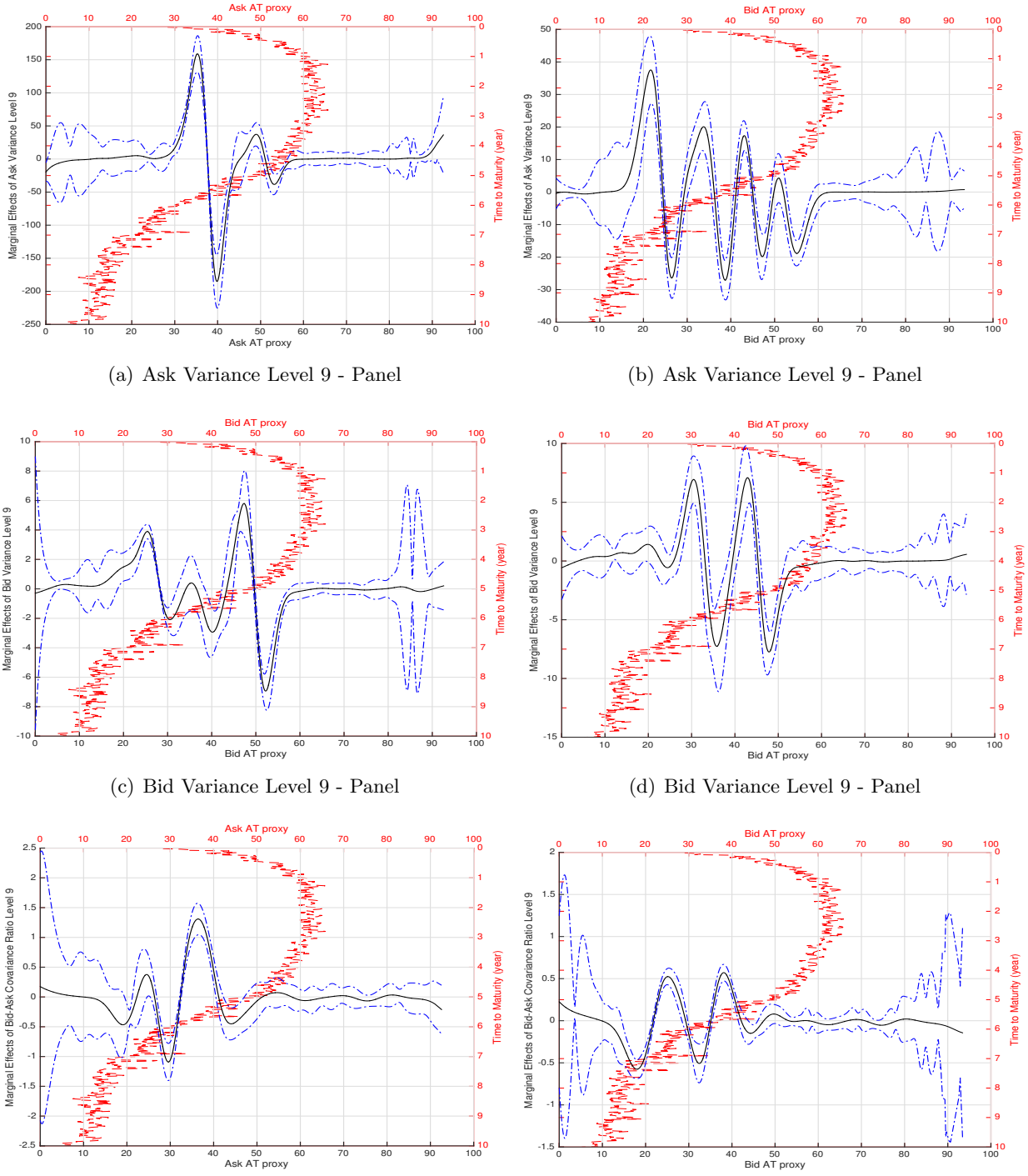
(e) Bid Ask Covariance Level 9 - VWA



(f) Bid Ask Covariance Level 9 - VWA

Figure B.70: Marginal Effects of Variance and Covariance at Timescale Level 9

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on variance ratio in Subplots (a) to (d) and, on covariance ratio in Subplots (e) and (f), both at timescale 9 with the volume weighted average dataset. The blue dashed lines are the 95% lower and upper confidence bounds of marginal effects.



(a) Ask Variance Level 9 - Panel

(b) Ask Variance Level 9 - Panel

(c) Bid Variance Level 9 - Panel

(d) Bid Variance Level 9 - Panel

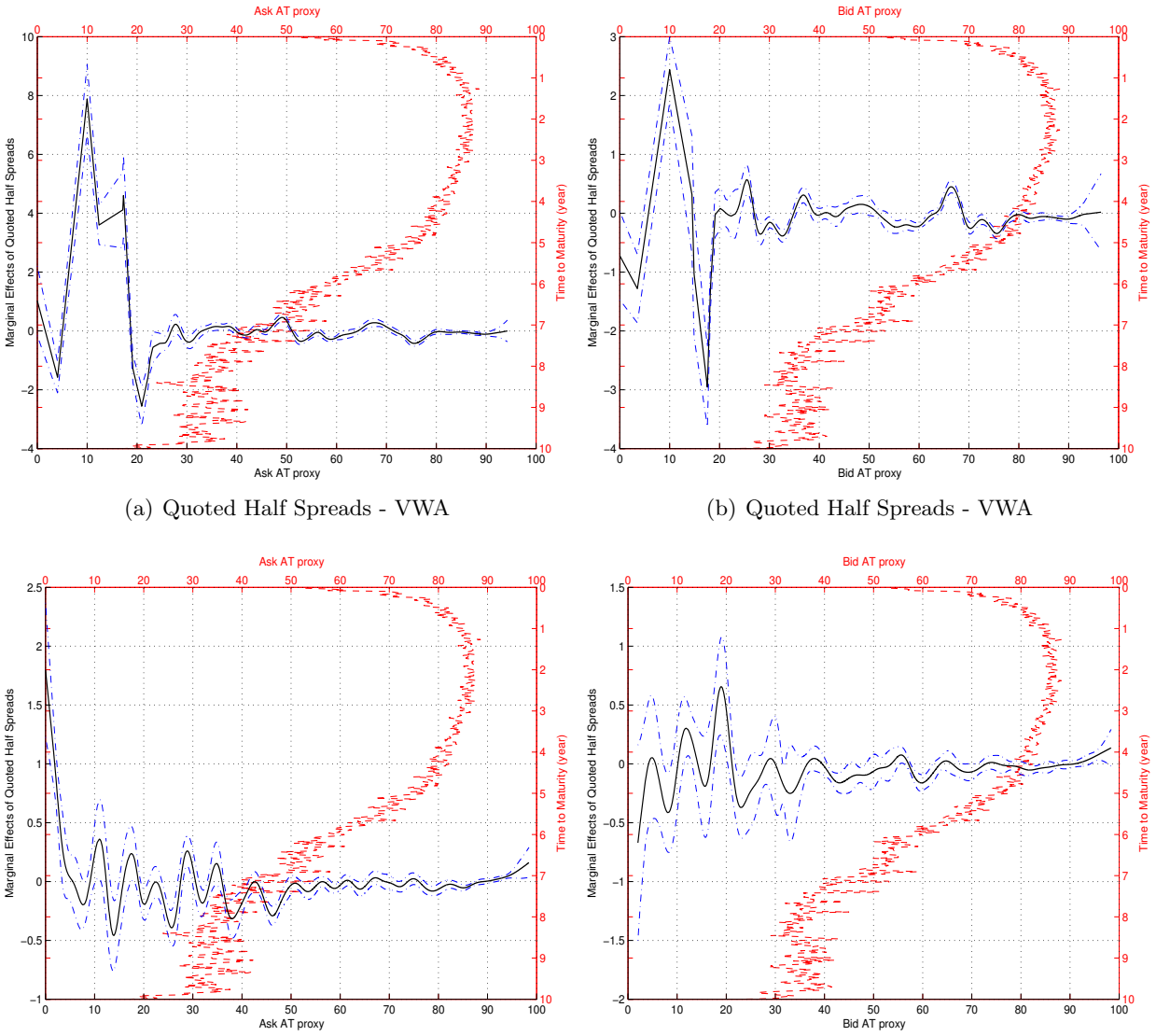
(e) Bid Ask Covariance Level 9 - Panel

(f) Bid Ask Covariance Level 9 - Panel

Figure B.71: Marginal Effects of Variance and Covariance at Timescale Level 9

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on variance ratio in Subplots (a) to (d) and, on covariance ratio in Subplots (e) and (f), both at timescale 9 with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of marginal effects.

Appendix B.2.2. Marginal Effects of AT Proxy Thresholded at 200ms



(a) Quoted Half Spreads - VWA

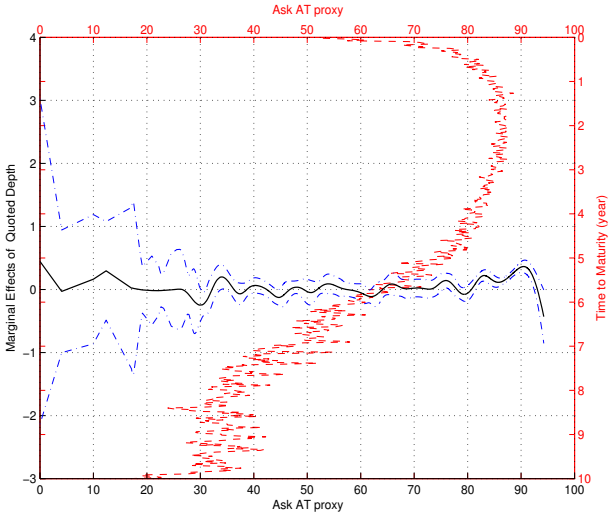
(b) Quoted Half Spreads - VWA

(c) Quoted Half Spreads - Panel

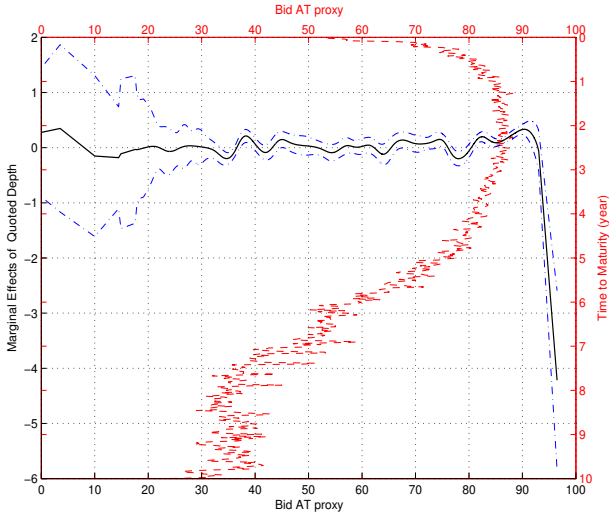
(d) Quoted Half Spreads - Panel

Figure B.72: Marginal Effects of Quoted Half Spreads

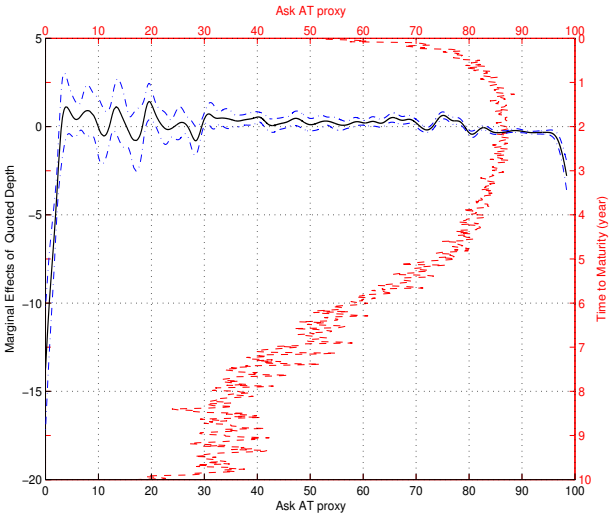
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted half spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted half spreads marginal effects.



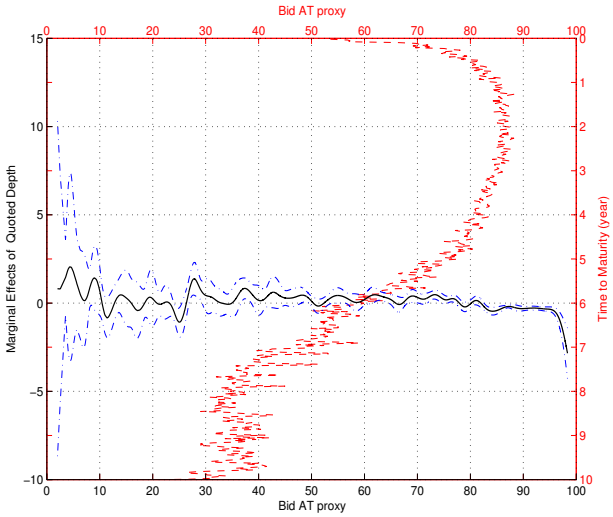
(a) Quoted Depth - VWA



(b) Quoted Depth - VWA



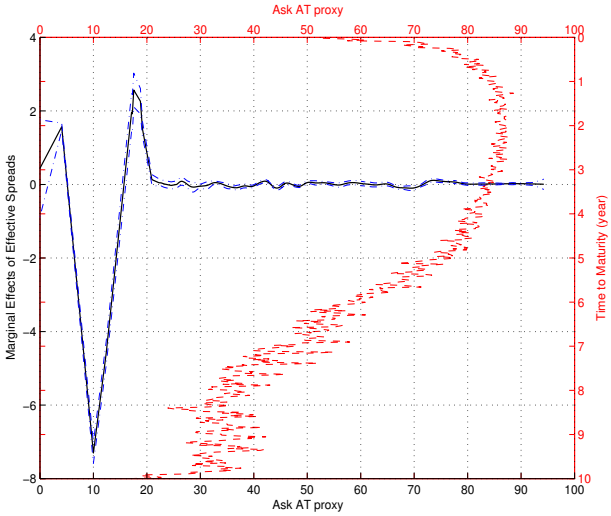
(c) Quoted Depth - Panel



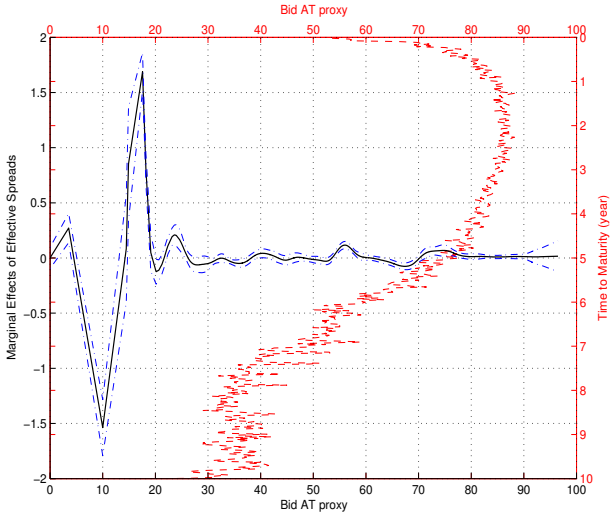
(d) Quoted Depth - Panel

Figure B.73: Marginal Effects of Quoted Depth

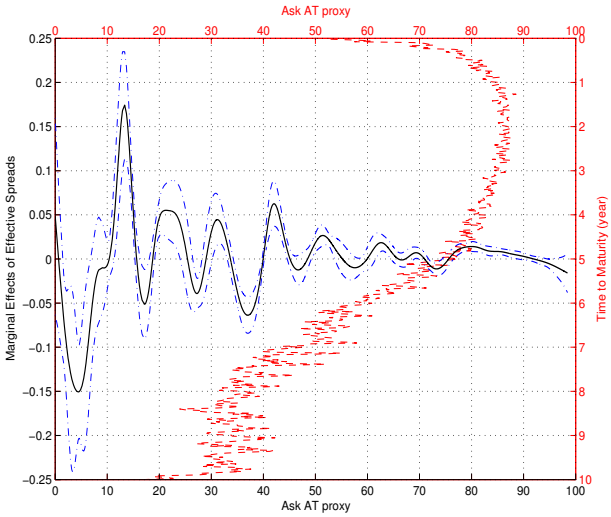
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted depth in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted depth marginal effects.



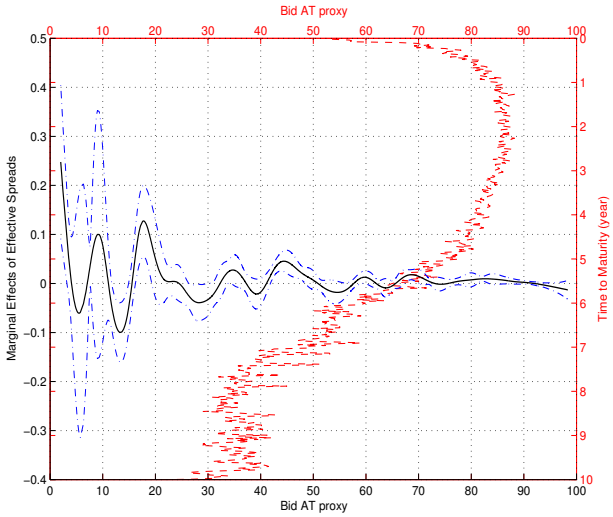
(a) Effective Spreads - VWA



(b) Effective Spreads - VWA



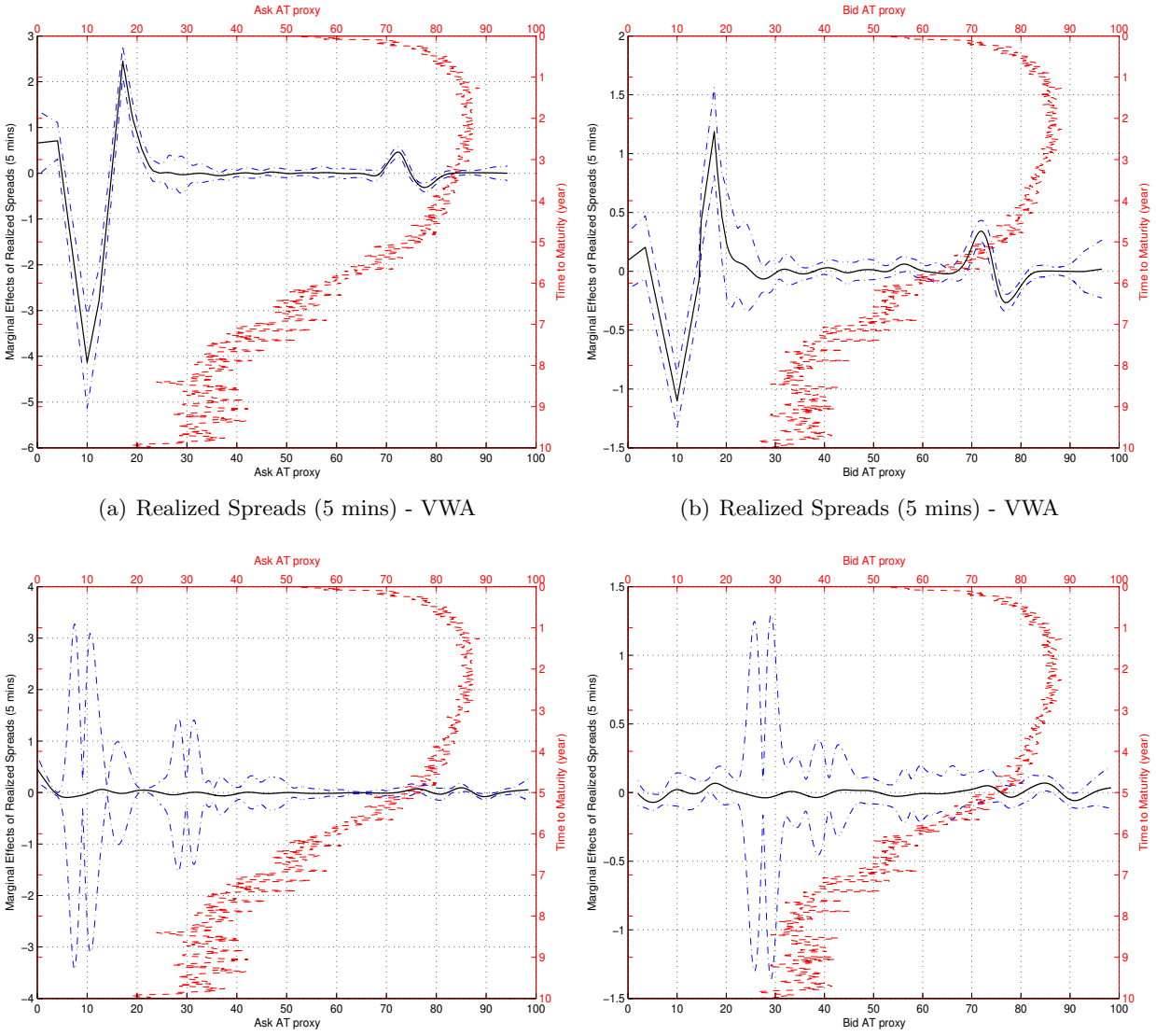
(c) Effective Spreads - Panel



(d) Effective Spreads - Panel

Figure B.74: Marginal Effects of Effective Spreads

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on effective spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of effective spreads marginal effects.



(a) Realized Spreads (5 mins) - VWA

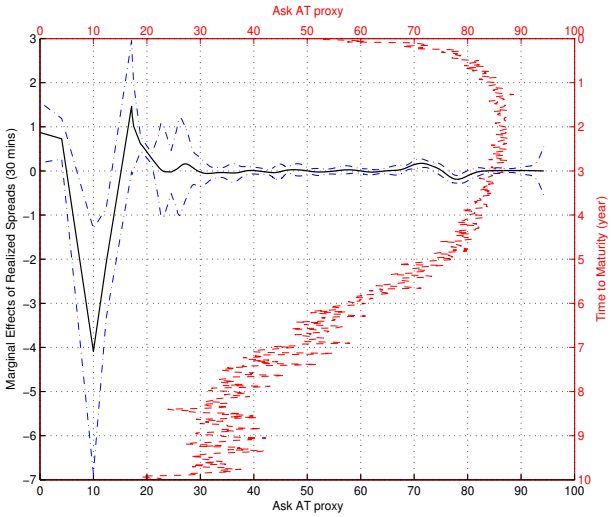
(b) Realized Spreads (5 mins) - VWA

(c) Realized Spreads (5 mins) - Panel

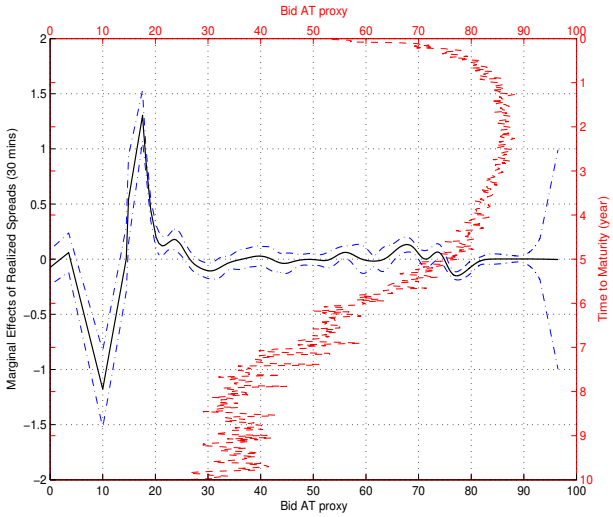
(d) Realized Spreads (5 mins) - Panel

Figure B.75: Marginal Effects of Realized Spreads (5 mins)

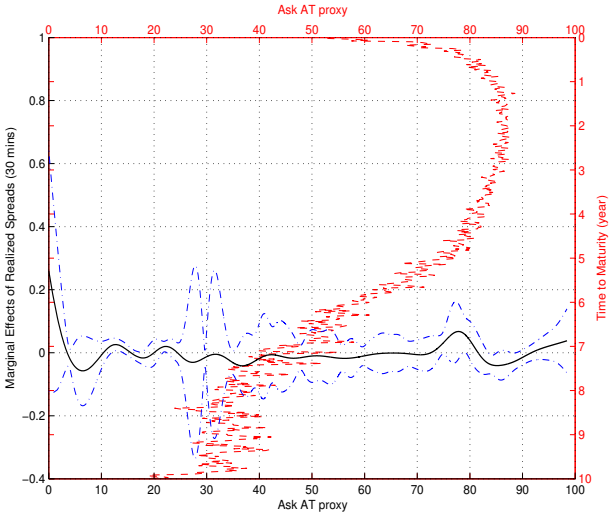
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (5 mins) marginal effects.



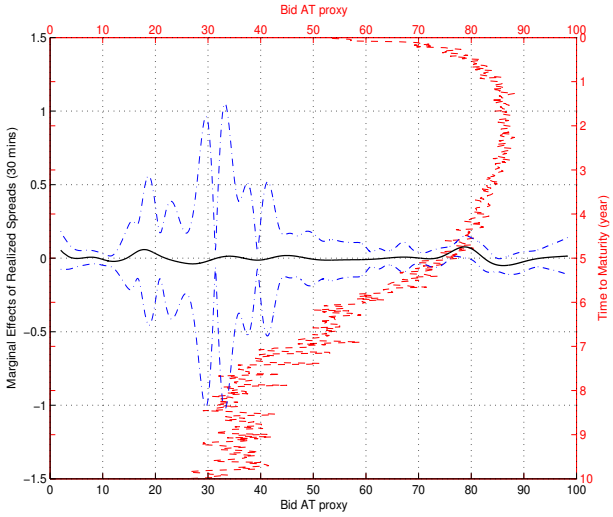
(a) Realized Spreads (30 mins) - VWA



(b) Realized Spreads (30 mins) - VWA



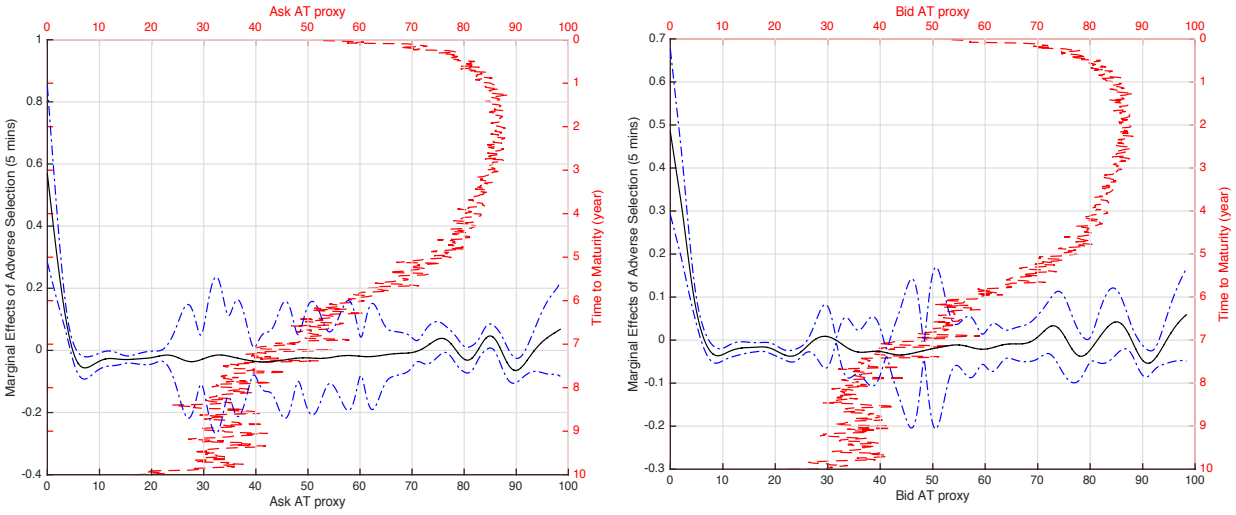
(c) Realized Spreads (30 mins) - Panel



(d) Realized Spreads (30 mins) - Panel

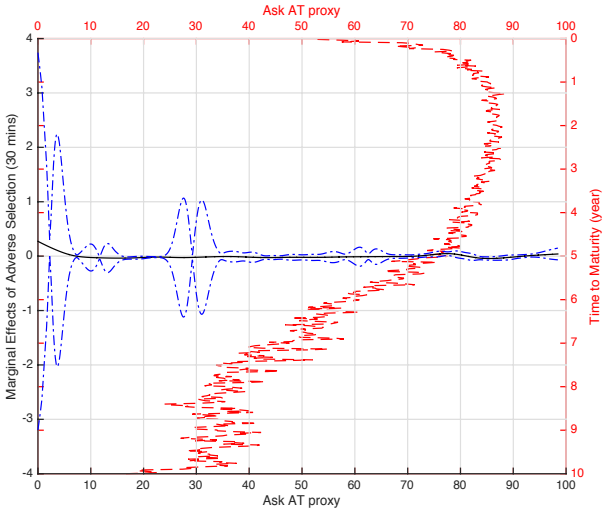
Figure B.76: Marginal Effects of Realized Spreads (30 mins)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (30 mins) marginal effects.

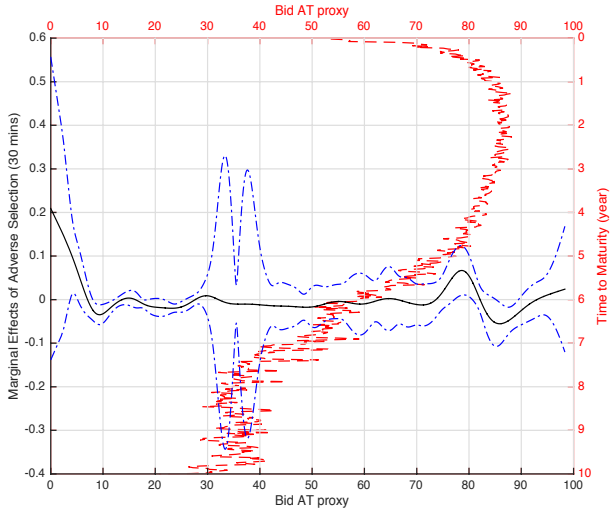


(a) Adverse Selection (5 mins) - Panel

(b) Adverse Selection (5 mins) - Panel



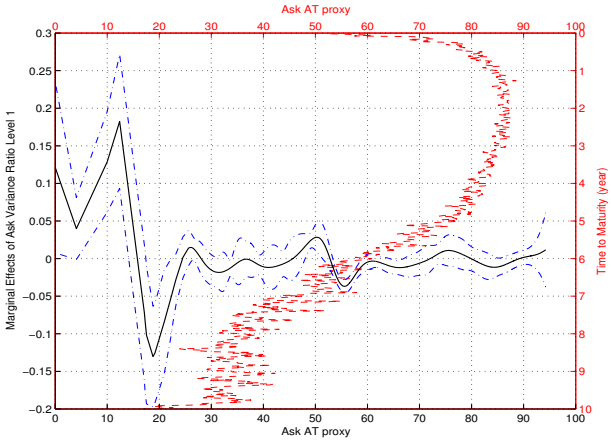
(c) Adverse Selection (30 mins) - Panel



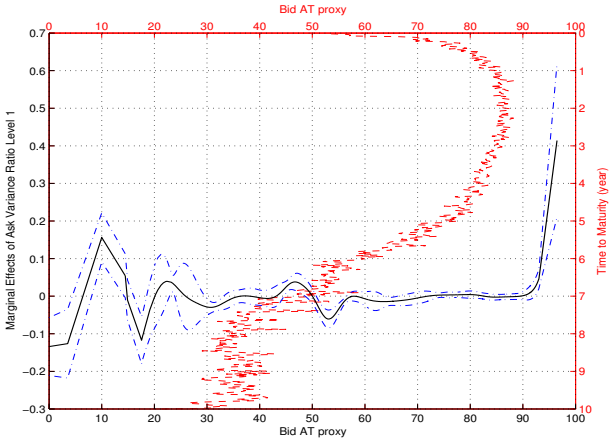
(d) Adverse Selection (30 mins) - Panel

Figure B.77: Marginal Effects of Adverse Selection (5 mins and 30 mins)

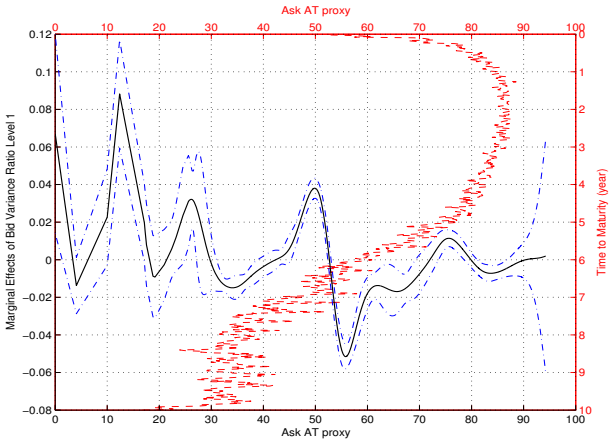
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (5 mins) in Subplots (a) to (b) and, on adverse selection (30 mins) in Subplots (c) and (d), both with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects.



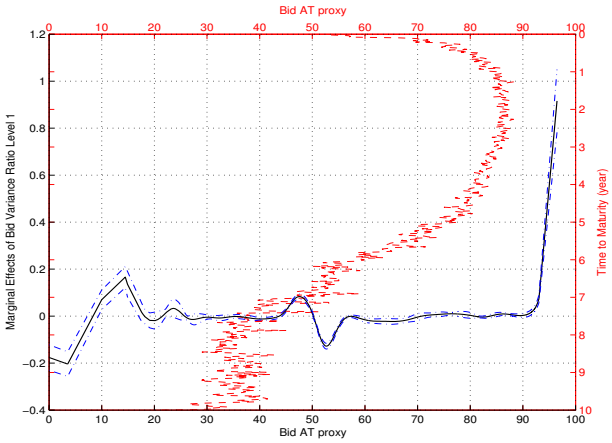
(a) Ask Variance Level 1 - VWA



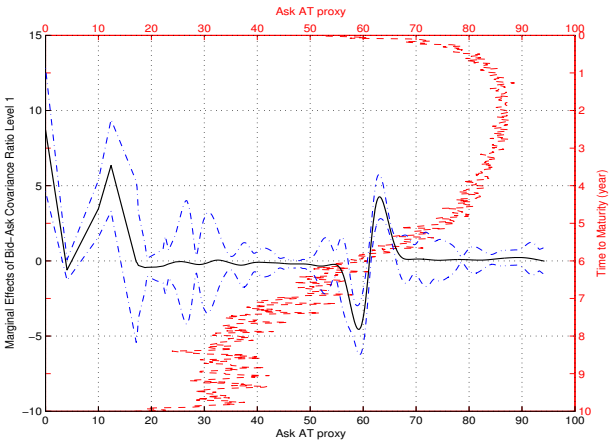
(b) Ask Variance Level 1 - VWA



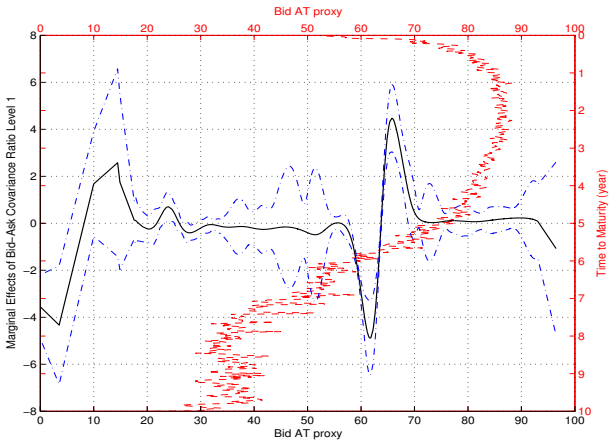
(c) Bid Variance Level 1 - VWA



(d) Bid Variance Level 1 - VWA



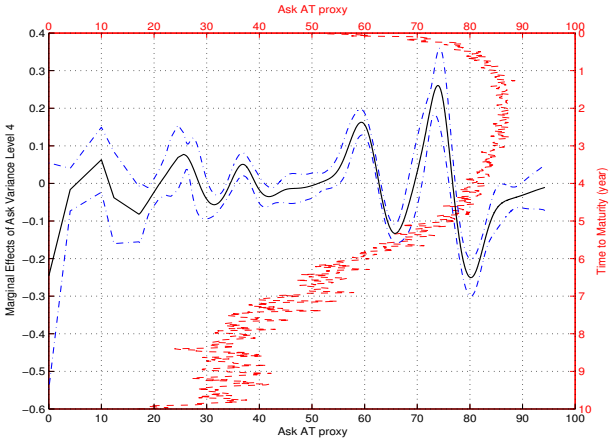
(e) Bid Ask Covariance Level 1 - VWA



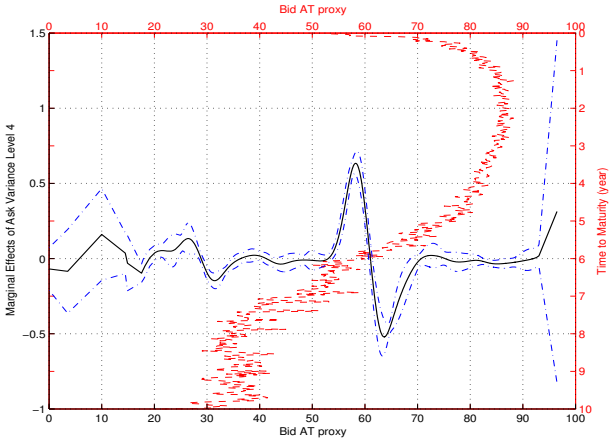
(f) Bid Ask Covariance Level 1 - VWA

Figure B.78: Marginal Effects of Variance and Covariance at Timescale Level 1

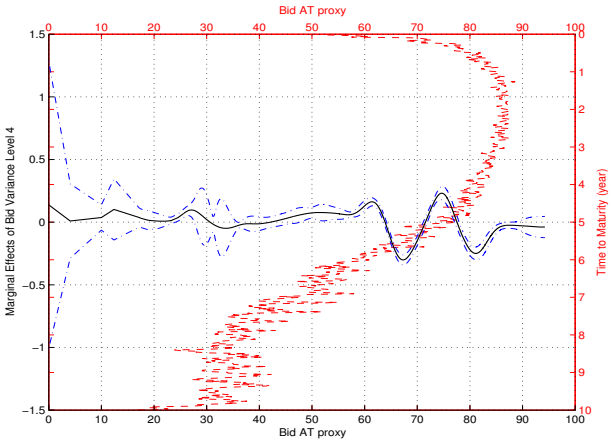
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on variance ratio in Subplots (a) to (d) and, on covariance ratio in Subplots (e) and (f), both at timescale 1 with the volume weighted average dataset. The blue dashed lines are the 95% lower and upper confidence bounds of marginal effects.



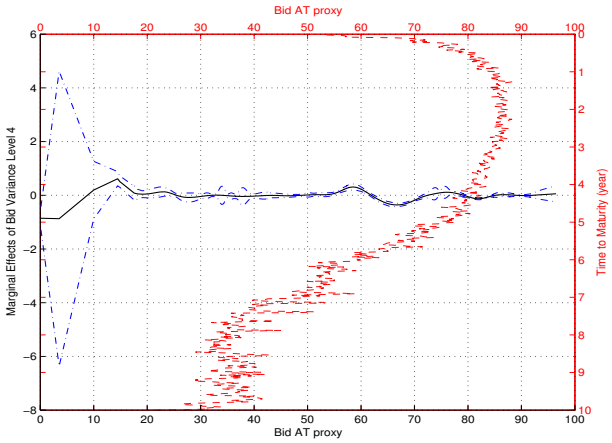
(a) Ask Variance Level 4 - VWA



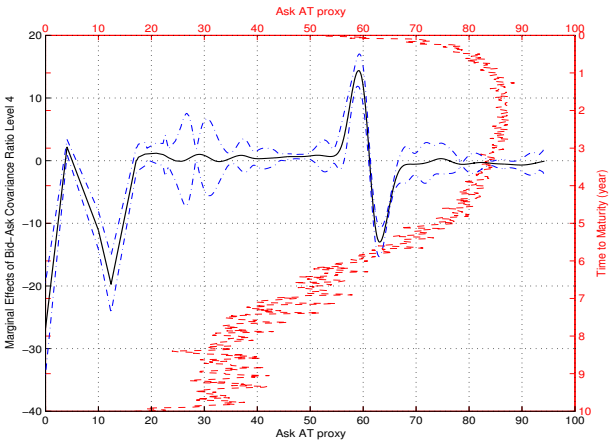
(b) Ask Variance Level 4 - VWA



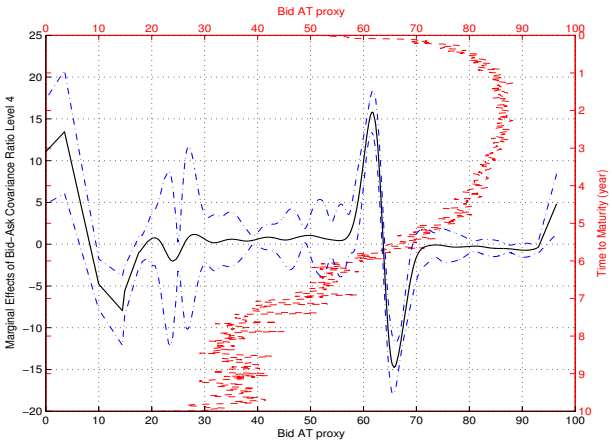
(c) Bid Variance Level 4 - VWA



(d) Bid Variance Level 4 - VWA



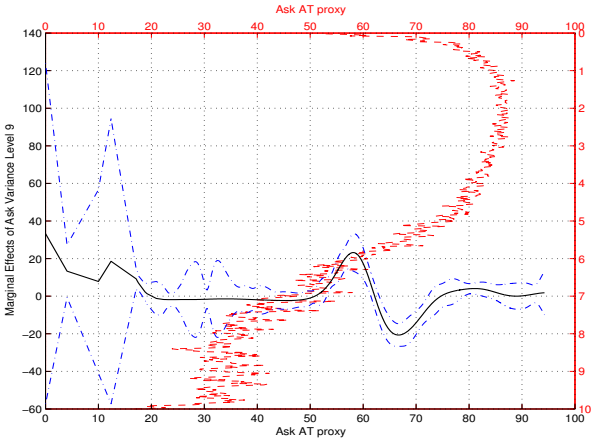
(e) Bid Ask Covariance Level 4 - VWA



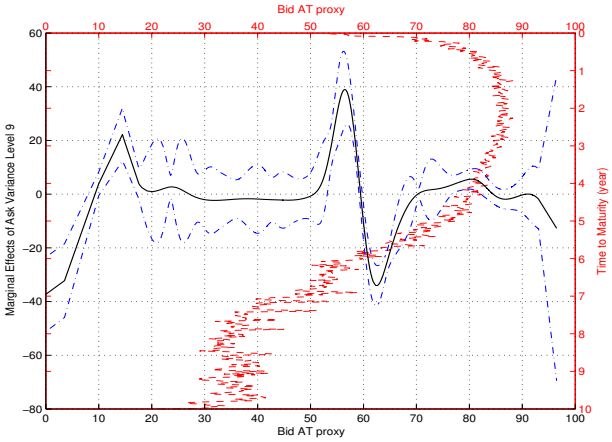
(f) Bid Ask Covariance Level 4 - VWA

Figure B.79: Marginal Effects of Variance and Covariance at Timescale Level 4

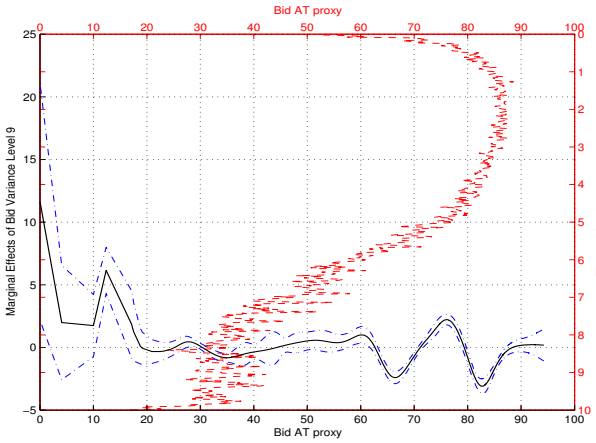
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on variance ratio in Subplots (a) to (d) and, on covariance ratio in Subplots (e) and (f), both at timescale 4 with the volume weighted average dataset. The blue dashed lines are the 95% lower and upper confidence bounds of marginal effects.



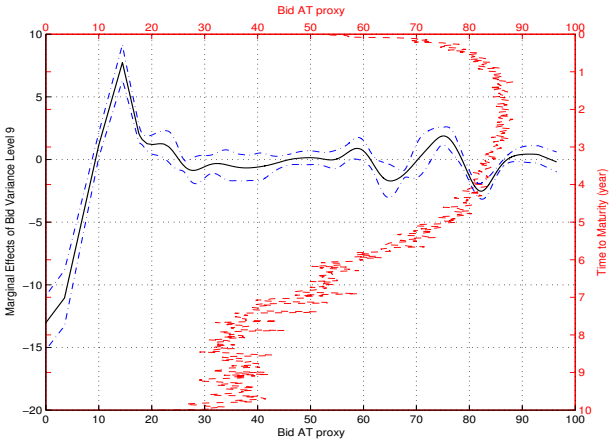
(a) Ask Variance Level 9 - VWA



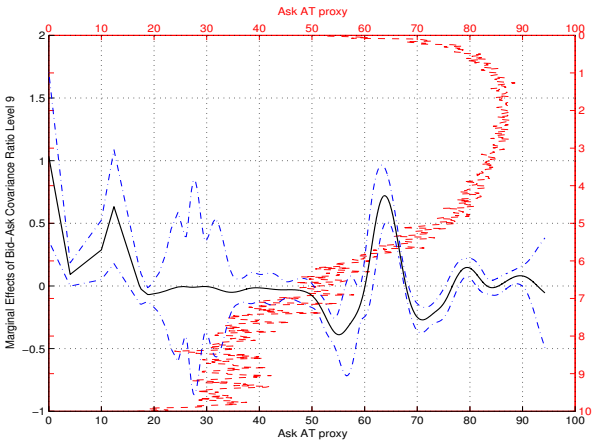
(b) Ask Variance Level 9 - VWA



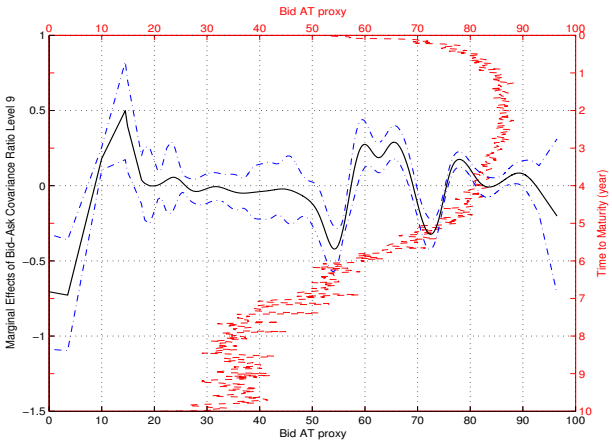
(c) Bid Variance Level 9 - VWA



(d) Bid Variance Level 9 - VWA



(e) Bid Ask Covariance Level 9 - VWA



(f) Bid Ask Covariance Level 9 - VWA

Figure B.80: Marginal Effects of Variance and Covariance at Timescale Level 9

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on variance ratio in Subplots (a) to (d) and, on covariance ratio in Subplots (e) and (f), both at timescale 9 with the volume weighted average dataset. The blue dashed lines are the 95% lower and upper confidence bounds of marginal effects.

Appendix B.3. Robust Check

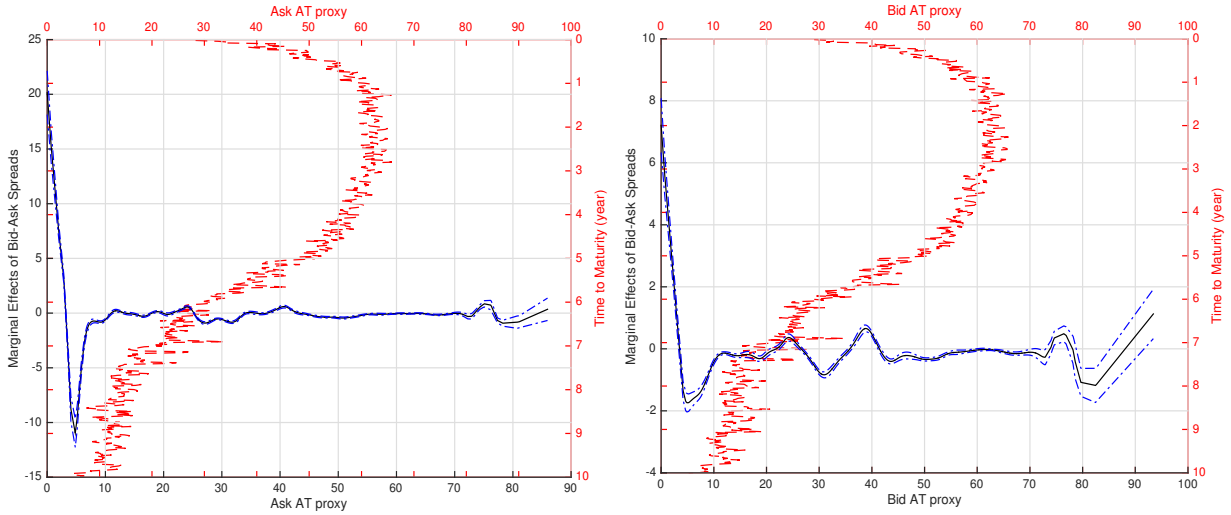
Appendix B.3.1. Robust Check: The Semi-parametric Regressions with IV Number of Traders (thresholded at 25ms)

Table B.107: Robust Check: The Semi-parametric Regressions with IV Number of Traders (thresholded at 25 ms)

		Liqudity Measures								Variance Ratios								
		$\tilde{\mathscr{S}}^{Q}$	$\tilde{\mathscr{S}}^{Q^{1/2}}$	$\tilde{\mathscr{S}}^{D}$	$\tilde{\mathscr{S}}^{E}$	$\tilde{\mathscr{S}}^{R,5}$	$\tilde{\mathscr{S}}^{R,30}$	$\tilde{\mathscr{S}}^{AS,5}$	$\tilde{\mathscr{S}}^{AS,30}$	$\tilde{\mathscr{R}}_{A1}$	$\tilde{\mathscr{R}}_{B1}$	$\tilde{\mathscr{R}}_{AB1}$	$\tilde{\mathscr{R}}_{A4}$	$\tilde{\mathscr{R}}_{B4}$	$\tilde{\mathscr{R}}_{AB4}$	$\tilde{\mathscr{R}}_{A9}$	$\tilde{\mathscr{R}}_{B9}$	$\tilde{\mathscr{R}}_{AB9}$
Volume weighted average																		
	$L(Y_{i,t})$	0.341	0.341	0.429	0.088	0.07	0.578	0.131	0.624	-0.012	-0.003	-0.009	-0.004	0.008	-0.015	-0.002	-0.002	0.002
		(18.94)**	(18.94)**	(32.70)**	(4.98)**	(3.43)**	(34.12)**	(6.40)**	(38.39)**	-0.62	-0.14	-0.45	-0.19	-0.36	-0.75	-0.1	-0.09	-0.08
Ask	$W_{i,t}$	0.066	0.033	-0.598	-0.007	0.007	0.006	-0.013	-0.008	-0.001	-0.016	-4.087	-0.001	-0.019	-0.796	-0.003	-0.021	0.035
AT Proxy		(7.35)**	(7.35)**	(41.24)**	(4.76)**	-1.14	-1.07	(2.21)*	-1.58	-1.03	-1.28	(2.58)**	-0.84	-1.74	(5.43)**	-0.04	-0.1	-1.41
	R^2	0.17	0.17	0.94	0.02	0.01	0.33	0.02	0.39	0	0	0	0	0	0.01	0	0	0
	N	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339
	$L(Y_{i,t})$	0.352	0.352	0.432	0.093	0.072	0.579	0.131	0.625	-0.009	-0.003	-0.007	-0.003	0.008	-0.012	-0.006	-0.006	0.002
		(18.47)**	(18.47)**	(32.78)**	(4.57)**	(3.50)**	(34.20)**	(6.42)**	(38.48)**	-0.47	-0.15	-0.35	-0.16	-0.39	-0.6	-0.3	-0.31	-0.09
Bid	$W_{i,t}$	0.068	0.034	-0.59	-0.007	0.008	0.004	-0.015	-0.006	-0.002	-0.038	-4.177	-0.002	-0.027	-0.691	-0.055	0.129	0.028
AT Proxy		(7.26)**	(7.26)**	(40.79)**	(4.29)**	-1.32	-0.76	(2.43)*	-1.21	-1.53	(3.17)**	(2.69)**	-1.18	(2.54)*	(4.80)**	-0.8	-0.58	-1.16
	R^2	0.17	0.17	0.94	0.02	0.01	0.33	0.02	0.39	0	0	0	0	0	0.01	0	0	0
	N	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338
Panel																		
	$L(Y_{i,t})$	0.747	0.747	0.893	0.605	0.074	0.59	0.131	0.613	0.008	0.049	0.001	0.005	0.129	0.003	0	0	0.006
		(211.59)**	(211.59)**	(378.97)**	(143.16)**	(13.96)**	(137.73)**	(24.92)**	(146.18)**	-1.56	(9.21)**	-0.22	-0.96	(24.43)**	-0.61	-0.04	-0.03	-1.06
Ask	$W_{i,t}$	1.161	0.581	-2.872	-0.118	0.133	0.146	-0.384	-0.254	0.009	-0.256	-64.016	0.019	-0.022	-14.454	-1.096	2.668	0.717
AT Proxy		(10.88)**	(10.88)**	(20.76)**	(10.64)**	-0.96	-1.17	(2.71)**	(2.01)*	-0.49	(4.07)**	-1.9	-0.76	-0.4	(3.87)**	-1.13	-0.86	-1.1
	R^2	0.57	0.57	0.84	0.37	0.01	0.35	0.02	0.38	0	0	0	0	0.02	0	0	0	0
	N	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491
	$L(Y_{i,t})$	0.747	0.747	0.893	0.605	0.074	0.59	0.131	0.613	0.008	0.048	0.001	0.005	0.129	0.003	0	0	0.006
		(211.42)**	(211.42)**	(377.55)**	(143.05)**	(14.01)**	(137.73)**	(24.97)**	(146.16)**	-1.56	(9.11)**	-0.17	-0.96	(24.44)**	-0.6	-0.01	0	-1.06
Bid	$W_{i,t}$	1.292	0.646	-3.289	-0.132	0.138	0.132	-0.42	-0.252	-0.005	-0.365	-86.854	0.007	-0.086	-14.733	-1.237	2.902	0.761
AT Proxy		(10.81)**	(10.81)**	(21.18)**	(10.68)**	-0.89	-0.94	(2.65)**	-1.79	-0.25	(5.19)**	(2.30)*	-0.27	-1.35	(3.52)**	-1.14	-0.83	-1.04
	R^2	0.57	0.57	0.84	0.37	0.01	0.35	0.02	0.38	0	0	0	0	0.02	0	0	0	0
	N	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491

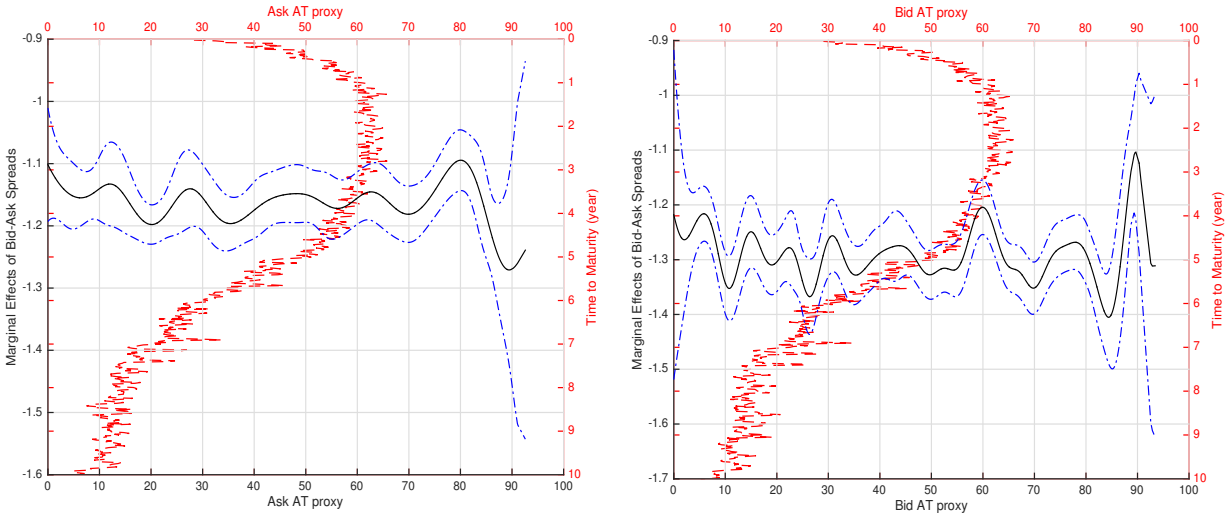
* p<0.05; ** p<0.01

Notes: This table illustrates coefficients estimate results from the semi-parametric regression: $Y_{i,t} = X_{i,t}\beta + \mathscr{G}(Z_{i,t}) + \varepsilon_{i,t}$, where $Y_{i,t}$ is our measure of execution risk/market quality for the i contract type for day t, $X_{i,t}$ are our $k = 2$ linear regressors, $Z_{i,t}$ is our $p = 1$ algorithmic trading proxy thresholded at 25 milliseconds, and $W_{i,t}$ is a set of instrumental variables, where $\mathbb{E}[\varepsilon_{i,t}|W_{i,t}] = 0$. Flattening the data set to an index $i \in \{1, \ldots, N\}$, where N is the total number of day-contracts and the index i represents the set of N tuples of (i, t) contract-days. In this table, the dependent variables measuring the execution risk $Y_{i,t}$ are reported into two groups: liquidity measures and variance/covariance ratios. Liquidity measurements contain the bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads 5 minutes ($\tilde{\mathscr{S}}^{R,5}$), realized spreads 30 minutes ($\tilde{\mathscr{S}}^{R,30}$), adverse selection 5 minutes ($\tilde{\mathscr{S}}^{AS,5}$) and adverse selection 30 minutes ($\tilde{\mathscr{S}}^{AS,30}$). Variance/covariance ratios include ask variance ratios ($\tilde{\mathscr{R}}_{A}$), bid variance ratios ($\tilde{\mathscr{R}}_{B}$) and bid-ask covariance ratios ($\tilde{\mathscr{R}}_{AB}$) at level 1, level 4 and level 9. The lagged one dependent variable is denoted as $L(Y_{i,t})$. Instrumental variables are adopted to deal with the endogeneity problems, named as $W_{i,t}$. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid-Ask Spreads - VWA

(b) Bid-Ask Spreads - VWA

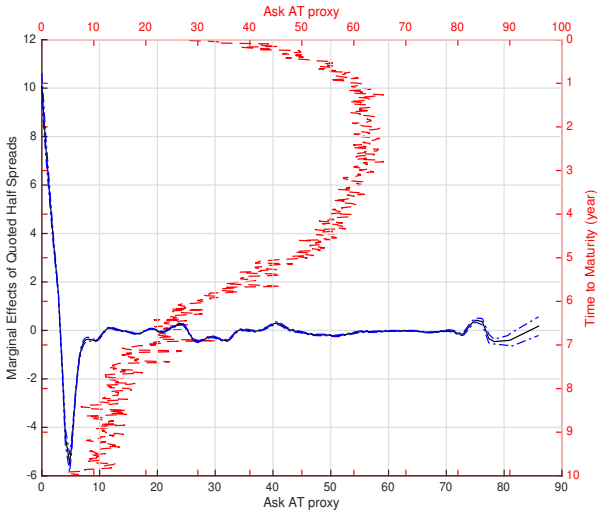


(c) Bid-Ask Spreads - Panel

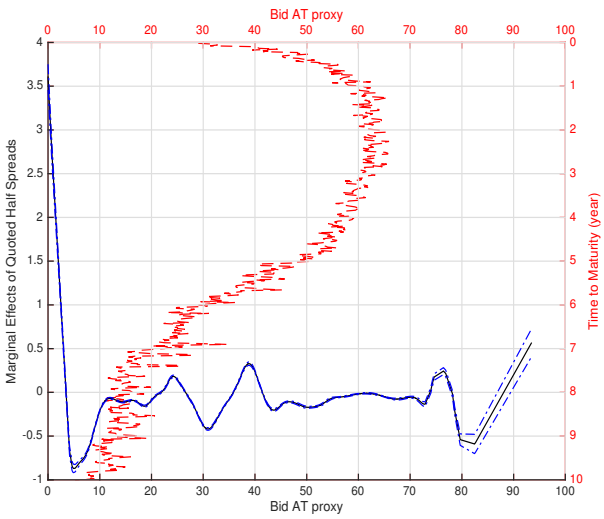
(d) Bid-Ask Spreads - Panel

Figure B.81: Marginal Effects of Bid-Ask Spreads with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

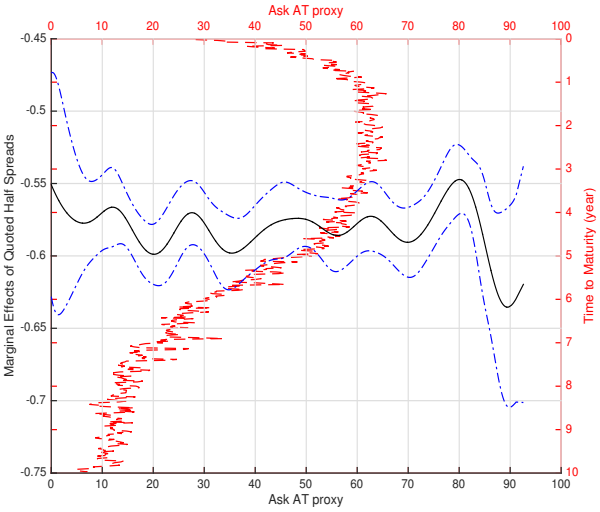
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of bid-ask spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



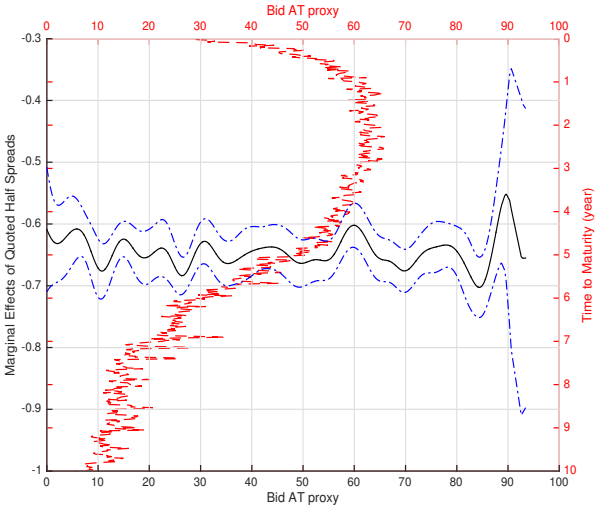
(a) Quoted Half Spreads - VWA



(b) Quoted Half Spreads - VWA



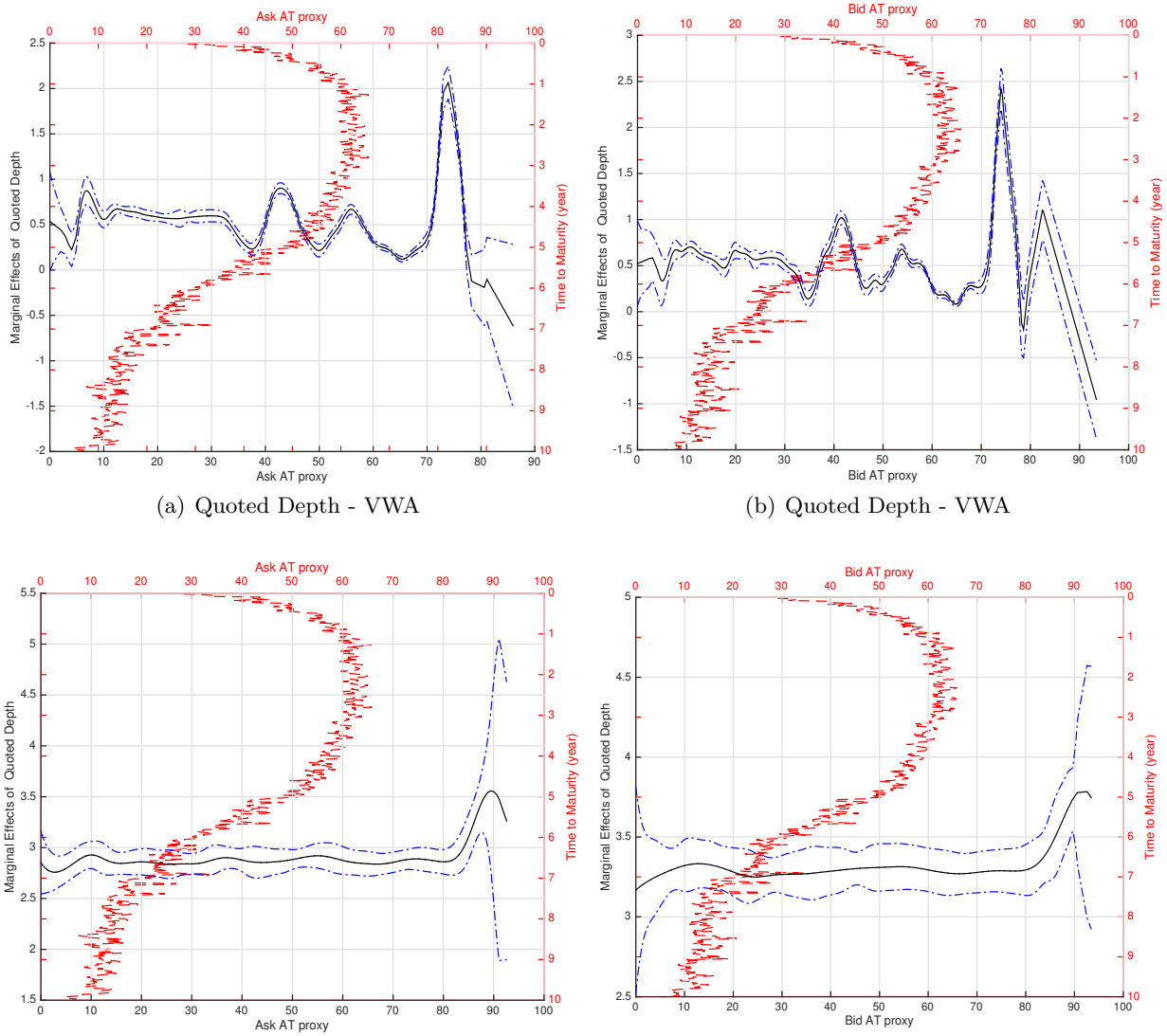
(c) Quoted Half Spreads - Panel



(d) Quoted Half Spreads - Panel

Figure B.82: Marginal Effects of Quoted Half Spreads with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted half spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted half spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Quoted Depth - VWA

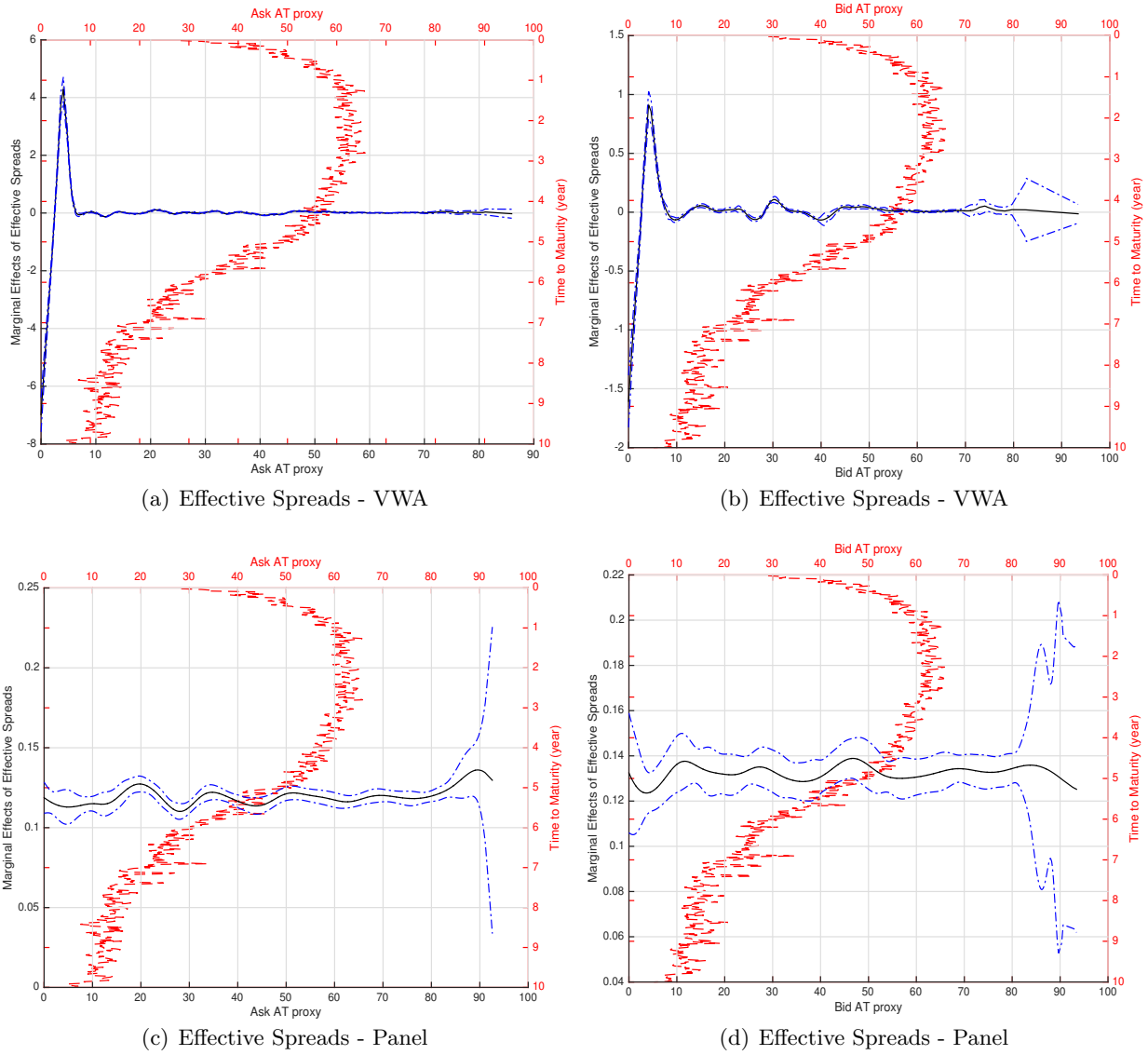
(b) Quoted Depth - VWA

(c) Quoted Depth - Panel

(d) Quoted Depth - Panel

Figure B.83: Marginal Effects of Quoted Depth with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted depth in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted depth marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Effective Spreads - VWA

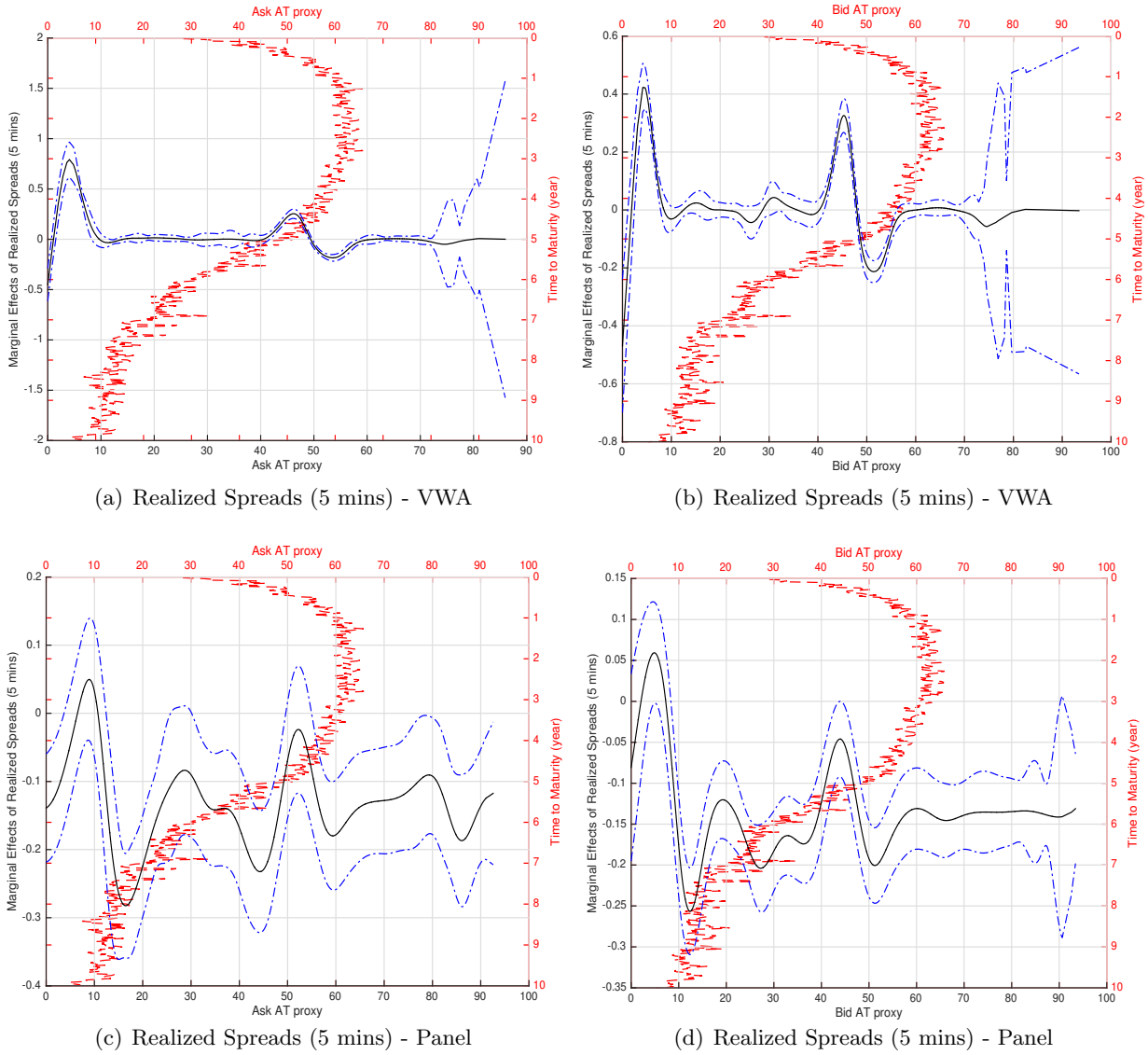
(b) Effective Spreads - VWA

(c) Effective Spreads - Panel

(d) Effective Spreads - Panel

Figure B.84: Marginal Effects of Effective Spreads with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on effective spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of effective spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Realized Spreads (5 mins) - VWA

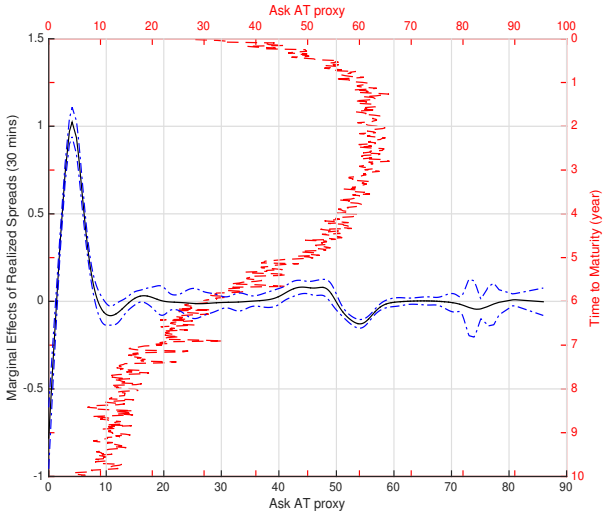
(b) Realized Spreads (5 mins) - VWA

(c) Realized Spreads (5 mins) - Panel

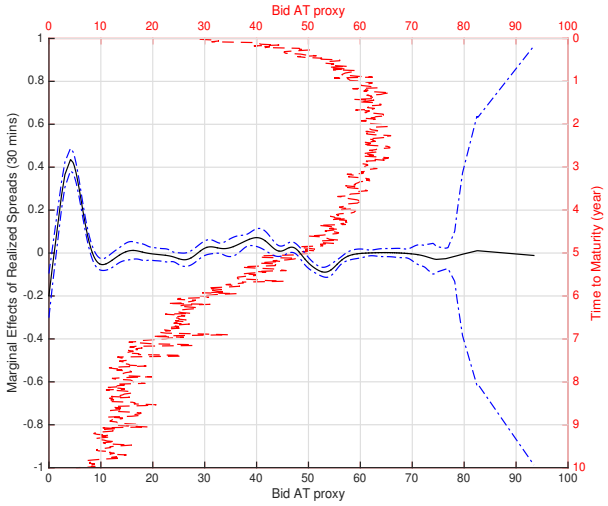
(d) Realized Spreads (5 mins) - Panel

Figure B.85: Marginal Effects of Realized Spreads (5 mins) with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

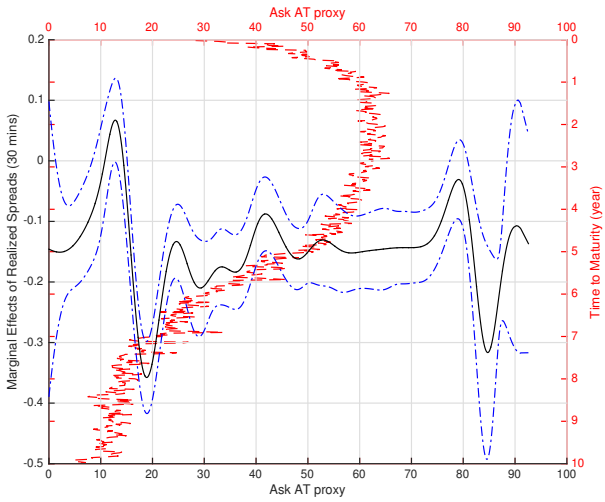
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (5 mins) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



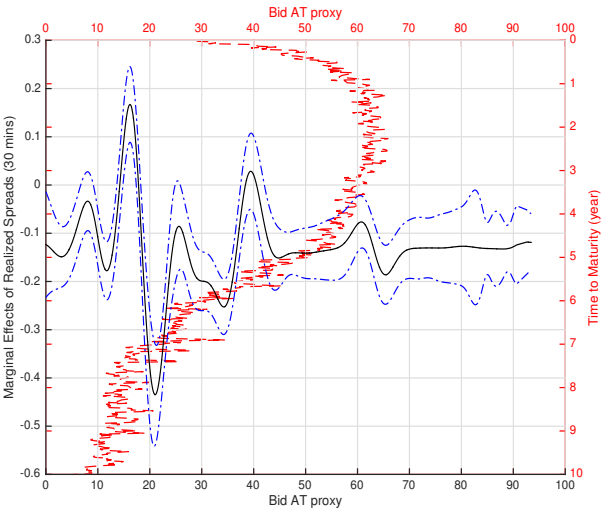
(a) Realized Spreads (30 mins) - VWA



(b) Realized Spreads (30 mins) - VWA



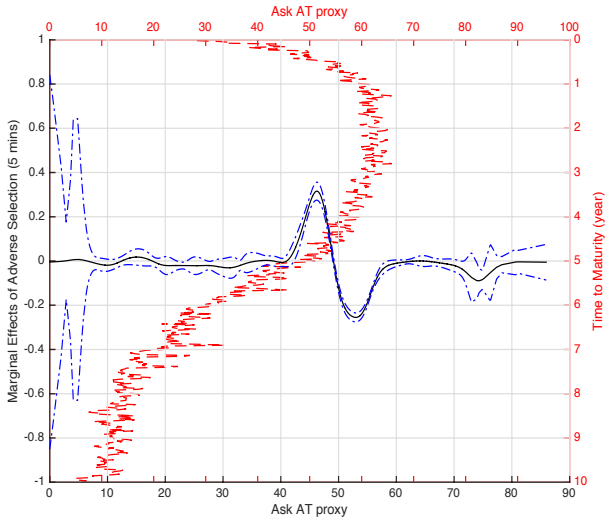
(c) Realized Spreads (30 mins) - Panel



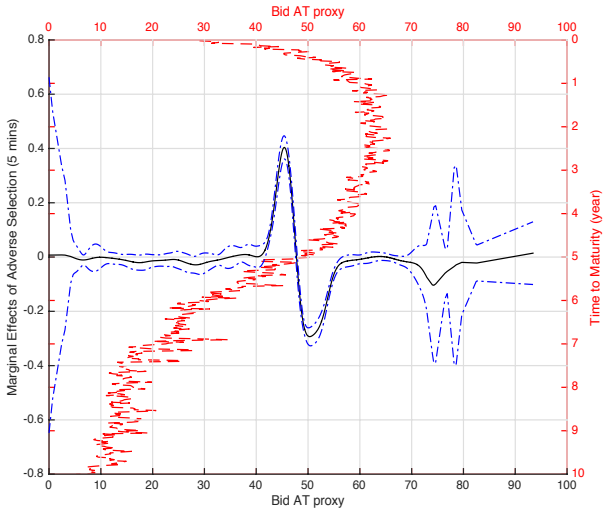
(d) Realized Spreads (30 mins) - Panel

Figure B.86: Marginal Effects of Realized Spreads (30 mins) with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

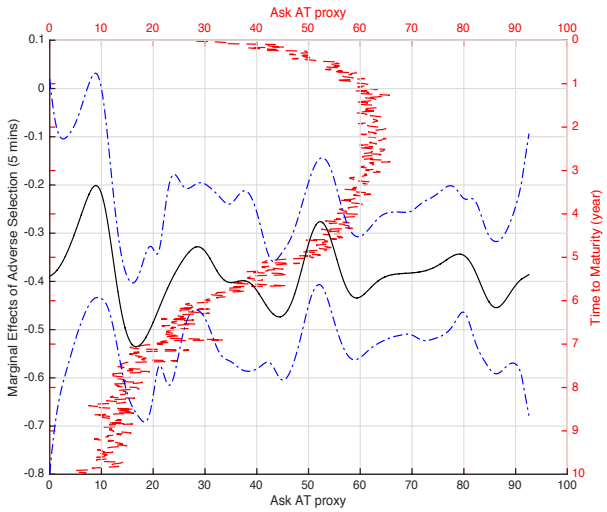
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (30 mins) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



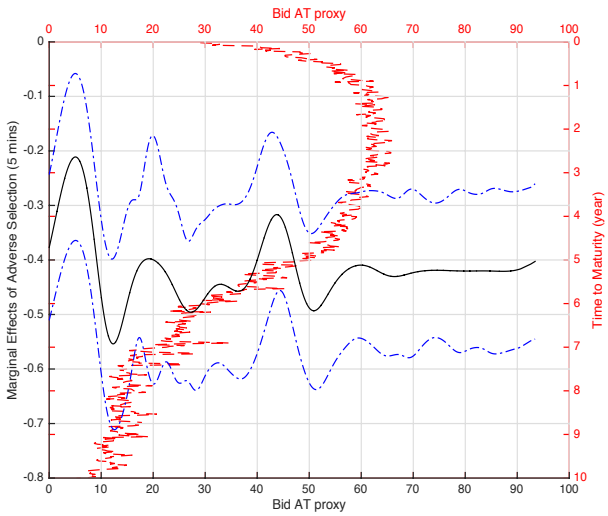
(a) Adverse Selection (5 mins) - VWA



(b) Adverse Selection (5 mins) - VWA



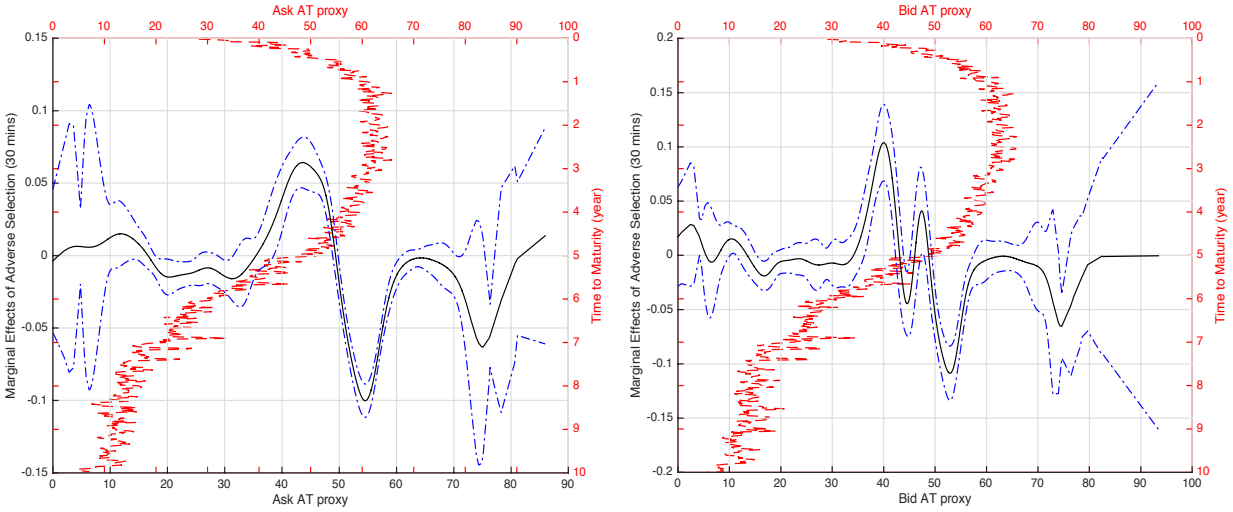
(c) Adverse Selection (5 mins) - Panel



(d) Adverse Selection (5 mins) - Panel

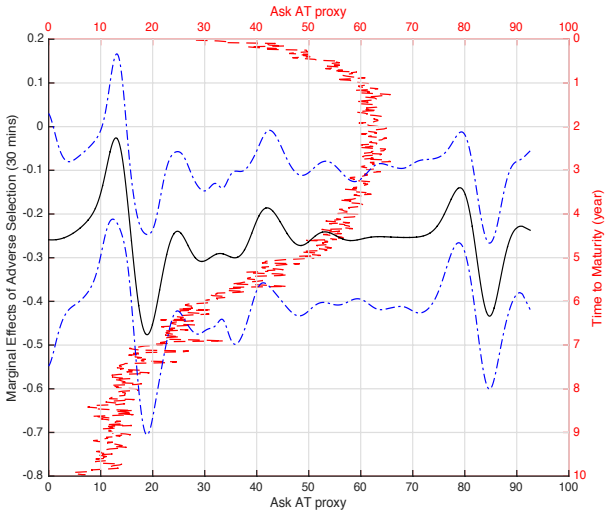
Figure B.87: Marginal Effects of Adverse Selection (5 mins) with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.

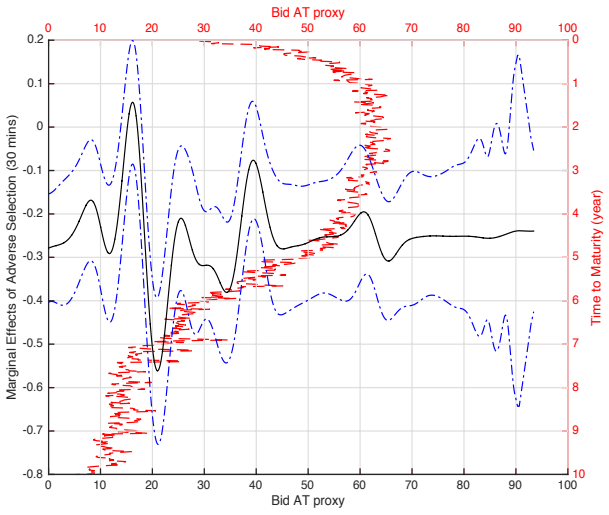


(a) Adverse Selection (30 mins) - VWA

(b) Adverse Selection (30 mins) - VWA



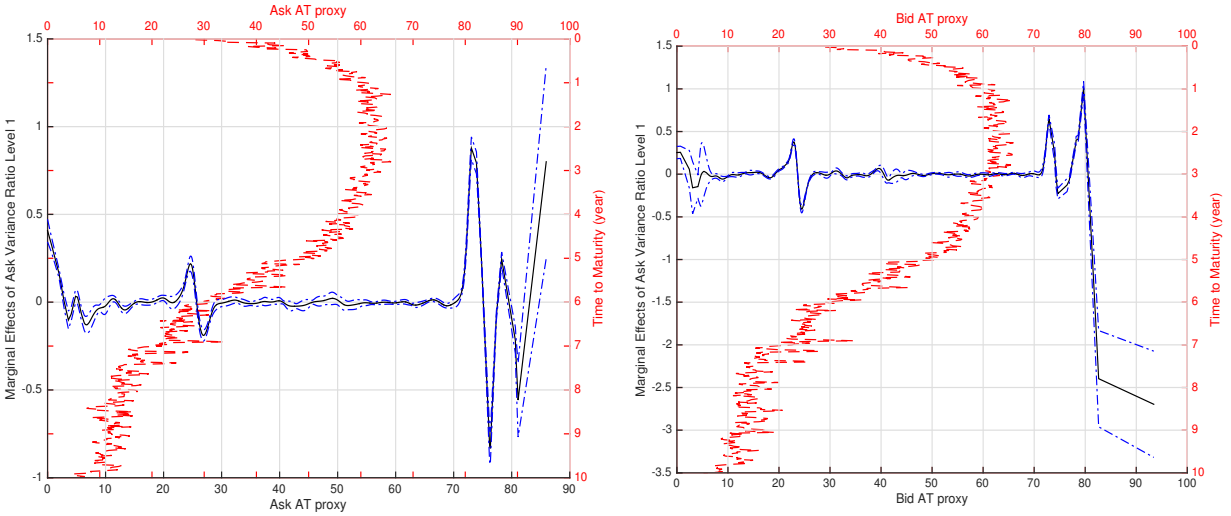
(c) Adverse Selection (30 mins) - Panel



(d) Adverse Selection (30 mins) - Panel

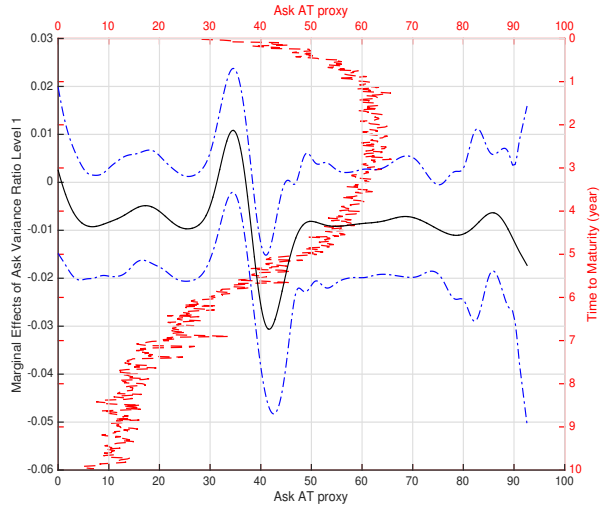
Figure B.88: Marginal Effects of Adverse Selection (30 mins) with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.

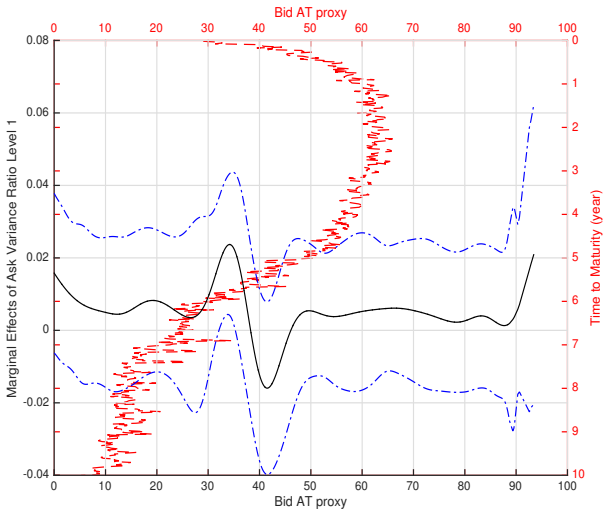


(a) Ask Variance Level 1 - VWA

(b) Ask Variance Level 1 - VWA



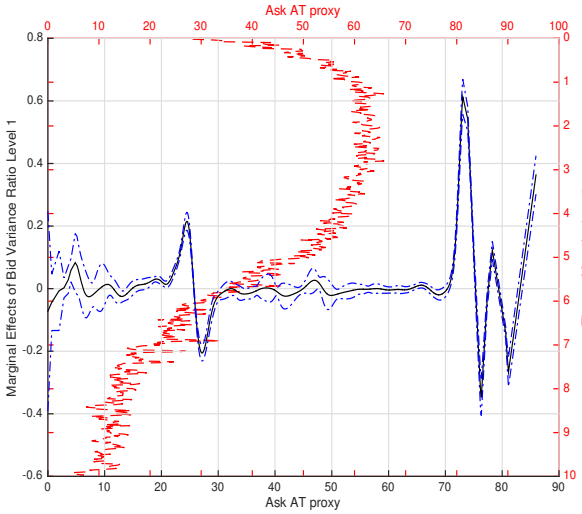
(c) Ask Variance Level 1 - Panel



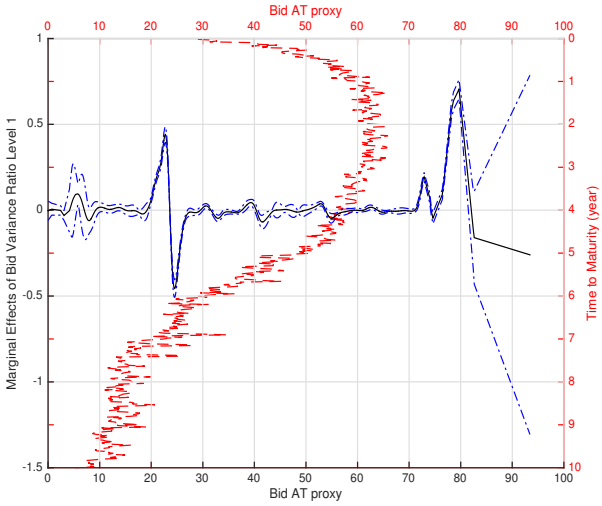
(d) Ask Variance Level 1 - Panel

Figure B.89: Marginal Effects of Ask Variance Level 1 with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

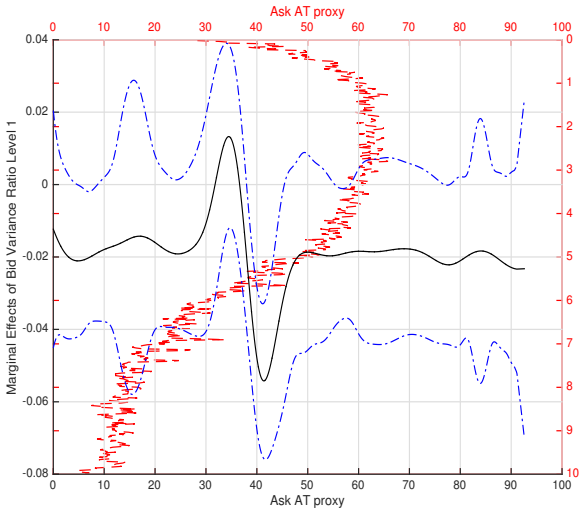
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



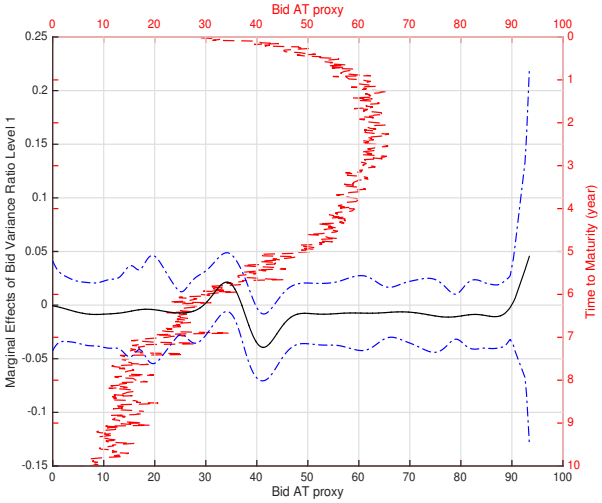
(a) Bid Variance Level 1 - VWA



(b) Bid Variance Level 1 - VWA



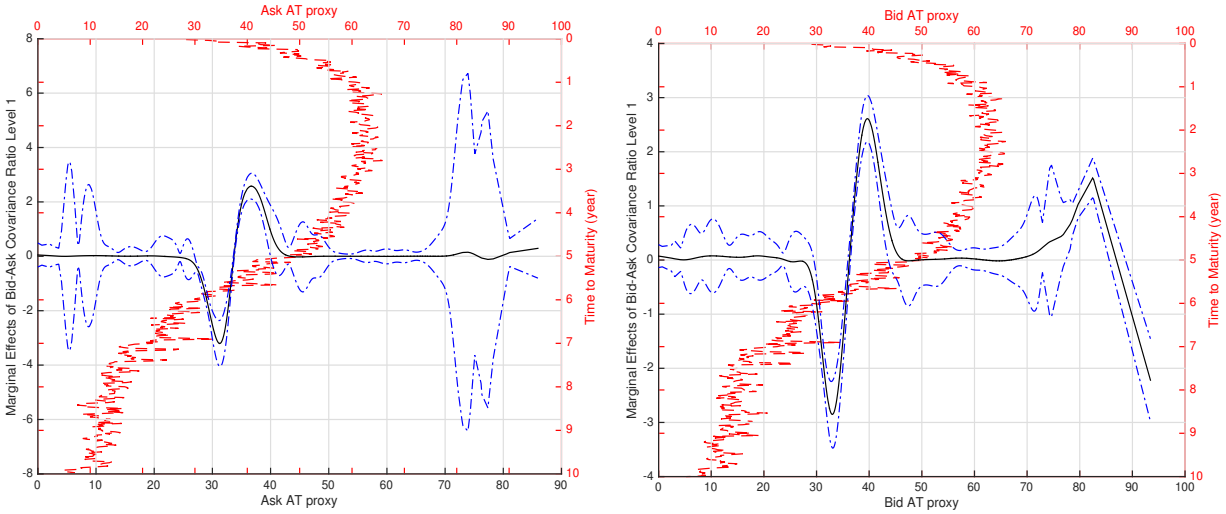
(c) Bid Variance Level 1 - Panel



(d) Bid Variance Level 1 - Panel

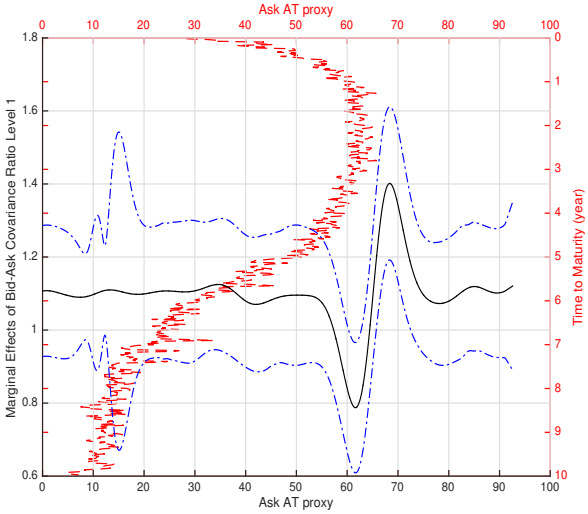
Figure B.90: Marginal Effects of Bid Variance Level 1 with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.

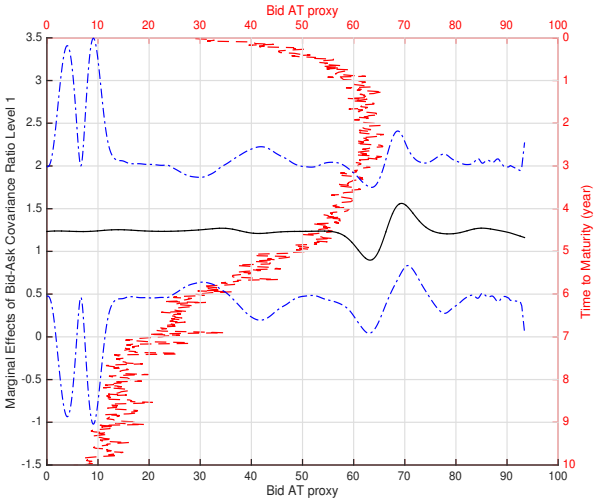


(a) Bid Ask Covariance Level 1 - VWA

(b) Bid Ask Covariance Level 1 - VWA



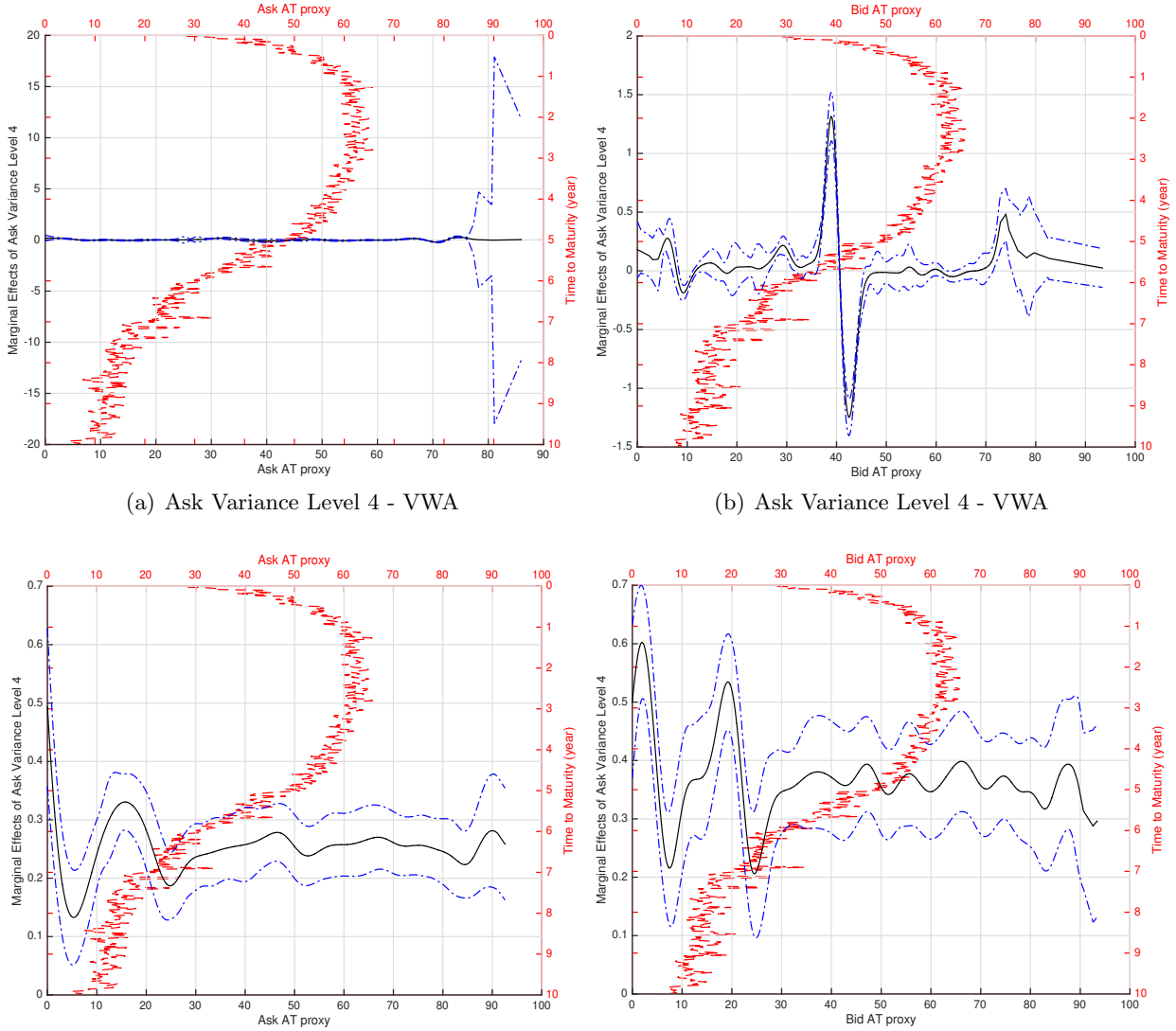
(c) Bid Ask Covariance Level 1 - Panel



(d) Bid Ask Covariance Level 1 - Panel

Figure B.91: Marginal Effects of Bid Ask Covariance Level 1 with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Ask Variance Level 4 - VWA

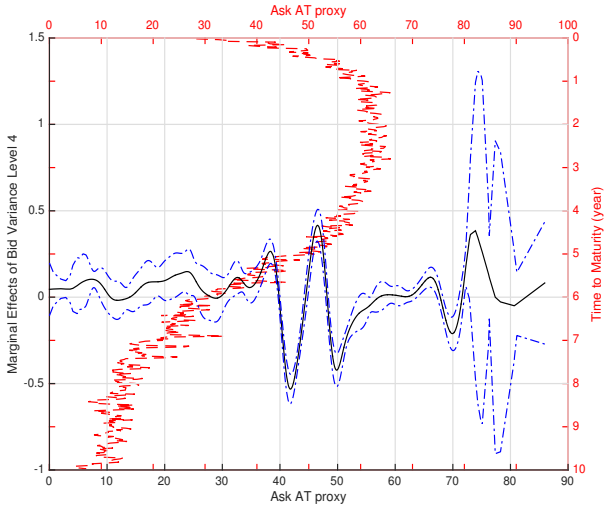
(b) Ask Variance Level 4 - VWA

(c) Ask Variance Level 4 - Panel

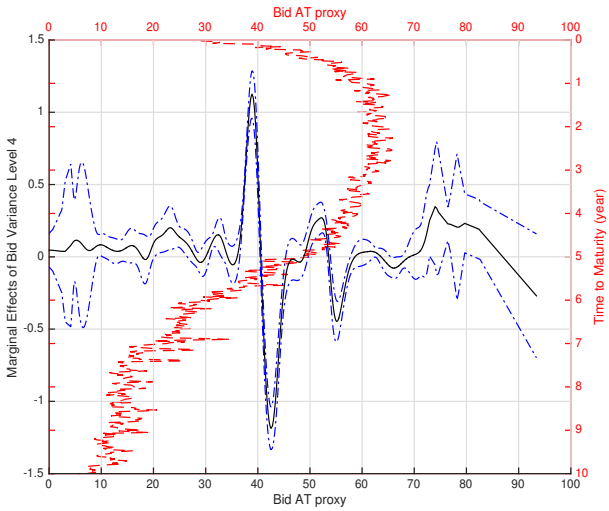
(d) Ask Variance Level 4 - Panel

Figure B.92: Marginal Effects of Ask Variance Level 4 with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

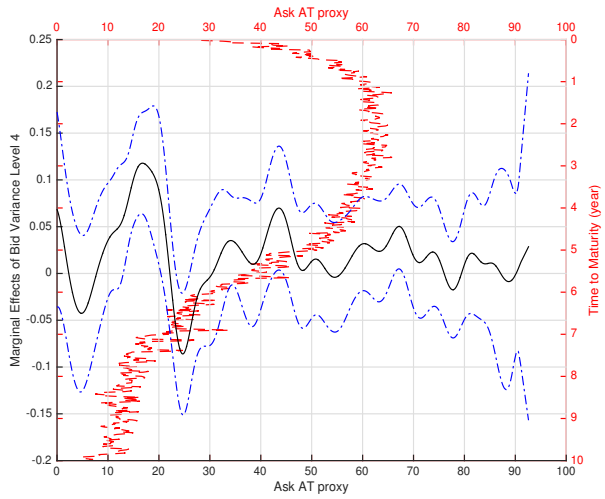
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



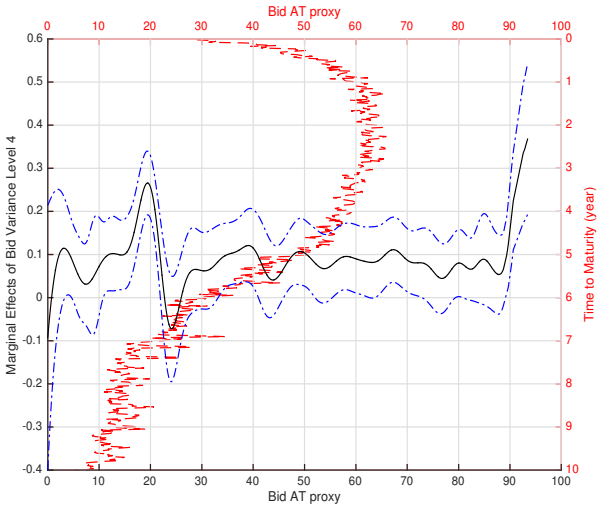
(a) Bid Variance Level 4 - VWA



(b) Bid Variance Level 4 - VWA



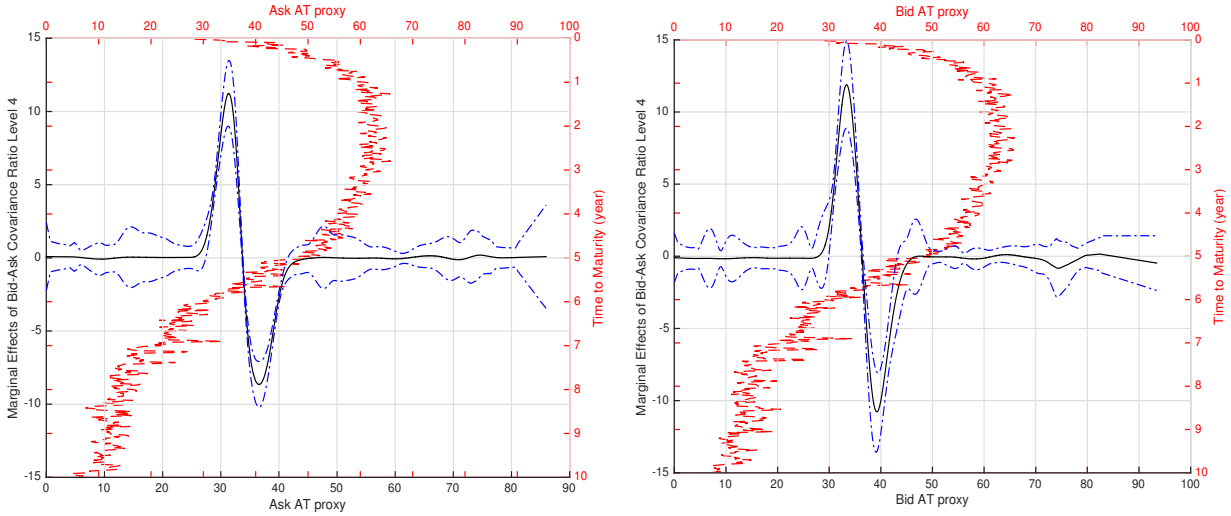
(c) Bid Variance Level 4 - Panel



(d) Bid Variance Level 4 - Panel

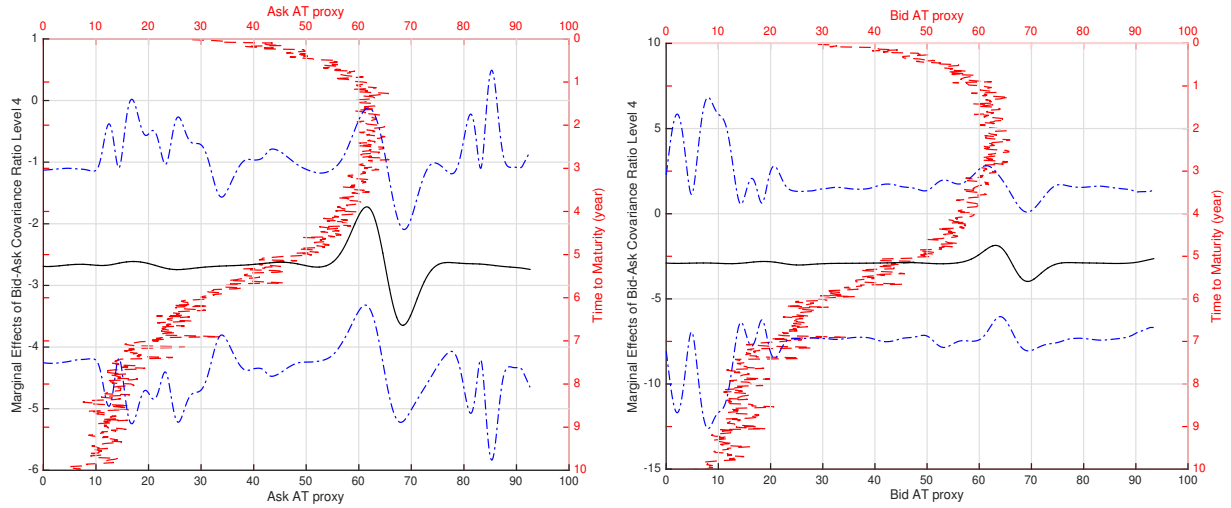
Figure B.93: Marginal Effects of Bid Variance Level 4 with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid Ask Covariance Level 4 - VWA

(b) Bid Ask Covariance Level 4 - VWA

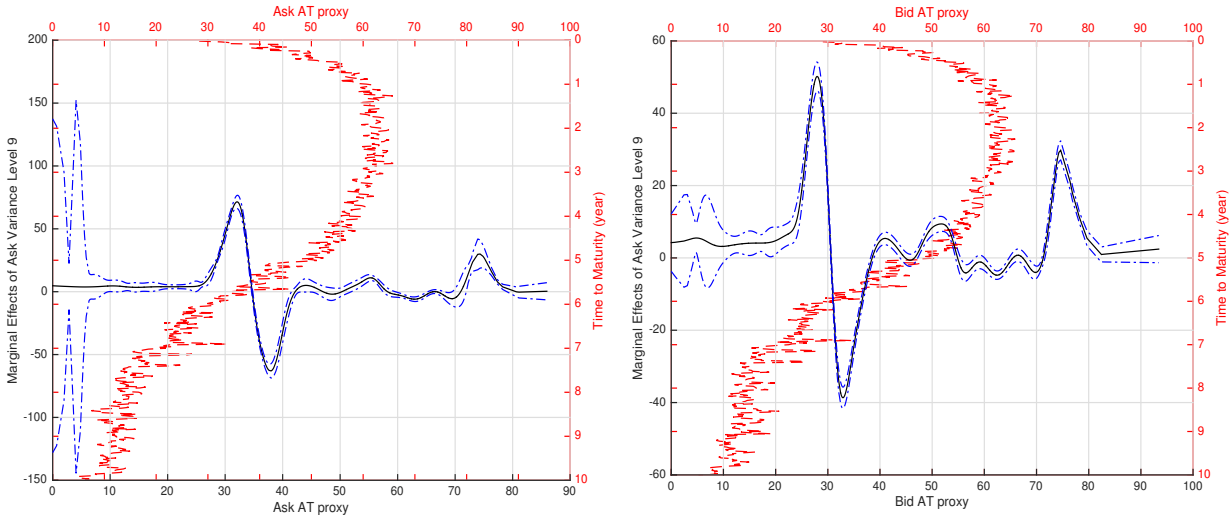


(c) Bid Ask Covariance Level 4 - Panel

(d) Bid Ask Covariance Level 4 - Panel

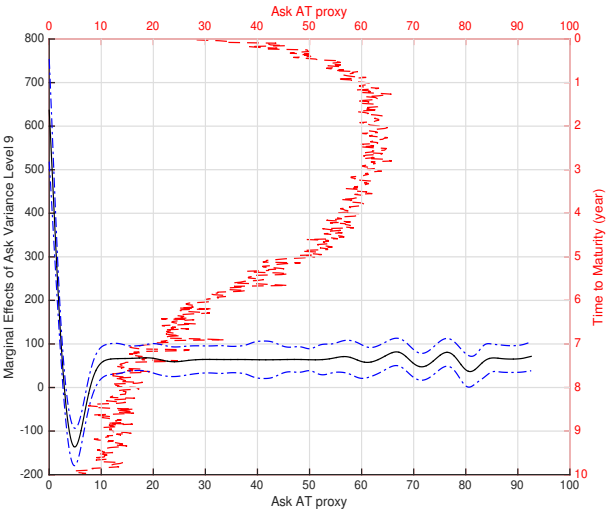
Figure B.94: Marginal Effects of Bid Ask Covariance Level 4 with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.

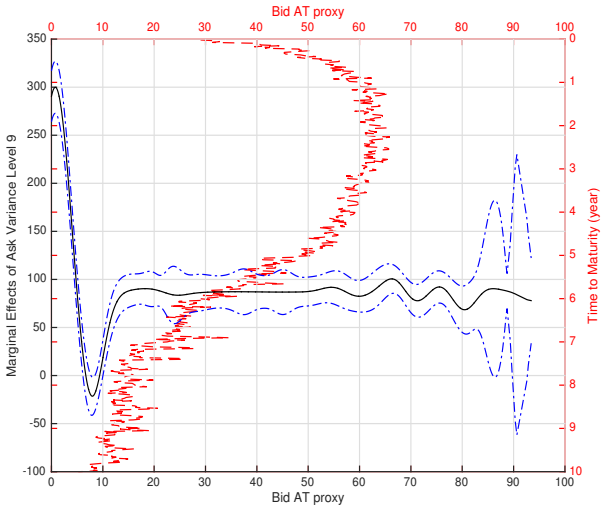


(a) Ask Variance Level 9 - VWA

(b) Ask Variance Level 9 - VWA



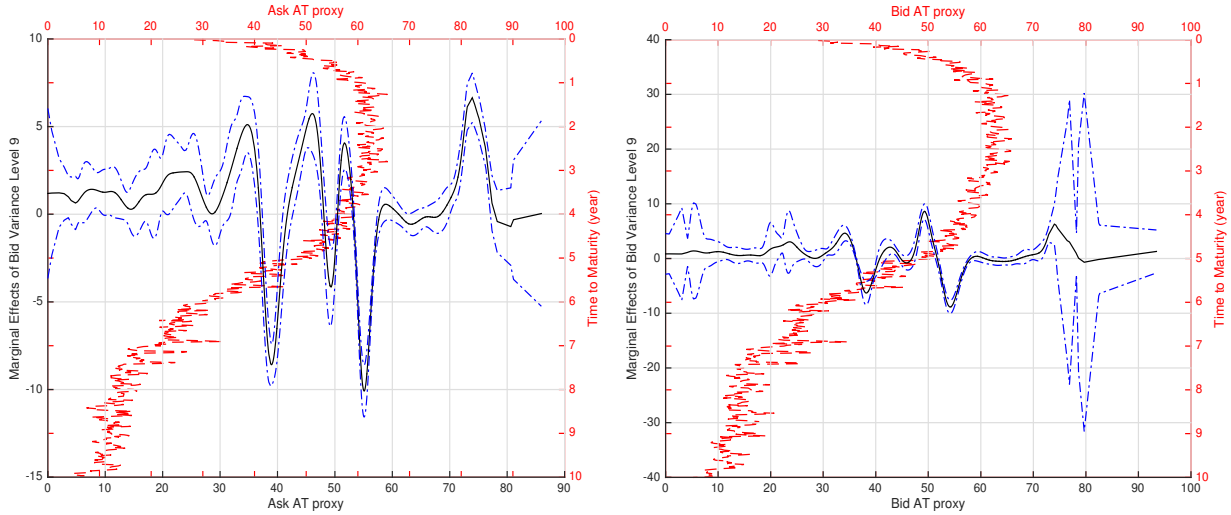
(c) Ask Variance Level 9 - Panel



(d) Ask Variance Level 9 - Panel

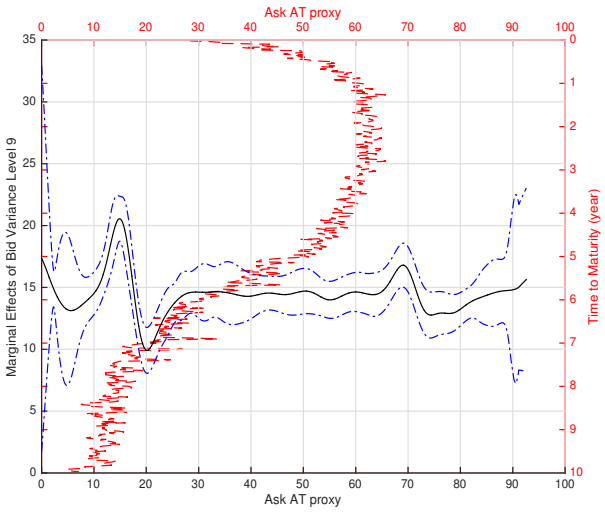
Figure B.95: Marginal Effects of Ask Variance Level 9 with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.

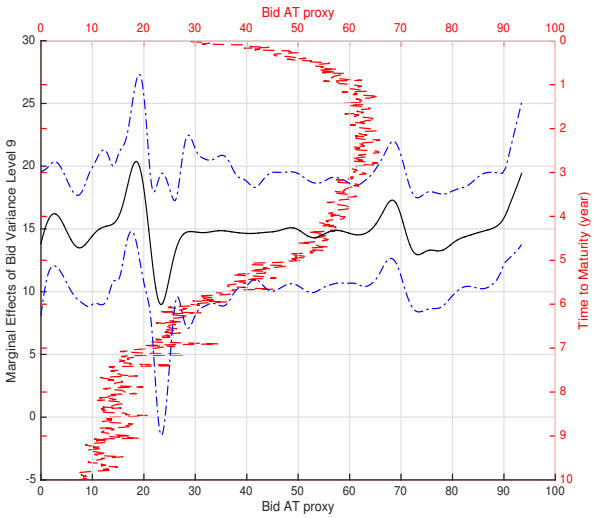


(a) Bid Variance Level 9 - VWA

(b) Bid Variance Level 9 - VWA



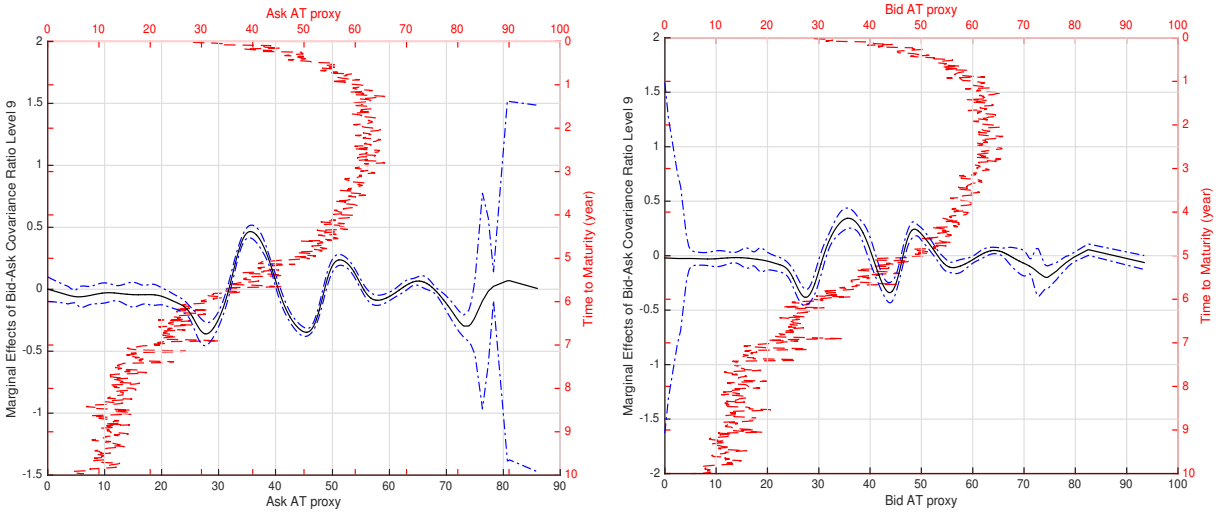
(c) Bid Variance Level 9 - Panel



(d) Bid Variance Level 9 - Panel

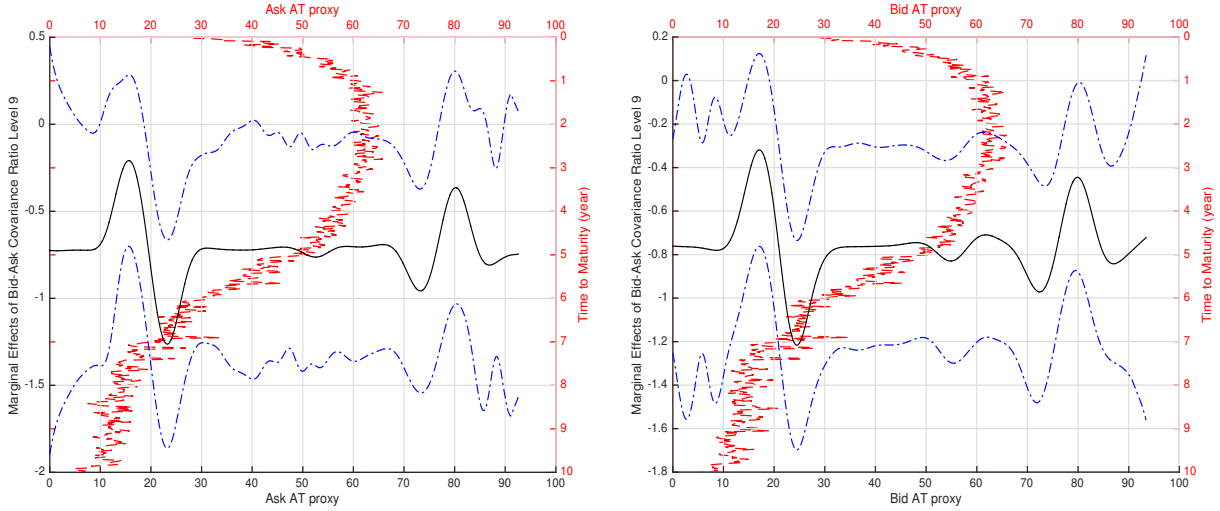
Figure B.96: Marginal Effects of Bid Variance Level 9 with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid Ask Covariance Level 9 - VWA

(b) Bid Ask Covariance Level 9 - VWA



(c) Bid Ask Covariance Level 9 - Panel

(d) Bid Ask Covariance Level 9 - Panel

Figure B.97: Marginal Effects of Bid Ask Covariance Level 9 with AT Proxy Instrumented on the Number of Traders (thresholded at 25 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.

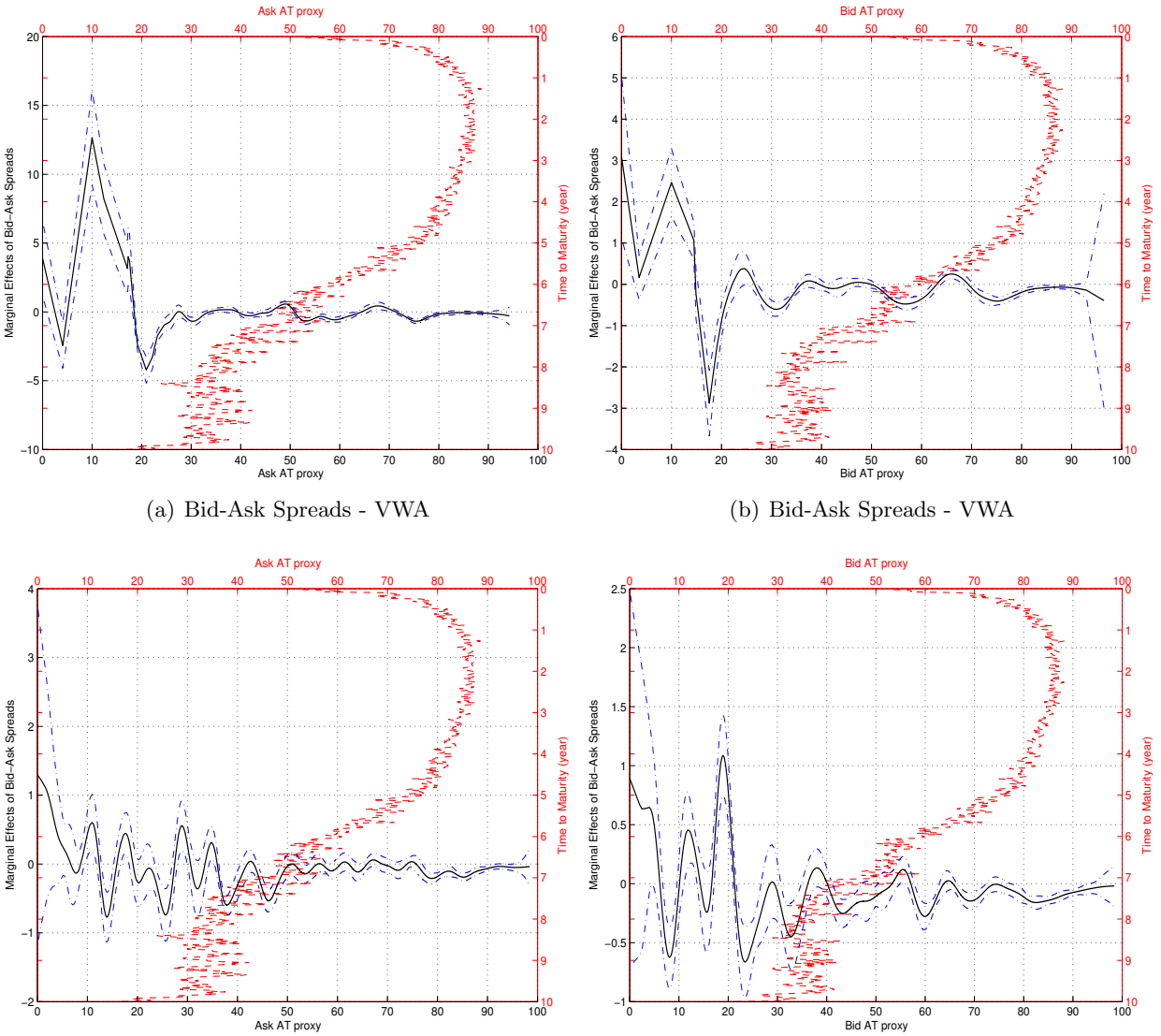
Appendix B.3.2. Robust Check: The Semi-parametric Regressions with IV Number of Traders (thresholded at 200ms)

Table B.108: Robust Check: The Semi-parametric Regressions with IV Number of Traders (thresholded at 200 ms)

		Liqudity Measures								Variance Ratios								
		$\tilde{\mathscr{S}}^{Q}$	$\tilde{\mathscr{S}}^{Q^{1/2}}$	$\tilde{\mathscr{S}}^{D}$	$\tilde{\mathscr{S}}^{E}$	$\tilde{\mathscr{S}}^{R,5}$	$\tilde{\mathscr{S}}^{R,30}$	$\tilde{\mathscr{S}}^{AS,5}$	$\tilde{\mathscr{S}}^{AS,30}$	$\tilde{\mathscr{R}}_{A1}$	$\tilde{\mathscr{R}}_{B1}$	$\tilde{\mathscr{R}}_{AB1}$	$\tilde{\mathscr{R}}_{A4}$	$\tilde{\mathscr{R}}_{B4}$	$\tilde{\mathscr{R}}_{AB4}$	$\tilde{\mathscr{R}}_{A9}$	$\tilde{\mathscr{R}}_{B9}$	$\tilde{\mathscr{R}}_{AB9}$
Volume weighted average																		
	L(Yi,t)	0.337	0.337	0.479	-0.012	0.065	0.570	0.131	0.622	-0.009	-0.003	-0.008	-0.002	0.006	-0.013	0.000	0.000	0.003
		(18.31)**	(18.31)**	(37.27)**	-0.68	(3.19)**	(33.91)**	(6.39)**	(38.27)**	-0.41	-0.16	-0.38	-0.12	-0.27	-0.65	0.00	-0.01	-0.15
Ask	Wi,t	0.065	0.032	-0.577	-0.007	0.003	0.003	-0.009	-0.006	0.000	-0.045	-4.208	-0.001	-0.032	-0.886	-0.011	-0.020	0.030
AT Proxy		(6.43)**	(6.43)**	(37.69)**	(4.63)**	-0.43	-0.51	-1.34	-0.94	-0.23	(3.38)**	(2.42)*	-0.31	(2.66)**	(5.48)**	-0.14	-0.08	-1.11
	R2	0.16	0.16	0.93	0.01	0.00	0.33	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
	N	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339
	L(Yi,t)	0.354	0.354	0.485	0.099	0.074	0.578	0.132	0.623	-0.012	-0.005	-0.008	-0.005	0.003	-0.012	-0.009	-0.009	0.003
		(18.64)**	(18.64)**	(37.25)**	(4.81)**	(3.59)**	(34.23)**	(6.46)**	(38.41)**	-0.59	-0.26	-0.39	-0.25	-0.17	-0.60	-0.42	-0.46	-0.15
Bid	Wi,t	0.066	0.033	-0.554	-0.007	0.006	0.004	-0.012	-0.006	-0.001	-0.043	-4.364	-0.001	-0.033	-0.875	-0.044	0.087	0.026
AT Proxy		(6.47)**	(6.47)**	(36.70)**	(3.69)**	-0.88	-0.64	-1.84	-1.05	-0.69	(3.35)**	(2.59)**	-0.48	(2.87)**	(5.60)**	-0.59	-0.36	-1.01
	R2	0.16	0.16	0.93	0.02	0.01	0.33	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
	N	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339
Panel																		
	L(Yi,t)	0.739	0.739	0.889	0.602	0.074	0.59	0.131	0.613	0.004	0.002	0.000	0.047	0.123	0.000	0.001	0.003	0.006
		(207.79)**	(207.79)**	(374.31)**	(142.07)**	(13.97)**	(137.78)**	(24.96)**	(146.23)**	-0.84	-0.44	0.00	(8.79)**	(23.31)**	-0.01	-0.22	-0.53	-1.08
Ask	Wi,t	0.051	0.025	-0.246	-0.006	0.018	0.013	-0.03	-0.018	-0.004	-0.004	-0.057	-0.032	-0.019	0.105	-8.784	-1.660	0.102
AT Proxy		(5.58)**	(5.58)**	(20.89)**	(6.13)**	-1.52	-1.21	(2.42)*	-1.65	(2.64)**	-1.89	-0.68	(5.97)**	(3.91)**	-0.39	(3.01)**	(5.14)**	-1.80
	R2	0.55	0.55	0.83	0.37	0.01	0.35	0.02	0.38	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
	N	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491
	L(Yi,t)	0.741	0.741	0.89	0.602	0.074	0.59	0.131	0.613	0.005	0.003	0.000	0.046	0.122	0.000	0.001	0.003	0.006
		(208.18)**	(208.17)**	(376.55)**	(142.03)**	(13.98)**	(137.79)**	(24.97)**	(146.25)**	-0.92	-0.52	-0.01	(8.65)**	(23.11)**	0.00	-0.20	-0.48	-1.11
Bid	Wi,t	0.049	0.024	-0.241	-0.006	0.019	0.013	-0.03	-0.018	-0.004	-0.004	-0.029	-0.03	-0.013	0.025	-11.519	-1.070	0.097
AT Proxy		(5.30)**	(5.30)**	(20.41)**	(5.95)**	-1.56	-1.24	(2.43)*	-1.67	(2.55)*	-1.85	-0.35	(5.51)**	(2.56)*	-0.09	(3.93)**	(3.30)**	-1.70
	R2	0.55	0.55	0.83	0.36	0.01	0.35	0.02	0.38	0	0	0.00	0	0.02	0.00	0.00	0.00	0.00
	N	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491

* p¡0.05; ** p¡0.01

Notes: This table illustrates coefficients estimate results from the semi-parametric regression: $Y_{i,t} = X_{i,t}\beta + \mathscr{G}(Z_{i,t}) + \varepsilon_{i,t}$, where $Y_{i,t}$ is our measure of execution risk/market quality for the i contract type for day t, $X_{i,t}$ are our $k = 2$ linear regressors, $Z_{i,t}$ is our $p = 1$ algorithmic trading proxy thresholded at 200 milliseconds, and $W_{i,t}$ is a set of instrumental variables, where $\mathbb{E}[\varepsilon_{i,t}|W_{i,t}] = 0$. Flattening the data set to an index $i \in \{1, \ldots, N\}$, where N is the total number of day-contracts and the index i represents the set of N tuples of (i, t) contract-days. In this table, the dependent variables measuring the execution risk $Y_{i,t}$ are reported into two groups: liquidity measures and variance/covariance ratios. Liquidity measurements contain the bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads 5 minutes ($\tilde{\mathscr{S}}^{R,5}$), realized spreads 30 minutes ($\tilde{\mathscr{S}}^{R,30}$), adverse selection 5 minutes ($\tilde{\mathscr{S}}^{AS,5}$) and adverse selection 30 minutes ($\tilde{\mathscr{S}}^{AS,30}$). Variance/covariance ratios include ask variance ratios ($\tilde{\mathscr{R}}_{A}$), bid variance ratios ($\tilde{\mathscr{R}}_{B}$) and bid-ask covariance ratios ($\tilde{\mathscr{R}}_{AB}$) at level 1, level 4 and level 9. The lagged one dependent variable is denoted as $L(Y_{i,t})$. Instrumental variables are adopted to deal with the endogeneity problems, named as $W_{i,t}$. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid-Ask Spreads - VWA

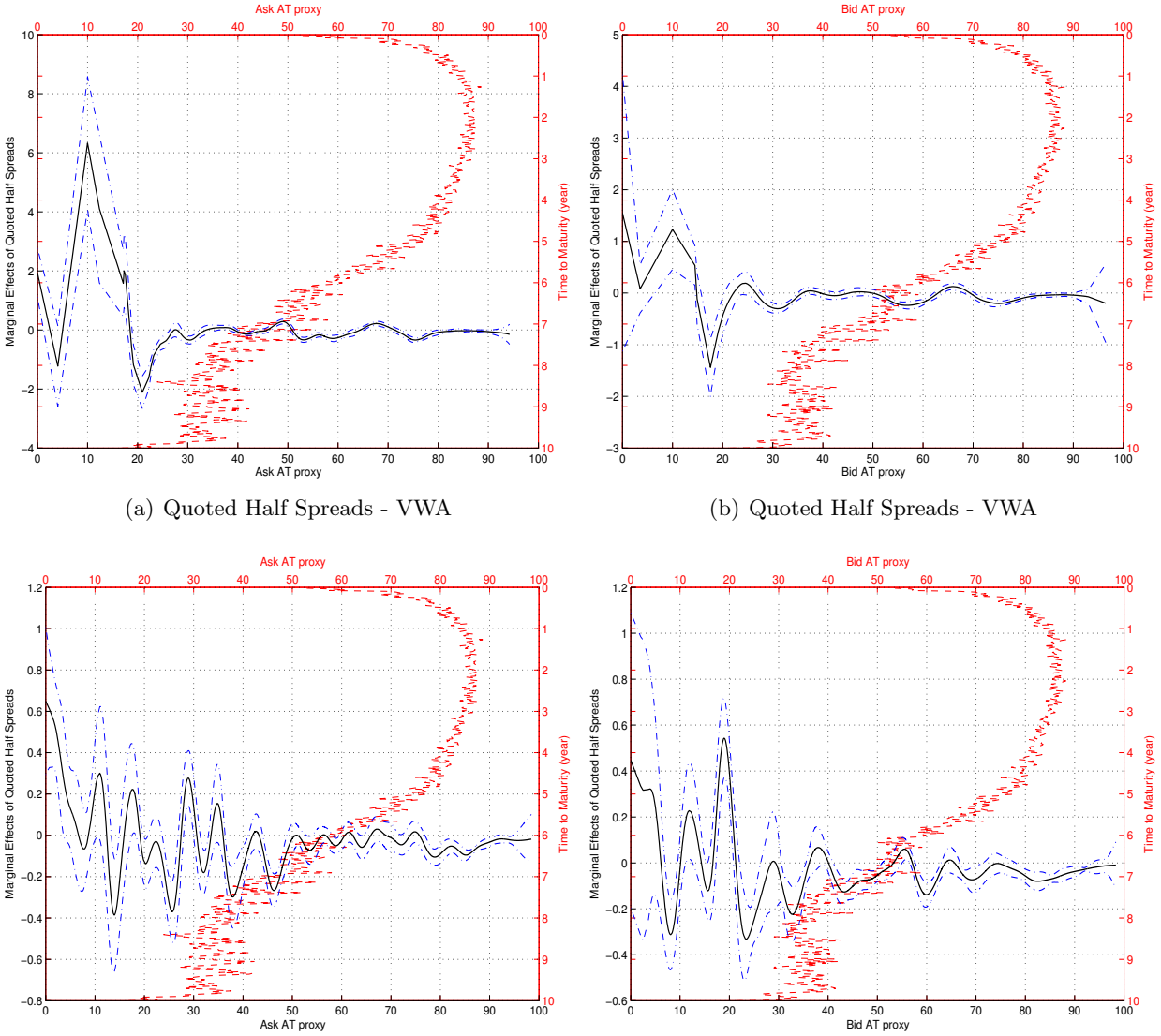
(b) Bid-Ask Spreads - VWA

(c) Bid-Ask Spreads - Panel

(d) Bid-Ask Spreads - Panel

Figure B.98: Marginal Effects of Bid-Ask Spreads with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of bid-ask spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Quoted Half Spreads - VWA

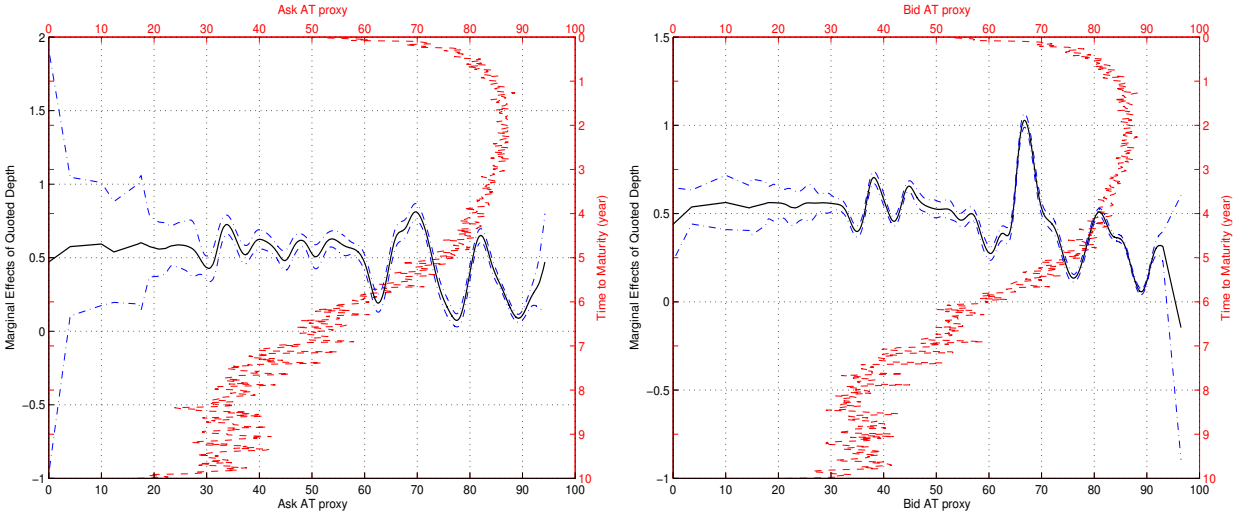
(b) Quoted Half Spreads - VWA

(c) Quoted Half Spreads - Panel

(d) Quoted Half Spreads - Panel

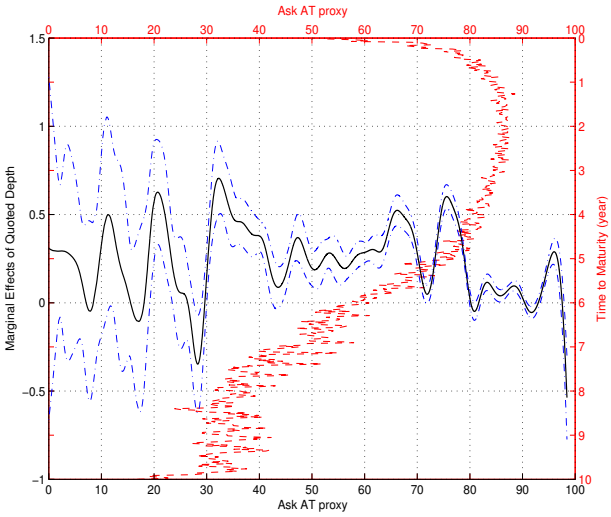
Figure B.99: Marginal Effects of Quoted Half Spreads with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted half spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted half spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.

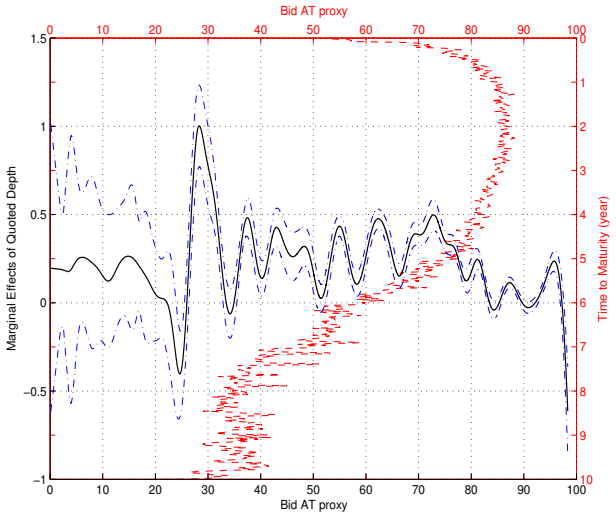


(a) Quoted Depth - VWA

(b) Quoted Depth - VWA



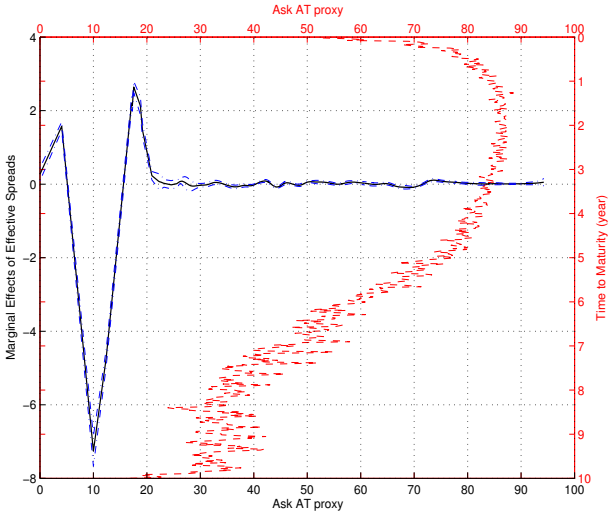
(c) Quoted Depth - Panel



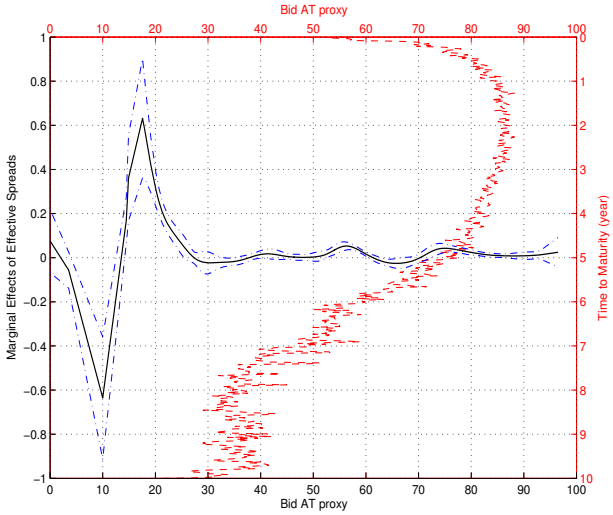
(d) Quoted Depth - Panel

Figure B.100: Marginal Effects of Quoted Depth with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

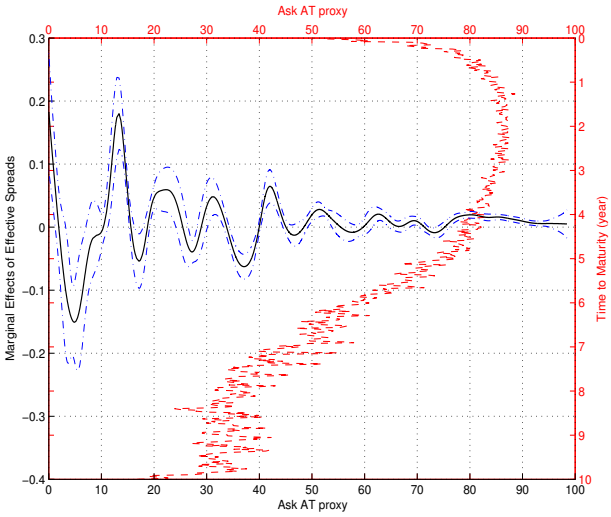
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted depth in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted depth marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



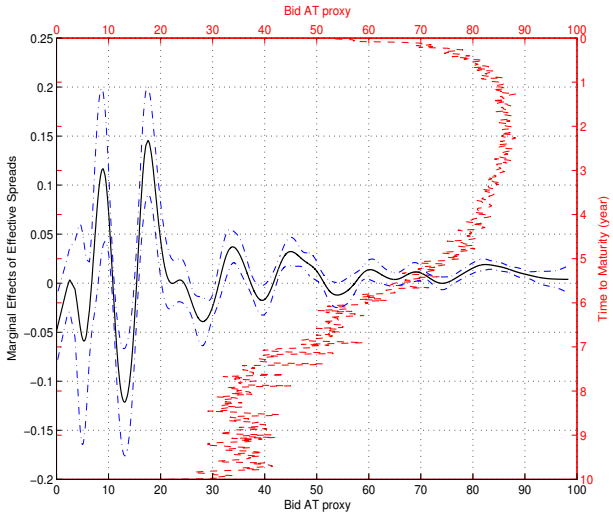
(a) Effective Spreads - VWA



(b) Effective Spreads - VWA



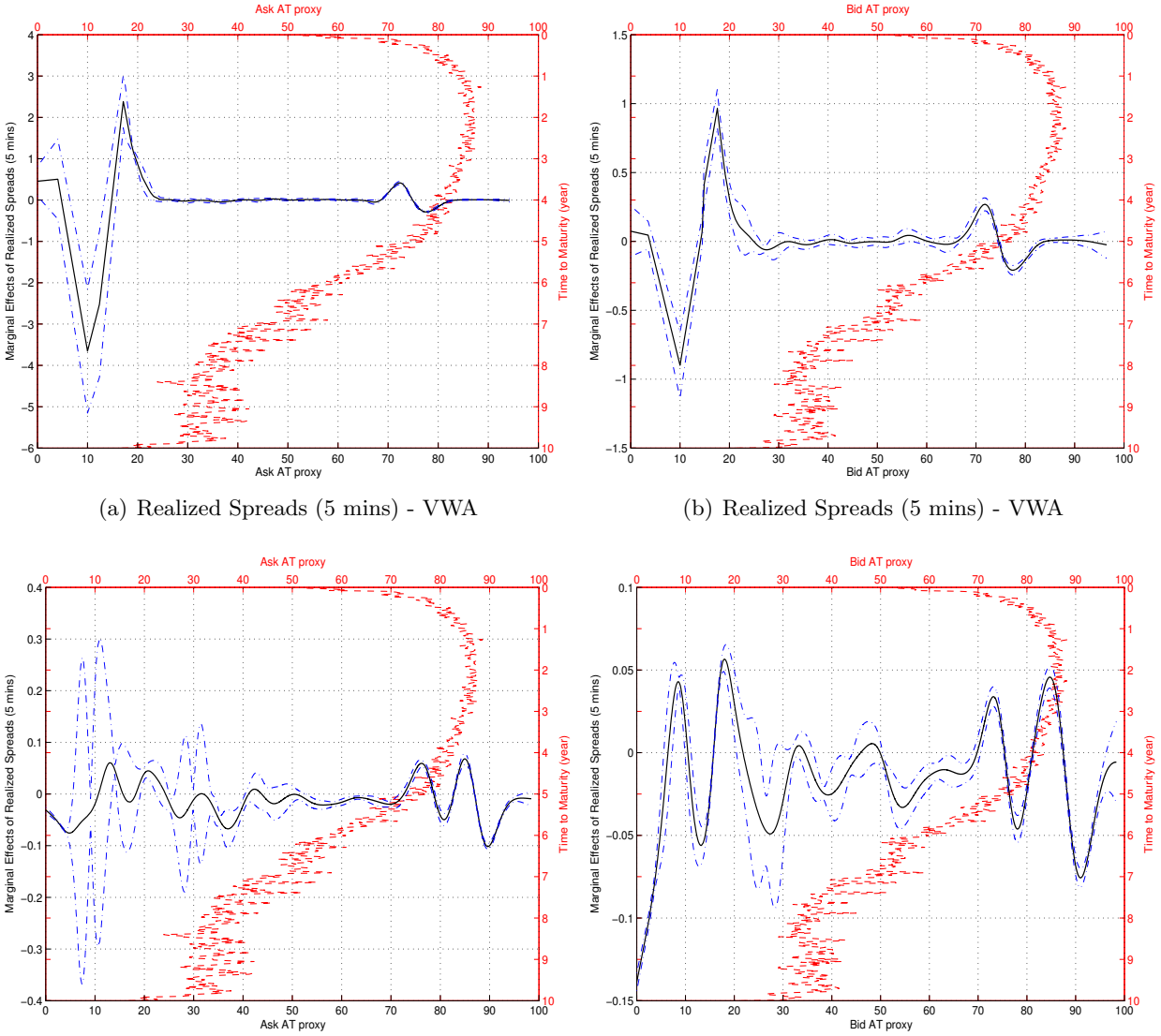
(c) Effective Spreads - Panel



(d) Effective Spreads - Panel

Figure B.101: Marginal Effects of Effective Spreads with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on effective spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of effective spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Realized Spreads (5 mins) - VWA

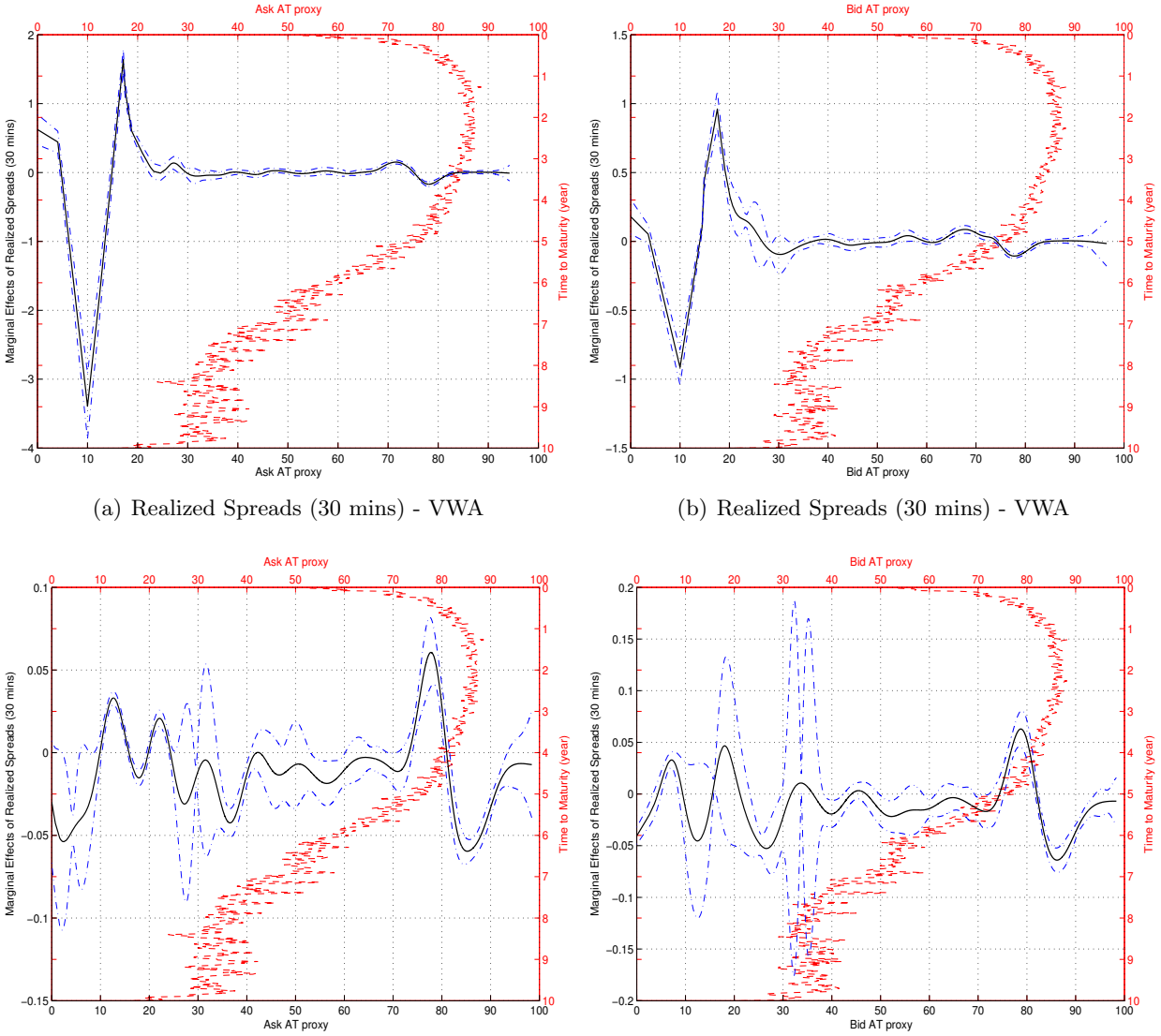
(b) Realized Spreads (5 mins) - VWA

(c) Realized Spreads (5 mins) - Panel

(d) Realized Spreads (5 mins) - Panel

Figure B.102: Marginal Effects of Realized Spreads (5 mins) with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (5 mins) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Realized Spreads (30 mins) - VWA

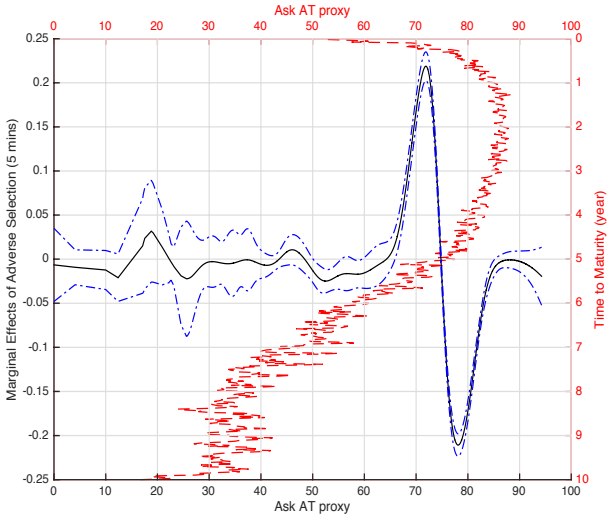
(b) Realized Spreads (30 mins) - VWA

(c) Realized Spreads (30 mins) - Panel

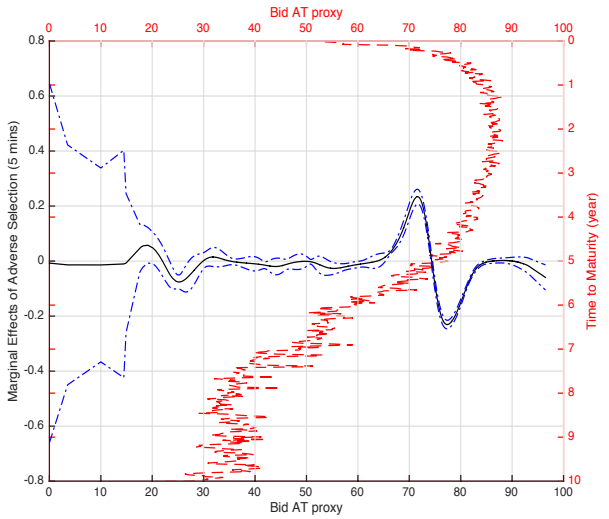
(d) Realized Spreads (30 mins) - Panel

Figure B.103: Marginal Effects of Realized Spreads (30 mins) with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

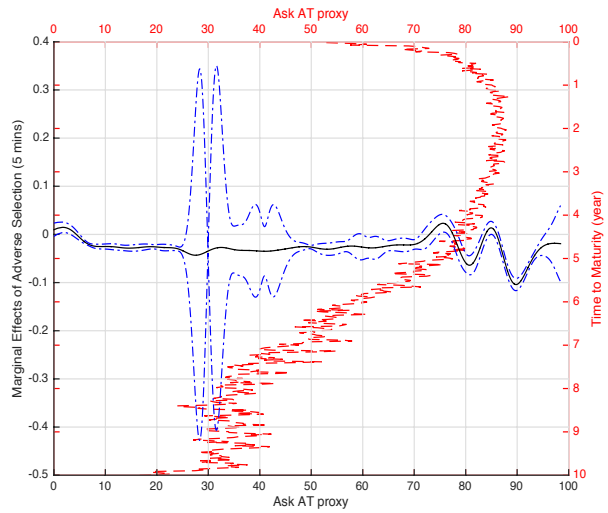
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (30 mins) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



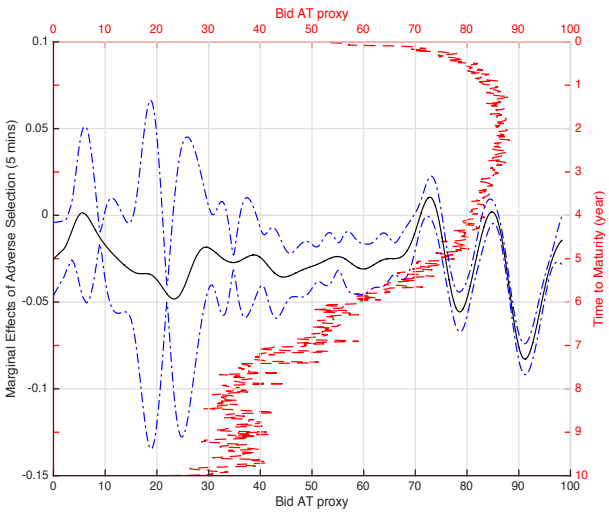
(a) Adverse Selection (5 mins) - VWA



(b) Adverse Selection (5 mins) - VWA



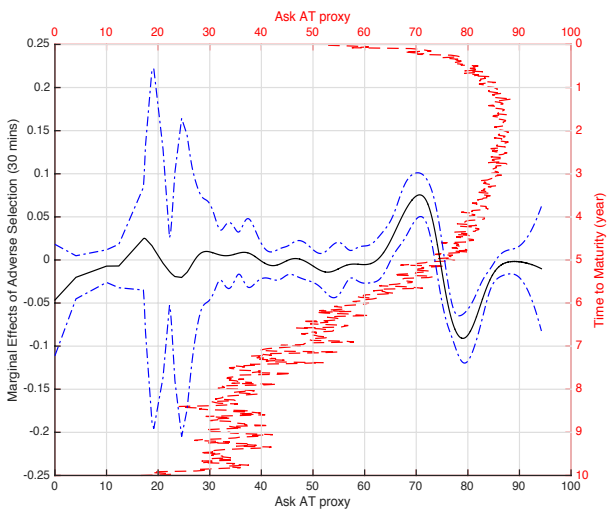
(c) Adverse Selection (5 mins) - Panel



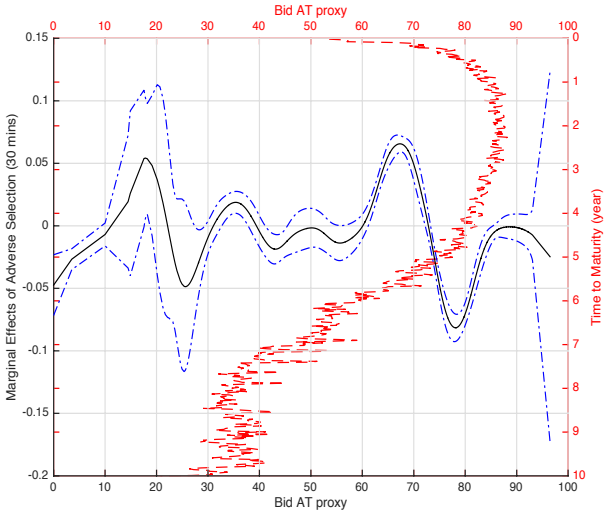
(d) Adverse Selection (5 mins) - Panel

Figure B.104: Marginal Effects of Adverse Selection (5 mins) with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

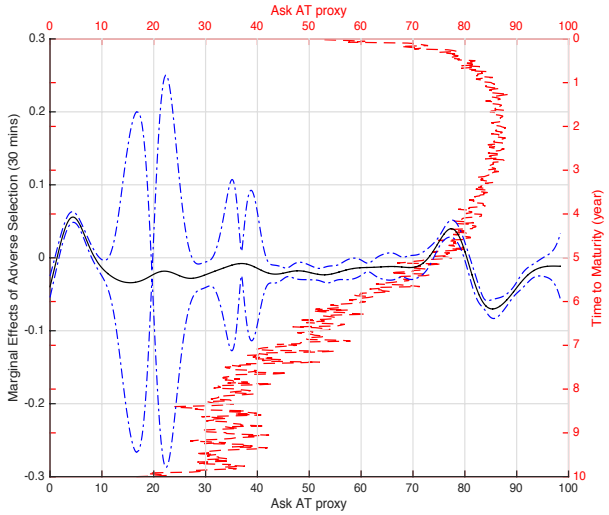
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



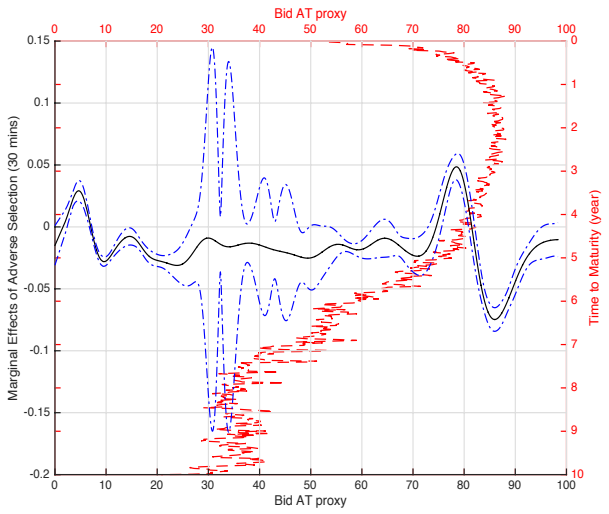
(a) Adverse Selection (30 mins) - VWA



(b) Adverse Selection (30 mins) - VWA



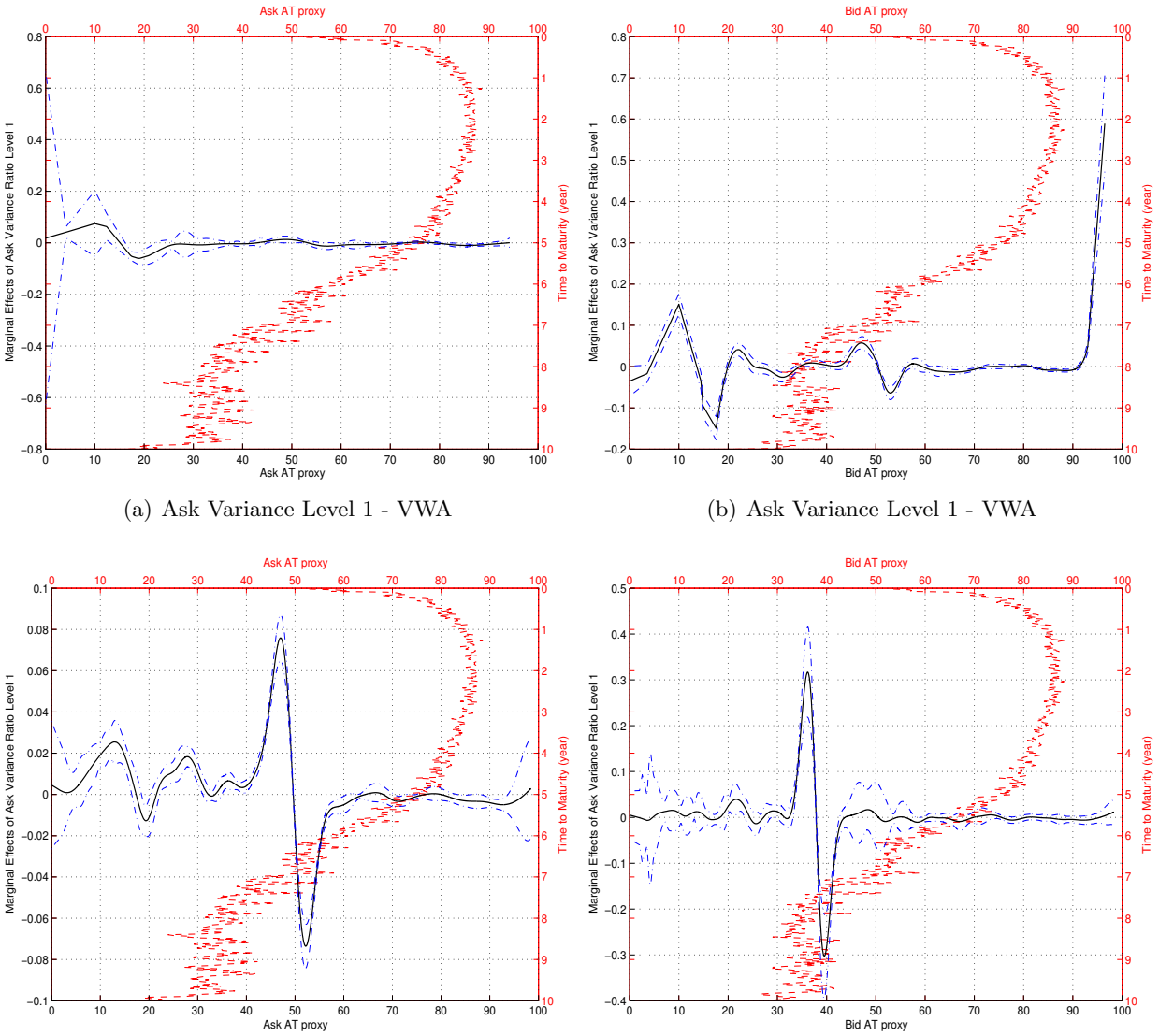
(c) Adverse Selection (30 mins) - Panel



(d) Adverse Selection (30 mins) - Panel

Figure B.105: Marginal Effects of Adverse Selection (30 mins) with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Ask Variance Level 1 - VWA

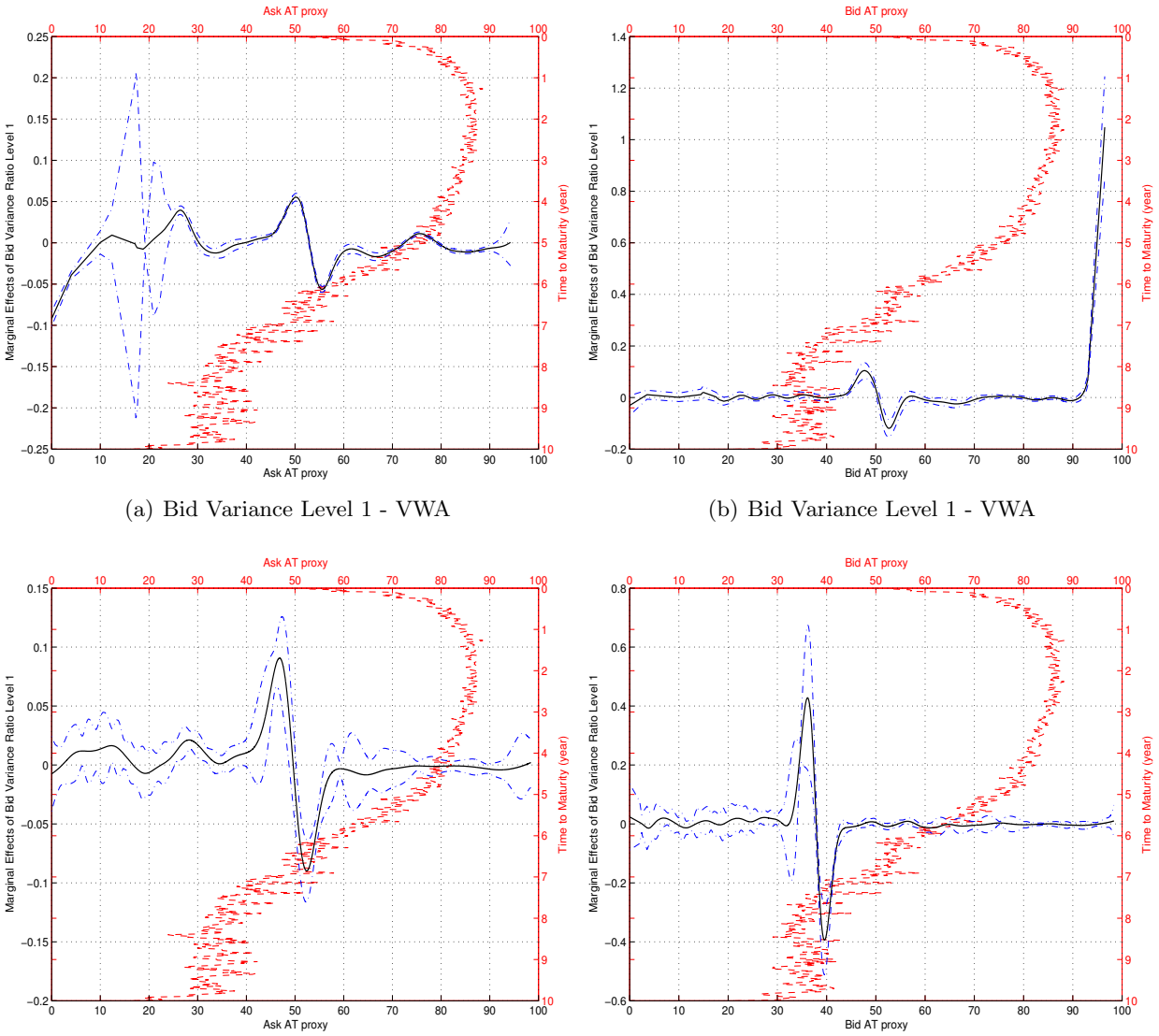
(b) Ask Variance Level 1 - VWA

(c) Ask Variance Level 1 - Panel

(d) Ask Variance Level 1 - Panel

Figure B.106: Marginal Effects of Ask Variance Level 1 with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid Variance Level 1 - VWA

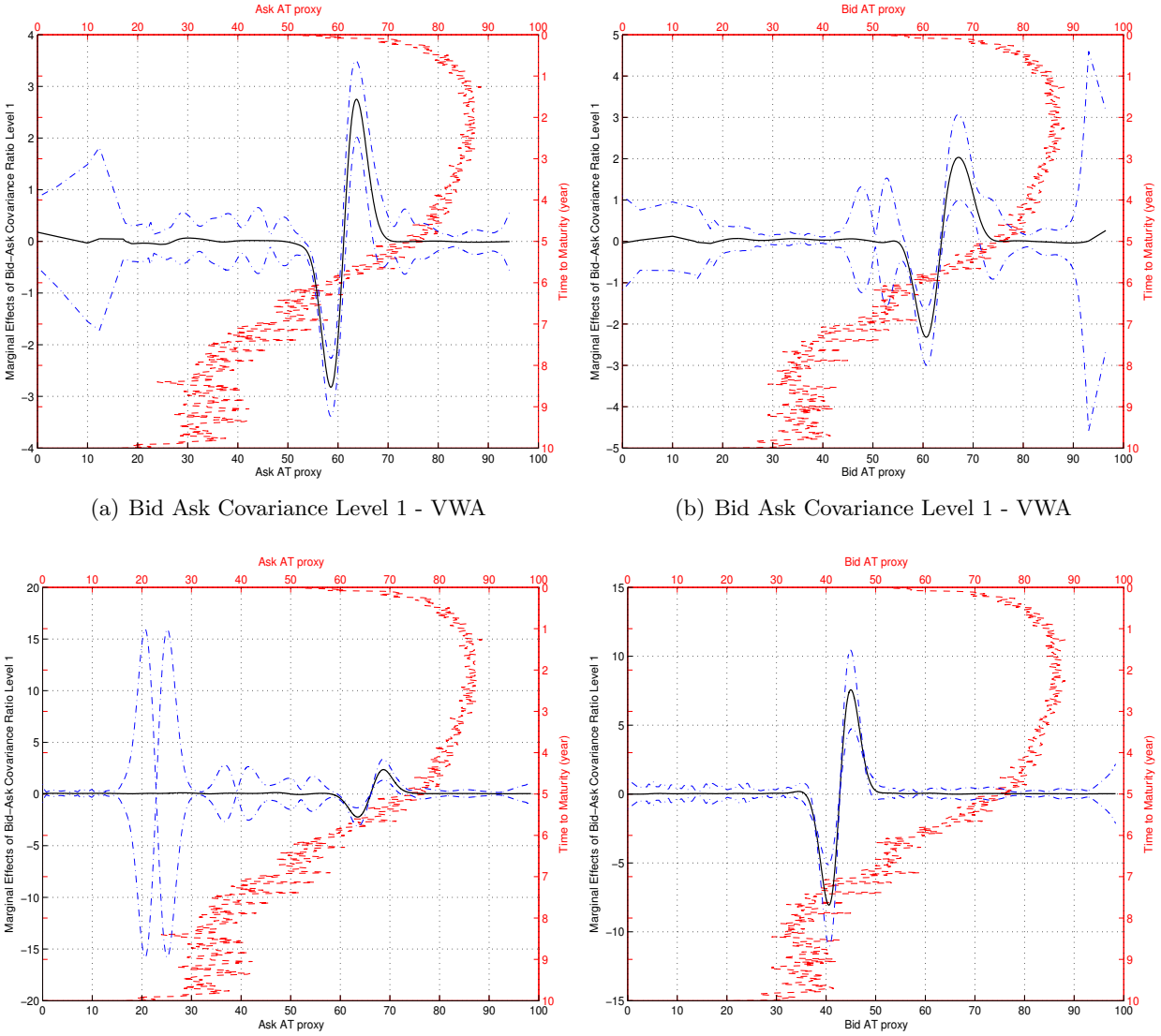
(b) Bid Variance Level 1 - VWA

(c) Bid Variance Level 1 - Panel

(d) Bid Variance Level 1 - Panel

Figure B.107: Marginal Effects of Bid Variance Level 1 with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid Ask Covariance Level 1 - VWA

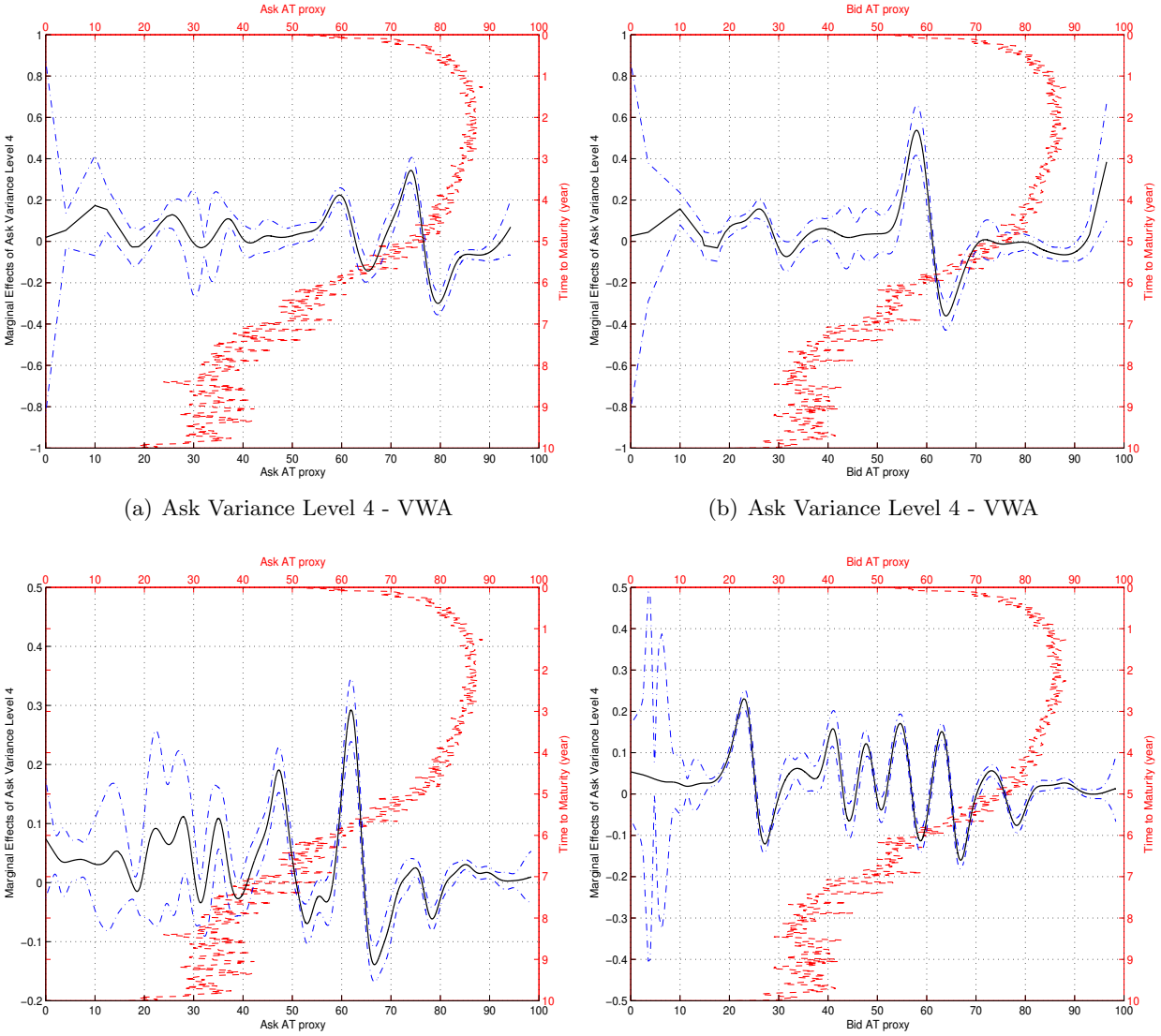
(b) Bid Ask Covariance Level 1 - VWA

(c) Bid Ask Covariance Level 1 - Panel

(d) Bid Ask Covariance Level 1 - Panel

Figure B.108: Marginal Effects of Bid Ask Covariance Level 1 with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Ask Variance Level 4 - VWA

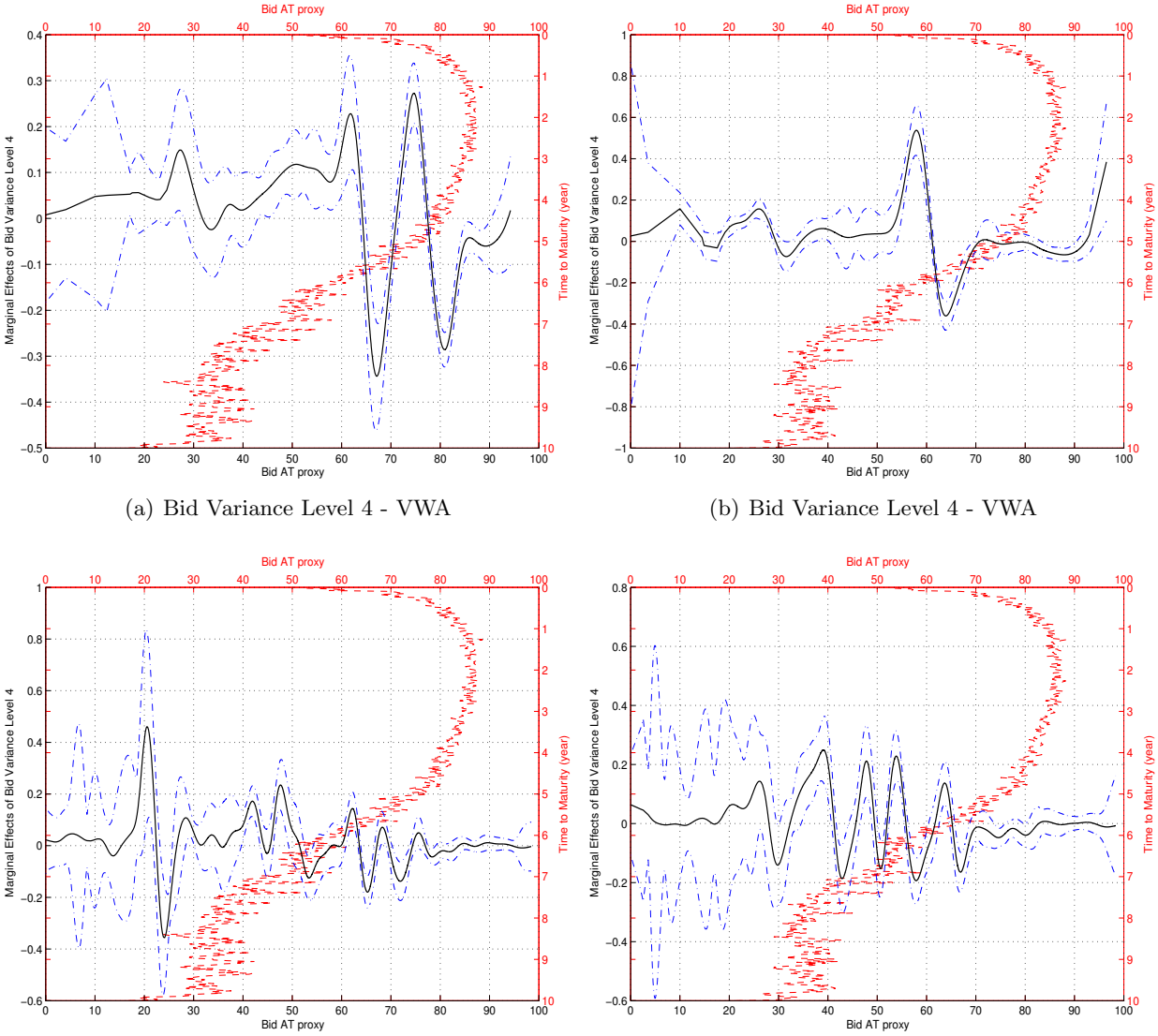
(b) Ask Variance Level 4 - VWA

(c) Ask Variance Level 4 - Panel

(d) Ask Variance Level 4 - Panel

Figure B.109: Marginal Effects of Ask Variance Level 4 with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid Variance Level 4 - VWA

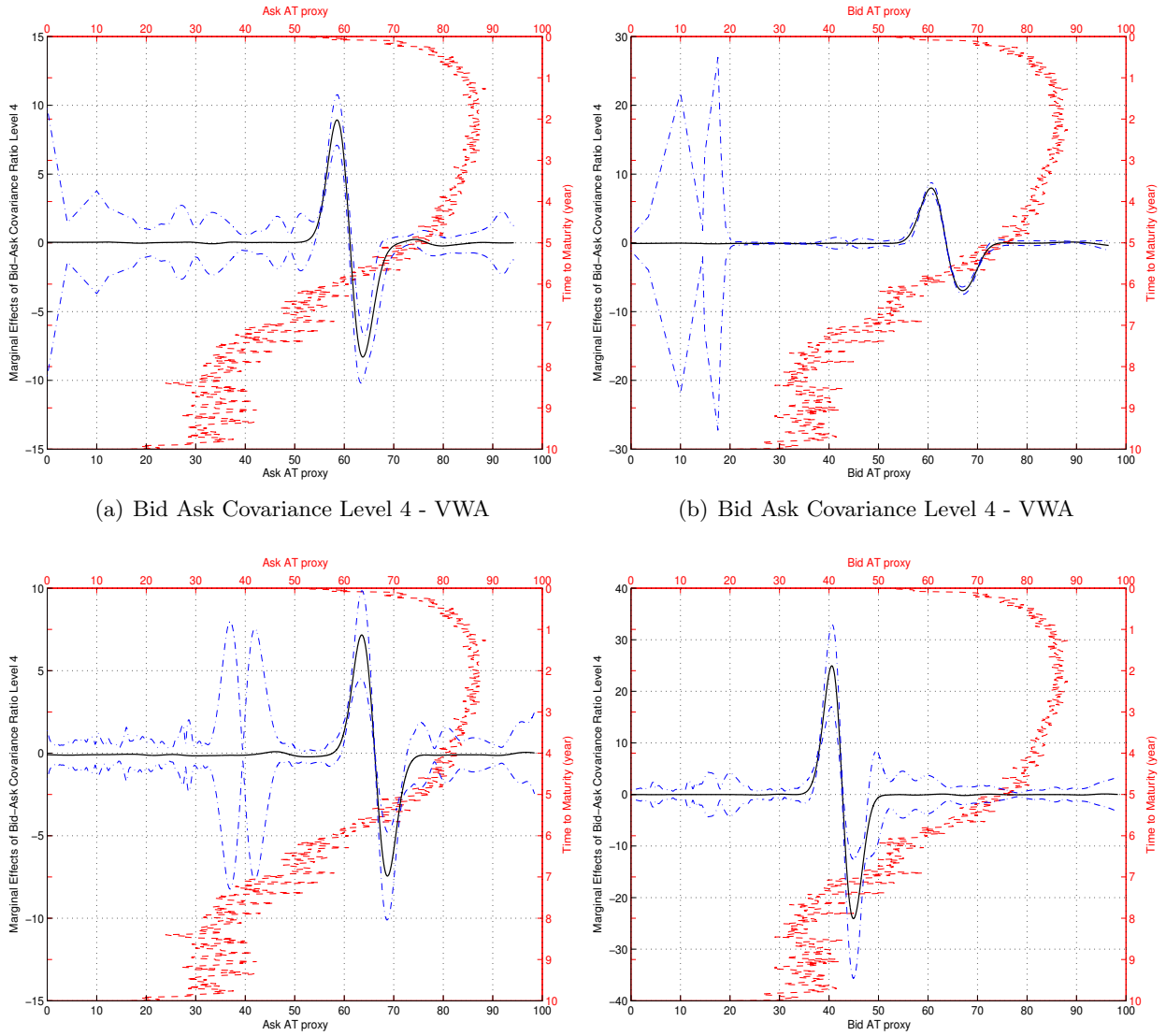
(b) Bid Variance Level 4 - VWA

(c) Bid Variance Level 4 - Panel

(d) Bid Variance Level 4 - Panel

Figure B.110: Marginal Effects of Bid Variance Level 4 with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid Ask Covariance Level 4 - VWA

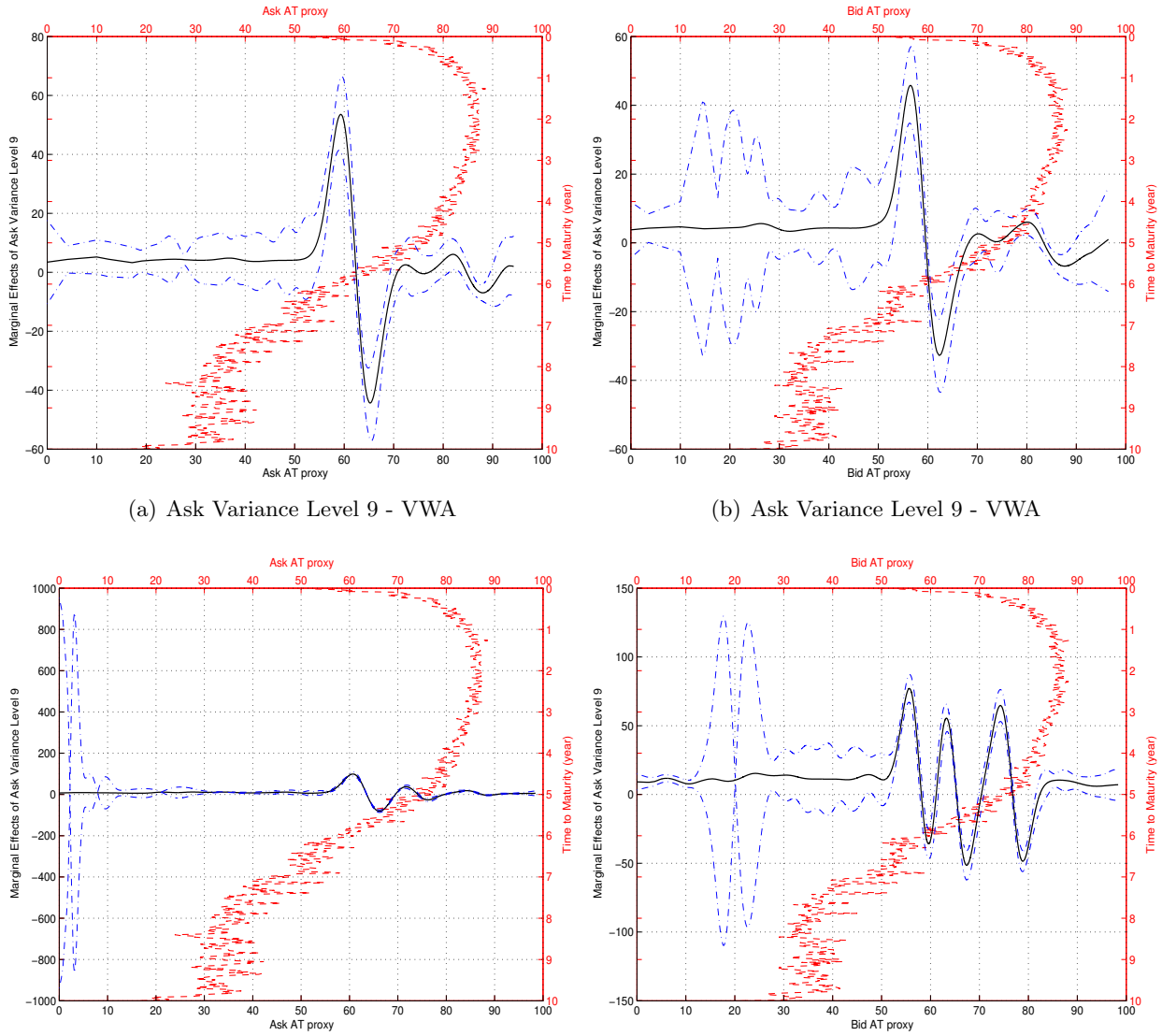
(b) Bid Ask Covariance Level 4 - VWA

(c) Bid Ask Covariance Level 4 - Panel

(d) Bid Ask Covariance Level 4 - Panel

Figure B.111: Marginal Effects of Bid Ask Covariance Level 4 with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Ask Variance Level 9 - VWA

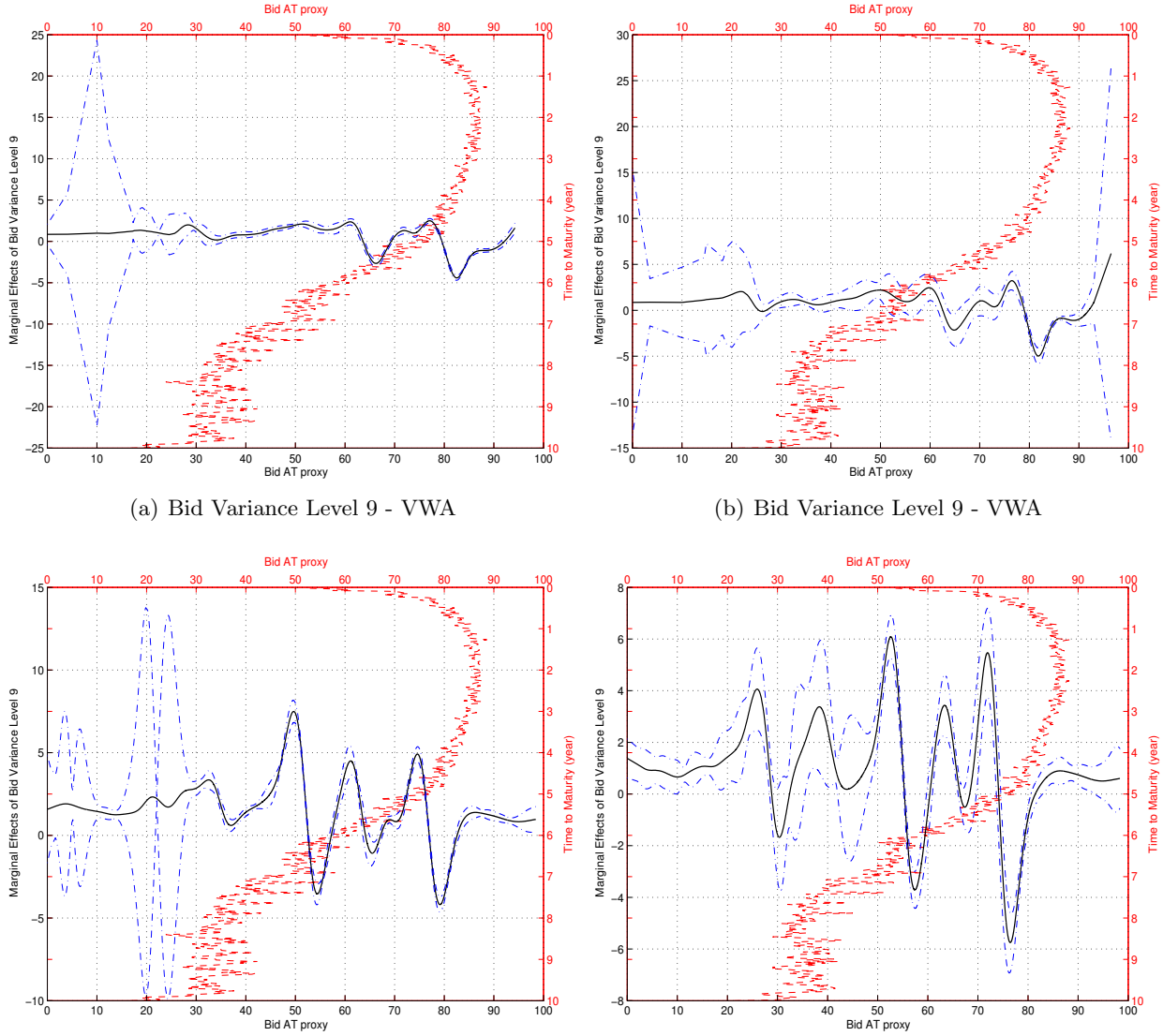
(b) Ask Variance Level 9 - VWA

(c) Ask Variance Level 9 - Panel

(d) Ask Variance Level 9 - Panel

Figure B.112: Marginal Effects of Ask Variance Level 9 with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid Variance Level 9 - VWA

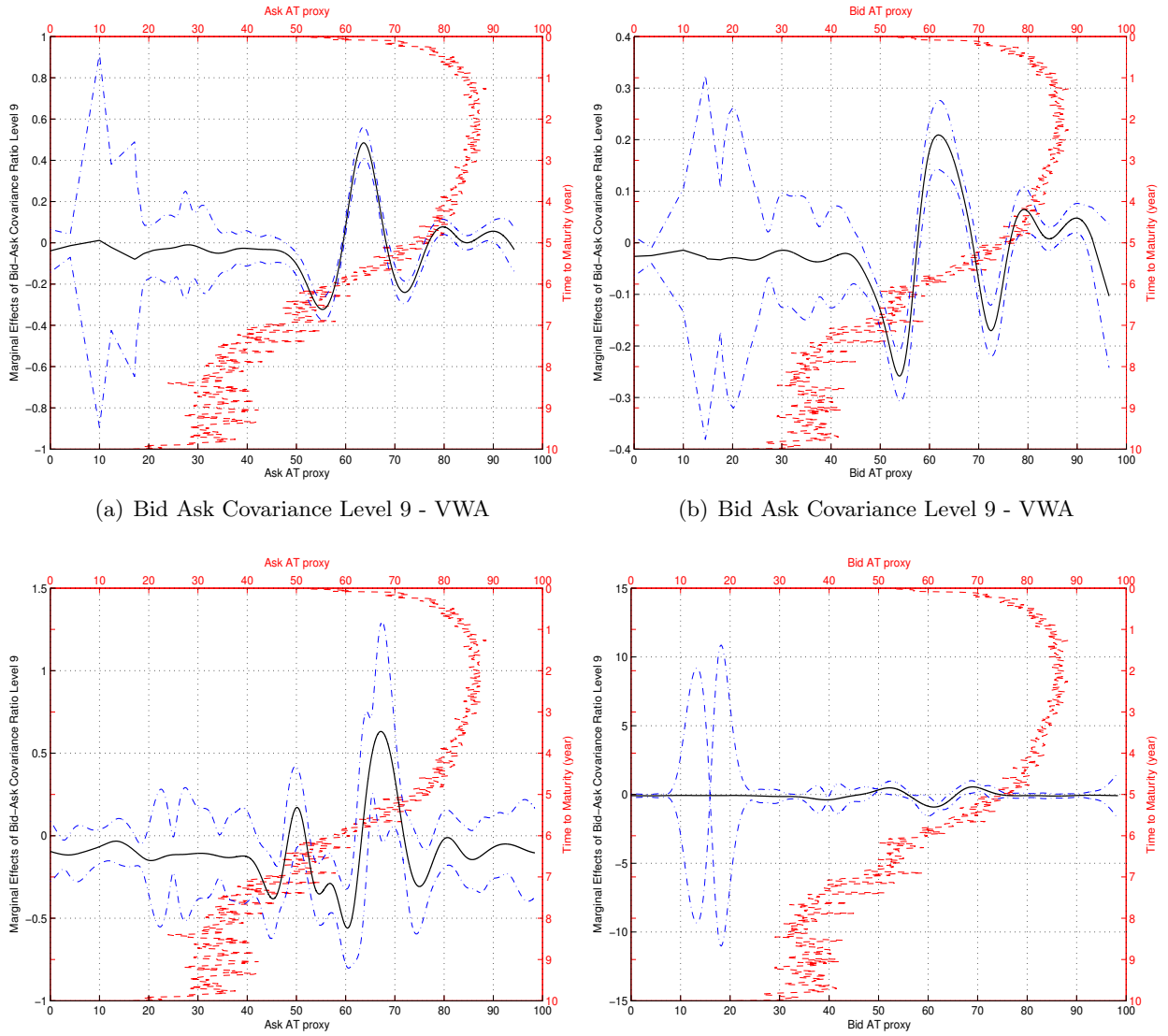
(b) Bid Variance Level 9 - VWA

(c) Bid Variance Level 9 - Panel

(d) Bid Variance Level 9 - Panel

Figure B.113: Marginal Effects of Bid Variance Level 9 with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.



(a) Bid Ask Covariance Level 9 - VWA

(b) Bid Ask Covariance Level 9 - VWA

(c) Bid Ask Covariance Level 9 - Panel

(d) Bid Ask Covariance Level 9 - Panel

Figure B.114: Marginal Effects of Bid Ask Covariance Level 9 with AT Proxy Instrumented on the Number of Traders (thresholded at 200 ms)

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the total number of traders, and the panel dataset adopts algorithmic trading proxy instrumented on both the total number of traders and the log of time to maturity.

Appendix B.3.3. Robust Check: The Semi-parametric Regressions with IV Volume-to-message Ratio (thresholded at 25ms)

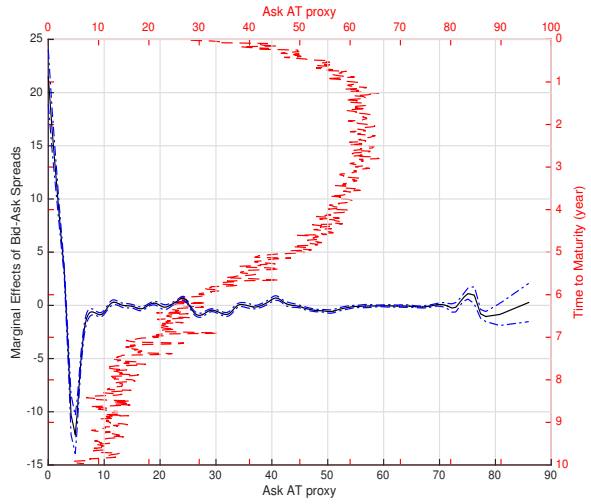
Table B.109: Robust Check: The Semi-parametric Regressions with IV Volume-to-message Ratio (thresholded at 25ms)

		Liqudity Measures								Variance Ratios								
		$\tilde{\mathscr{S}}^{Q}$	$\tilde{\mathscr{S}}^{Q^{1/2}}$	$\tilde{\mathscr{S}}^{D}$	$\tilde{\mathscr{S}}^{E}$	$\tilde{\mathscr{S}}^{R,5}$	$\tilde{\mathscr{S}}^{R,30}$	$\tilde{\mathscr{S}}^{AS,5}$	$\tilde{\mathscr{S}}^{AS,30}$	$\tilde{\mathscr{R}}_{A1}$	$\tilde{\mathscr{R}}_{B1}$	$\tilde{\mathscr{R}}_{AB1}$	$\tilde{\mathscr{R}}_{A4}$	$\tilde{\mathscr{R}}_{B4}$	$\tilde{\mathscr{R}}_{AB4}$	$\tilde{\mathscr{R}}_{A9}$	$\tilde{\mathscr{R}}_{B9}$	$\tilde{\mathscr{R}}_{AB9}$
Volume weighted average																		
	$L(Y_{i,t})$	0.356	0.356	0.748	0.093	0.071	0.578	0.132	0.625	-0.012	-0.001	-0.01	-0.004	0.009	-0.007	-0.002	-0.002	0.002
		(19.87)**	(19.87)**	(80.72)**	(5.23)**	(3.44)**	(34.15)**	(6.46)**	(38.47)**	-0.58	-0.07	-0.49	-0.17	-0.45	-0.33	-0.1	-0.09	-0.12
Ask	$W_{i,t}$	0.05	0.025	-0.298	-0.005	0.001	0.002	-0.006	-0.004	0	0.015	-5.923	0	0.014	-0.223	-0.002	0.003	0.012
AT Proxy		(4.85)**	(4.85)**	(25.16)**	(3.03)**	-0.17	-0.26	-0.86	-0.6	-0.09	-1.06	(3.25)**	-0.1	-1.12	-1.31	-0.02	-0.01	-0.43
	R^2	0.16	0.16	0.91	0.02	0.01	0.33	0.02	0.39	0	0	0	0	0	0	0	0	0
	N	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339
	$L(Y_{i,t})$	0.369	0.369	0.754	0.099	0.072	0.58	0.133	0.626	-0.008	-0.001	-0.008	-0.003	0.01	-0.005	-0.006	-0.006	0.003
		(19.54)**	(19.54)**	(83.29)**	(4.83)**	(3.52)**	(34.25)**	(6.50)**	(38.60)**	-0.43	-0.04	-0.37	-0.14	-0.48	-0.22	-0.3	-0.31	-0.12
Bid	$W_{i,t}$	0.05	0.025	-0.295	-0.005	0.002	0.001	-0.007	-0.003	0	-0.011	-6.207	0	0.002	-0.214	-0.011	0.016	0.008
AT Proxy		(4.57)**	(4.57)**	(25.47)**	(2.65)**	-0.26	-0.21	-0.97	-0.53	-0.06	-0.78	(3.43)**	-0.19	-0.19	-1.27	-0.14	-0.06	-0.29
	R^2	0.16	0.16	0.92	0.01	0.01	0.33	0.02	0.39	0	0	0.01	0	0	0	0	0	0
	N	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338	2,338
Panel																		
	$L(Y_{i,t})$	0.737	0.737	0.886	0.6	0.074	0.59	0.131	0.613	0.005	0.045	0	0.003	0.122	0.002	-0.001	0	0.006
		(206.42)**	(206.42)**	(370.59)**	(141.53)**	(13.98)**	(137.81)**	(24.98)**	(146.27)**	-1.03	(8.43)**	-0.04	-0.59	(23.12)**	-0.43	-0.1	-0.09	-1.1
Ask	$W_{i,t}$	0.103	0.051	-0.322	-0.01	0.018	0.017	-0.039	-0.026	-0.007	-0.065	-10.144	-0.007	-0.045	-2.264	-0.092	0.163	0.12
AT Proxy		(8.48)**	(8.48)**	(20.68)**	(8.30)**	-1.11	-1.17	(2.41)*	-1.79	(3.57)**	(9.07)**	(2.62)**	(2.43)*	(6.96)**	(5.29)**	-0.83	-0.46	-1.61
	R^2	0.55	0.55	0.83	0.37	0.01	0.35	0.02	0.38	0	0	0	0	0.02	0	0	0	0
	N	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491
	$L(Y_{i,t})$	0.738	0.738	0.887	0.6	0.074	0.59	0.132	0.613	0.005	0.045	0.001	0.003	0.122	0.002	0	0	0.006
		(206.62)**	(206.62)**	(371.69)**	(141.42)**	(14.01)**	(137.81)**	(25.01)**	(146.28)**	-1.02	(8.41)**	-0.16	-0.61	(23.13)**	-0.35	-0.01	0	-1.06
Bid	$W_{i,t}$	0.106	0.053	-0.34	-0.011	0.018	0.017	-0.041	-0.027	-0.007	-0.069	-10.669	-0.007	-0.046	-2.429	-0.09	0.147	0.116
AT Proxy		(8.23)**	(8.23)**	(20.51)**	(8.32)**	-1.08	-1.11	(2.39)*	-1.74	(3.46)**	(9.06)**	(2.59)**	(2.30)*	(6.68)**	(5.33)**	-0.76	-0.39	-1.45
	R^2	0.55	0.55	0.83	0.37	0.01	0.35	0.02	0.38	0	0	0	0	0.02	0	0	0	0
	N	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491

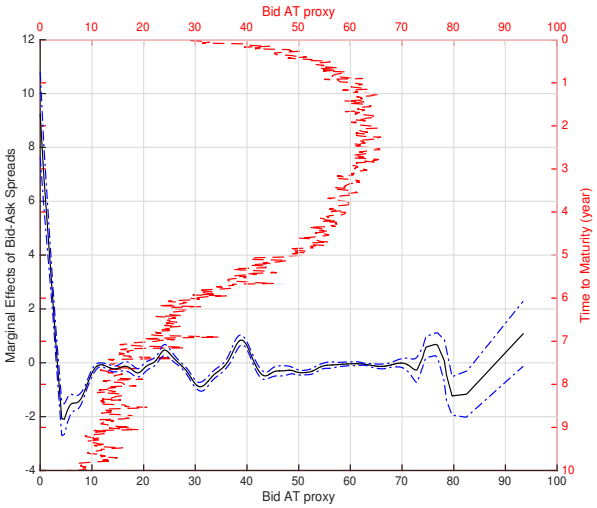
* p <0.05; ** p<0.01

Notes: This table illustrates coefficients estimate results from the semi-parametric regression: $Y_{i,t} = X_{i,t}\beta + \mathscr{G}(Z_{i,t}) + \varepsilon_{i,t}$, where $Y_{i,t}$ is our measure of execution risk/market quality for the i contract type for day t, $X_{i,t}$ are our $k = 2$ linear regressors, $Z_{i,t}$ is our $p = 1$ algorithmic trading proxy thresholded at 25 milliseconds, and $W_{i,t}$ is a set of instrumental variables, where $\mathbb{E}[\varepsilon_{i,t}|W_{i,t}] = 0$. Flattening the data set to an index $i \in \{1, \ldots, N\}$, where N is the total number of day-contracts and the index i represents the set of N tuples of (i, t) contract-days. In this table, the dependent variables measuring the execution risk $Y_{i,t}$ are reported into two groups: liquidity measures and variance/covariance ratios. Liquidity measurements contain the bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads 5 minutes ($\tilde{\mathscr{S}}^{R,5}$), realized spreads 30 minutes ($\tilde{\mathscr{S}}^{R,30}$), adverse selection 5 minutes ($\tilde{\mathscr{S}}^{AS,5}$) and adverse selection 30 minutes ($\tilde{\mathscr{S}}^{AS,30}$). Variance/covariance ratios include ask variance ratios ($\tilde{\mathscr{R}}_{A}$), bid variance ratios ($\tilde{\mathscr{R}}_{B}$) and bid-ask covariance ratios ($\tilde{\mathscr{R}}_{AB}$) at level 1, level 4 and level 9. The lagged one dependent variable is denoted as $L(Y_{i,t})$. Instrumental variables are adopted to deal with the endogeneity problems, named as $W_{i,t}$. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

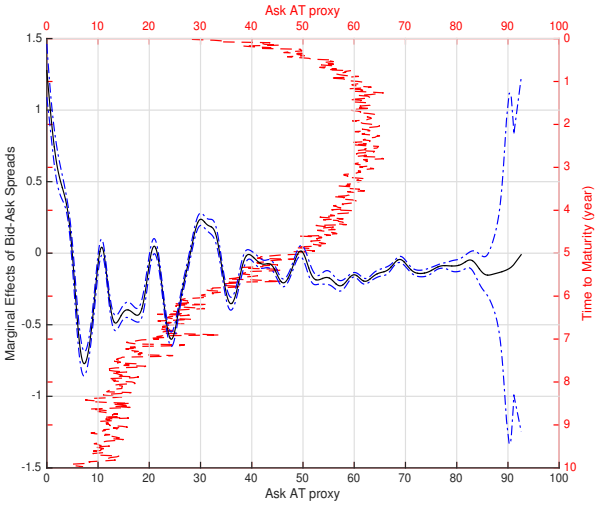
Figure B.115: Marginal Effects of Bid-Ask Spreads with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



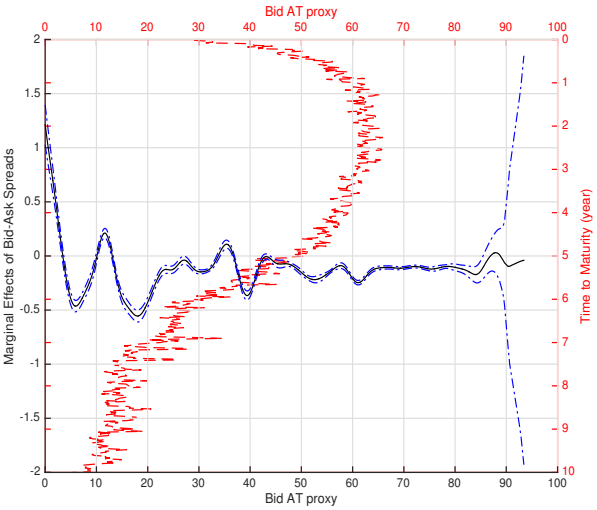
(a) Bid-Ask Spreads - VWA



(b) Bid-Ask Spreads - VWA



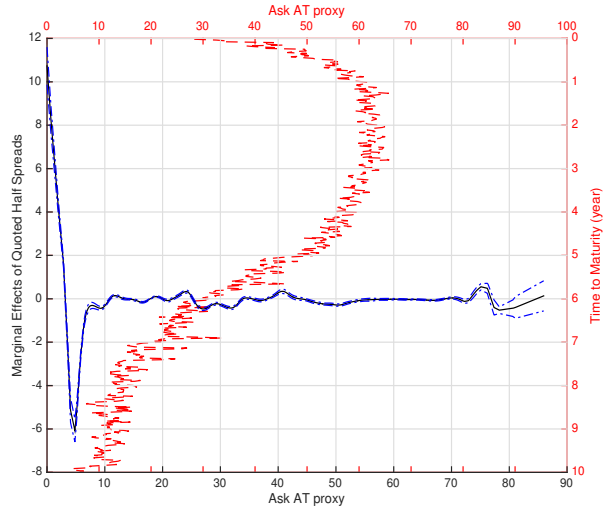
(c) Bid-Ask Spreads - Panel



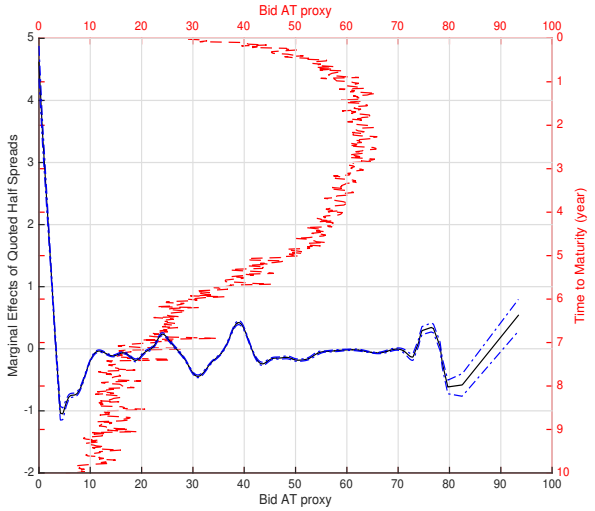
(d) Bid-Ask Spreads - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of bid-ask spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

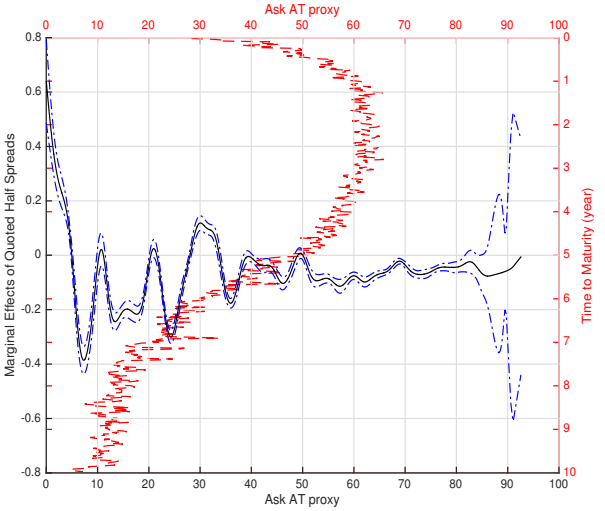
Figure B.116: Marginal Effects of Quoted Half Spreads with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



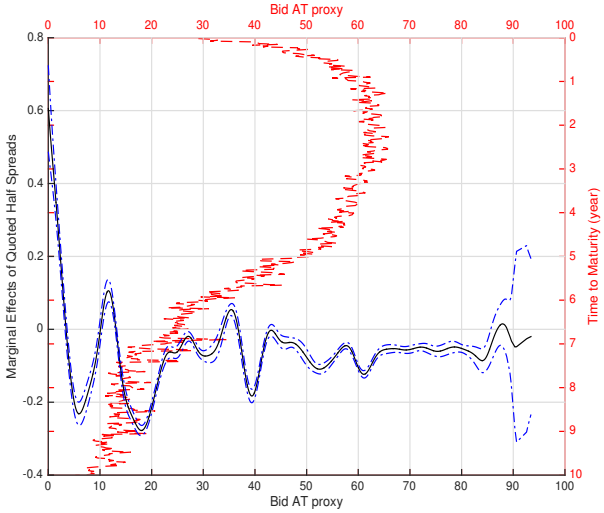
(a) Quoted Half Spreads - VWA



(b) Quoted Half Spreads - VWA



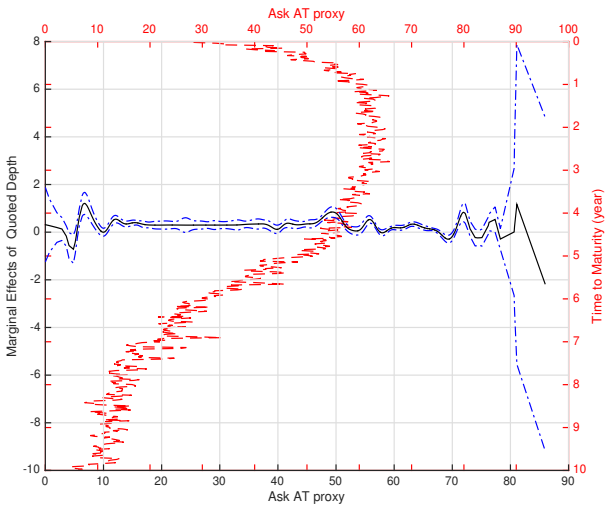
(c) Quoted Half Spreads - Panel



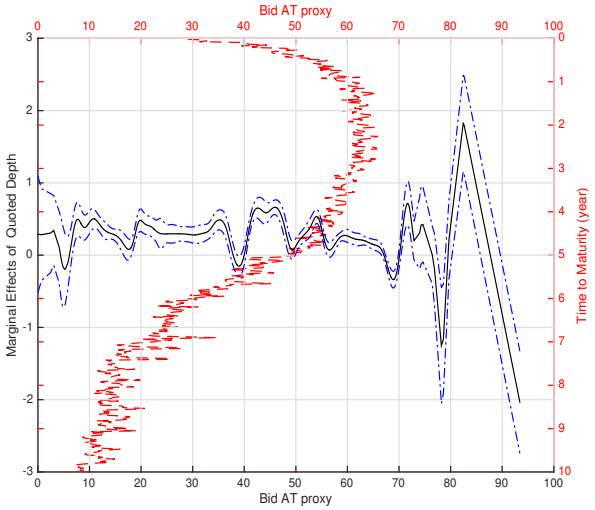
(d) Quoted Half Spreads - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted half spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted half spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

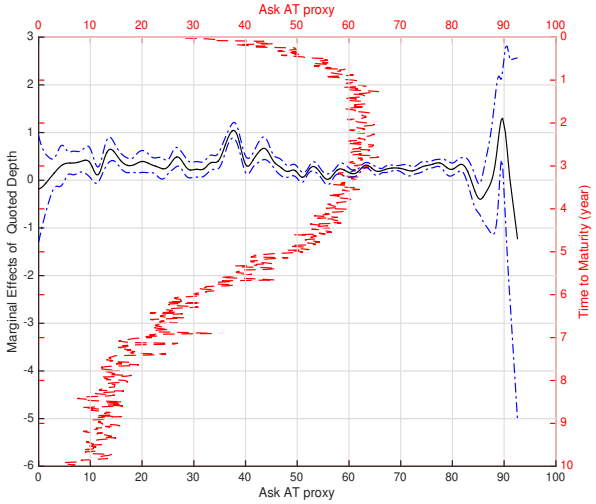
Figure B.117: Marginal Effects of Quoted Depth with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



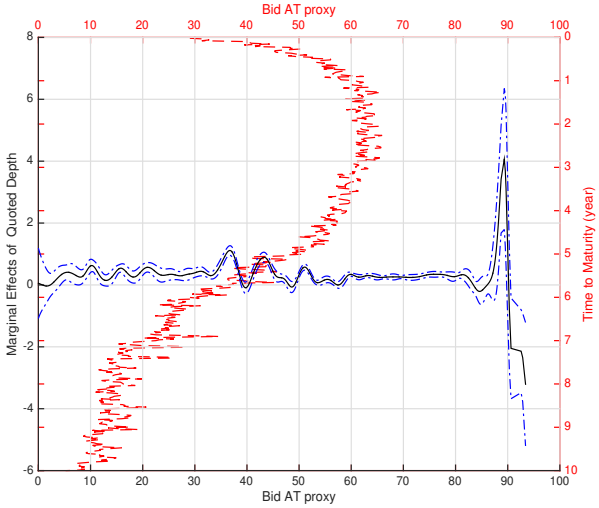
(a) Quoted Depth - VWA



(b) Quoted Depth - VWA



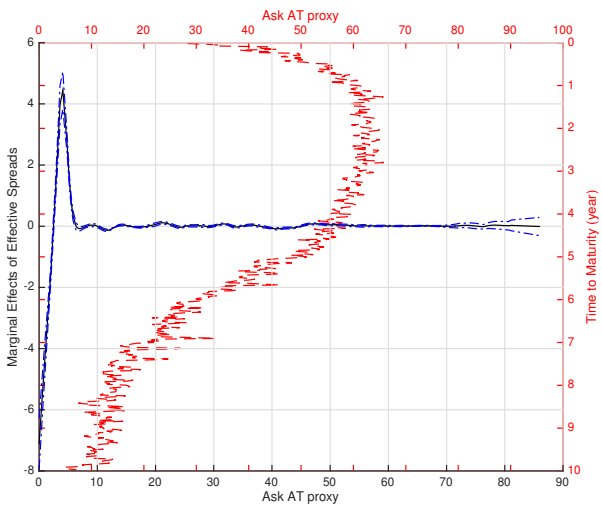
(c) Quoted Depth - Panel



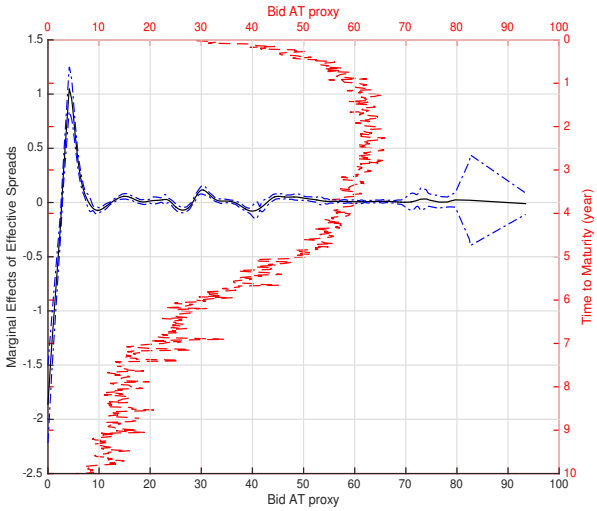
(d) Quoted Depth - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted depth in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted depth marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

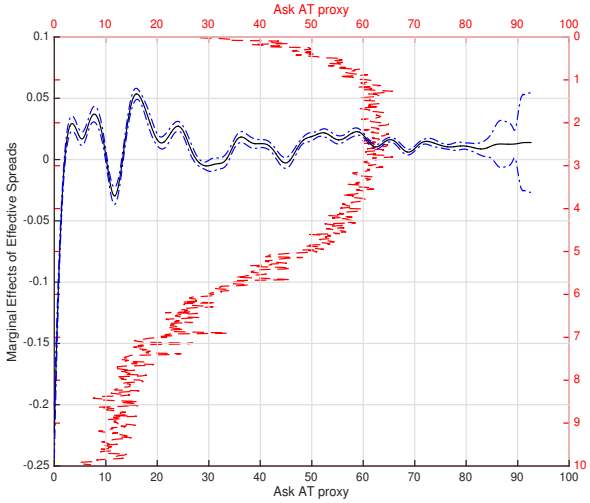
Figure B.118: Marginal Effects of Effective Spreads with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



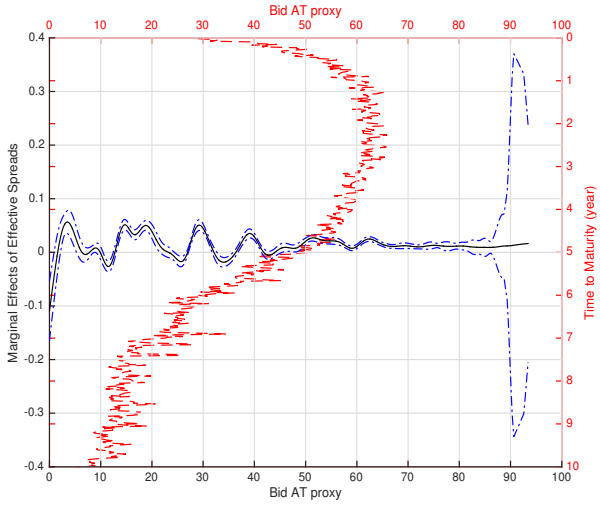
(a) Effective Spreads - VWA



(b) Effective Spreads - VWA



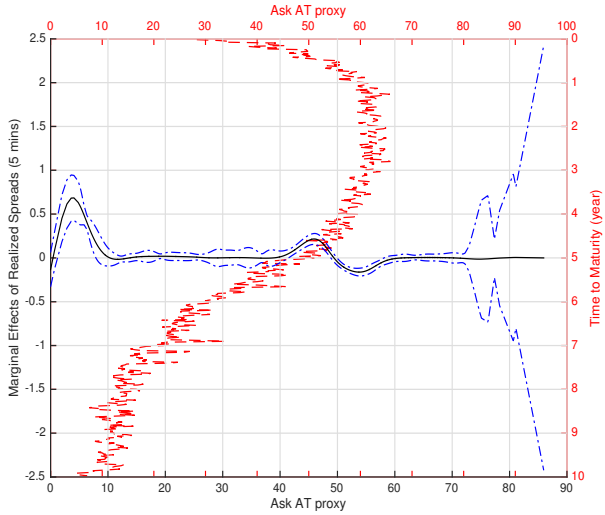
(c) Effective Spreads - Panel



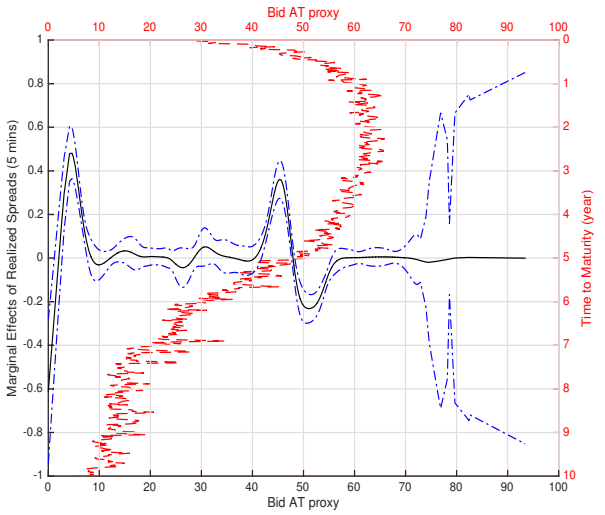
(d) Effective Spreads - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on effective spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of effective spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

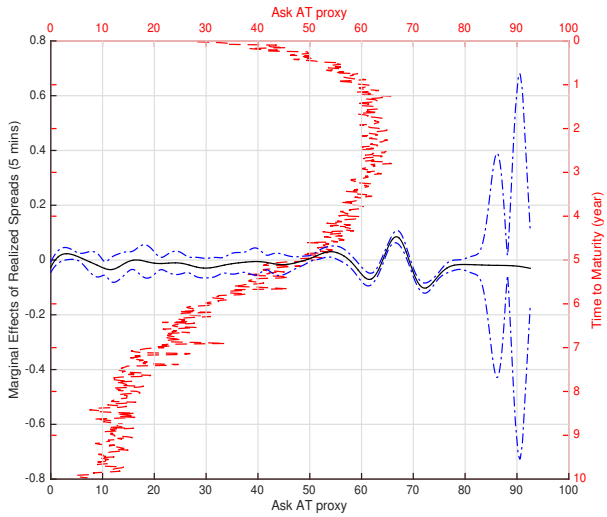
Figure B.119: Marginal Effects of Realized Spreads (5 mins) with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



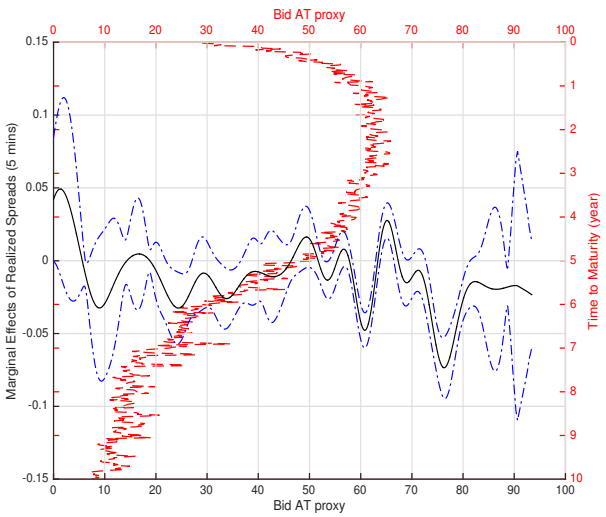
(a) Realized Spreads (5 mins) - VWA



(b) Realized Spreads (5 mins) - VWA



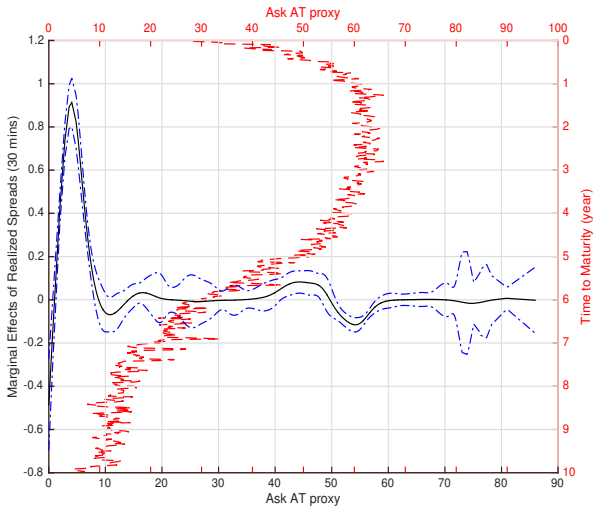
(c) Realized Spreads (5 mins) - Panel



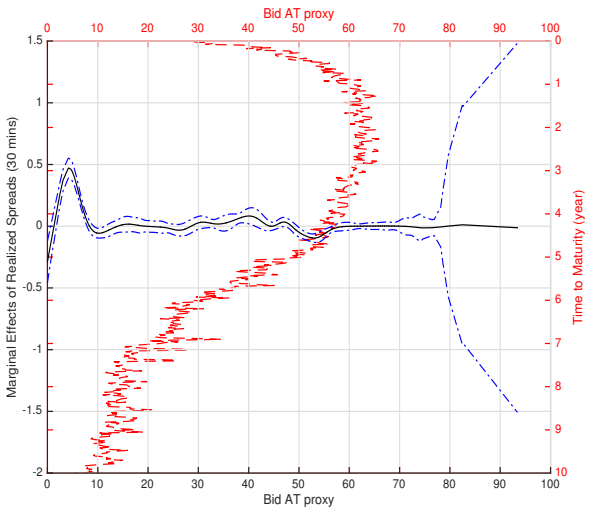
(d) Realized Spreads (5 mins) - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (5 mins) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

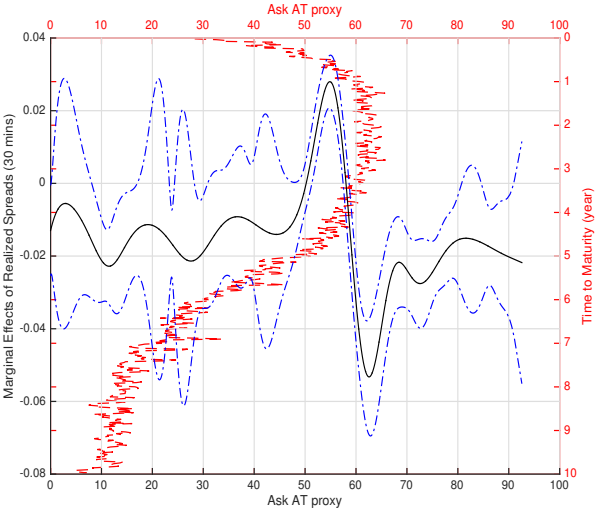
Figure B.120: Marginal Effects of Realized Spreads (30 mins) with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



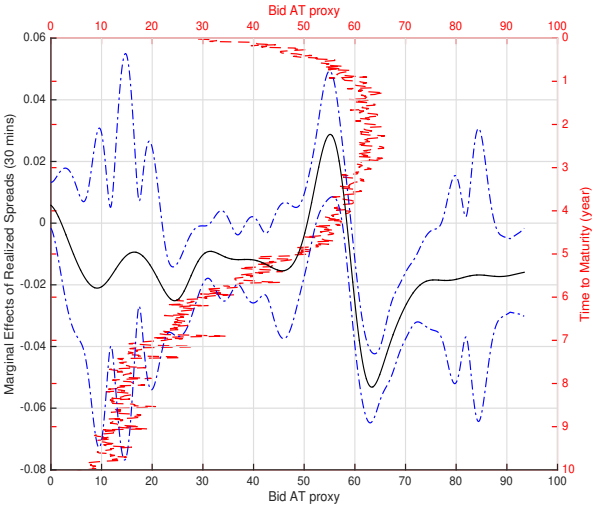
(a) Realized Spreads (30 mins) - VWA



(b) Realized Spreads (30 mins) - VWA



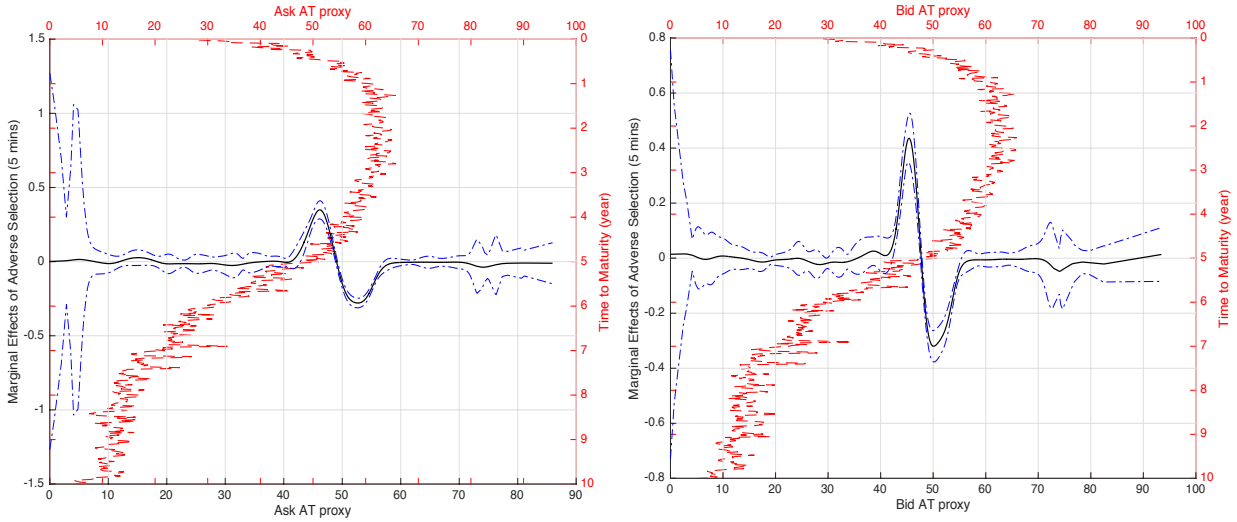
(c) Realized Spreads (30 mins) - Panel



(d) Realized Spreads (30 mins) - Panel

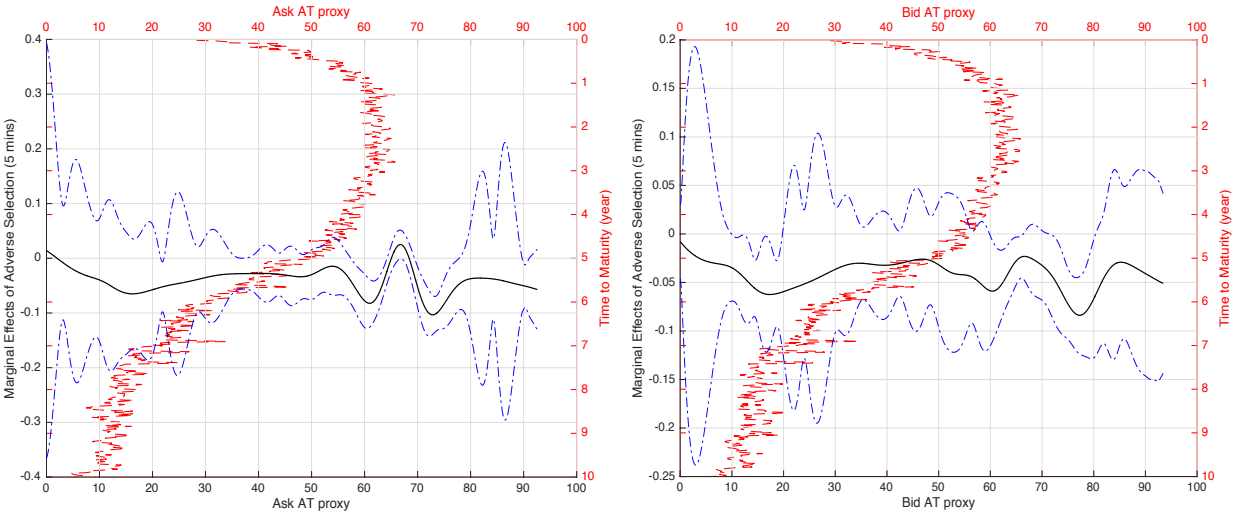
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (30 mins) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

Figure B.121: Marginal Effects of Adverse Selection (5 mins) with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



(a) Adverse Selection (5 mins) - VWA

(b) Adverse Selection (5 mins) - VWA

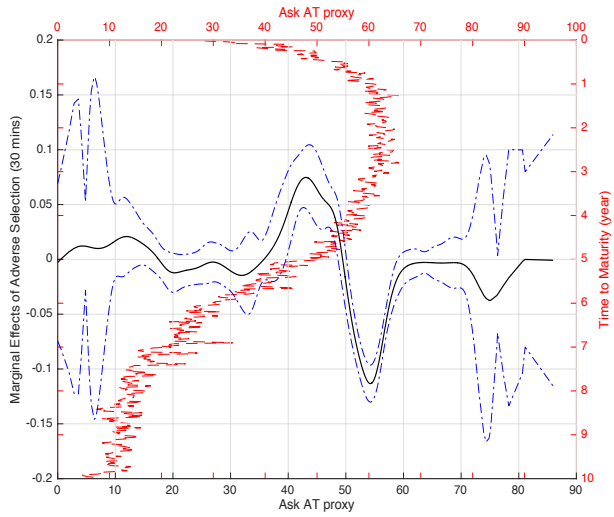


(c) Adverse Selection (5 mins) - Panel

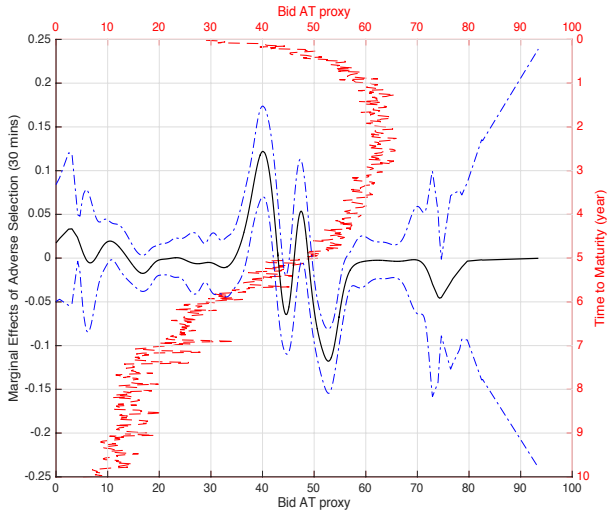
(d) Adverse Selection (5 mins) - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

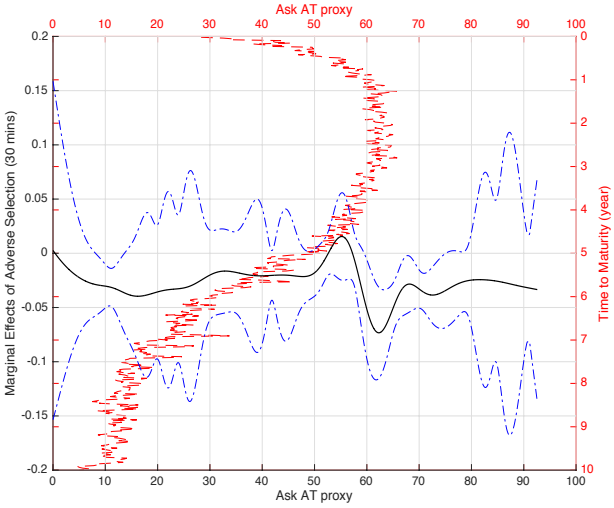
Figure B.122: Marginal Effects of Adverse Selection (30 mins) with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



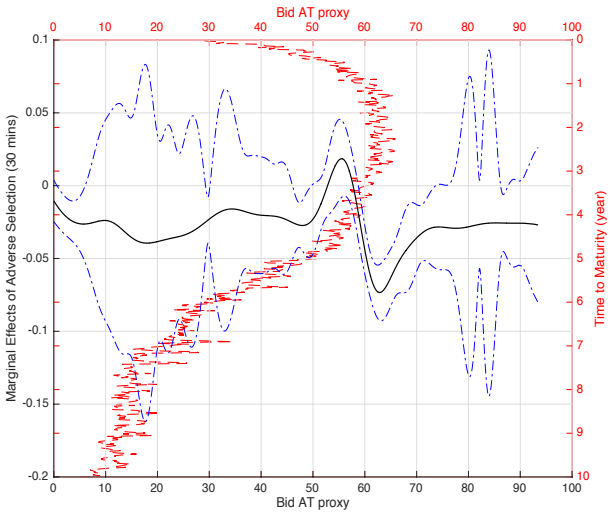
(a) Adverse Selection (30 mins) - VWA



(b) Adverse Selection (30 mins) - VWA



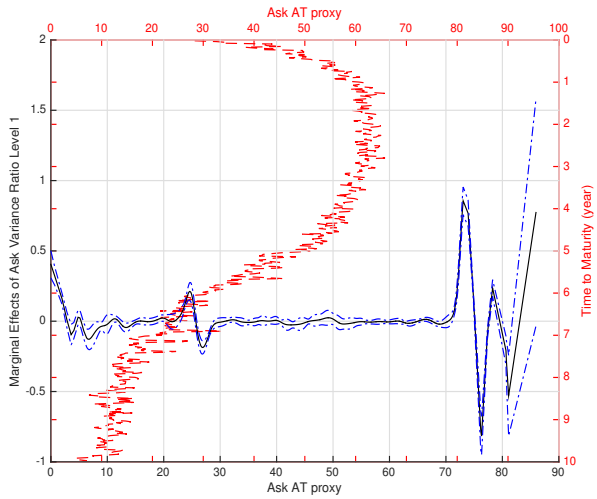
(c) Adverse Selection (30 mins) - Panel



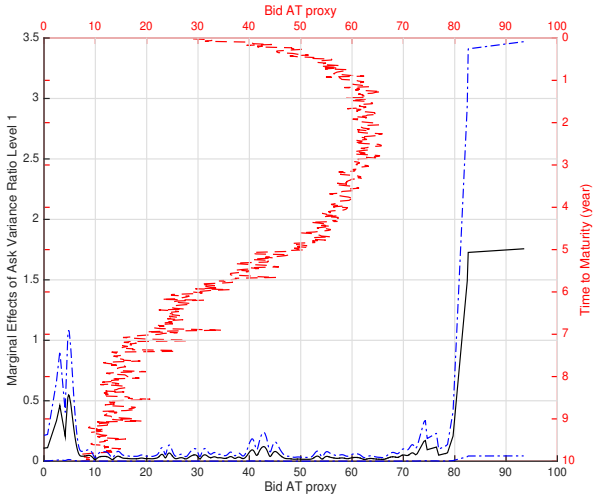
(d) Adverse Selection (30 mins) - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

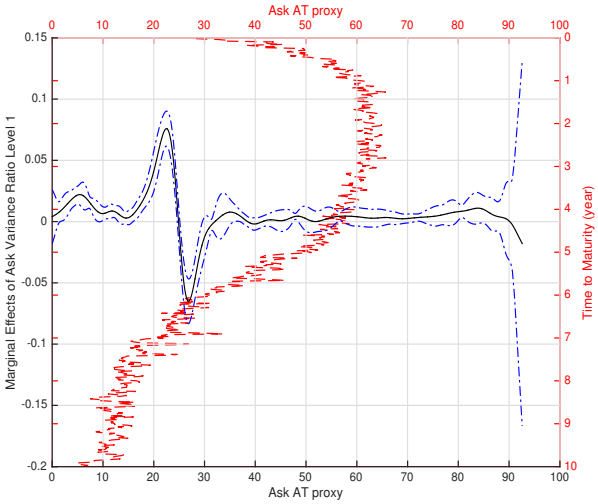
Figure B.123: Marginal Effects of Ask Variance Level 1 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



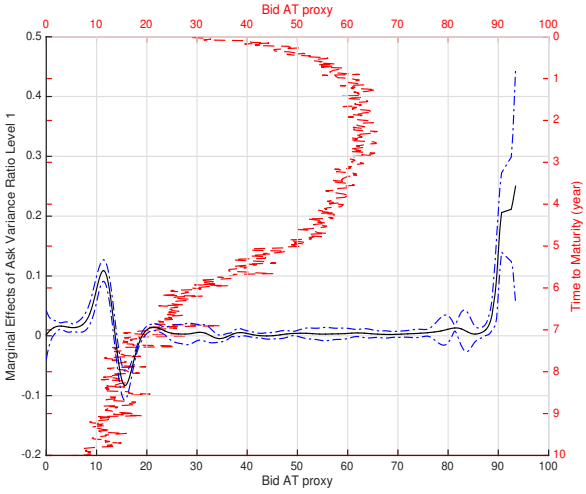
(a) Ask Variance Level 1 - VWA



(b) Ask Variance Level 1 - VWA



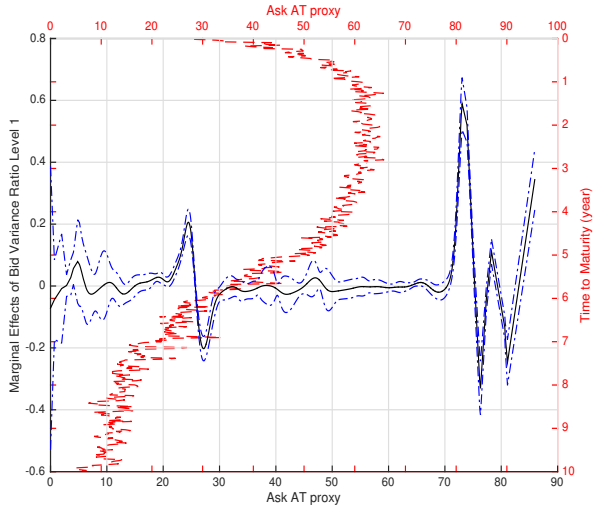
(c) Ask Variance Level 1 - Panel



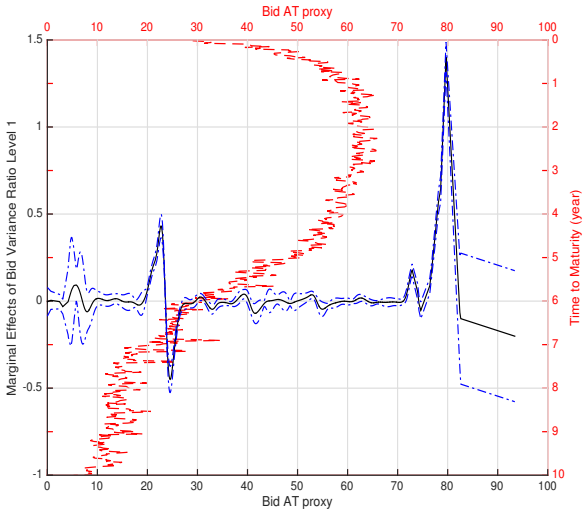
(d) Ask Variance Level 1 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

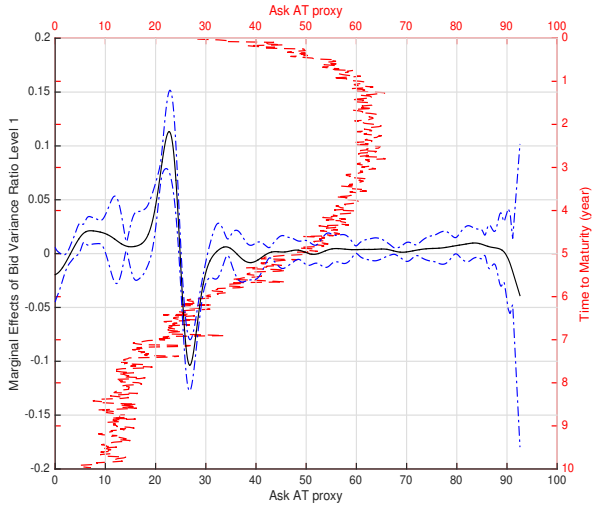
Figure B.124: Marginal Effects of Bid Variance Level 1 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



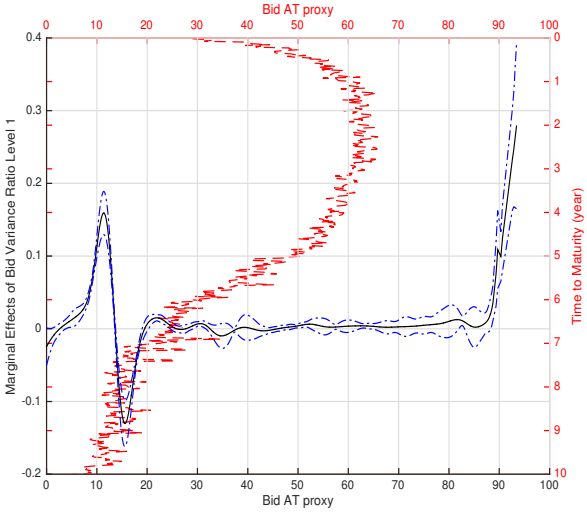
(a) Bid Variance Level 1 - VWA



(b) Bid Variance Level 1 - VWA



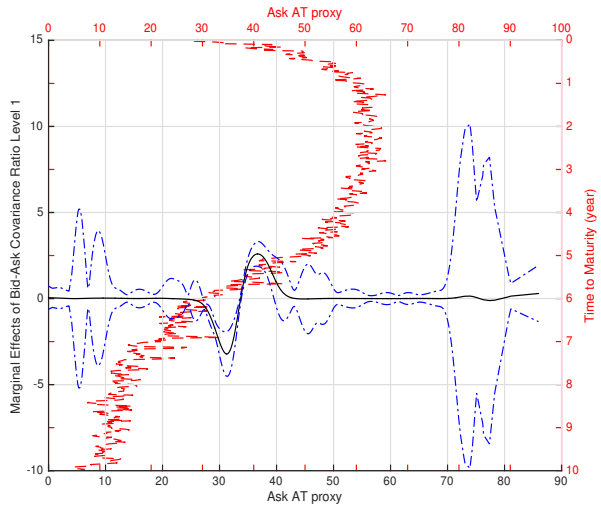
(c) Bid Variance Level 1 - Panel



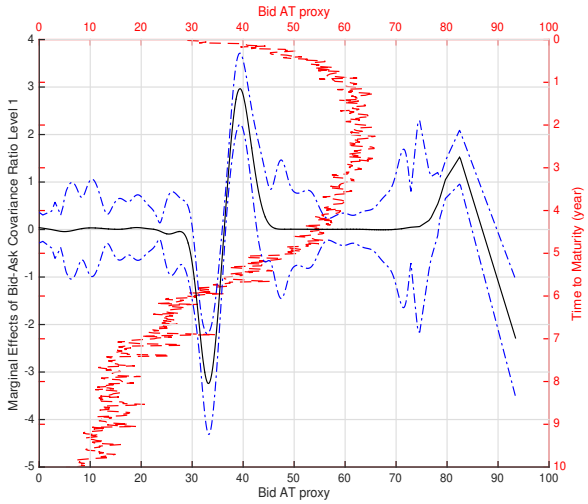
(d) Bid Variance Level 1 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

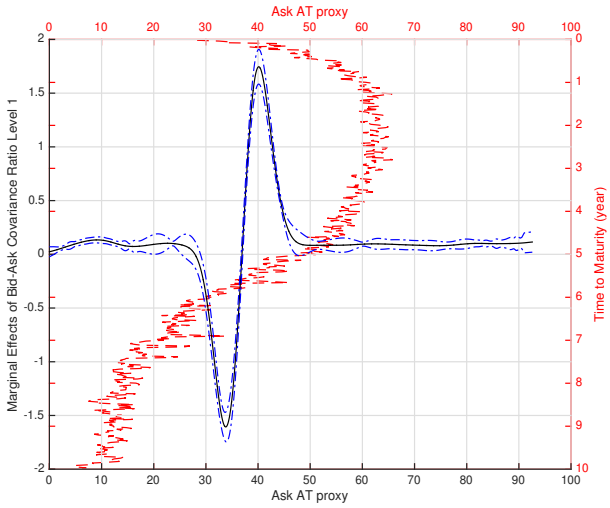
Figure B.125: Marginal Effects of Bid Ask Covariance Level 1 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



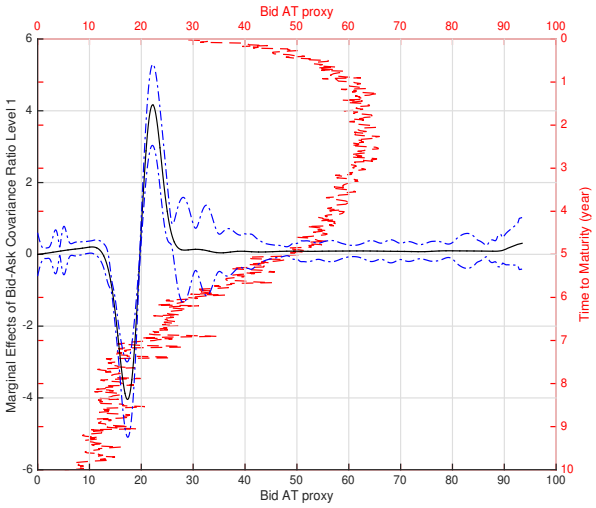
(a) Bid Ask Covariance Level 1 - VWA



(b) Bid Ask Covariance Level 1 - VWA



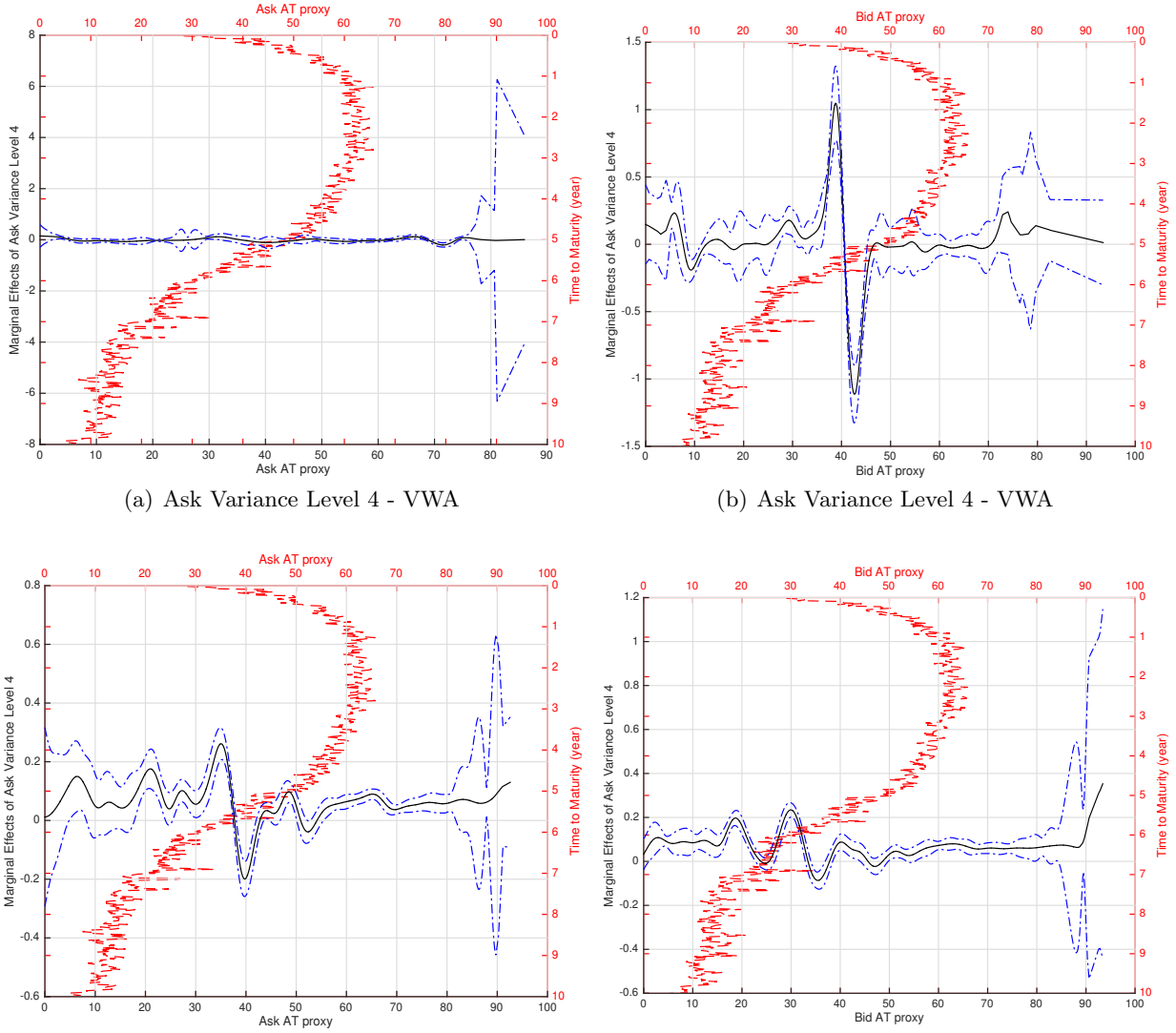
(c) Bid Ask Covariance Level 1 - Panel



(d) Bid Ask Covariance Level 1 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

Figure B.126: Marginal Effects of Ask Variance Level 4 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



(a) Ask Variance Level 4 - VWA

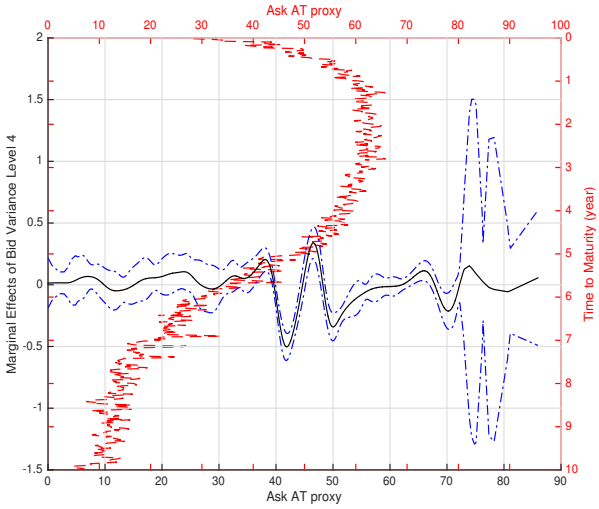
(b) Ask Variance Level 4 - VWA

(c) Ask Variance Level 4 - Panel

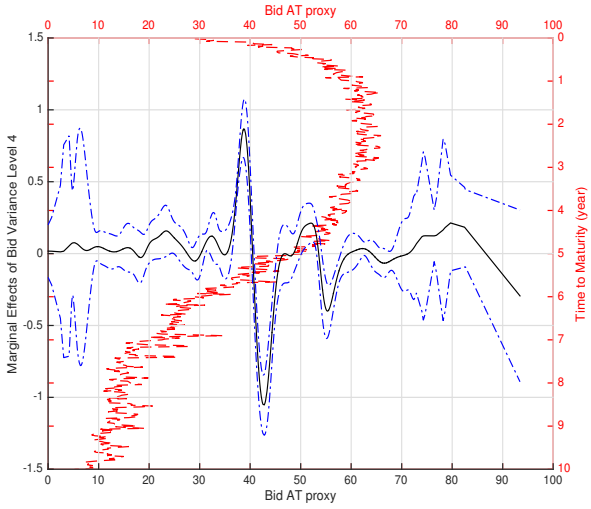
(d) Ask Variance Level 4 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

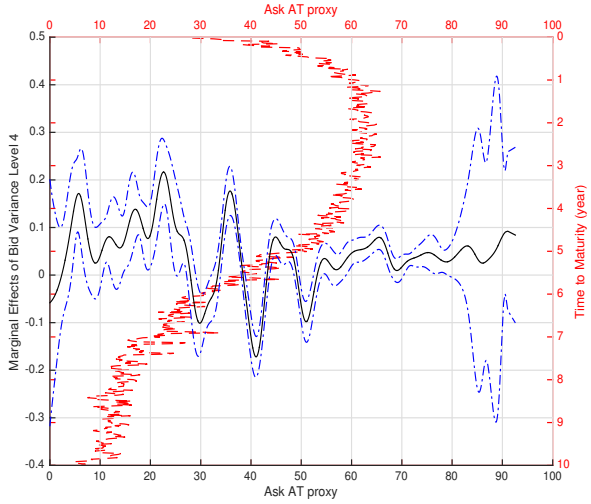
Figure B.127: Marginal Effects of Bid Variance Level 4 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



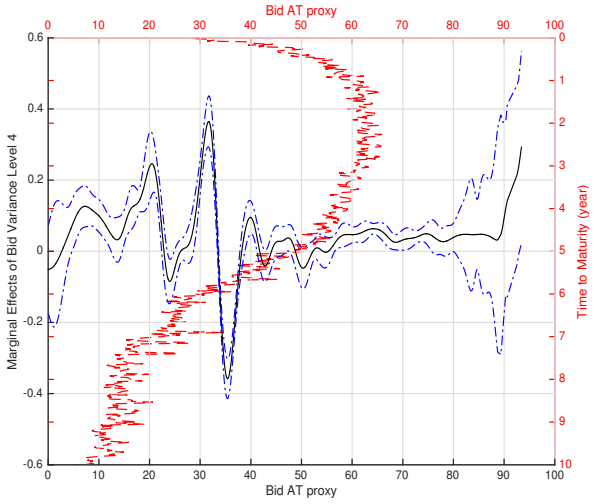
(a) Bid Variance Level 4 - VWA



(b) Bid Variance Level 4 - VWA



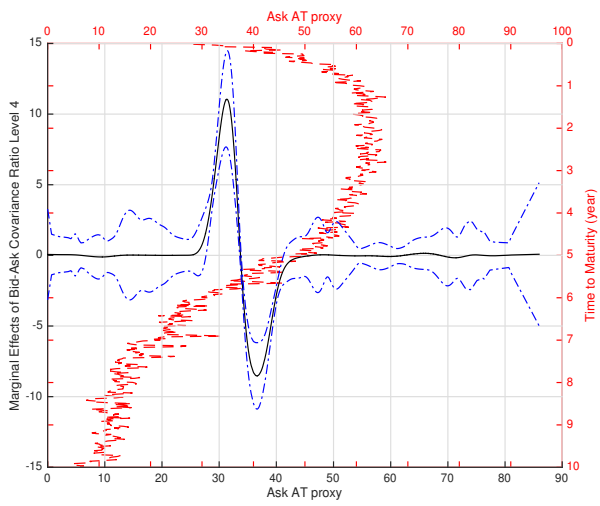
(c) Bid Variance Level 4 - Panel



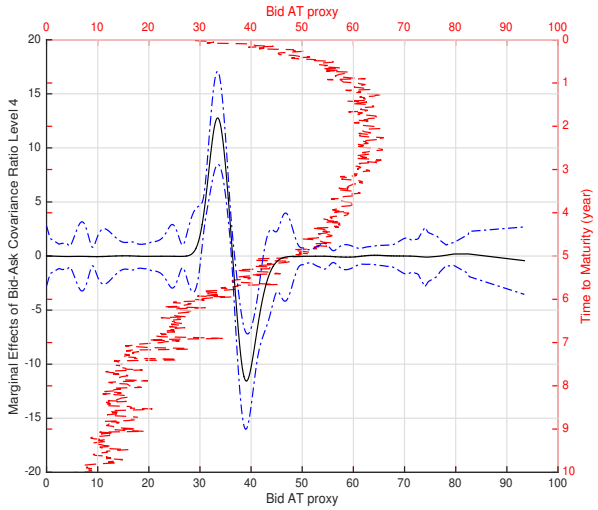
(d) Bid Variance Level 4 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

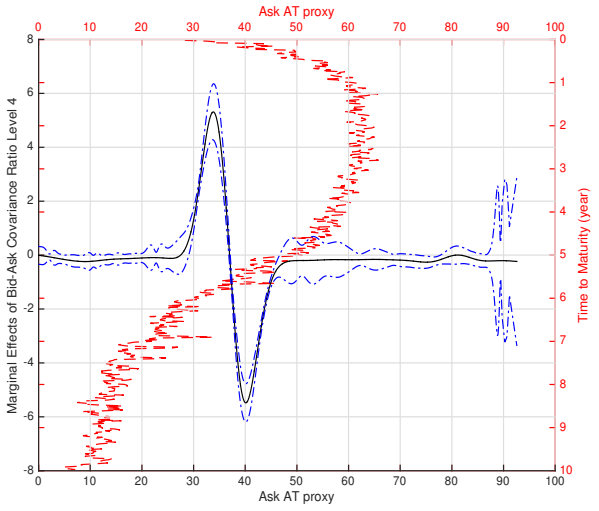
Figure B.128: Marginal Effects of Bid Ask Covariance Level 4 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



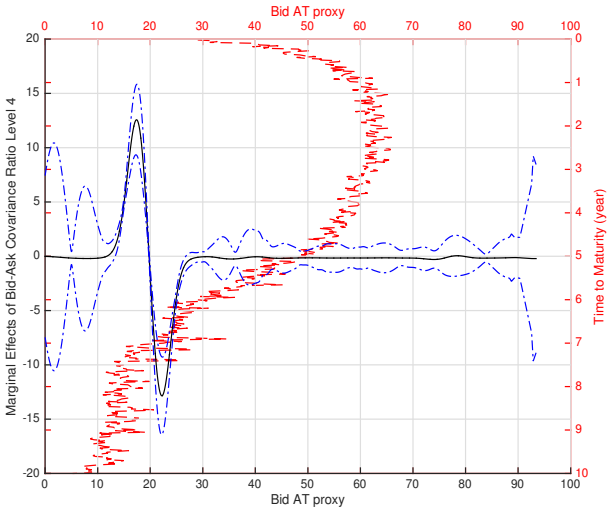
(a) Bid Ask Covariance Level 4 - VWA



(b) Bid Ask Covariance Level 4 - VWA



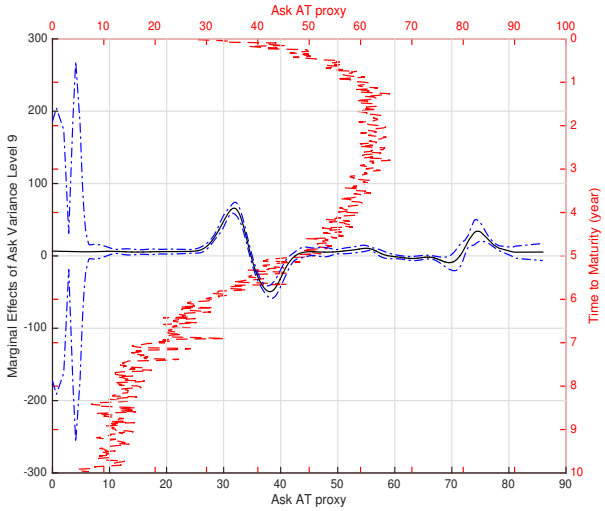
(c) Bid Ask Covariance Level 4 - Panel



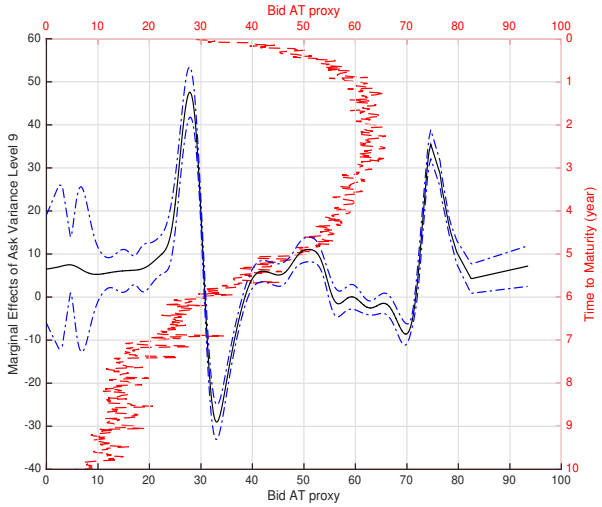
(d) Bid Ask Covariance Level 4 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

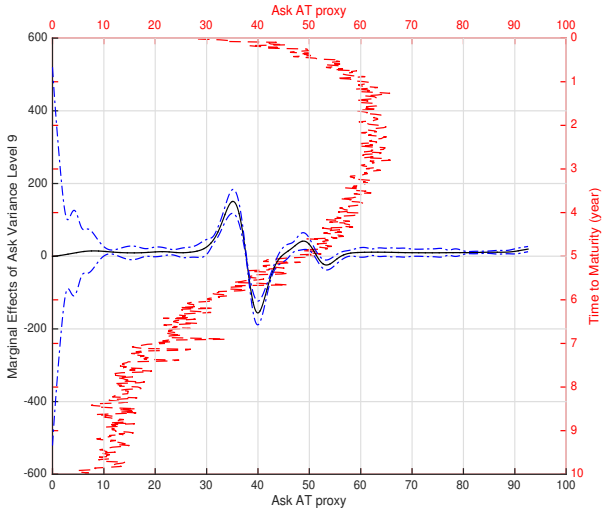
Figure B.129: Marginal Effects of Ask Variance Level 9 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



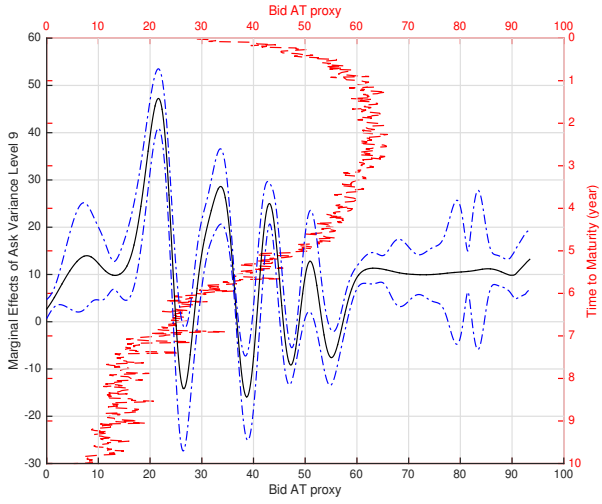
(a) Ask Variance Level 9 - VWA



(b) Ask Variance Level 9 - VWA



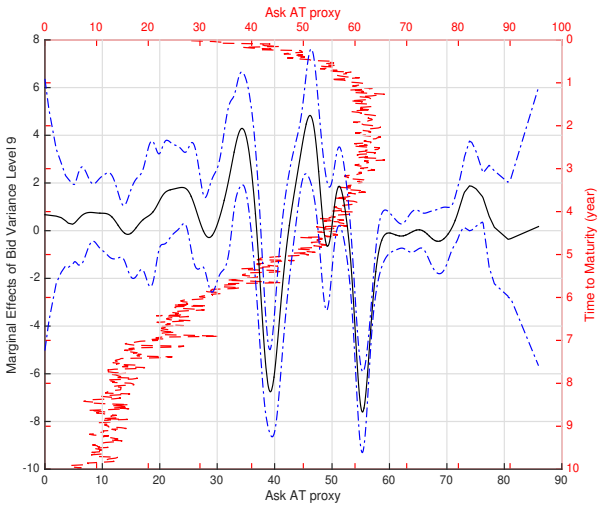
(c) Ask Variance Level 9 - Panel



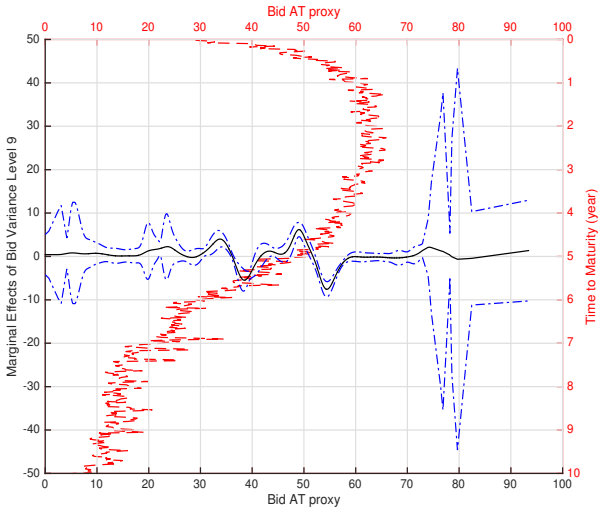
(d) Ask Variance Level 9 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

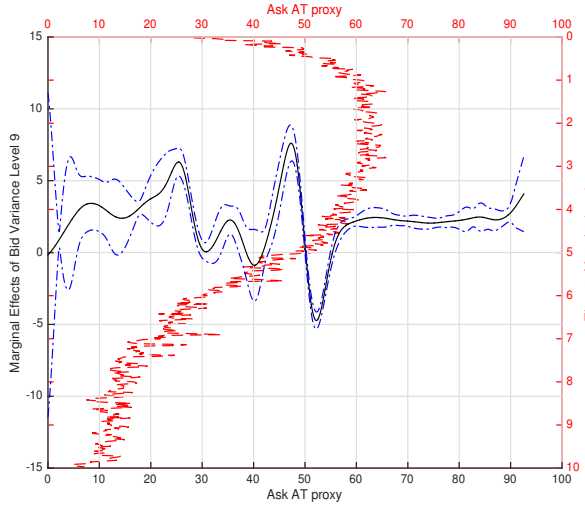
Figure B.130: Marginal Effects of Bid Variance Level 9 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



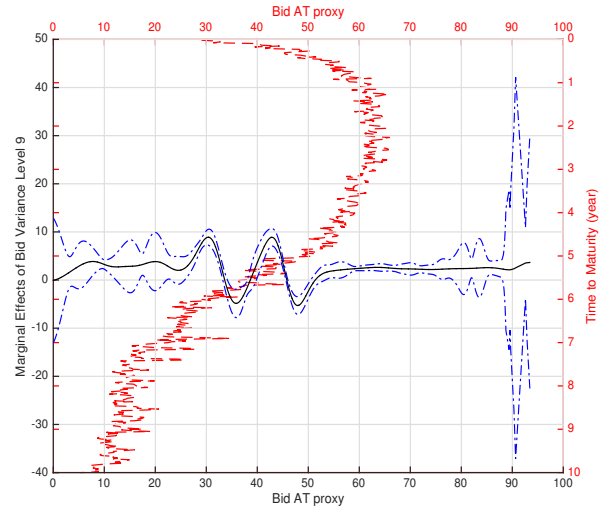
(a) Bid Variance Level 9 - VWA



(b) Bid Variance Level 9 - VWA



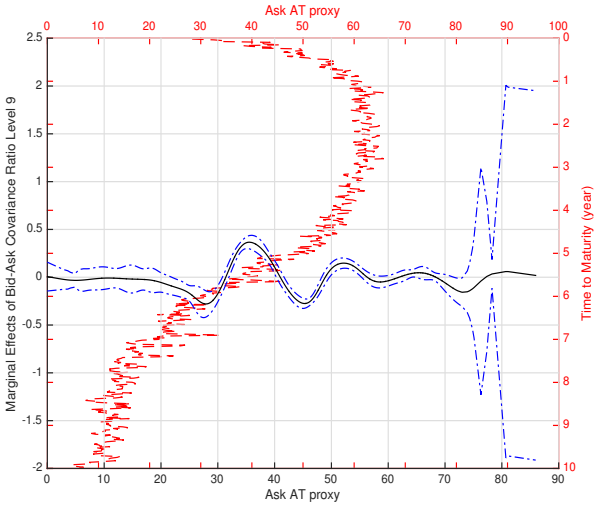
(c) Bid Variance Level 9 - Panel



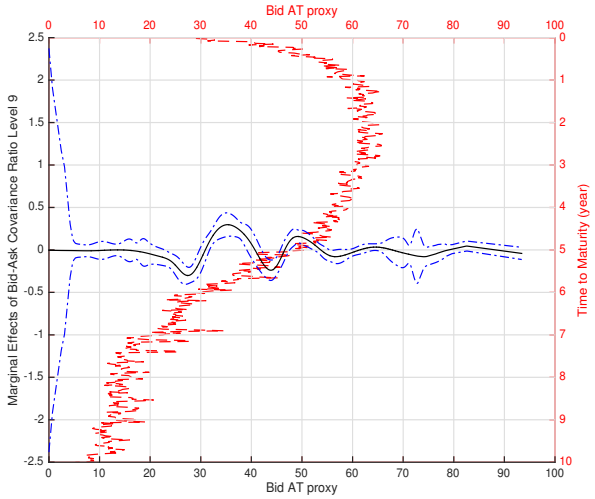
(d) Bid Variance Level 9 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

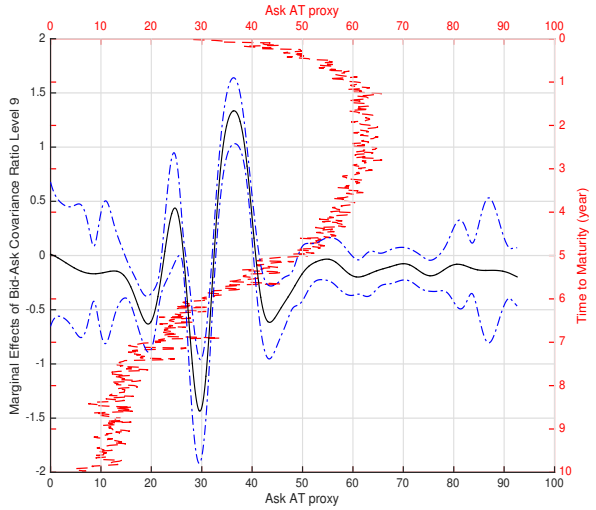
Figure B.131: Marginal Effects of Bid Ask Covariance Level 9 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 25 ms)



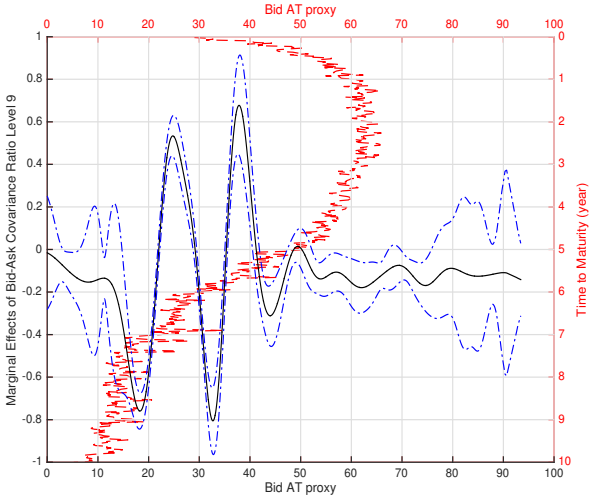
(a) Bid Ask Covariance Level 9 - VWA



(b) Bid Ask Covariance Level 9 - VWA



(c) Bid Ask Covariance Level 9 - Panel



(d) Bid Ask Covariance Level 9 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 25 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

Appendix B.3.4. Robust Check: The Semi-parametric Regressions with IV Volume-to-message Ratio (thresholded at 200ms)

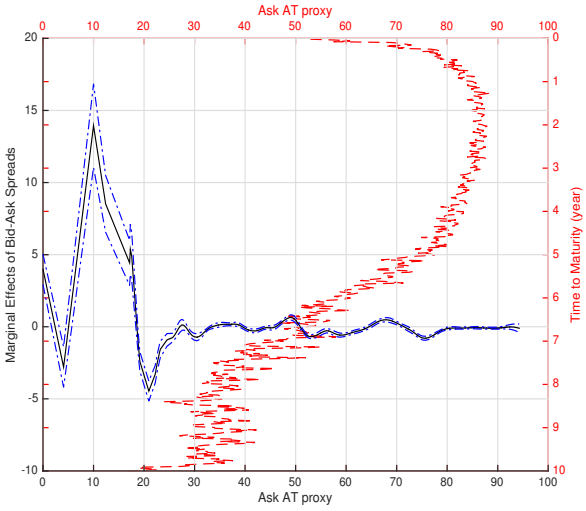
Table B.110: Robust Check: The Semi-parametric Regressions with IV Volume-to-message Ratio (thresholded at 200ms)

		Liqudity Measures								Variance Ratios								
		$\tilde{\mathscr{S}}^{Q}$	$\tilde{\mathscr{S}}^{Q^{1/2}}$	$\tilde{\mathscr{S}}^{D}$	$\tilde{\mathscr{S}}^{E}$	$\tilde{\mathscr{S}}^{R,5}$	$\tilde{\mathscr{S}}^{R,30}$	$\tilde{\mathscr{S}}^{AS,5}$	$\tilde{\mathscr{S}}^{AS,30}$	$\tilde{\mathscr{R}}_{A1}$	$\tilde{\mathscr{R}}_{B1}$	$\tilde{\mathscr{R}}_{AB1}$	$\tilde{\mathscr{R}}_{A4}$	$\tilde{\mathscr{R}}_{B4}$	$\tilde{\mathscr{R}}_{AB4}$	$\tilde{\mathscr{R}}_{A9}$	$\tilde{\mathscr{R}}_{B9}$	$\tilde{\mathscr{R}}_{AB9}$
Volume weighted average																		
	$L(Y_{i,t})$	0.349	0.349	0.753	-0.008	0.065	0.571	0.132	0.622	-0.008	-0.001	-0.009	-0.002	0.007	-0.004	0	0	0.004
		(19.04)**	(19.04)**	(81.47)**	-0.46	(3.19)**	(33.92)**	(6.42)**	(38.30)**	-0.4	-0.04	-0.44	-0.11	-0.35	-0.2	0	-0.01	-0.18
Ask	$W_{i,t}$	0.05	0.025	-0.311	-0.005	0	0.001	-0.004	-0.002	0.001	-0.011	-6.724	0	0.002	-0.273	-0.004	-0.012	0.01
AT Proxy		(4.23)**	(4.23)**	(24.12)**	(2.92)**	-0.02	-0.09	-0.55	-0.34	-0.44	-0.67	(3.30)**	-0.21	-0.16	-1.44	-0.04	-0.04	-0.32
	R^2	0.15	0.15	0.91	0	0	0.33	0.02	0.39	0	0	0	0	0	0	0	0	0
	N	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339
	$L(Y_{i,t})$	0.368	0.368	0.759	0.103	0.074	0.578	0.133	0.624	-0.012	-0.003	-0.009	-0.005	0.005	-0.003	-0.009	-0.009	0.004
		(19.52)**	(19.52)**	(83.69)**	(5.01)**	(3.60)**	(34.25)**	(6.50)**	(38.47)**	-0.56	-0.14	-0.44	-0.24	-0.25	-0.14	-0.42	-0.46	-0.18
Bid	$W_{i,t}$	0.049	0.024	-0.299	-0.005	0.001	0.001	-0.006	-0.003	0	-0.013	-7.149	0	0	-0.306	-0.009	0.007	0.008
AT Proxy		(4.05)**	(4.05)**	(23.96)**	(2.23)*	-0.15	-0.16	-0.74	-0.41	-0.27	-0.86	(3.59)**	-0.18	-0.03	-1.65	-0.1	-0.02	-0.26
	R^2	0.15	0.15	0.91	0.01	0.01	0.33	0.02	0.39	0	0	0.01	0	0	0	0	0	0
	N	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339	2,339
Panel																		
	$L(Y_{i,t})$	0.739	0.739	0.889	0.601	0.074	0.59	0.131	0.613	0.004	0.045	0.001	0.002	0.121	0.002	0	0	0.006
		(207.17)**	(207.17)**	(373.68)**	(141.75)**	(13.97)**	(137.79)**	(24.96)**	(146.23)**	-0.78	(8.46)**	-0.21	-0.42	(23.07)**	-0.42	0	-0.01	-1.07
Ask	$W_{i,t}$	0.083	0.041	-0.311	-0.009	0.018	0.015	-0.036	-0.023	-0.009	-0.067	-10.034	-0.008	-0.048	-2.332	-0.097	0.173	0.104
AT Proxy		(7.00)**	(6.99)**	(20.34)**	(7.47)**	-1.13	-1.07	(2.30)*	-1.62	(4.45)**	(9.58)**	(2.65)**	(3.06)**	(7.61)**	(5.58)**	-0.89	-0.5	-1.43
	R^2	0.55	0.55	0.83	0.37	0.01	0.35	0.02	0.38	0	0	0	0	0.02	0	0	0	0
	N	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491
	$L(Y_{i,t})$	0.739	0.739	0.89	0.601	0.074	0.59	0.131	0.613	0.005	0.044	0.001	0.003	0.12	0.002	0	0	0.006
		(207.40)**	(207.40)**	(374.04)**	(141.63)**	(13.98)**	(137.80)**	(24.97)**	(146.25)**	-0.87	(8.32)**	-0.2	-0.5	(22.87)**	-0.35	-0.01	0	-1.12
Bid	$W_{i,t}$	0.088	0.044	-0.325	-0.01	0.018	0.016	-0.038	-0.024	-0.009	-0.071	-10.353	-0.009	-0.049	-2.402	-0.052	0.025	0.101
AT Proxy		(7.06)**	(7.06)**	(20.29)**	(7.50)**	-1.09	-1.09	(2.28)*	-1.65	(4.47)**	(9.61)**	(2.61)**	(3.13)**	(7.42)**	(5.48)**	-0.46	-0.07	-1.31
	R^2	0.55	0.55	0.83	0.37	0.01	0.35	0.02	0.38	0	0	0	0	0.02	0	0	0	0
	N	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491	35,491

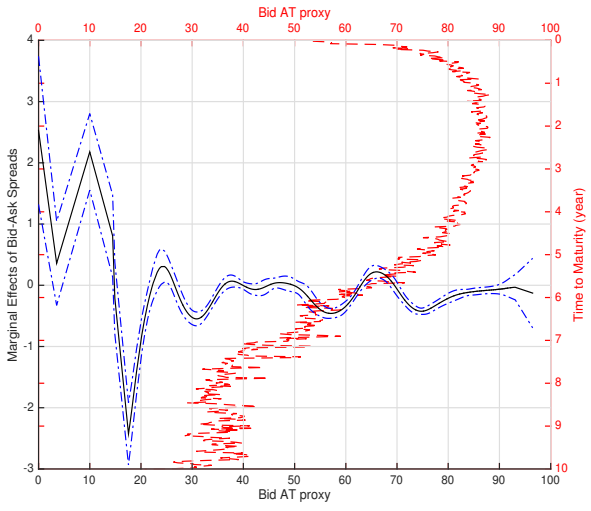
* p <0.05; ** p<0.01

Notes: This table illustrates coefficients estimate results from the semi-parametric regression: $Y_{i,t} = X_{i,t}\beta + \mathscr{G}(Z_{i,t}) + \varepsilon_{i,t}$, where $Y_{i,t}$ is our measure of execution risk/market quality for the i contract type for day t, $X_{i,t}$ are our $k = 2$ linear regressors, $Z_{i,t}$ is our $p = 1$ algorithmic trading proxy thresholded at 200 milliseconds, and $W_{i,t}$ is a set of instrumental variables, where $\mathbb{E}[\varepsilon_{i,t}|W_{i,t}] = 0$. Flattening the data set to an index $i \in \{1, \ldots, N\}$, where N is the total number of day-contracts and the index i represents the set of N tuples of (i, t) contract-days. In this table, the dependent variables measuring the execution risk $Y_{i,t}$ are reported into two groups: liquidity measures and variance/covariance ratios. Liquidity measurements contain the bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads 5 minutes ($\tilde{\mathscr{S}}^{R,5}$), realized spreads 30 minutes ($\tilde{\mathscr{S}}^{R,30}$), adverse selection 5 minutes ($\tilde{\mathscr{S}}^{AS,5}$) and adverse selection 30 minutes ($\tilde{\mathscr{S}}^{AS,30}$). Variance/covariance ratios include ask variance ratios ($\tilde{\mathscr{R}}_{A}$), bid variance ratios ($\tilde{\mathscr{R}}_{B}$) and bid-ask covariance ratios ($\tilde{\mathscr{R}}_{AB}$) at level 1, level 4 and level 9. The lagged one dependent variable is denoted as $L(Y_{i,t})$. Instrumental variables are adopted to deal with the endogeneity problems, named as $W_{i,t}$. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

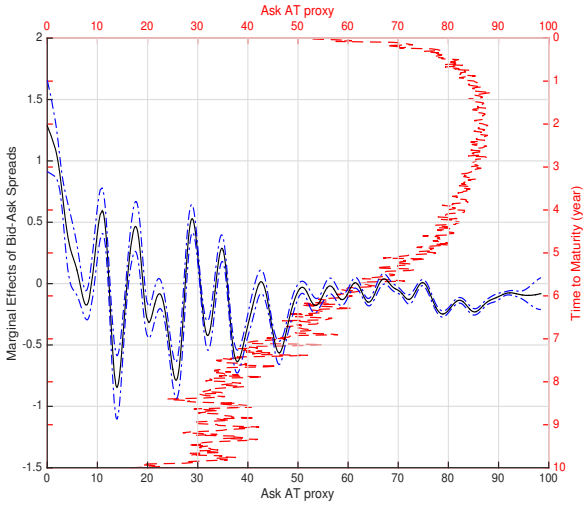
Figure B.132: Marginal Effects of Bid-Ask Spreads with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



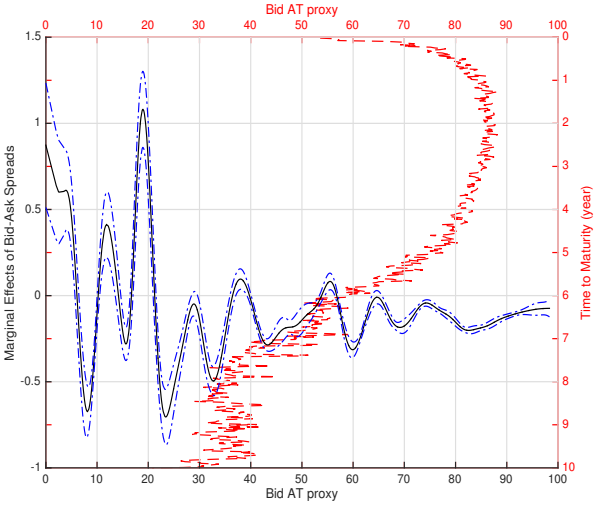
(a) Bid-Ask Spreads - VWA



(b) Bid-Ask Spreads - VWA



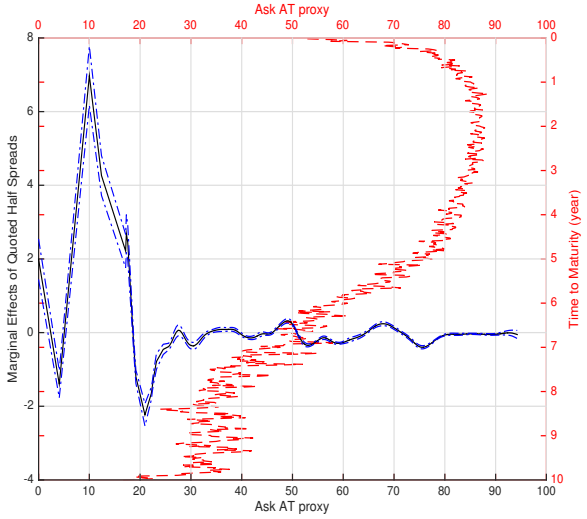
(c) Bid-Ask Spreads - Panel



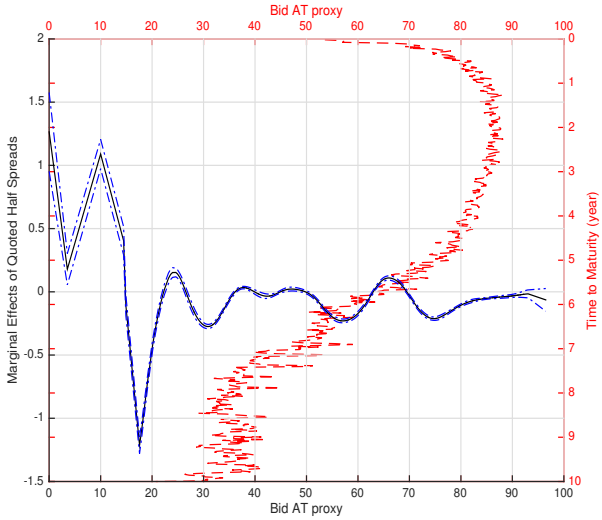
(d) Bid-Ask Spreads - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of bid-ask spreads marginal effects. Volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

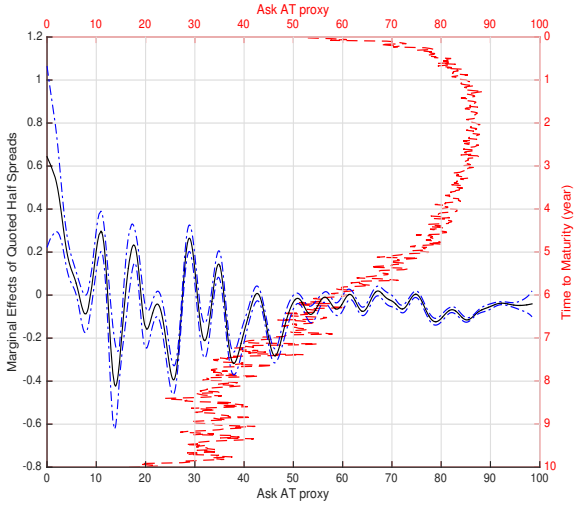
Figure B.133: Marginal Effects of Quoted Half Spreads with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



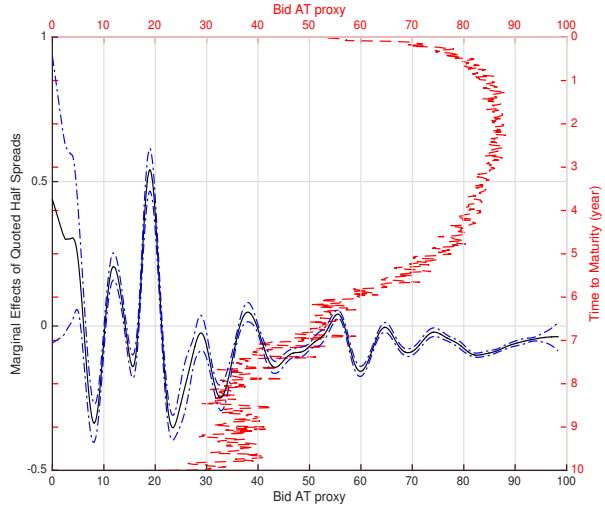
(a) Quoted Half Spreads - VWA



(b) Quoted Half Spreads - VWA



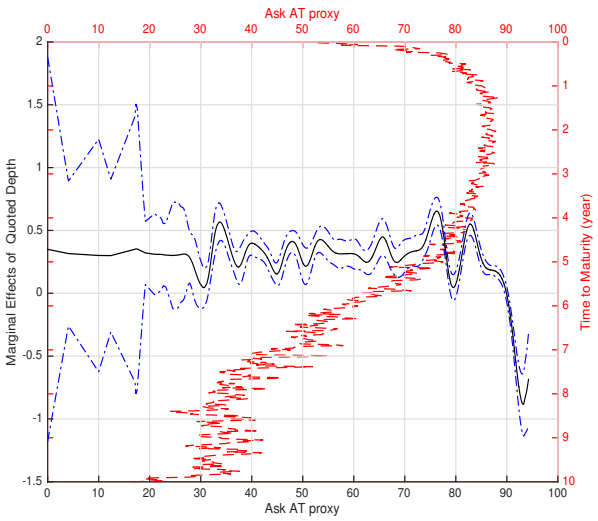
(c) Quoted Half Spreads - Panel



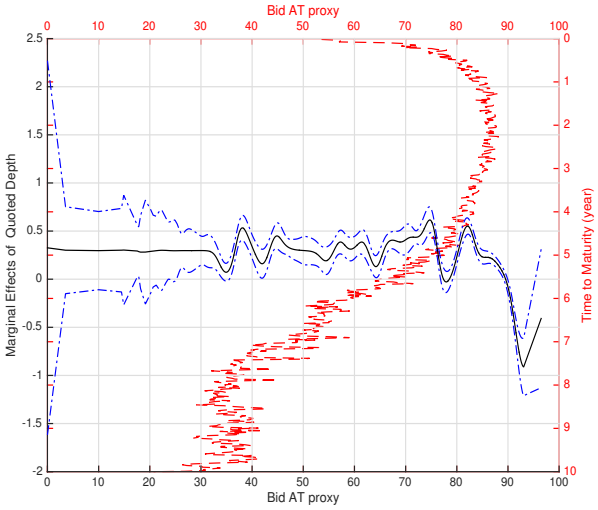
(d) Quoted Half Spreads - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted half spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted half spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

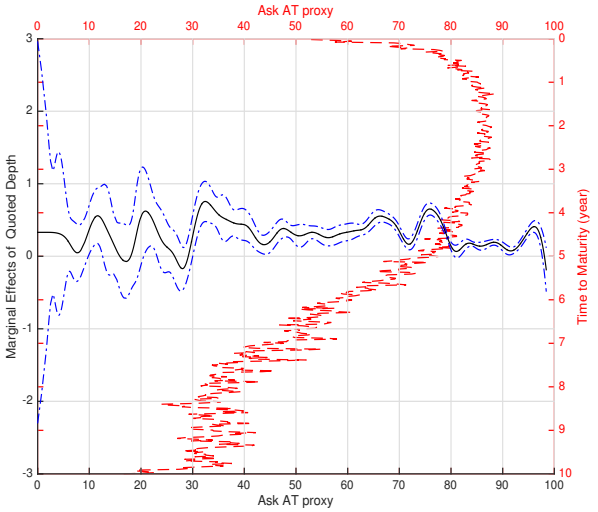
Figure B.134: Marginal Effects of Quoted Depth with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



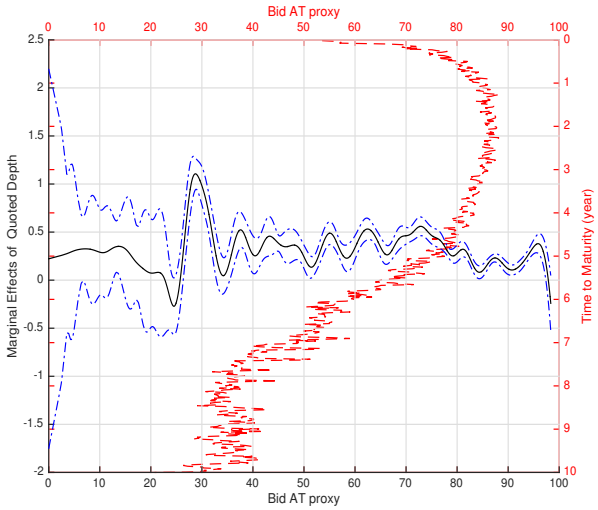
(a) Quoted Depth - VWA



(b) Quoted Depth - VWA



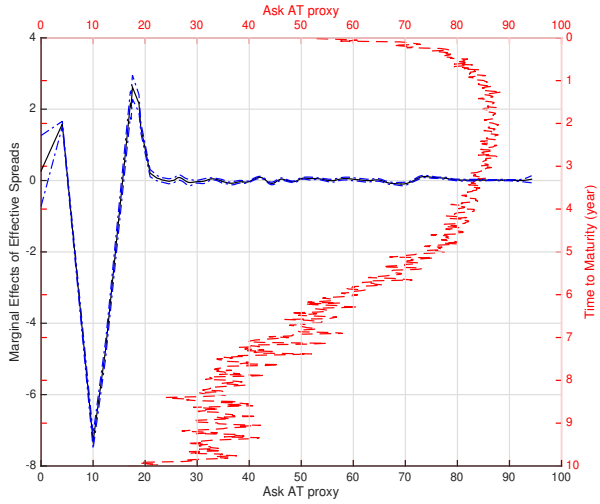
(c) Quoted Depth - Panel



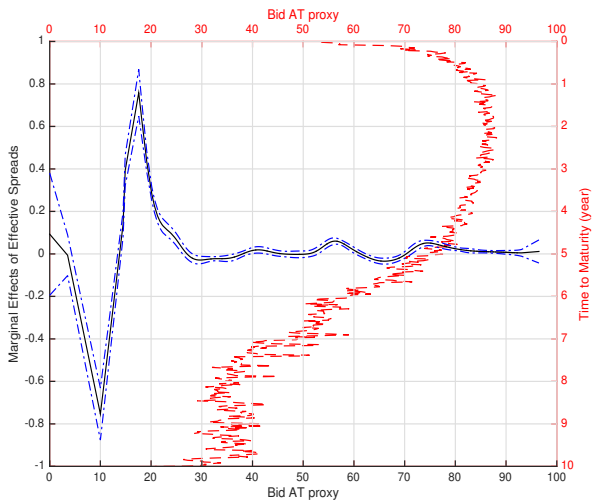
(d) Quoted Depth - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on quoted depth in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of quoted depth marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

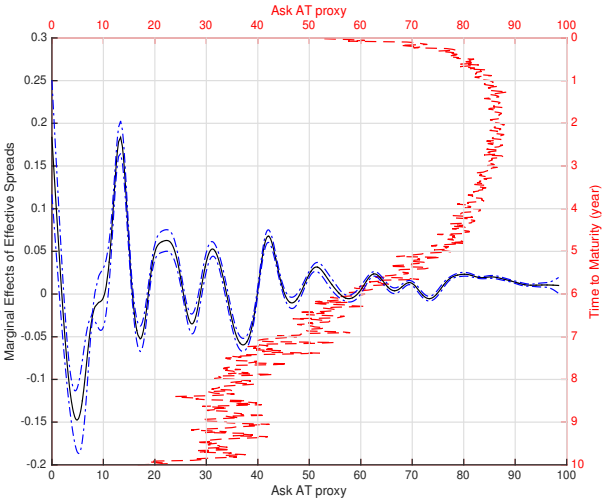
Figure B.135: Marginal Effects of Effective Spreads with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



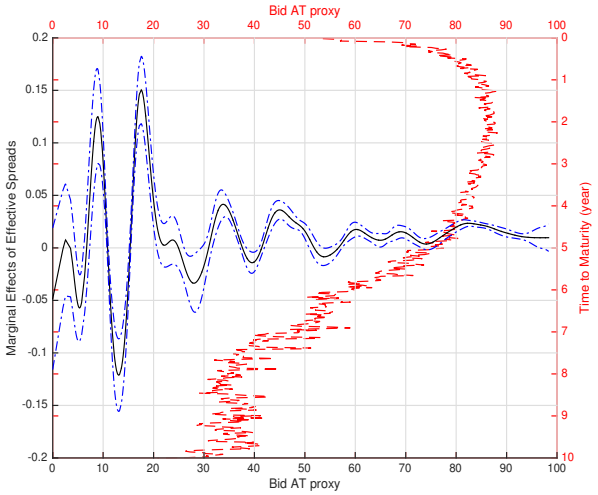
(a) Effective Spreads - VWA



(b) Effective Spreads - VWA



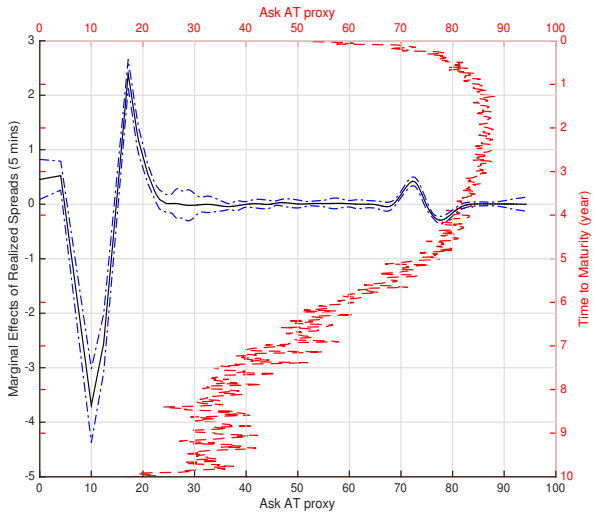
(c) Effective Spreads - Panel



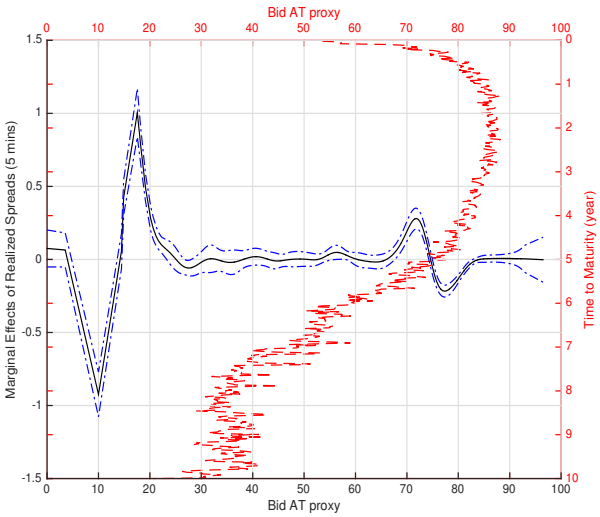
(d) Effective Spreads - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on effective spreads in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of effective spreads marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

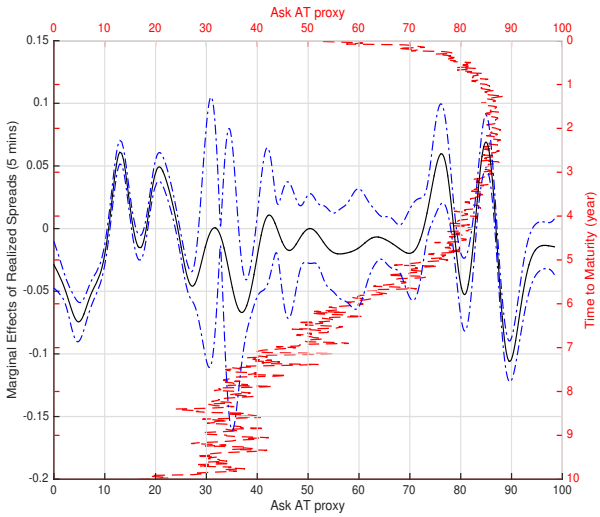
Figure B.136: Marginal Effects of Realized Spreads (5 mins) with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



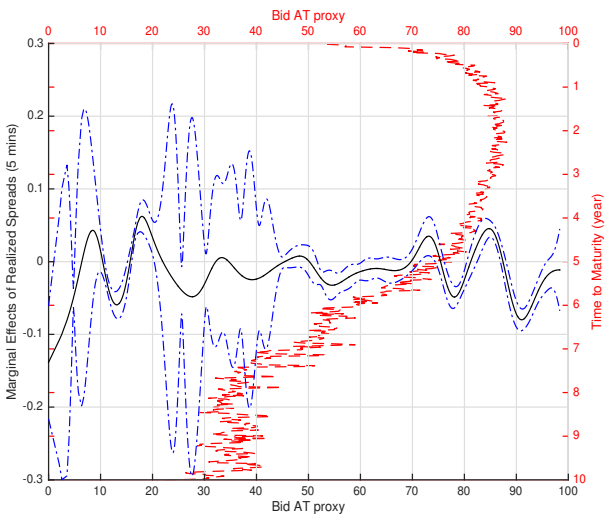
(a) Realized Spreads (5 mins) - VWA



(b) Realized Spreads (5 mins) - VWA



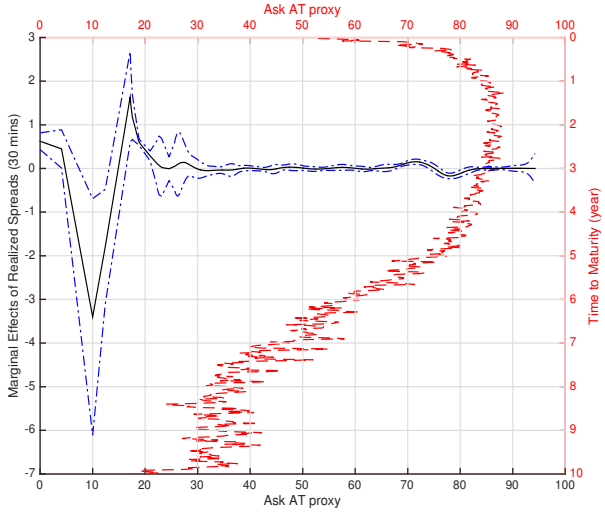
(c) Realized Spreads (5 mins) - Panel



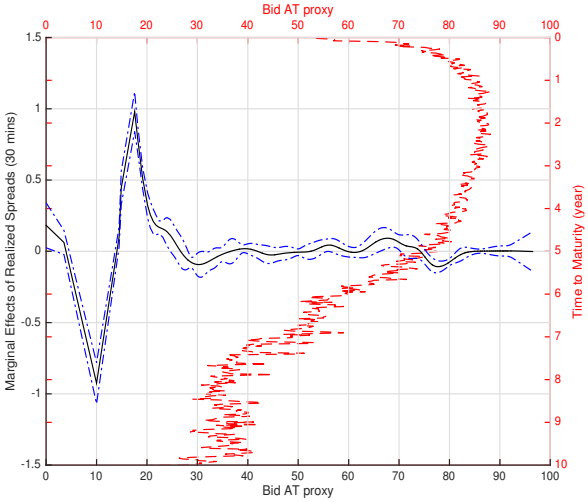
(d) Realized Spreads (5 mins) - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (5 mins) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

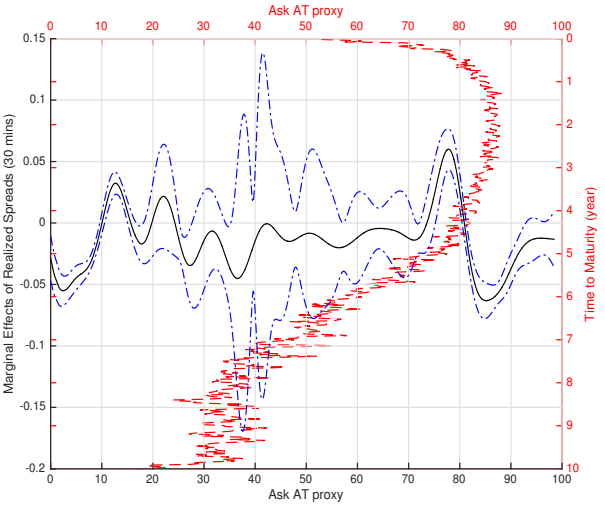
Figure B.137: Marginal Effects of Realized Spreads (30 mins) with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



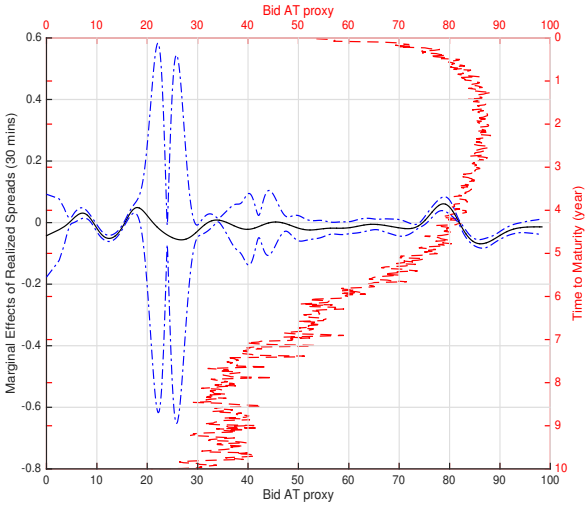
(a) Realized Spreads (30 mins) - VWA



(b) Realized Spreads (30 mins) - VWA



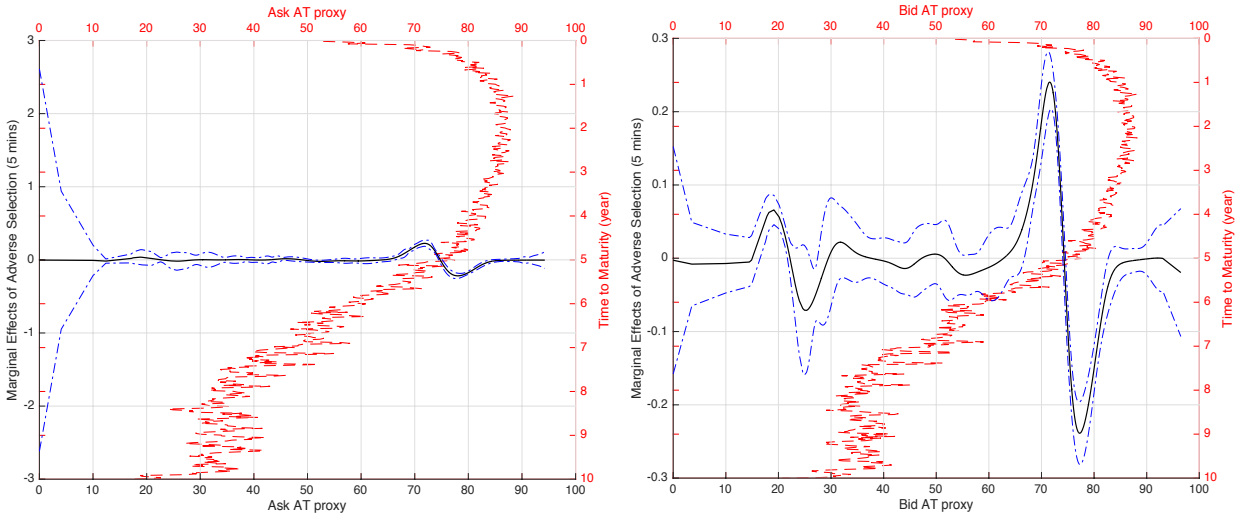
(c) Realized Spreads (30 mins) - Panel



(d) Realized Spreads (30 mins) - Panel

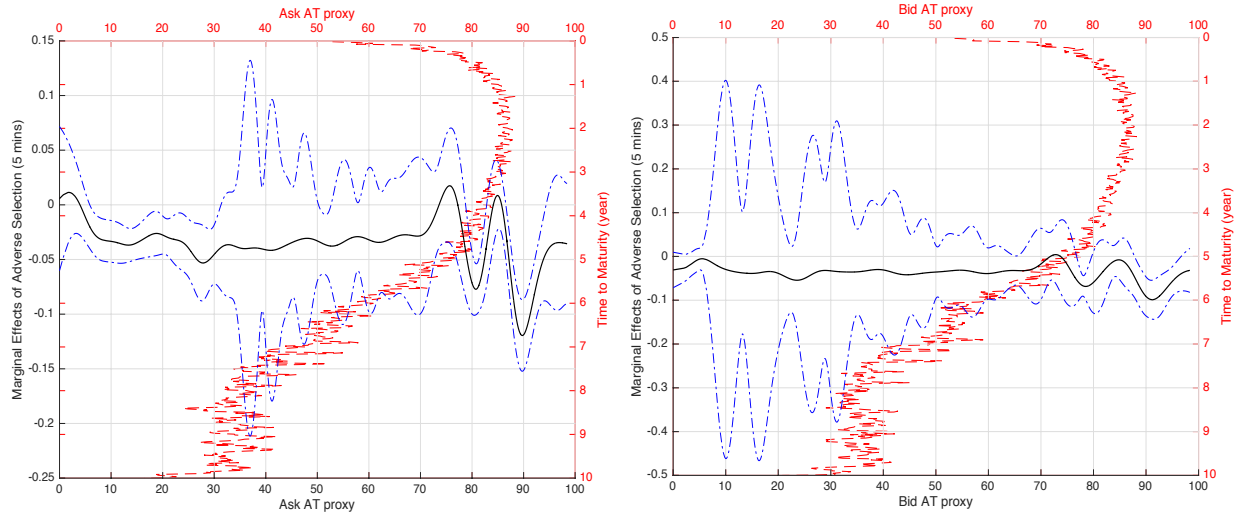
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on realized spreads (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of realized spreads (30 mins) marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

Figure B.138: Marginal Effects of Adverse Selection (5 mins) with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



(a) Adverse Selection (5 mins) - VWA

(b) Adverse Selection (5 mins) - VWA

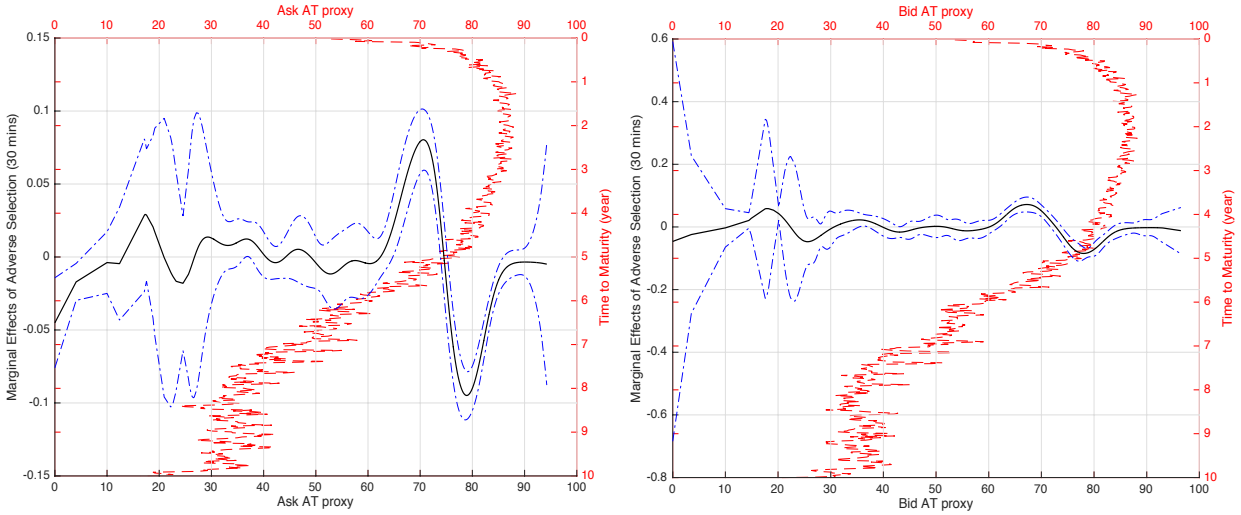


(c) Adverse Selection (5 mins) - Panel

(d) Adverse Selection (5 mins) - Panel

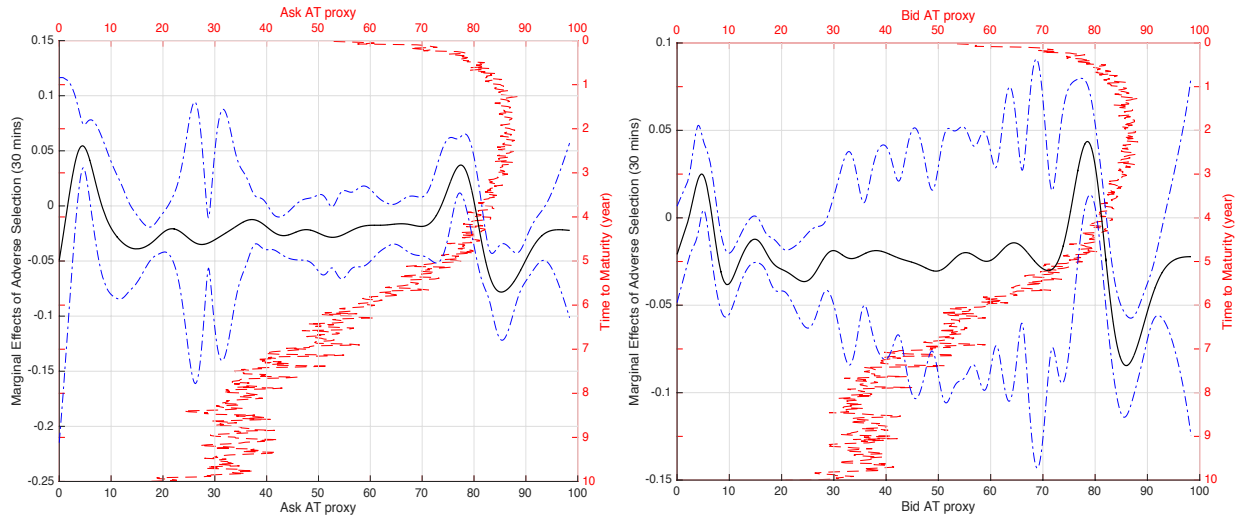
Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (5 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

Figure B.139: Marginal Effects of Adverse Selection (30 mins) with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



(a) Adverse Selection (30 mins) - VWA

(b) Adverse Selection (30 mins) - VWA

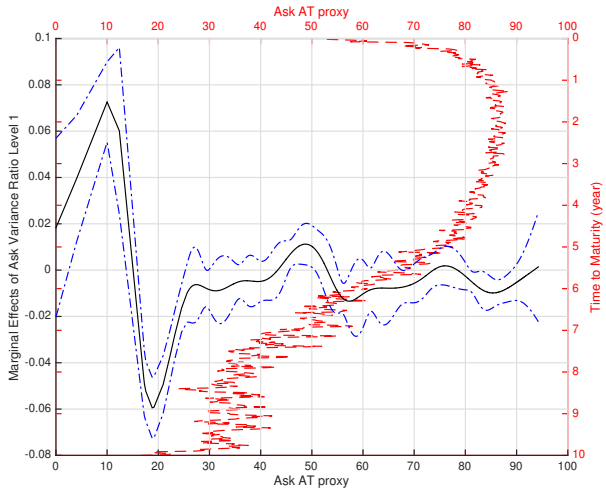


(c) Adverse Selection (30 mins) - Panel

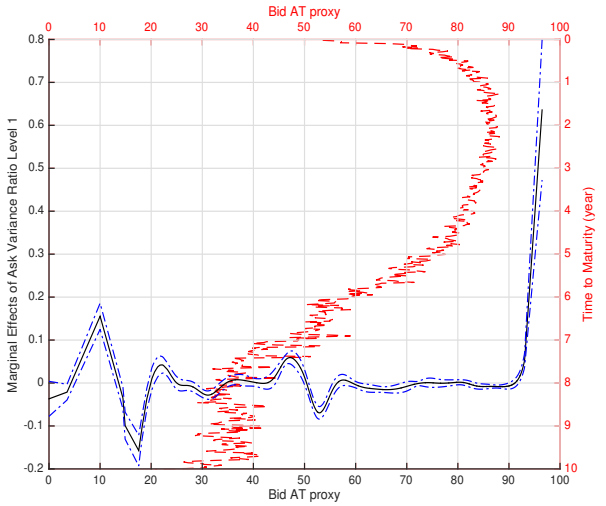
(d) Adverse Selection (30 mins) - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on adverse selection (30 mins) in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

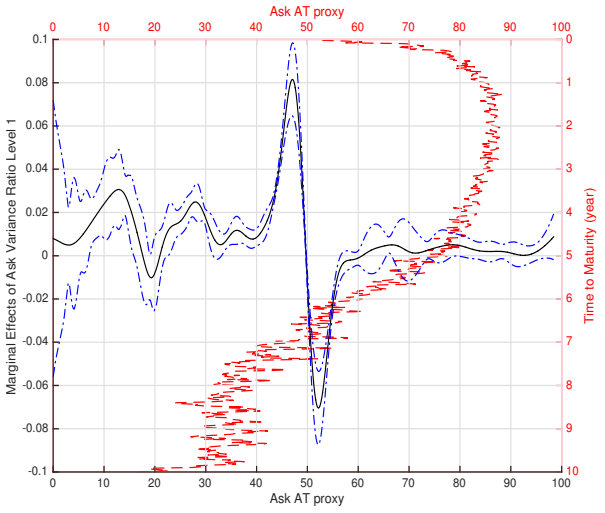
Figure B.140: Marginal Effects of Ask Variance Level 1 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



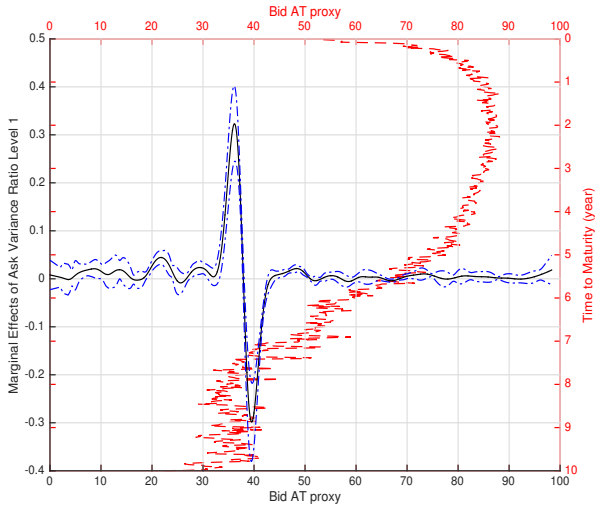
(a) Ask Variance Level 1 - VWA



(b) Ask Variance Level 1 - VWA



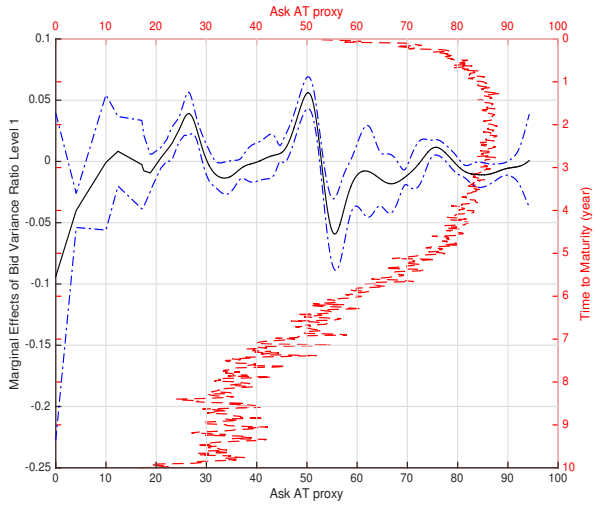
(c) Ask Variance Level 1 - Panel



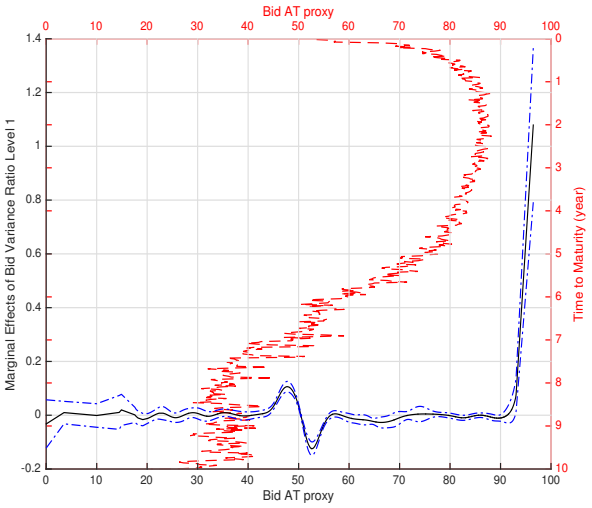
(d) Ask Variance Level 1 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

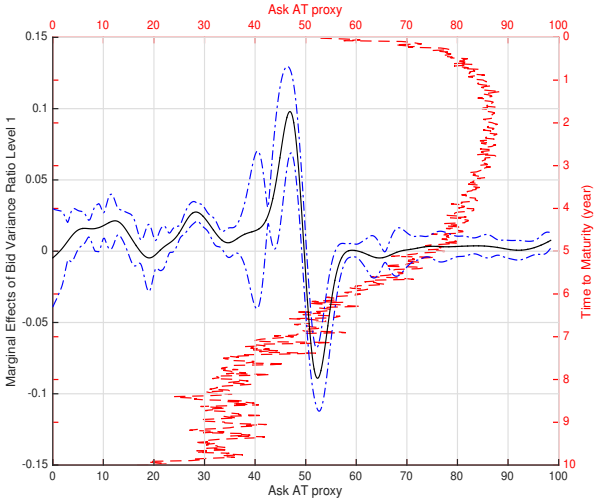
Figure B.141: Marginal Effects of Bid Variance Level 1 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



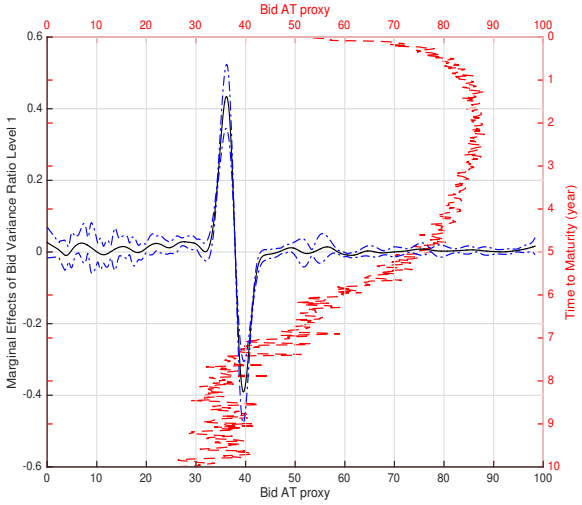
(a) Bid Variance Level 1 - VWA



(b) Bid Variance Level 1 - VWA



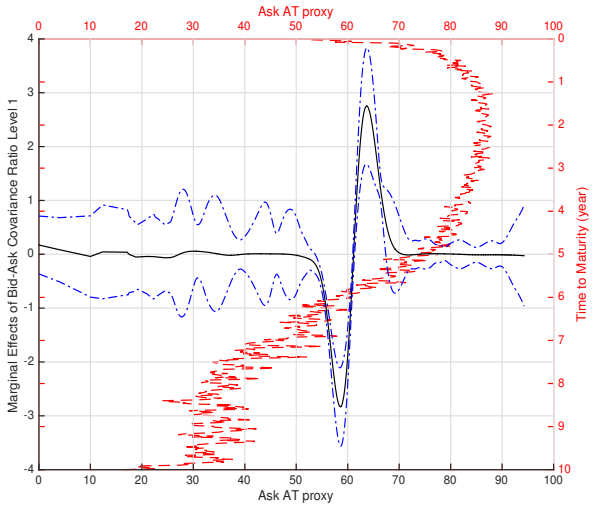
(c) Bid Variance Level 1 - Panel



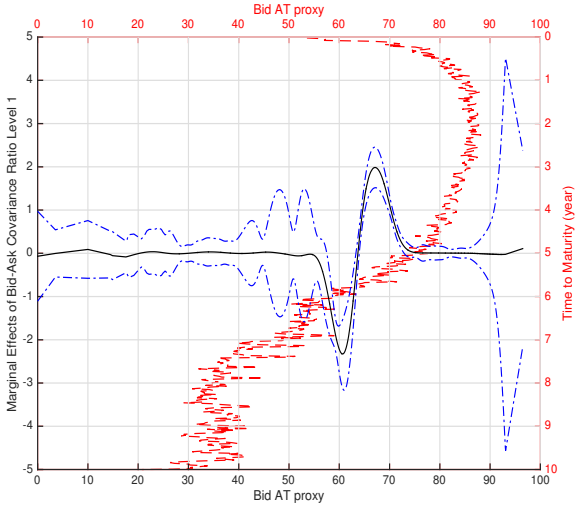
(d) Bid Variance Level 1 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

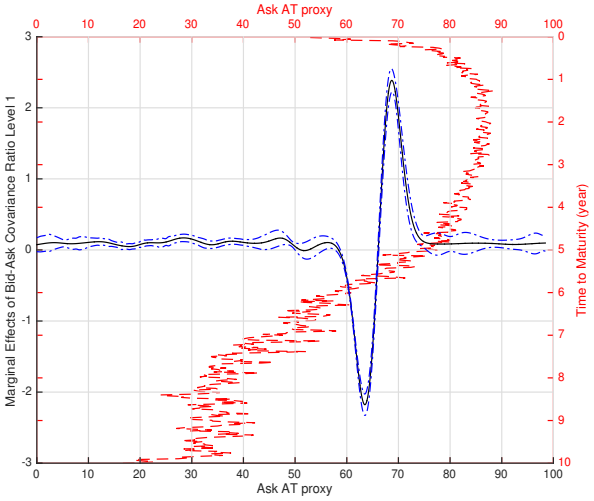
Figure B.142: Marginal Effects of Bid Ask Covariance Level 1 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



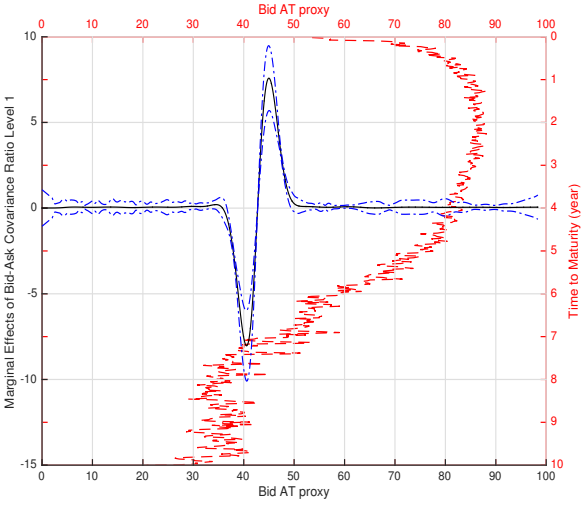
(a) Bid Ask Covariance Level 1 - VWA



(b) Bid Ask Covariance Level 1 - VWA



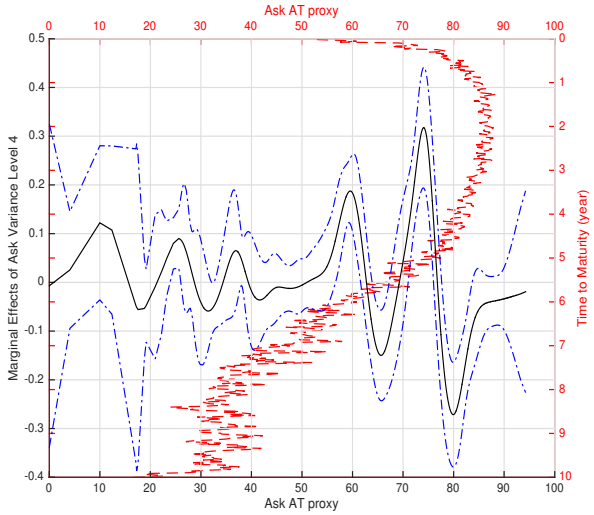
(c) Bid Ask Covariance Level 1 - Panel



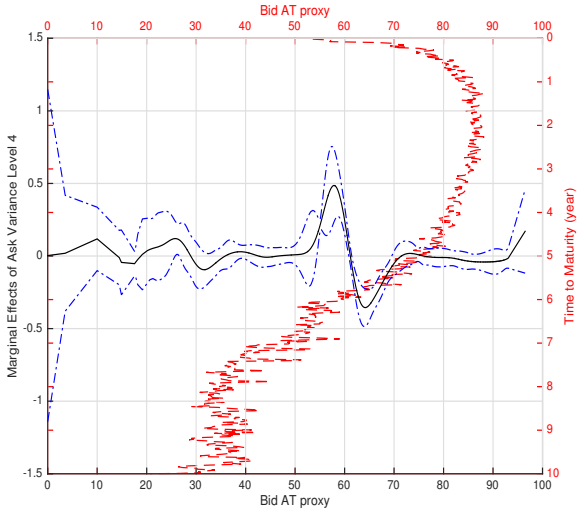
(d) Bid Ask Covariance Level 1 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 1 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

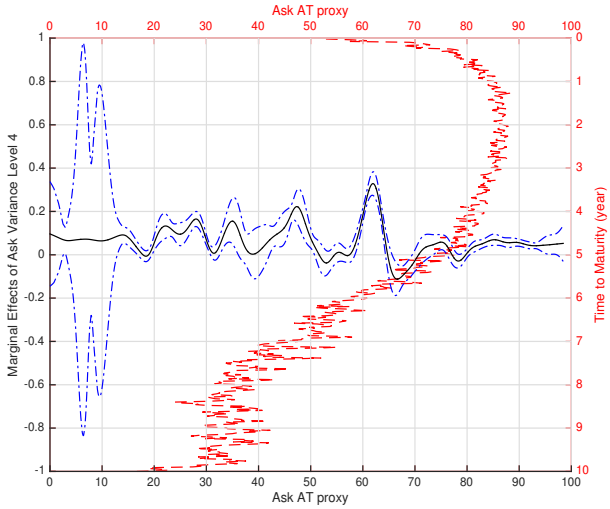
Figure B.143: Marginal Effects of Ask Variance Level 4 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



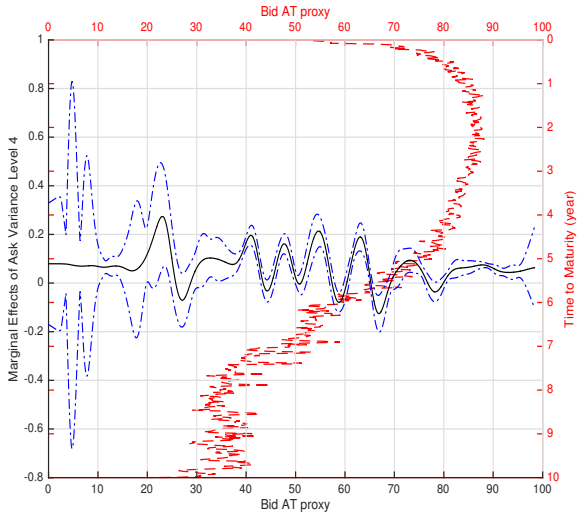
(a) Ask Variance Level 4 - VWA



(b) Ask Variance Level 4 - VWA



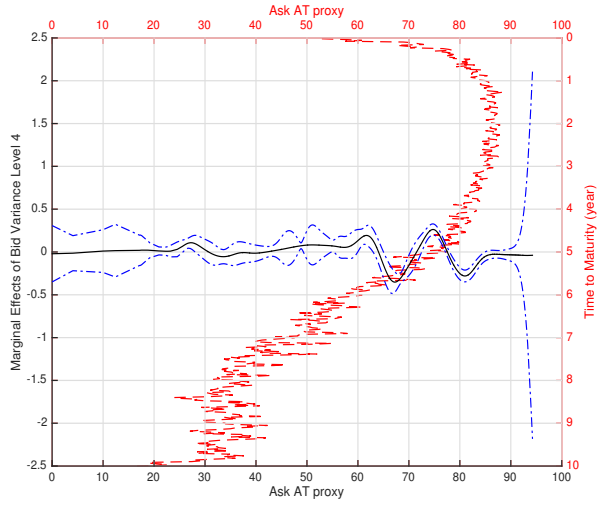
(c) Ask Variance Level 4 - Panel



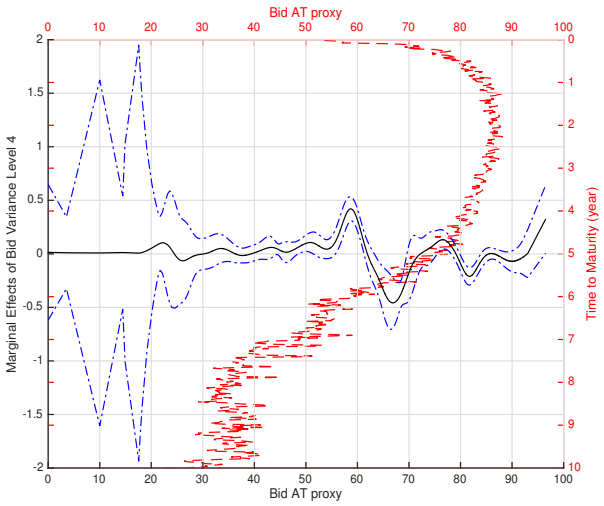
(d) Ask Variance Level 4 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

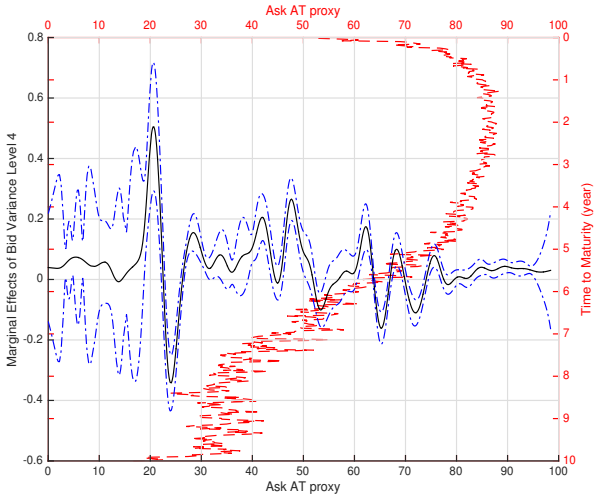
Figure B.144: Marginal Effects of Bid Variance Level 4 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



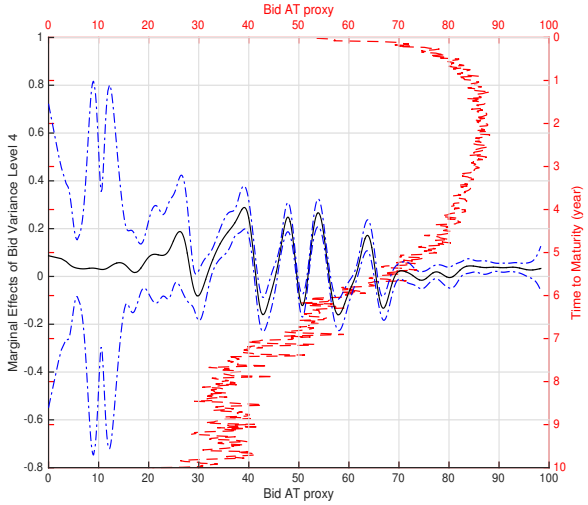
(a) Bid Variance Level 4 - VWA



(b) Bid Variance Level 4 - VWA



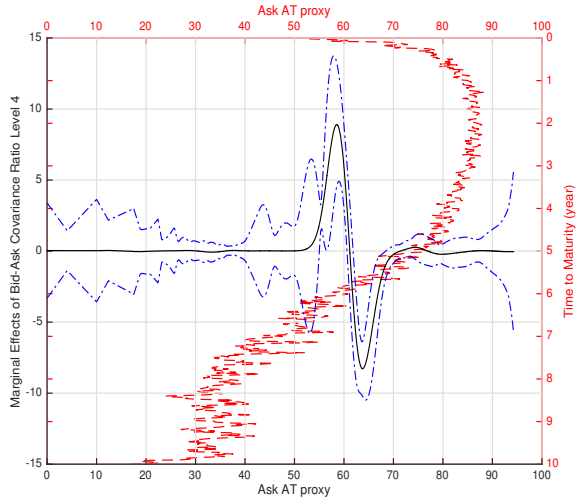
(c) Bid Variance Level 4 - Panel



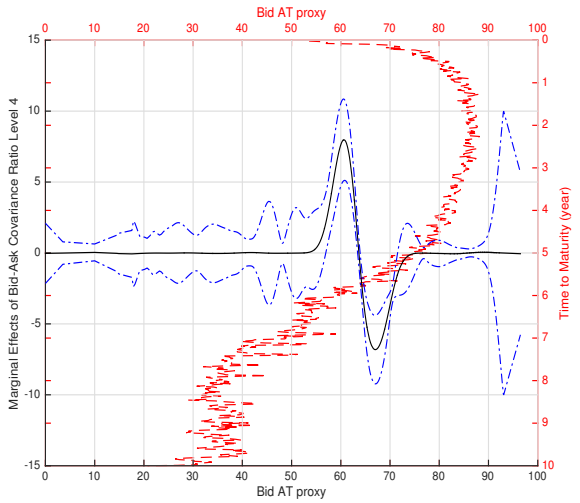
(d) Bid Variance Level 4 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

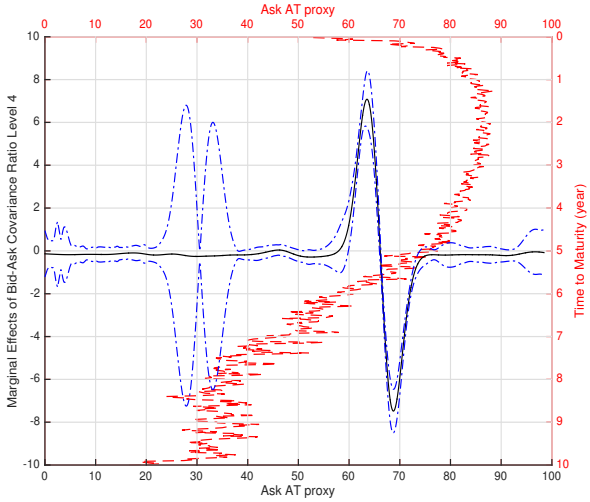
Figure B.145: Marginal Effects of Bid Ask Covariance Level 4 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



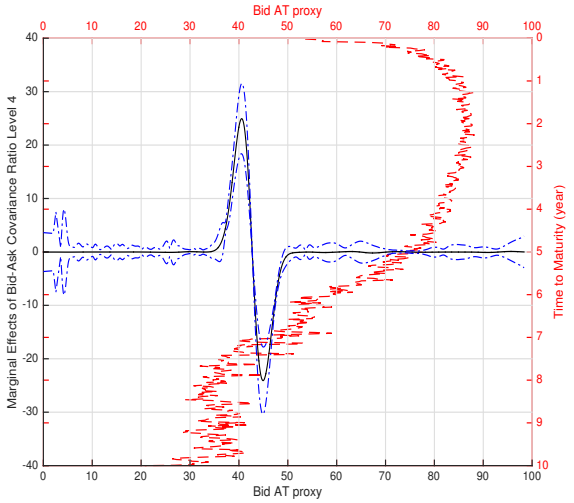
(a) Bid Ask Covariance Level 4 - VWA



(b) Bid Ask Covariance Level 4 - VWA



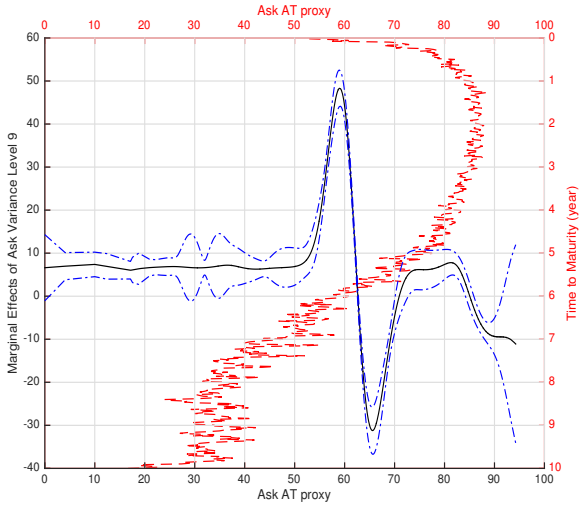
(c) Bid Ask Covariance Level 4 - Panel



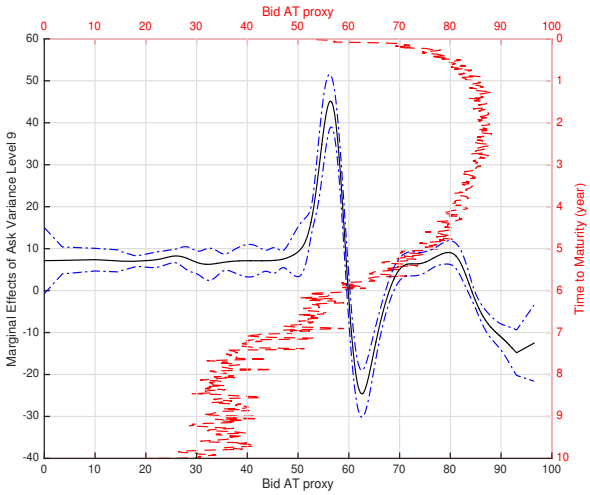
(d) Bid Ask Covariance Level 4 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 4 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

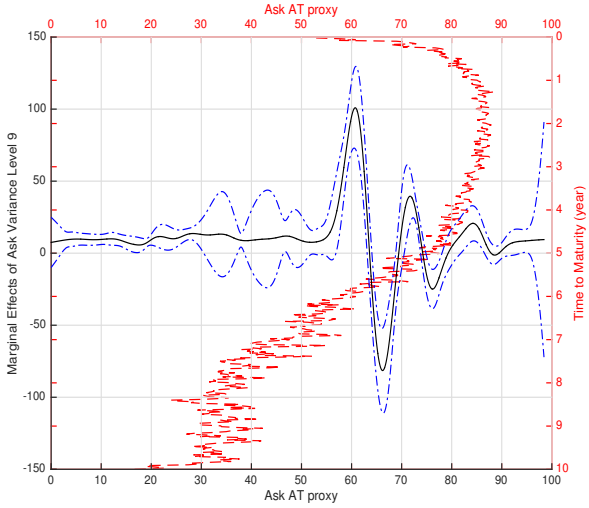
Figure B.146: Marginal Effects of Ask Variance Level 9 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



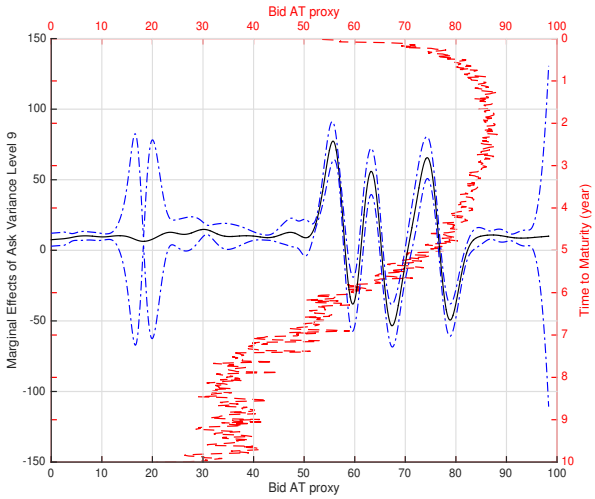
(a) Ask Variance Level 9 - VWA



(b) Ask Variance Level 9 - VWA



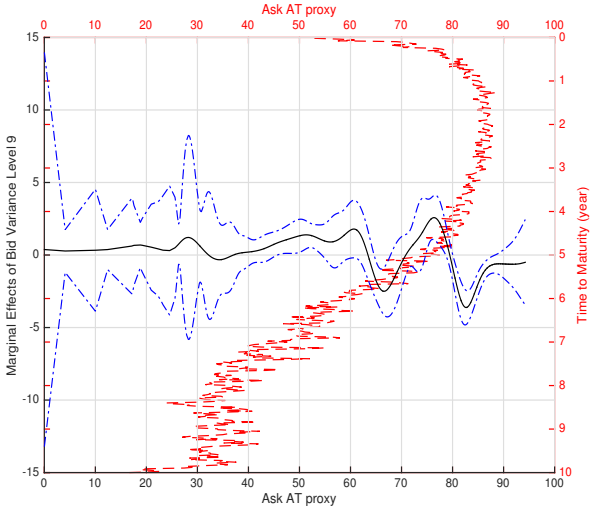
(c) Ask Variance Level 9 - Panel



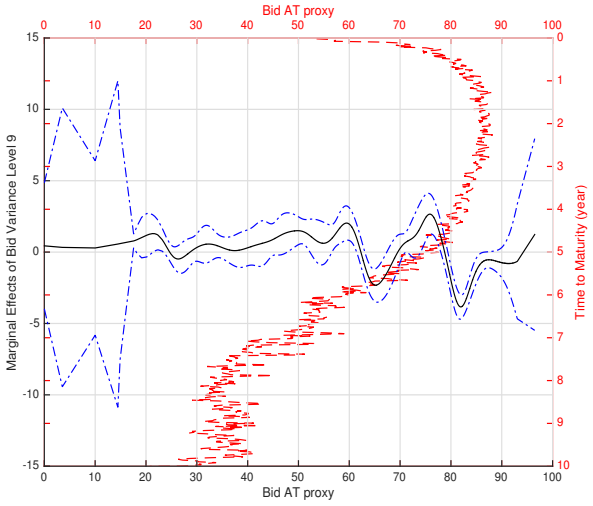
(d) Ask Variance Level 9 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on ask-side variance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

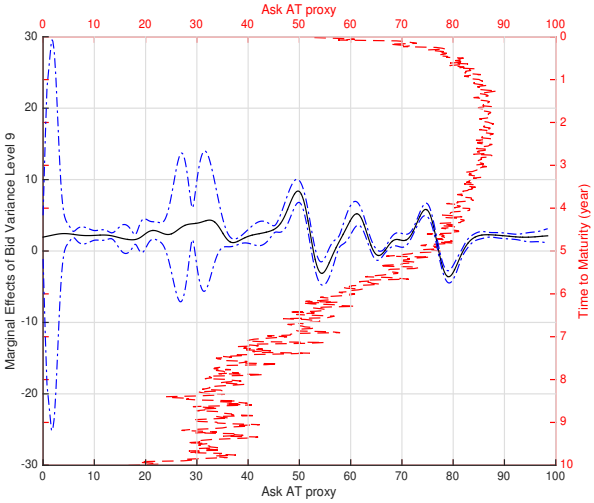
Figure B.147: Marginal Effects of Bid Variance Level 9 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



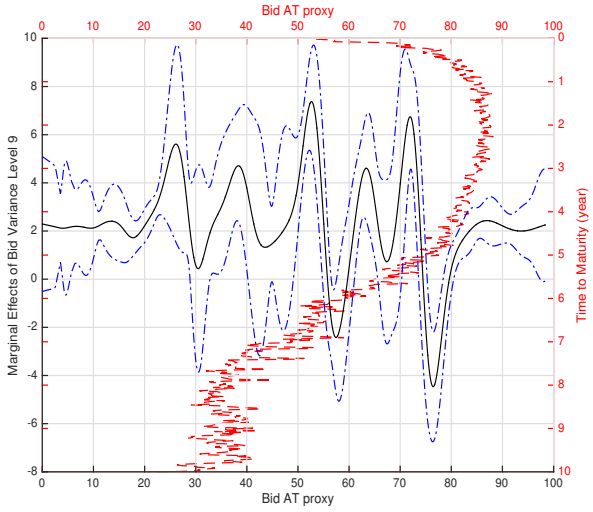
(a) Bid Variance Level 9 - VWA



(b) Bid Variance Level 9 - VWA



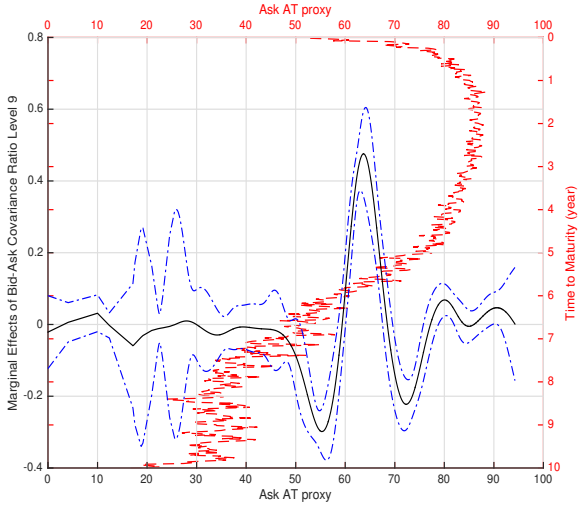
(c) Bid Variance Level 9 - Panel



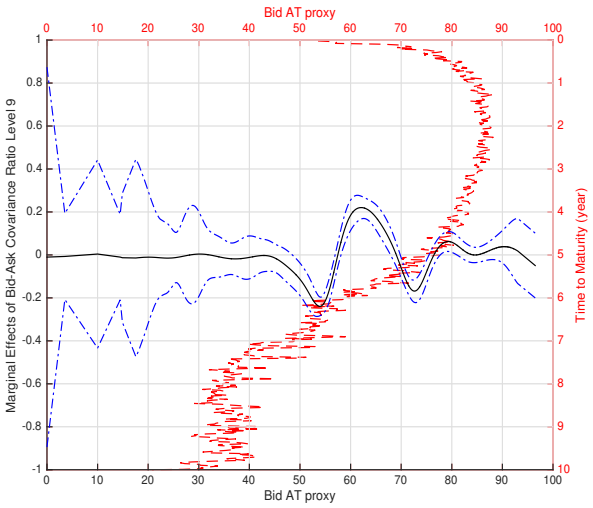
(d) Bid Variance Level 9 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-side variance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

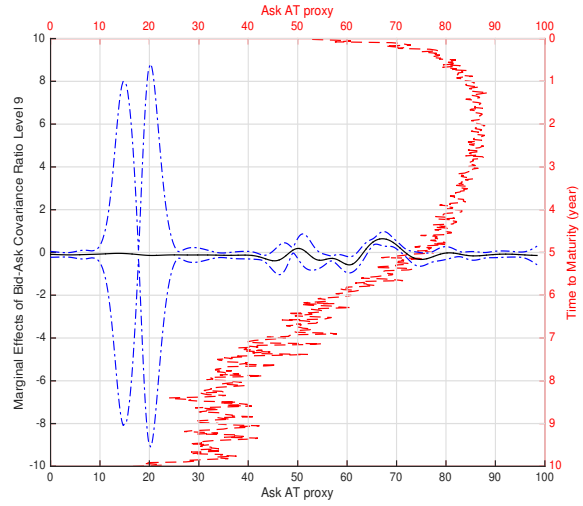
Figure B.148: Marginal Effects of Bid Ask Covariance Level 9 with AT Proxy Instrumented on the Volume-to-message Ratio (thresholded at 200 ms)



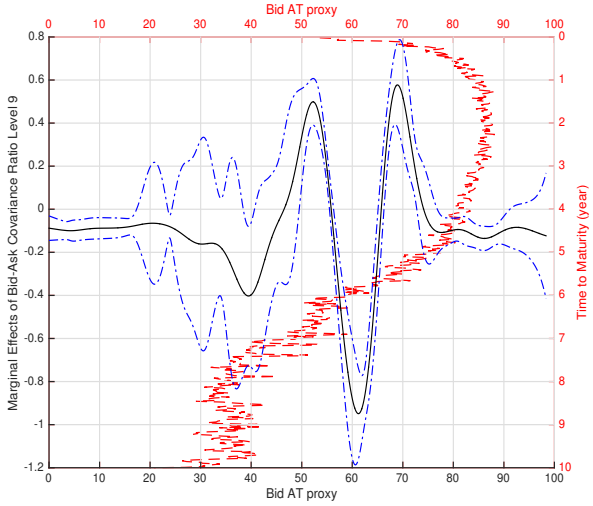
(a) Bid Ask Covariance Level 9 - VWA



(b) Bid Ask Covariance Level 9 - VWA



(c) Bid Ask Covariance Level 9 - Panel



(d) Bid Ask Covariance Level 9 - Panel

Notes: The red dashed line represents the evolution of daily AT proxy thresholded at 200 ms for order book level 2 in function of the average time to maturity. The black continuous line depicts the marginal effects of AT on bid-ask covariance ratio at timescale level 9 in Subplots (a) to (b) with volume weighted average dataset and Subplots (c) and (d) with the panel dataset. The blue dashed lines are the 95% lower and upper confidence bounds of adverse selection marginal effects. The volume weighted average dataset uses algorithmic trading proxy instrumented on the volume to message ratio, and the panel dataset adopts algorithmic trading proxy instrumented on both the volume to message ratio and the log of time to maturity.

Appendix C. Supplemental Materials for Chapter 5 – High Frequency Price Discovery and Price Efficiency on Interest Rate Futures

Appendix C.1. Mid-quote Return Autocorrelations (30 days – 1,800 days before maturity)

Table C.111: Mid-quoted Return Autocorrelation - 30 days before maturity

		Mean						Median					
		VWA	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**VWA**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	Tick	-0.0494	-0.0513	-0.0520	-0.0631	-0.0948	-0.3315	-0.0408	-0.0499	-0.0554	-0.0628	-0.0669	-0.3684
	1ms	0.2796	0.3326	0.3311	0.3318	0.3251	0.2677	0.2848	0.3344	0.3322	0.3381	0.3333	0.1825
	2ms	0.3678	0.4007	0.3971	0.4042	0.4001	0.3007	0.3968	0.4268	0.4542	0.4558	0.4989	0.2998
	5ms	0.4672	0.4414	0.4372	0.4353	0.4319	0.3093	0.4940	0.4996	0.4997	0.4998	0.4997	0.3336
	10ms	0.5571	0.4704	0.4716	0.4635	0.4525	0.3739	0.5781	0.4535	0.4810	0.4993	0.4994	0.3848
	15ms	0.5700	0.5011	0.4995	0.4919	0.4858	0.4034	0.6328	0.4998	0.4995	0.4999	0.4998	0.4279
	20ms	0.5944	0.5219	0.5145	0.5125	0.5054	0.4085	0.6454	0.5166	0.5000	0.5000	0.5092	0.4000
	25ms	0.6114	0.5455	0.5351	0.5371	0.5303	0.4227	0.6483	0.5088	0.5043	0.4999	0.5212	0.4068
	50ms	0.6790	0.6288	0.6217	0.6189	0.6125	0.4951	0.7208	0.6329	0.6255	0.6399	0.6627	0.4812
	75ms	0.7174	0.6737	0.6659	0.6606	0.6498	0.5181	0.7704	0.6853	0.6780	0.6965	0.6995	0.4999
	100ms	0.7291	0.6955	0.6837	0.6761	0.6558	0.5286	0.7682	0.7126	0.7081	0.7143	0.7185	0.5251
	150ms	0.7399	0.7099	0.7014	0.6914	0.6645	0.5462	0.7924	0.7339	0.7330	0.7395	0.7473	0.5513
First	**200ms**	0.7507	0.7228	0.7117	0.7025	0.6703	0.5466	0.7851	0.7542	0.7476	0.7520	0.7522	0.5789
Order	**500ms**	0.7721	0.7605	0.7469	0.7370	0.7098	0.5739	0.8404	0.7952	0.7788	0.7992	0.7946	0.6084
	750ms	0.7842	0.7738	0.7614	0.7512	0.7194	0.5847	0.8411	0.8075	0.7945	0.7998	0.7988	0.6176
	1s	0.7923	0.7811	0.7685	0.7565	0.7239	0.5861	0.8432	0.8075	0.7930	0.8153	0.7998	0.6153
	5s	0.8285	0.8171	0.8028	0.7943	0.7514	0.6085	0.8645	0.8638	0.8562	0.8526	0.8488	0.6460
	15s	0.8611	0.8460	0.8306	0.8208	0.7641	0.6279	0.8939	0.8828	0.8776	0.8731	0.8641	0.6660
	30s	0.8787	0.8620	0.8469	0.8377	0.7798	0.6329	0.9163	0.8970	0.8917	0.8877	0.8834	0.6792
	60s	0.8912	0.8772	0.8605	0.8507	0.7866	0.6510	0.9323	0.9149	0.9144	0.9057	0.8930	0.7055
	300s	0.9401	0.9233	0.9033	0.8915	0.8250	0.6498	0.9645	0.9588	0.9569	0.9508	0.9393	0.6977
	600s	0.9551	0.9259	0.9074	0.8896	0.8198	0.6417	0.9763	0.9689	0.9666	0.9616	0.9500	0.6807
	900s	0.9624	0.9413	0.9214	0.9018	0.8307	0.6438	0.9820	0.9733	0.9723	0.9682	0.9553	0.7040
	1200s	0.9672	0.9472	0.9240	0.9082	0.8357	0.6489	0.9843	0.9773	0.9762	0.9731	0.9602	0.6928
	1500s	0.9698	0.9463	0.9266	0.9084	0.8396	0.6455	0.9856	0.9797	0.9790	0.9761	0.9639	0.6727
	1800s	0.9719	0.9482	0.9290	0.9106	0.8399	0.6441	0.9871	0.9810	0.9806	0.9780	0.9677	0.6663
	Tick	-0.0067	-0.0172	-0.0147	-0.0166	-0.0185	-0.0070	-0.0062	-0.0121	-0.0083	-0.0076	-0.0033	0.0000
	1ms	0.1110	0.0989	0.0988	0.0929	0.0981	0.0182	0.0316	-0.0002	-0.0001	-0.0002	-0.0001	-0.0002
	2ms	0.1339	0.1277	0.1270	0.1264	0.1246	0.0226	0.0365	-0.0001	0.0000	-0.0001	-0.0001	-0.0002
	5ms	0.1861	0.1744	0.1713	0.1729	0.1725	0.0695	0.0762	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.2572	0.2150	0.2112	0.2117	0.2091	0.1178	0.1113	0.0268	0.0000	0.0000	0.0000	0.0000
	15ms	0.2928	0.2455	0.2417	0.2442	0.2414	0.1401	0.1619	0.0646	0.0559	0.0576	0.0512	0.0000
	20ms	0.3235	0.2705	0.2681	0.2706	0.2674	0.1605	0.1892	0.0568	0.0665	0.0504	0.0373	0.0000
	25ms	0.3455	0.2868	0.2818	0.2834	0.2800	0.1707	0.2163	0.0797	0.0738	0.0706	0.0588	0.0200
	50ms	0.3967	0.3471	0.3403	0.3408	0.3382	0.2016	0.3029	0.1685	0.1366	0.1256	0.1365	0.0284
	75ms	0.4303	0.3808	0.3754	0.3740	0.3655	0.2087	0.3900	0.2550	0.2235	0.2121	0.2209	0.0400
	100ms	0.4407	0.3931	0.3854	0.3831	0.3727	0.2136	0.3948	0.2747	0.2443	0.2246	0.2304	0.0524
	150ms	0.4580	0.4096	0.4025	0.3953	0.3841	0.2296	0.3840	0.3067	0.3061	0.2843	0.2791	0.0740
Fifth	**200ms**	0.4691	0.4231	0.4132	0.4052	0.3925	0.2368	0.4229	0.3391	0.3056	0.3025	0.2872	0.0868
Order	**500ms**	0.5033	0.4685	0.4542	0.4492	0.4292	0.2667	0.5378	0.4443	0.3915	0.3944	0.3792	0.1614
	750ms	0.5167	0.4851	0.4741	0.4671	0.4448	0.2762	0.5383	0.4865	0.4286	0.4367	0.4145	0.1660
	1s	0.5330	0.4988	0.4868	0.4802	0.4551	0.2800	0.5552	0.4966	0.4528	0.4809	0.4252	0.1808
	5s	0.5881	0.5507	0.5389	0.5314	0.5031	0.3084	0.6116	0.5674	0.5640	0.5581	0.5329	0.2340
	15s	0.6307	0.5934	0.5799	0.5686	0.5293	0.3340	0.6720	0.6296	0.5927	0.5679	0.5442	0.2956
	30s	0.6598	0.6230	0.6096	0.5958	0.5482	0.3528	0.7145	0.6488	0.6432	0.6164	0.5968	0.3305
	60s	0.6946	0.6582	0.6426	0.6268	0.5692	0.3834	0.7494	0.6867	0.6760	0.6666	0.6384	0.3650
	300s	0.7981	0.7677	0.7451	0.7293	0.6566	0.4161	0.8634	0.8352	0.8233	0.8098	0.7794	0.4078
	600s	0.8454	0.8005	0.7771	0.7559	0.6725	0.4257	0.8942	0.8730	0.8605	0.8556	0.8106	0.3819
	900s	0.8668	0.8269	0.8025	0.7813	0.6962	0.4321	0.9219	0.8980	0.8912	0.8802	0.8300	0.3993
	1200s	0.8833	0.8439	0.8163	0.7972	0.7118	0.4423	0.9338	0.9108	0.9055	0.8952	0.8490	0.4194
	1500s	0.8939	0.8524	0.8274	0.8037	0.7199	0.4350	0.9344	0.9150	0.9124	0.9036	0.8600	0.3915
	1800s	0.9011	0.8585	0.8335	0.8101	0.7240	0.4399	0.9431	0.9236	0.9193	0.9097	0.8770	0.3974
	Tick	-0.0016	-0.0002	-0.0028	-0.0035	-0.0023	-0.0011	-0.0012	0.0000	0.0000	0.0000	0.0000	0.0000
	1ms	0.0584	0.0575	0.0568	0.0571	0.0554	0.0195	0.0000	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	2ms	0.0669	0.0630	0.0624	0.0630	0.0632	0.0096	0.0000	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002
	5ms	0.1079	0.0884	0.0889	0.0893	0.0899	0.0176	0.0153	-0.0001	-0.0001	-0.0001	-0.0001	-0.0002
	10ms	0.1639	0.1318	0.1333	0.1344	0.1330	0.0564	0.0216	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	15ms	0.1928	0.1576	0.1575	0.1564	0.1553	0.0725	0.0317	0.0000	-0.0001	0.0000	0.0000	-0.0001
	20ms	0.2268	0.1894	0.1872	0.1901	0.1898	0.0868	0.0475	0.0000	0.0000	0.0000	0.0000	0.0000
	25ms	0.2495	0.2064	0.2025	0.2061	0.2046	0.0989	0.0859	0.0100	0.0052	0.0068	0.0000	0.0000
	50ms	0.2984	0.2583	0.2530	0.2559	0.2556	0.1253	0.1149	0.0342	0.0266	0.0317	0.0273	-0.0001
	75ms	0.3269	0.2903	0.2853	0.2881	0.2807	0.1381	0.1793	0.0689	0.0599	0.0574	0.0542	0.0000
	100ms	0.3361	0.2997	0.2932	0.2947	0.2896	0.1381	0.1864	0.1011	0.0846	0.0757	0.0833	0.0030
	150ms	0.3466	0.3088	0.3040	0.3023	0.2970	0.1488	0.2143	0.1277	0.1197	0.0979	0.0903	0.0112
Tenth	**200ms**	0.3525	0.3144	0.3086	0.3063	0.2991	0.1499	0.2030	0.1488	0.1369	0.1048	0.0891	0.0160
Order	**500ms**	0.3837	0.3550	0.3438	0.3411	0.3301	0.1759	0.3017	0.2762	0.2277	0.2315	0.1823	0.0402
	750ms	0.3986	0.3722	0.3641	0.3592	0.3452	0.1876	0.3518	0.2950	0.2800	0.2740	0.2571	0.0481
	1s	0.4145	0.3845	0.3762	0.3714	0.3555	0.1841	0.3987	0.3108	0.2811	0.2694	0.2670	0.0522
	5s	0.4633	0.4354	0.4253	0.4207	0.4007	0.2051	0.4495	0.4068	0.3918	0.3682	0.3451	0.1149
	15s	0.5053	0.4763	0.4644	0.4542	0.4260	0.2265	0.5018	0.4541	0.4349	0.4088	0.3713	0.1599
	30s	0.5311	0.4958	0.4825	0.4717	0.4370	0.2396	0.5382	0.4766	0.4615	0.4406	0.4201	0.1646
	60s	0.5654	0.5323	0.5174	0.5051	0.4618	0.2611	0.5999	0.5348	0.5308	0.5019	0.4648	0.1901
	300s	0.6875	0.6592	0.6387	0.6224	0.5585	0.3067	0.7589	0.7290	0.7151	0.6977	0.6540	0.2543
	600s	0.7461	0.7063	0.6842	0.6631	0.5850	0.3216	0.8143	0.7845	0.7698	0.7639	0.7072	0.2547
	900s	0.7831	0.7464	0.7232	0.7011	0.6202	0.3300	0.8567	0.8278	0.8183	0.8005	0.7313	0.2666
	1200s	0.8104	0.7711	0.7455	0.7252	0.6426	0.3363	0.8769	0.8415	0.8379	0.8277	0.7702	0.2567
	1500s	0.8280	0.7849	0.7611	0.7371	0.6544	0.3350	0.8828	0.8517	0.8503	0.8332	0.7853	0.2589
	1800s	0.8398	0.7949	0.7707	0.7467	0.6627	0.3431	0.8922	0.8661	0.8630	0.8594	0.8061	0.2574

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 30 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.112: Mid-quoted Return Autocorrelation - 60 days before maturity

		Mean						Median					
		VWA	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**VWA**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	Tick	-0.0527	-0.0519	-0.0534	-0.0619	-0.0795	-0.3204	-0.0458	-0.0554	-0.0564	-0.0591	-0.0622	-0.3652
	1ms	0.2919	0.3641	0.3636	0.3636	0.3621	0.2947	0.3158	0.3990	0.3985	0.3990	0.3869	0.2498
	2ms	0.4178	0.4418	0.4407	0.4456	0.4336	0.3320	0.4706	0.4997	0.4996	0.4996	0.4997	0.3459
	5ms	0.5187	0.4806	0.4796	0.4825	0.4762	0.3497	0.5587	0.5265	0.5240	0.5427	0.5499	0.4278
	10ms	0.5878	0.4953	0.5001	0.4983	0.4918	0.3898	0.6402	0.5000	0.5001	0.5269	0.5002	0.4577
	15ms	0.5985	0.5247	0.5268	0.5259	0.5237	0.4133	0.6654	0.5671	0.5717	0.5736	0.5765	0.4989
	20ms	0.6252	0.5520	0.5510	0.5505	0.5432	0.4197	0.7196	0.5904	0.5902	0.5931	0.5877	0.4317
	25ms	0.6365	0.5690	0.5650	0.5672	0.5602	0.4294	0.7169	0.6127	0.6136	0.6179	0.6149	0.4347
	50ms	0.6981	0.6487	0.6461	0.6442	0.6398	0.4902	0.7860	0.7163	0.7186	0.7311	0.7333	0.4992
	75ms	0.7321	0.6858	0.6828	0.6817	0.6734	0.5137	0.8261	0.7582	0.7533	0.7612	0.7618	0.4997
	100ms	0.7497	0.7099	0.7039	0.7029	0.6896	0.5197	0.8437	0.7887	0.7765	0.7955	0.7906	0.5339
	150ms	0.7645	0.7287	0.7257	0.7206	0.7015	0.5356	0.8616	0.7998	0.7898	0.8039	0.7996	0.5508
First	**200ms**	0.7748	0.7453	0.7407	0.7351	0.7126	0.5486	0.8617	0.8133	0.8044	0.8152	0.8058	0.5830
Order	**500ms**	0.8007	0.7807	0.7746	0.7670	0.7451	0.5730	0.8716	0.8413	0.8392	0.8406	0.8342	0.6199
	750ms	0.8122	0.7954	0.7897	0.7813	0.7577	0.5852	0.8744	0.8495	0.8453	0.8517	0.8404	0.6357
	1s	0.8200	0.8046	0.7988	0.7896	0.7653	0.5913	0.8751	0.8620	0.8606	0.8610	0.8539	0.6456
	5s	0.8525	0.8409	0.8331	0.8261	0.7963	0.6164	0.8998	0.8926	0.8919	0.8896	0.8835	0.6698
	15s	0.8791	0.8673	0.8566	0.8513	0.8159	0.6328	0.9141	0.9149	0.9109	0.9089	0.9056	0.6994
	30s	0.8952	0.8836	0.8724	0.8678	0.8316	0.6456	0.9281	0.9252	0.9242	0.9224	0.9151	0.7305
	60s	0.9088	0.8995	0.8875	0.8811	0.8434	0.6559	0.9405	0.9380	0.9359	0.9353	0.9316	0.7382
	300s	0.9482	0.9337	0.9196	0.9092	0.8703	0.6514	0.9681	0.9641	0.9626	0.9613	0.9584	0.7471
	600s	0.9612	0.9393	0.9243	0.9131	0.8699	0.6470	0.9795	0.9723	0.9716	0.9702	0.9671	0.7306
	900s	0.9677	0.9494	0.9341	0.9191	0.8775	0.6449	0.9838	0.9761	0.9752	0.9745	0.9707	0.7197
	1200s	0.9720	0.9544	0.9375	0.9234	0.8823	0.6464	0.9863	0.9793	0.9785	0.9777	0.9744	0.7235
	1500s	0.9748	0.9552	0.9414	0.9247	0.8865	0.6447	0.9874	0.9810	0.9803	0.9800	0.9769	0.7086
	1800s	0.9768	0.9555	0.9418	0.9251	0.8860	0.6441	0.9890	0.9825	0.9820	0.9812	0.9777	0.7072
	Tick	-0.0089	-0.0193	-0.0179	-0.0189	-0.0190	-0.0080	-0.0070	-0.0163	-0.0157	-0.0151	-0.0124	0.0000
	1ms	0.1324	0.1081	0.1078	0.1054	0.1081	0.0394	0.0531	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1657	0.1492	0.1483	0.1484	0.1457	0.0434	0.0773	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2210	0.1946	0.1933	0.1956	0.1948	0.0821	0.1192	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.2831	0.2276	0.2272	0.2288	0.2285	0.1268	0.1569	0.0280	0.0233	0.0261	0.0000	0.0000
	15ms	0.3169	0.2635	0.2623	0.2651	0.2658	0.1533	0.1949	0.0718	0.0706	0.0793	0.0703	0.0000
	20ms	0.3496	0.2954	0.2943	0.2968	0.2945	0.1730	0.2622	0.1345	0.1271	0.1366	0.1164	0.0000
	25ms	0.3703	0.3134	0.3108	0.3131	0.3098	0.1784	0.3064	0.1564	0.1502	0.1537	0.1285	0.0000
	50ms	0.4334	0.3791	0.3760	0.3776	0.3731	0.2061	0.4502	0.2934	0.2900	0.2926	0.2898	0.0301
	75ms	0.4674	0.4129	0.4107	0.4120	0.4051	0.2129	0.5073	0.3479	0.3426	0.3566	0.3576	0.0490
	100ms	0.4833	0.4301	0.4268	0.4282	0.4201	0.2166	0.5345	0.3872	0.3729	0.3912	0.3842	0.0618
	150ms	0.5048	0.4518	0.4493	0.4474	0.4365	0.2305	0.5824	0.4244	0.4235	0.4235	0.4084	0.0837
Fifth	**200ms**	0.5158	0.4670	0.4621	0.4583	0.4459	0.2417	0.5859	0.4565	0.4404	0.4433	0.4192	0.1084
Order	**500ms**	0.5499	0.5028	0.4960	0.4925	0.4757	0.2607	0.6228	0.5049	0.4999	0.5116	0.4905	0.1625
	750ms	0.5642	0.5216	0.5167	0.5115	0.4941	0.2701	0.6283	0.5494	0.5347	0.5476	0.5327	0.1780
	1s	0.5768	0.5352	0.5296	0.5245	0.5063	0.2784	0.6322	0.5812	0.5711	0.5781	0.5605	0.2053
	5s	0.6284	0.5896	0.5840	0.5786	0.5576	0.3139	0.6885	0.6503	0.6372	0.6352	0.6180	0.2850
	15s	0.6667	0.6323	0.6245	0.6183	0.5923	0.3457	0.7188	0.6946	0.6897	0.6854	0.6739	0.3402
	30s	0.6957	0.6631	0.6539	0.6465	0.6164	0.3701	0.7506	0.7205	0.7137	0.7139	0.6816	0.3790
	60s	0.7306	0.7026	0.6925	0.6833	0.6489	0.3977	0.7795	0.7658	0.7643	0.7621	0.7469	0.4209
	300s	0.8240	0.7977	0.7834	0.7720	0.7285	0.4269	0.8734	0.8552	0.8492	0.8476	0.8354	0.4641
	600s	0.8656	0.8292	0.8131	0.7995	0.7493	0.4377	0.9128	0.8887	0.8877	0.8828	0.8684	0.4431
	900s	0.8863	0.8502	0.8333	0.8188	0.7680	0.4399	0.9294	0.9043	0.9018	0.9010	0.8874	0.4430
	1200s	0.9007	0.8657	0.8471	0.8317	0.7815	0.4425	0.9399	0.9189	0.9154	0.9122	0.9036	0.4298
	1500s	0.9113	0.8741	0.8567	0.8391	0.7897	0.4444	0.9458	0.9255	0.9243	0.9212	0.9127	0.4328
	1800s	0.9181	0.8791	0.8618	0.8441	0.7938	0.4485	0.9529	0.9302	0.9287	0.9255	0.9162	0.4430
	Tick	-0.0037	-0.0050	-0.0060	-0.0068	-0.0055	-0.0009	-0.0019	-0.0004	-0.0004	-0.0003	-0.0001	0.0000
	1ms	0.0712	0.0476	0.0469	0.0473	0.0470	0.0061	0.0000	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	2ms	0.0824	0.0731	0.0725	0.0733	0.0721	0.0206	0.0054	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1299	0.1085	0.1088	0.1099	0.1108	0.0357	0.0237	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	10ms	0.1865	0.1441	0.1457	0.1468	0.1478	0.0634	0.0464	0.0000	0.0000	0.0000	0.0000	-0.0001
	15ms	0.2138	0.1745	0.1749	0.1754	0.1762	0.0842	0.0642	0.0000	0.0000	0.0000	0.0000	-0.0001
	20ms	0.2451	0.2046	0.2036	0.2057	0.2062	0.0944	0.0978	0.0103	0.0063	0.0062	0.0000	-0.0001
	25ms	0.2676	0.2227	0.2212	0.2233	0.2228	0.1032	0.1280	0.0251	0.0246	0.0215	0.0162	0.0000
	50ms	0.3303	0.2822	0.2798	0.2815	0.2805	0.1268	0.2260	0.0908	0.0885	0.0904	0.0851	-0.0001
	75ms	0.3623	0.3149	0.3126	0.3140	0.3089	0.1350	0.3127	0.1598	0.1591	0.1597	0.1457	0.0000
	100ms	0.3774	0.3280	0.3252	0.3265	0.3230	0.1371	0.3541	0.1811	0.1772	0.1744	0.1703	0.0000
	150ms	0.3945	0.3447	0.3424	0.3418	0.3369	0.1476	0.3770	0.2299	0.2332	0.2218	0.2034	0.0101
Tenth	**200ms**	0.4026	0.3527	0.3500	0.3485	0.3417	0.1529	0.3915	0.2570	0.2550	0.2539	0.2341	0.0186
Order	**500ms**	0.4337	0.3831	0.3782	0.3758	0.3665	0.1665	0.4574	0.3376	0.3224	0.3096	0.2903	0.0389
	750ms	0.4491	0.4023	0.3990	0.3954	0.3845	0.1770	0.4570	0.3673	0.3469	0.3548	0.3379	0.0514
	1s	0.4597	0.4131	0.4092	0.4058	0.3943	0.1785	0.4717	0.4186	0.3946	0.4054	0.3794	0.0593
	5s	0.5061	0.4679	0.4628	0.4591	0.4451	0.2030	0.5402	0.4934	0.4811	0.4744	0.4648	0.1210
	15s	0.5441	0.5106	0.5039	0.4982	0.4797	0.2314	0.5851	0.5514	0.5409	0.5366	0.5194	0.1630
	30s	0.5701	0.5337	0.5253	0.5193	0.4975	0.2521	0.6132	0.5860	0.5690	0.5605	0.5401	0.1848
	60s	0.6068	0.5775	0.5683	0.5606	0.5351	0.2773	0.6430	0.6408	0.6334	0.6259	0.5880	0.2384
	300s	0.7234	0.6968	0.6842	0.6731	0.6348	0.3210	0.7748	0.7585	0.7525	0.7506	0.7337	0.3103
	600s	0.7797	0.7438	0.7293	0.7162	0.6694	0.3371	0.8443	0.8137	0.8103	0.8042	0.7824	0.2833
	900s	0.8128	0.7750	0.7596	0.7451	0.6968	0.3430	0.8737	0.8392	0.8368	0.8315	0.8190	0.2860
	1200s	0.8368	0.7981	0.7813	0.7657	0.7178	0.3452	0.8904	0.8638	0.8621	0.8569	0.8346	0.2845
	1500s	0.8528	0.8109	0.7948	0.7776	0.7296	0.3494	0.9028	0.8748	0.8731	0.8674	0.8522	0.2752
	1800s	0.8641	0.8198	0.8036	0.7861	0.7364	0.3563	0.9139	0.8805	0.8794	0.8749	0.8619	0.2770

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 60 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.113: Mid-quoted Return Autocorrelation - 90 days before maturity

		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
	Tick	-0.0469	-0.0487	-0.0494	-0.0560	-0.0687	-0.3218	-0.0417	-0.0467	-0.0468	-0.0482	-0.0484	-0.3684
	1ms	0.3171	0.3812	0.3827	0.3830	0.3821	0.2971	0.3329	0.3994	0.4004	0.3999	0.3996	0.2500
	2ms	0.4464	0.4585	0.4596	0.4624	0.4564	0.3274	0.4966	0.4998	0.4998	0.4998	0.4999	0.3637
	5ms	0.5475	0.5102	0.5101	0.5110	0.5069	0.3589	0.5885	0.5735	0.5720	0.5737	0.5805	0.4285
	10ms	0.6044	0.5236	0.5263	0.5255	0.5241	0.3923	0.6563	0.6062	0.6027	0.6057	0.6062	0.4594
	15ms	0.6179	0.5463	0.5480	0.5484	0.5493	0.4125	0.6892	0.6152	0.6149	0.6312	0.6320	0.4825
	20ms	0.6424	0.5718	0.5709	0.5707	0.5688	0.4220	0.7355	0.6394	0.6386	0.6483	0.6521	0.4510
	25ms	0.6536	0.5900	0.5878	0.5891	0.5861	0.4325	0.7458	0.6667	0.6662	0.6694	0.6693	0.4441
	50ms	0.7130	0.6690	0.6671	0.6656	0.6649	0.4931	0.8293	0.7681	0.7675	0.7697	0.7752	0.4996
	75ms	0.7458	0.7063	0.7050	0.7042	0.7007	0.5232	0.8603	0.8070	0.8064	0.8080	0.8094	0.5256
	100ms	0.7629	0.7286	0.7247	0.7243	0.7175	0.5306	0.8726	0.8233	0.8199	0.8236	0.8248	0.5540
	150ms	0.7784	0.7482	0.7460	0.7427	0.7327	0.5441	0.8805	0.8457	0.8395	0.8427	0.8449	0.5692
First	200ms	0.7876	0.7624	0.7590	0.7556	0.7433	0.5549	0.8853	0.8547	0.8482	0.8513	0.8511	0.5992
Order	500ms	0.8156	0.7975	0.7936	0.7881	0.7746	0.5802	0.8990	0.8656	0.8655	0.8663	0.8647	0.6460
	750ms	0.8287	0.8125	0.8088	0.8028	0.7883	0.5928	0.9023	0.8763	0.8759	0.8768	0.8749	0.6543
	1s	0.8368	0.8206	0.8168	0.8105	0.7954	0.5977	0.9017	0.8840	0.8826	0.8838	0.8798	0.6629
	5s	0.8680	0.8565	0.8517	0.8467	0.8272	0.6258	0.9169	0.9093	0.9089	0.9085	0.9064	0.6997
	15s	0.8928	0.8814	0.8752	0.8713	0.8471	0.6448	0.9321	0.9285	0.9285	0.9284	0.9265	0.7257
	30s	0.9081	0.8975	0.8910	0.8872	0.8623	0.6565	0.9425	0.9361	0.9355	0.9347	0.9327	0.7485
	60s	0.9210	0.9118	0.9048	0.8991	0.8733	0.6627	0.9511	0.9474	0.9461	0.9454	0.9443	0.7546
	300s	0.9551	0.9408	0.9322	0.9229	0.8976	0.6543	0.9741	0.9673	0.9670	0.9666	0.9651	0.7495
	600s	0.9670	0.9469	0.9387	0.9278	0.9001	0.6454	0.9821	0.9745	0.9745	0.9740	0.9720	0.7188
	900s	0.9730	0.9554	0.9470	0.9336	0.9065	0.6438	0.9855	0.9779	0.9778	0.9773	0.9758	0.7158
	1200s	0.9768	0.9595	0.9502	0.9373	0.9100	0.6466	0.9879	0.9805	0.9800	0.9798	0.9782	0.7122
	1500s	0.9791	0.9607	0.9533	0.9388	0.9125	0.6470	0.9894	0.9820	0.9818	0.9816	0.9801	0.7053
	1800s	0.9809	0.9614	0.9541	0.9395	0.9127	0.6397	0.9907	0.9834	0.9831	0.9830	0.9813	0.7032
	Tick	-0.0094	-0.0194	-0.0184	-0.0190	-0.0184	-0.0075	-0.0074	-0.0163	-0.0158	-0.0155	-0.0139	0.0000
	1ms	0.1379	0.1133	0.1134	0.1130	0.1145	0.0366	0.0708	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1689	0.1543	0.1552	0.1559	0.1547	0.0489	0.0800	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2317	0.2024	0.2028	0.2046	0.2048	0.0890	0.1234	0.0360	0.0424	0.0473	0.0442	-0.0001
	10ms	0.2996	0.2445	0.2450	0.2463	0.2472	0.1344	0.1840	0.0637	0.0625	0.0629	0.0570	0.0000
	15ms	0.3371	0.2821	0.2827	0.2850	0.2860	0.1588	0.2348	0.1184	0.1231	0.1334	0.1192	0.0000
	20ms	0.3696	0.3146	0.3144	0.3163	0.3157	0.1824	0.3016	0.1814	0.1819	0.1868	0.1793	0.0000
	25ms	0.3899	0.3334	0.3323	0.3343	0.3333	0.1891	0.3485	0.2077	0.2045	0.2058	0.2046	0.0000
	50ms	0.4579	0.4049	0.4037	0.4052	0.4043	0.2217	0.4921	0.3835	0.3832	0.3854	0.3865	0.0568
	75ms	0.4919	0.4385	0.4379	0.4391	0.4366	0.2277	0.5659	0.4461	0.4385	0.4420	0.4605	0.0781
	100ms	0.5076	0.4563	0.4551	0.4565	0.4533	0.2351	0.6080	0.4898	0.4871	0.4915	0.4917	0.0985
	150ms	0.5290	0.4778	0.4764	0.4758	0.4714	0.2492	0.6242	0.5196	0.5196	0.5239	0.5192	0.1230
Fifth	200ms	0.5412	0.4922	0.4895	0.4879	0.4824	0.2574	0.6434	0.5582	0.5536	0.5540	0.5500	0.1450
Order	500ms	0.5776	0.5307	0.5268	0.5243	0.5154	0.2784	0.6732	0.5850	0.5795	0.5869	0.5688	0.1922
	750ms	0.5945	0.5519	0.5491	0.5456	0.5361	0.2881	0.6897	0.6283	0.6241	0.6287	0.6235	0.2183
	1s	0.6085	0.5644	0.5610	0.5575	0.5479	0.2961	0.6952	0.6314	0.6322	0.6324	0.6301	0.2330
	5s	0.6609	0.6209	0.6181	0.6146	0.6017	0.3399	0.7359	0.6896	0.6895	0.6892	0.6822	0.3285
	15s	0.6981	0.6606	0.6563	0.6526	0.6355	0.3686	0.7652	0.7401	0.7394	0.7387	0.7353	0.3862
	30s	0.7268	0.6921	0.6868	0.6823	0.6621	0.3924	0.7929	0.7614	0.7595	0.7581	0.7518	0.4136
	60s	0.7588	0.7281	0.7225	0.7161	0.6930	0.4135	0.8175	0.7929	0.7909	0.7864	0.7815	0.4493
	300s	0.8448	0.8150	0.8064	0.7974	0.7680	0.4381	0.8929	0.8706	0.8690	0.8665	0.8605	0.4764
	600s	0.8821	0.8445	0.8358	0.8243	0.7899	0.4381	0.9233	0.8984	0.8976	0.8960	0.8900	0.4393
	900s	0.9013	0.8642	0.8551	0.8425	0.8053	0.4439	0.9380	0.9106	0.9099	0.9084	0.9031	0.4654
	1200s	0.9145	0.8777	0.8676	0.8544	0.8181	0.4442	0.9485	0.9227	0.9212	0.9204	0.9139	0.4369
	1500s	0.9231	0.8852	0.8759	0.8613	0.8259	0.4509	0.9533	0.9289	0.9285	0.9281	0.9226	0.4464
	1800s	0.9293	0.8900	0.8806	0.8658	0.8298	0.4461	0.9593	0.9332	0.9331	0.9316	0.9277	0.4438
	Tick	-0.0024	-0.0066	-0.0072	-0.0074	-0.0071	-0.0011	-0.0019	-0.0016	-0.0019	-0.0007	-0.0002	0.0000
	1ms	0.0725	0.0527	0.0524	0.0534	0.0533	0.0065	0.0098	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	2ms	0.0855	0.0736	0.0738	0.0748	0.0744	0.0171	0.0123	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1349	0.1098	0.1105	0.1116	0.1123	0.0367	0.0317	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	10ms	0.1958	0.1512	0.1525	0.1534	0.1549	0.0659	0.0576	0.0000	0.0000	0.0000	0.0000	-0.0001
	15ms	0.2282	0.1840	0.1853	0.1860	0.1870	0.0850	0.0786	0.0000	0.0000	0.0000	0.0000	-0.0001
	20ms	0.2602	0.2159	0.2158	0.2174	0.2181	0.0999	0.1141	0.0200	0.0203	0.0206	0.0158	-0.0001
	25ms	0.2834	0.2372	0.2369	0.2384	0.2387	0.1114	0.1413	0.0474	0.0457	0.0459	0.0430	0.0000
	50ms	0.3525	0.3031	0.3025	0.3037	0.3050	0.1390	0.2975	0.1610	0.1617	0.1628	0.1629	0.0000
	75ms	0.3870	0.3354	0.3347	0.3361	0.3349	0.1451	0.3811	0.2350	0.2335	0.2348	0.2339	0.0000
	100ms	0.4026	0.3497	0.3491	0.3503	0.3501	0.1498	0.4289	0.2784	0.2798	0.2790	0.2808	0.0044
	150ms	0.4205	0.3665	0.3653	0.3657	0.3647	0.1615	0.4476	0.3257	0.3224	0.3252	0.3216	0.0134
Tenth	200ms	0.4305	0.3762	0.3749	0.3751	0.3727	0.1661	0.4646	0.3579	0.3398	0.3433	0.3433	0.0233
Order	500ms	0.4635	0.4090	0.4066	0.4057	0.4011	0.1802	0.5146	0.3902	0.3863	0.3883	0.3781	0.0506
	750ms	0.4797	0.4305	0.4290	0.4272	0.4216	0.1901	0.5309	0.4574	0.4589	0.4604	0.4535	0.0689
	1s	0.4926	0.4417	0.4399	0.4382	0.4323	0.1937	0.5348	0.4705	0.4705	0.4716	0.4681	0.0764
	5s	0.5416	0.4984	0.4965	0.4945	0.4862	0.2266	0.5959	0.5344	0.5342	0.5335	0.5295	0.1485
	15s	0.5791	0.5380	0.5345	0.5316	0.5197	0.2515	0.6323	0.5931	0.5882	0.5872	0.5790	0.1986
	30s	0.6072	0.5656	0.5606	0.5575	0.5433	0.2726	0.6738	0.6269	0.6233	0.6209	0.6082	0.2186
	60s	0.6422	0.6060	0.6011	0.5962	0.5792	0.2939	0.6992	0.6714	0.6687	0.6652	0.6562	0.2734
	300s	0.7524	0.7185	0.7112	0.7029	0.6770	0.3344	0.8127	0.7818	0.7785	0.7762	0.7675	0.3249
	600s	0.8051	0.7645	0.7569	0.7461	0.7133	0.3393	0.8603	0.8271	0.8257	0.8236	0.8164	0.2845
	900s	0.8364	0.7941	0.7859	0.7737	0.7391	0.3497	0.8888	0.8491	0.8480	0.8465	0.8373	0.3049
	1200s	0.8577	0.8138	0.8050	0.7920	0.7575	0.3490	0.9057	0.8685	0.8668	0.8661	0.8583	0.2831
	1500s	0.8710	0.8252	0.8168	0.8028	0.7684	0.3566	0.9151	0.8809	0.8804	0.8789	0.8707	0.2920
	1800s	0.8814	0.8334	0.8248	0.8103	0.7746	0.3558	0.9263	0.8866	0.8861	0.8844	0.8782	0.2753

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 90 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.114: Mid-quoted Return Autocorrelation - 180 days before maturity

		Mean						Median					
		VWA	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**VWA**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	Tick	-0.0427	-0.0520	-0.0534	-0.0567	-0.0658	-0.3186	-0.0380	-0.0482	-0.0478	-0.0476	-0.0466	-0.3636
	1ms	0.3420	0.3808	0.3810	0.3814	0.3817	0.2939	0.3599	0.4284	0.4289	0.4287	0.4286	0.2770
	2ms	0.4807	0.4532	0.4534	0.4560	0.4543	0.3177	0.5309	0.4999	0.4998	0.4999	0.4999	0.3340
	5ms	0.5775	0.5088	0.5094	0.5097	0.5104	0.3354	0.6259	0.5714	0.5709	0.5712	0.5738	0.3997
	10ms	0.6235	0.5419	0.5437	0.5454	0.5461	0.3818	0.6911	0.6150	0.6091	0.6143	0.6163	0.4252
	15ms	0.6409	0.5681	0.5696	0.5715	0.5742	0.4063	0.7327	0.6362	0.6363	0.6417	0.6432	0.4335
	20ms	0.6658	0.5965	0.5969	0.5976	0.5994	0.4219	0.7648	0.6749	0.6742	0.6765	0.6797	0.4374
	25ms	0.6763	0.6164	0.6161	0.6174	0.6179	0.4419	0.7837	0.6992	0.6989	0.7018	0.7047	0.4513
	50ms	0.7376	0.6939	0.6933	0.6930	0.6943	0.5014	0.8621	0.8081	0.8103	0.8115	0.8153	0.4998
	75ms	0.7693	0.7321	0.7315	0.7318	0.7323	0.5285	0.8881	0.8459	0.8474	0.8495	0.8514	0.5332
	100ms	0.7873	0.7551	0.7534	0.7538	0.7518	0.5391	0.9015	0.8634	0.8637	0.8649	0.8687	0.5548
	150ms	0.8068	0.7771	0.7770	0.7753	0.7714	0.5561	0.9115	0.8800	0.8805	0.8822	0.8837	0.5838
First	**200ms**	0.8175	0.7896	0.7886	0.7865	0.7811	0.5651	0.9154	0.8867	0.8869	0.8876	0.8879	0.6063
Order	**500ms**	0.8441	0.8204	0.8194	0.8155	0.8086	0.5898	0.9270	0.9014	0.9015	0.9018	0.9033	0.6545
	750ms	0.8548	0.8328	0.8317	0.8274	0.8186	0.6026	0.9305	0.9090	0.9091	0.9092	0.9100	0.6675
	1s	0.8616	0.8404	0.8392	0.8346	0.8253	0.6071	0.9311	0.9120	0.9121	0.9124	0.9124	0.6815
	5s	0.8895	0.8724	0.8705	0.8663	0.8531	0.6350	0.9412	0.9316	0.9311	0.9311	0.9317	0.7162
	15s	0.9100	0.8947	0.8922	0.8873	0.8712	0.6538	0.9512	0.9440	0.9442	0.9440	0.9440	0.7356
	30s	0.9236	0.9097	0.9063	0.9022	0.8840	0.6632	0.9575	0.9509	0.9506	0.9506	0.9507	0.7493
	60s	0.9361	0.9227	0.9196	0.9138	0.8951	0.6662	0.9649	0.9572	0.9570	0.9568	0.9568	0.7479
	300s	0.9645	0.9486	0.9450	0.9358	0.9141	0.6630	0.9818	0.9727	0.9726	0.9722	0.9717	0.7450
	600s	0.9740	0.9557	0.9514	0.9419	0.9190	0.6543	0.9873	0.9794	0.9792	0.9789	0.9782	0.7275
	900s	0.9785	0.9623	0.9566	0.9460	0.9235	0.6548	0.9901	0.9819	0.9818	0.9814	0.9808	0.7194
	1200s	0.9814	0.9649	0.9576	0.9490	0.9268	0.6526	0.9916	0.9843	0.9842	0.9839	0.9831	0.7140
	1500s	0.9832	0.9658	0.9600	0.9502	0.9277	0.6546	0.9926	0.9857	0.9857	0.9854	0.9847	0.7133
	1800s	0.9847	0.9676	0.9614	0.9519	0.9276	0.6486	0.9934	0.9867	0.9867	0.9865	0.9859	0.7101
	Tick	-0.0069	-0.0193	-0.0189	-0.0192	-0.0188	-0.0093	-0.0060	-0.0168	-0.0167	-0.0166	-0.0151	0.0000
	1ms	0.1431	0.1008	0.1008	0.1004	0.1011	0.0296	0.0833	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1807	0.1451	0.1449	0.1453	0.1452	0.0418	0.1104	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2461	0.1979	0.1982	0.1993	0.2005	0.0798	0.1537	0.0469	0.0478	0.0525	0.0540	0.0000
	10ms	0.3136	0.2528	0.2528	0.2543	0.2565	0.1299	0.2279	0.1083	0.1106	0.1161	0.1184	0.0000
	15ms	0.3542	0.2939	0.2941	0.2964	0.2990	0.1561	0.2880	0.1656	0.1685	0.1730	0.1783	0.0000
	20ms	0.3920	0.3303	0.3303	0.3325	0.3347	0.1809	0.3583	0.2254	0.2267	0.2301	0.2309	0.0151
	25ms	0.4159	0.3547	0.3541	0.3565	0.3583	0.1914	0.4162	0.2668	0.2660	0.2718	0.2738	0.0347
	50ms	0.4954	0.4365	0.4363	0.4379	0.4394	0.2244	0.5877	0.4623	0.4588	0.4637	0.4681	0.0841
	75ms	0.5311	0.4736	0.4738	0.4754	0.4764	0.2322	0.6554	0.5383	0.5401	0.5426	0.5462	0.1003
	100ms	0.5500	0.4943	0.4944	0.4961	0.4962	0.2373	0.6859	0.5863	0.5865	0.5895	0.5931	0.1127
	150ms	0.5751	0.5182	0.5185	0.5190	0.5190	0.2526	0.7111	0.6310	0.6310	0.6328	0.6371	0.1427
Fifth	**200ms**	0.5899	0.5337	0.5330	0.5330	0.5323	0.2607	0.7254	0.6443	0.6437	0.6447	0.6499	0.1622
Order	**500ms**	0.6270	0.5708	0.5698	0.5684	0.5658	0.2872	0.7559	0.6753	0.6753	0.6765	0.6783	0.2233
	750ms	0.6424	0.5876	0.5870	0.5847	0.5810	0.2990	0.7631	0.6935	0.6939	0.6941	0.6940	0.2457
	1s	0.6537	0.5986	0.5977	0.5954	0.5916	0.3057	0.7710	0.7031	0.7027	0.7033	0.7036	0.2588
	5s	0.7033	0.6516	0.6510	0.6478	0.6411	0.3496	0.7968	0.7572	0.7565	0.7574	0.7578	0.3434
	15s	0.7398	0.6915	0.6902	0.6857	0.6755	0.3783	0.8229	0.7899	0.7904	0.7898	0.7871	0.3958
	30s	0.7678	0.7234	0.7210	0.7165	0.7028	0.4024	0.8434	0.8089	0.8079	0.8079	0.8076	0.4219
	60s	0.7980	0.7584	0.7558	0.7500	0.7336	0.4172	0.8642	0.8320	0.8319	0.8310	0.8301	0.4581
	300s	0.8754	0.8388	0.8350	0.8260	0.8013	0.4472	0.9229	0.8928	0.8923	0.8914	0.8890	0.4828
	600s	0.9061	0.8670	0.8628	0.8529	0.8254	0.4501	0.9444	0.9160	0.9158	0.9148	0.9122	0.4690
	900s	0.9208	0.8840	0.8785	0.8677	0.8394	0.4554	0.9565	0.9277	0.9270	0.9263	0.9242	0.4721
	1200s	0.9312	0.8945	0.8878	0.8780	0.8499	0.4525	0.9626	0.9360	0.9358	0.9352	0.9335	0.4447
	1500s	0.9379	0.9010	0.8946	0.8839	0.8560	0.4596	0.9670	0.9422	0.9419	0.9412	0.9389	0.4623
	1800s	0.9428	0.9066	0.9000	0.8890	0.8598	0.4556	0.9709	0.9459	0.9457	0.9453	0.9435	0.4566
	Tick	-0.0021	-0.0070	-0.0072	-0.0072	-0.0071	-0.0026	-0.0013	-0.0035	-0.0033	-0.0030	-0.0023	0.0000
	1ms	0.0728	0.0480	0.0475	0.0478	0.0481	0.0036	0.0214	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0907	0.0693	0.0690	0.0694	0.0694	0.0114	0.0265	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1420	0.1067	0.1069	0.1074	0.1085	0.0325	0.0472	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.2043	0.1560	0.1563	0.1571	0.1586	0.0648	0.0888	0.0000	0.0000	0.0000	0.0000	-0.0001
	15ms	0.2435	0.1941	0.1943	0.1954	0.1970	0.0860	0.1276	0.0227	0.0248	0.0268	0.0267	-0.0001
	20ms	0.2797	0.2284	0.2282	0.2297	0.2316	0.1025	0.1748	0.0624	0.0626	0.0644	0.0654	0.0000
	25ms	0.3058	0.2530	0.2528	0.2542	0.2560	0.1132	0.2244	0.0955	0.0972	0.1003	0.1009	0.0000
	50ms	0.3882	0.3293	0.3292	0.3303	0.3326	0.1420	0.4022	0.2665	0.2664	0.2670	0.2698	0.0000
	75ms	0.4271	0.3680	0.3679	0.3690	0.3706	0.1488	0.4877	0.3576	0.3579	0.3623	0.3658	0.0105
	100ms	0.4465	0.3862	0.3865	0.3876	0.3891	0.1521	0.5210	0.4119	0.4103	0.4134	0.4142	0.0144
	150ms	0.4699	0.4081	0.4083	0.4091	0.4106	0.1645	0.5554	0.4516	0.4510	0.4522	0.4554	0.0271
Tenth	**200ms**	0.4832	0.4202	0.4201	0.4207	0.4216	0.1685	0.5697	0.4749	0.4739	0.4762	0.4802	0.0327
Order	**500ms**	0.5176	0.4508	0.4504	0.4499	0.4496	0.1858	0.6132	0.5188	0.5195	0.5205	0.5213	0.0666
	750ms	0.5323	0.4675	0.4675	0.4663	0.4650	0.1961	0.6285	0.5346	0.5338	0.5395	0.5353	0.0901
	1s	0.5427	0.4778	0.4776	0.4764	0.4751	0.2006	0.6380	0.5578	0.5556	0.5570	0.5595	0.0950
	5s	0.5913	0.5311	0.5308	0.5284	0.5253	0.2322	0.6729	0.6268	0.6232	0.6262	0.6275	0.1585
	15s	0.6296	0.5717	0.5708	0.5671	0.5608	0.2579	0.7113	0.6638	0.6634	0.6636	0.6609	0.2153
	30s	0.6590	0.6032	0.6010	0.5974	0.5887	0.2795	0.7399	0.6876	0.6876	0.6876	0.6863	0.2378
	60s	0.6944	0.6445	0.6423	0.6373	0.6254	0.2949	0.7706	0.7284	0.7269	0.7266	0.7220	0.2791
	300s	0.7986	0.7534	0.7503	0.7420	0.7208	0.3433	0.8612	0.8188	0.8181	0.8162	0.8125	0.3254
	600s	0.8439	0.7976	0.7939	0.7842	0.7586	0.3531	0.8969	0.8580	0.8580	0.8558	0.8540	0.3080
	900s	0.8688	0.8233	0.8185	0.8079	0.7815	0.3619	0.9182	0.8762	0.8762	0.8744	0.8729	0.3166
	1200s	0.8853	0.8398	0.8337	0.8242	0.7974	0.3606	0.9304	0.8919	0.8914	0.8912	0.8864	0.2964
	1500s	0.8963	0.8503	0.8444	0.8342	0.8068	0.3688	0.9388	0.9027	0.9022	0.9007	0.8976	0.3075
	1800s	0.9045	0.8587	0.8526	0.8419	0.8133	0.3659	0.9459	0.9082	0.9082	0.9078	0.9041	0.2933

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 180 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.115: Mid-quoted Return Autocorrelation - 360 days before maturity

		Mean						Median					
		VWA	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**VWA**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	Tick	-0.0352	-0.0592	-0.0606	-0.0640	-0.0709	-0.3234	-0.0281	-0.0555	-0.0552	-0.0544	-0.0541	-0.3684
	1ms	0.3534	0.3640	0.3650	0.3655	0.3658	0.2828	0.3635	0.3998	0.3998	0.4000	0.3999	0.2501
	2ms	0.5086	0.4496	0.4505	0.4519	0.4514	0.3145	0.5538	0.4999	0.4999	0.4999	0.4999	0.3454
	5ms	0.5976	0.5202	0.5209	0.5212	0.5212	0.3312	0.6415	0.5716	0.5717	0.5722	0.5744	0.3770
	10ms	0.6322	0.5571	0.5584	0.5581	0.5570	0.3792	0.6941	0.6156	0.6154	0.6170	0.6193	0.4153
	15ms	0.6516	0.5824	0.5827	0.5837	0.5829	0.4031	0.7329	0.6386	0.6388	0.6426	0.6467	0.4280
	20ms	0.6777	0.6125	0.6125	0.6127	0.6113	0.4261	0.7693	0.6760	0.6765	0.6778	0.6804	0.4498
	25ms	0.6884	0.6301	0.6295	0.6302	0.6275	0.4460	0.7907	0.7018	0.7015	0.7036	0.7070	0.4542
	50ms	0.7513	0.7063	0.7052	0.7048	0.7035	0.5100	0.8738	0.8154	0.8155	0.8176	0.8200	0.5144
	75ms	0.7840	0.7450	0.7440	0.7433	0.7414	0.5402	0.9019	0.8582	0.8584	0.8588	0.8602	0.5490
	100ms	0.8035	0.7679	0.7664	0.7653	0.7627	0.5550	0.9140	0.8761	0.8761	0.8766	0.8779	0.5711
	150ms	0.8237	0.7921	0.7912	0.7887	0.7839	0.5716	0.9238	0.8921	0.8923	0.8927	0.8929	0.5994
First	**200ms**	0.8360	0.8045	0.8031	0.8006	0.7949	0.5816	0.9302	0.8993	0.8993	0.8997	0.9000	0.6189
Order	**500ms**	0.8629	0.8349	0.8336	0.8306	0.8238	0.6074	0.9411	0.9156	0.9156	0.9156	0.9158	0.6661
	750ms	0.8722	0.8453	0.8444	0.8411	0.8324	0.6187	0.9448	0.9206	0.9206	0.9211	0.9207	0.6812
	1s	0.8781	0.8522	0.8511	0.8476	0.8389	0.6254	0.9470	0.9238	0.9237	0.9240	0.9238	0.6921
	5s	0.9033	0.8793	0.8778	0.8744	0.8619	0.6517	0.9559	0.9387	0.9389	0.9392	0.9391	0.7236
	15s	0.9208	0.9008	0.8993	0.8947	0.8802	0.6705	0.9628	0.9483	0.9485	0.9485	0.9482	0.7423
	30s	0.9341	0.9149	0.9128	0.9075	0.8921	0.6811	0.9679	0.9549	0.9547	0.9546	0.9544	0.7515
	60s	0.9452	0.9278	0.9259	0.9195	0.9036	0.6843	0.9735	0.9604	0.9602	0.9601	0.9598	0.7508
	300s	0.9689	0.9548	0.9521	0.9443	0.9247	0.6824	0.9868	0.9755	0.9753	0.9749	0.9745	0.7445
	600s	0.9772	0.9631	0.9599	0.9520	0.9309	0.6769	0.9912	0.9818	0.9815	0.9812	0.9806	0.7321
	900s	0.9808	0.9683	0.9642	0.9560	0.9351	0.6776	0.9933	0.9847	0.9845	0.9842	0.9837	0.7330
	1200s	0.9830	0.9698	0.9652	0.9584	0.9371	0.6749	0.9943	0.9865	0.9863	0.9861	0.9856	0.7259
	1500s	0.9846	0.9715	0.9679	0.9603	0.9384	0.6727	0.9950	0.9879	0.9878	0.9876	0.9872	0.7170
	1800s	0.9860	0.9727	0.9695	0.9618	0.9391	0.6713	0.9956	0.9890	0.9889	0.9886	0.9881	0.7146
	Tick	-0.0045	-0.0196	-0.0194	-0.0194	-0.0194	-0.0085	-0.0034	-0.0187	-0.0189	-0.0189	-0.0183	0.0000
	1ms	0.1403	0.0831	0.0831	0.0835	0.0837	0.0175	0.0869	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1821	0.1329	0.1329	0.1339	0.1334	0.0387	0.1161	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2532	0.2007	0.2010	0.2019	0.2020	0.0814	0.1687	0.0882	0.0892	0.0908	0.0910	0.0000
	10ms	0.3184	0.2616	0.2615	0.2623	0.2626	0.1320	0.2447	0.1607	0.1618	0.1624	0.1631	0.0000
	15ms	0.3589	0.3018	0.3018	0.3031	0.3036	0.1585	0.3071	0.2187	0.2184	0.2218	0.2223	0.0227
	20ms	0.3970	0.3382	0.3380	0.3391	0.3392	0.1821	0.3785	0.2712	0.2716	0.2729	0.2735	0.0567
	25ms	0.4213	0.3613	0.3607	0.3619	0.3616	0.1929	0.4232	0.3052	0.3054	0.3083	0.3083	0.0768
	50ms	0.5099	0.4471	0.4464	0.4472	0.4471	0.2280	0.6091	0.4813	0.4781	0.4807	0.4829	0.1260
	75ms	0.5497	0.4856	0.4851	0.4859	0.4853	0.2401	0.6759	0.5581	0.5593	0.5603	0.5632	0.1464
	100ms	0.5720	0.5078	0.5071	0.5076	0.5058	0.2484	0.7104	0.6046	0.6045	0.6057	0.6072	0.1578
	150ms	0.6002	0.5342	0.5336	0.5334	0.5310	0.2625	0.7417	0.6478	0.6470	0.6483	0.6488	0.1851
Fifth	**200ms**	0.6168	0.5491	0.5481	0.5476	0.5451	0.2722	0.7584	0.6634	0.6633	0.6641	0.6655	0.2030
Order	**500ms**	0.6581	0.5878	0.5869	0.5855	0.5817	0.3000	0.7925	0.7092	0.7087	0.7097	0.7098	0.2576
	750ms	0.6736	0.6034	0.6030	0.6011	0.5965	0.3121	0.8039	0.7208	0.7208	0.7210	0.7205	0.2771
	1s	0.6834	0.6124	0.6119	0.6101	0.6052	0.3200	0.8094	0.7307	0.7305	0.7309	0.7297	0.2866
	5s	0.7310	0.6592	0.6585	0.6558	0.6485	0.3630	0.8369	0.7694	0.7694	0.7701	0.7699	0.3583
	15s	0.7667	0.7013	0.7006	0.6965	0.6860	0.3944	0.8587	0.8000	0.8001	0.8006	0.7994	0.4136
	30s	0.7954	0.7357	0.7341	0.7293	0.7162	0.4218	0.8738	0.8203	0.8202	0.8201	0.8196	0.4519
	60s	0.8252	0.7727	0.7710	0.7647	0.7495	0.4404	0.8908	0.8429	0.8424	0.8422	0.8408	0.4841
	300s	0.8949	0.8553	0.8526	0.8439	0.8219	0.4733	0.9413	0.9024	0.9015	0.9003	0.8989	0.5008
	600s	0.9208	0.8848	0.8816	0.8725	0.8481	0.4792	0.9601	0.9270	0.9265	0.9252	0.9233	0.4980
	900s	0.9326	0.9002	0.8962	0.8873	0.8618	0.4851	0.9688	0.9385	0.9381	0.9367	0.9343	0.4989
	1200s	0.9404	0.9089	0.9044	0.8963	0.8703	0.4843	0.9739	0.9463	0.9457	0.9448	0.9428	0.4877
	1500s	0.9459	0.9153	0.9109	0.9023	0.8762	0.4825	0.9770	0.9519	0.9516	0.9506	0.9487	0.4801
	1800s	0.9501	0.9203	0.9161	0.9072	0.8806	0.4838	0.9797	0.9558	0.9555	0.9545	0.9524	0.4815
	Tick	-0.0012	-0.0073	-0.0076	-0.0073	-0.0075	-0.0028	-0.0004	-0.0052	-0.0051	-0.0050	-0.0044	0.0000
	1ms	0.0713	0.0357	0.0354	0.0356	0.0356	-0.0012	0.0274	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0920	0.0594	0.0592	0.0595	0.0595	0.0074	0.0339	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1448	0.1065	0.1065	0.1070	0.1074	0.0293	0.0586	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.2059	0.1603	0.1603	0.1605	0.1611	0.0639	0.1009	0.0223	0.0237	0.0250	0.0237	0.0000
	15ms	0.2451	0.1975	0.1974	0.1980	0.1983	0.0865	0.1427	0.0672	0.0680	0.0698	0.0692	0.0000
	20ms	0.2808	0.2304	0.2302	0.2308	0.2312	0.1033	0.1913	0.1118	0.1138	0.1155	0.1146	0.0000
	25ms	0.3064	0.2536	0.2534	0.2540	0.2541	0.1124	0.2363	0.1519	0.1543	0.1542	0.1523	0.0000
	50ms	0.3985	0.3345	0.3342	0.3346	0.3351	0.1422	0.4312	0.2974	0.2969	0.2978	0.2978	0.0193
	75ms	0.4419	0.3743	0.3739	0.3745	0.3745	0.1519	0.5133	0.3834	0.3834	0.3846	0.3854	0.0317
	100ms	0.4657	0.3953	0.3950	0.3954	0.3949	0.1579	0.5515	0.4306	0.4300	0.4312	0.4311	0.0381
	150ms	0.4939	0.4200	0.4196	0.4199	0.4187	0.1687	0.5900	0.4758	0.4752	0.4768	0.4769	0.0522
Tenth	**200ms**	0.5099	0.4324	0.4319	0.4321	0.4309	0.1742	0.6184	0.5006	0.5006	0.5008	0.5012	0.0606
Order	**500ms**	0.5505	0.4664	0.4661	0.4656	0.4633	0.1921	0.6691	0.5516	0.5514	0.5529	0.5515	0.0961
	750ms	0.5655	0.4817	0.4815	0.4806	0.4778	0.2016	0.6822	0.5730	0.5729	0.5732	0.5724	0.1162
	1s	0.5749	0.4903	0.4900	0.4892	0.4862	0.2079	0.6892	0.5855	0.5845	0.5857	0.5836	0.1261
	5s	0.6229	0.5373	0.5368	0.5351	0.5304	0.2406	0.7305	0.6342	0.6348	0.6357	0.6351	0.1822
	15s	0.6608	0.5798	0.5789	0.5760	0.5685	0.2681	0.7635	0.6750	0.6761	0.6761	0.6735	0.2344
	30s	0.6926	0.6170	0.6154	0.6117	0.6022	0.2948	0.7834	0.7036	0.7042	0.7036	0.7009	0.2739
	60s	0.7302	0.6622	0.6607	0.6557	0.6433	0.3160	0.8113	0.7387	0.7384	0.7373	0.7359	0.3108
	300s	0.8296	0.7774	0.7751	0.7672	0.7470	0.3687	0.8919	0.8348	0.8337	0.8319	0.8293	0.3571
	600s	0.8687	0.8218	0.8191	0.8103	0.7869	0.3817	0.9245	0.8764	0.8758	0.8735	0.8700	0.3457
	900s	0.8888	0.8455	0.8418	0.8330	0.8087	0.3908	0.9403	0.8952	0.8946	0.8931	0.8901	0.3545
	1200s	0.9015	0.8596	0.8555	0.8475	0.8225	0.3920	0.9498	0.9083	0.9079	0.9064	0.9035	0.3413
	1500s	0.9101	0.8694	0.8655	0.8569	0.8308	0.3899	0.9563	0.9184	0.9177	0.9165	0.9130	0.3371
	1800s	0.9170	0.8772	0.8733	0.8644	0.8379	0.3928	0.9611	0.9240	0.9239	0.9224	0.9196	0.3312

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 360 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.116: Mid-quoted Return Autocorrelation - 480 days before maturity

		Mean						Median					
		VWA	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**VWA**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	Tick	-0.0296	-0.0629	-0.0644	-0.0673	-0.0739	-0.3260	-0.0218	-0.0606	-0.0606	-0.0599	-0.0597	-0.3714
	1ms	0.3577	0.3628	0.3638	0.3640	0.3645	0.2790	0.3675	0.4002	0.4002	0.4004	0.4005	0.2501
	2ms	0.5121	0.4476	0.4481	0.4492	0.4488	0.3071	0.5550	0.4999	0.4999	0.4999	0.4999	0.3334
	5ms	0.6004	0.5205	0.5204	0.5206	0.5199	0.3290	0.6420	0.5685	0.5685	0.5686	0.5708	0.3748
	10ms	0.6317	0.5580	0.5583	0.5585	0.5572	0.3768	0.6894	0.6117	0.6110	0.6123	0.6135	0.4059
	15ms	0.6522	0.5825	0.5820	0.5827	0.5816	0.4006	0.7281	0.6328	0.6328	0.6352	0.6367	0.4211
	20ms	0.6786	0.6119	0.6114	0.6115	0.6102	0.4237	0.7672	0.6710	0.6701	0.6715	0.6744	0.4473
	25ms	0.6894	0.6275	0.6265	0.6270	0.6246	0.4425	0.7871	0.6966	0.6957	0.6976	0.6985	0.4541
	50ms	0.7519	0.7024	0.7011	0.7009	0.6988	0.5074	0.8739	0.8116	0.8106	0.8121	0.8132	0.5083
	75ms	0.7853	0.7415	0.7403	0.7396	0.7369	0.5394	0.9020	0.8523	0.8523	0.8535	0.8539	0.5460
	100ms	0.8056	0.7657	0.7642	0.7631	0.7599	0.5559	0.9147	0.8731	0.8731	0.8736	0.8741	0.5701
	150ms	0.8267	0.7913	0.7900	0.7879	0.7832	0.5736	0.9262	0.8910	0.8911	0.8921	0.8921	0.5986
First	**200ms**	0.8392	0.8044	0.8027	0.8006	0.7950	0.5824	0.9329	0.8999	0.8997	0.9002	0.9004	0.6178
Order	**500ms**	0.8679	0.8351	0.8336	0.8312	0.8241	0.6087	0.9453	0.9171	0.9171	0.9173	0.9174	0.6658
	750ms	0.8766	0.8449	0.8439	0.8412	0.8319	0.6181	0.9488	0.9227	0.9228	0.9229	0.9226	0.6792
	1s	0.8823	0.8518	0.8507	0.8476	0.8384	0.6254	0.9509	0.9261	0.9261	0.9263	0.9261	0.6916
	5s	0.9055	0.8786	0.8774	0.8745	0.8620	0.6525	0.9591	0.9396	0.9398	0.9400	0.9397	0.7195
	15s	0.9231	0.9003	0.8986	0.8952	0.8811	0.6725	0.9658	0.9489	0.9488	0.9489	0.9486	0.7390
	30s	0.9361	0.9148	0.9127	0.9081	0.8936	0.6842	0.9704	0.9548	0.9545	0.9546	0.9541	0.7494
	60s	0.9475	0.9286	0.9265	0.9209	0.9063	0.6897	0.9759	0.9609	0.9606	0.9606	0.9602	0.7496
	300s	0.9704	0.9561	0.9535	0.9472	0.9295	0.6872	0.9884	0.9764	0.9762	0.9758	0.9753	0.7402
	600s	0.9780	0.9645	0.9613	0.9549	0.9362	0.6835	0.9923	0.9826	0.9824	0.9821	0.9816	0.7302
	900s	0.9817	0.9694	0.9655	0.9585	0.9397	0.6826	0.9941	0.9856	0.9854	0.9851	0.9846	0.7267
	1200s	0.9838	0.9710	0.9668	0.9611	0.9418	0.6807	0.9951	0.9873	0.9871	0.9870	0.9865	0.7246
	1500s	0.9853	0.9722	0.9692	0.9629	0.9431	0.6782	0.9957	0.9887	0.9886	0.9884	0.9880	0.7162
	1800s	0.9865	0.9735	0.9706	0.9642	0.9440	0.6775	0.9962	0.9898	0.9896	0.9894	0.9891	0.7152
	Tick	-0.0034	-0.0195	-0.0193	-0.0193	-0.0199	-0.0080	-0.0021	-0.0189	-0.0189	-0.0190	-0.0189	-0.0001
	1ms	0.1388	0.0791	0.0790	0.0793	0.0795	0.0137	0.0878	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1789	0.1302	0.1301	0.1307	0.1305	0.0346	0.1153	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2492	0.1996	0.1995	0.2002	0.1999	0.0793	0.1676	0.0937	0.0950	0.0956	0.0963	0.0000
	10ms	0.3137	0.2598	0.2594	0.2599	0.2598	0.1298	0.2433	0.1668	0.1674	0.1684	0.1685	0.0000
	15ms	0.3547	0.2989	0.2984	0.2994	0.2991	0.1562	0.3063	0.2231	0.2228	0.2233	0.2232	0.0381
	20ms	0.3930	0.3345	0.3340	0.3349	0.3344	0.1791	0.3743	0.2727	0.2724	0.2746	0.2735	0.0723
	25ms	0.4178	0.3563	0.3555	0.3564	0.3558	0.1892	0.4206	0.3013	0.2991	0.3021	0.3008	0.0849
	50ms	0.5085	0.4407	0.4400	0.4406	0.4397	0.2255	0.6072	0.4716	0.4688	0.4696	0.4719	0.1349
	75ms	0.5503	0.4795	0.4789	0.4794	0.4780	0.2395	0.6765	0.5489	0.5486	0.5494	0.5511	0.1578
	100ms	0.5748	0.5034	0.5026	0.5029	0.5004	0.2487	0.7112	0.5941	0.5932	0.5954	0.5957	0.1704
	150ms	0.6045	0.5311	0.5304	0.5301	0.5273	0.2644	0.7448	0.6423	0.6419	0.6429	0.6437	0.1998
Fifth	**200ms**	0.6222	0.5475	0.5462	0.5458	0.5428	0.2730	0.7626	0.6607	0.6598	0.6613	0.6619	0.2162
Order	**500ms**	0.6663	0.5881	0.5870	0.5859	0.5818	0.3015	0.8013	0.7131	0.7122	0.7127	0.7130	0.2659
	750ms	0.6817	0.6035	0.6029	0.6015	0.5962	0.3124	0.8135	0.7240	0.7240	0.7238	0.7231	0.2834
	1s	0.6913	0.6125	0.6118	0.6103	0.6048	0.3210	0.8199	0.7364	0.7364	0.7365	0.7356	0.2938
	5s	0.7371	0.6587	0.6579	0.6558	0.6482	0.3641	0.8467	0.7717	0.7722	0.7727	0.7718	0.3626
	15s	0.7737	0.7019	0.7009	0.6977	0.6871	0.3991	0.8675	0.8016	0.8015	0.8018	0.7997	0.4168
	30s	0.8016	0.7366	0.7348	0.7309	0.7182	0.4271	0.8816	0.8209	0.8206	0.8208	0.8197	0.4579
	60s	0.8317	0.7749	0.7730	0.7678	0.7530	0.4490	0.8995	0.8440	0.8439	0.8438	0.8424	0.4919
	300s	0.8990	0.8592	0.8563	0.8492	0.8287	0.4817	0.9471	0.9060	0.9052	0.9040	0.9025	0.5026
	600s	0.9233	0.8885	0.8852	0.8773	0.8552	0.4890	0.9642	0.9311	0.9306	0.9292	0.9270	0.4982
	900s	0.9351	0.9035	0.8996	0.8914	0.8684	0.4927	0.9723	0.9421	0.9417	0.9408	0.9389	0.4974
	1200s	0.9423	0.9116	0.9074	0.9002	0.8764	0.4938	0.9770	0.9498	0.9493	0.9483	0.9466	0.4931
	1500s	0.9475	0.9177	0.9138	0.9061	0.8824	0.4927	0.9800	0.9552	0.9548	0.9539	0.9524	0.4913
	1800s	0.9514	0.9225	0.9186	0.9106	0.8867	0.4947	0.9824	0.9591	0.9587	0.9580	0.9567	0.4873
	Tick	-0.0006	-0.0071	-0.0074	-0.0072	-0.0073	-0.0024	0.0000	-0.0055	-0.0054	-0.0053	-0.0051	0.0000
	1ms	0.0706	0.0327	0.0325	0.0326	0.0327	-0.0027	0.0297	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0905	0.0566	0.0565	0.0568	0.0567	0.0047	0.0357	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1420	0.1057	0.1054	0.1058	0.1060	0.0277	0.0590	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.2010	0.1580	0.1577	0.1580	0.1582	0.0617	0.1007	0.0332	0.0349	0.0351	0.0339	0.0000
	15ms	0.2399	0.1941	0.1936	0.1941	0.1941	0.0843	0.1434	0.0758	0.0765	0.0780	0.0768	0.0000
	20ms	0.2756	0.2260	0.2255	0.2261	0.2260	0.1007	0.1932	0.1214	0.1229	0.1246	0.1227	0.0000
	25ms	0.3016	0.2479	0.2476	0.2481	0.2476	0.1096	0.2372	0.1552	0.1558	0.1560	0.1543	0.0000
	50ms	0.3955	0.3279	0.3275	0.3278	0.3275	0.1402	0.4318	0.2950	0.2947	0.2955	0.2948	0.0270
	75ms	0.4404	0.3668	0.3663	0.3667	0.3659	0.1513	0.5138	0.3741	0.3734	0.3744	0.3744	0.0409
	100ms	0.4664	0.3894	0.3888	0.3890	0.3877	0.1577	0.5553	0.4228	0.4207	0.4226	0.4205	0.0489
	150ms	0.4969	0.4154	0.4147	0.4148	0.4132	0.1696	0.5969	0.4722	0.4711	0.4719	0.4706	0.0659
Tenth	**200ms**	0.5146	0.4294	0.4286	0.4288	0.4271	0.1746	0.6245	0.4978	0.4969	0.4978	0.4973	0.0754
Order	**500ms**	0.5588	0.4656	0.4650	0.4646	0.4620	0.1932	0.6798	0.5547	0.5548	0.5557	0.5547	0.1101
	750ms	0.5737	0.4809	0.4805	0.4799	0.4765	0.2015	0.6943	0.5764	0.5764	0.5768	0.5755	0.1262
	1s	0.5831	0.4896	0.4892	0.4885	0.4851	0.2082	0.7050	0.5885	0.5881	0.5884	0.5866	0.1366
	5s	0.6295	0.5361	0.5355	0.5343	0.5292	0.2414	0.7432	0.6366	0.6368	0.6372	0.6366	0.1887
	15s	0.6690	0.5802	0.5792	0.5770	0.5695	0.2726	0.7731	0.6755	0.6763	0.6774	0.6737	0.2437
	30s	0.7006	0.6179	0.6163	0.6133	0.6040	0.3002	0.7963	0.7041	0.7045	0.7043	0.7018	0.2843
	60s	0.7387	0.6647	0.6631	0.6592	0.6472	0.3255	0.8218	0.7418	0.7412	0.7407	0.7388	0.3249
	300s	0.8365	0.7833	0.7808	0.7745	0.7556	0.3777	0.9009	0.8410	0.8401	0.8382	0.8353	0.3619
	600s	0.8742	0.8278	0.8246	0.8172	0.7961	0.3919	0.9317	0.8830	0.8820	0.8803	0.8768	0.3525
	900s	0.8929	0.8504	0.8467	0.8387	0.8167	0.3985	0.9466	0.9017	0.9011	0.8999	0.8965	0.3568
	1200s	0.9047	0.8638	0.8598	0.8527	0.8300	0.4022	0.9556	0.9143	0.9138	0.9127	0.9097	0.3502
	1500s	0.9126	0.8731	0.8695	0.8620	0.8384	0.4010	0.9615	0.9237	0.9234	0.9222	0.9195	0.3474
	1800s	0.9189	0.8807	0.8770	0.8691	0.8452	0.4046	0.9659	0.9303	0.9300	0.9289	0.9264	0.3452

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 480 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.117: Mid-quoted Return Autocorrelation - 720 days before maturity

		Mean						Median					
		VWA	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**VWA**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	Tick	-0.0268	-0.0756	-0.0796	-0.0833	-0.0870	-0.3348	-0.0150	-0.0778	-0.0783	-0.0767	-0.0765	-0.3827
	1ms	0.3650	0.3520	0.3519	0.3527	0.3527	0.2609	0.3813	0.3994	0.3993	0.3995	0.3995	0.2495
	2ms	0.5097	0.4398	0.4398	0.4414	0.4411	0.2918	0.5521	0.4998	0.4998	0.4998	0.4998	0.3330
	5ms	0.5909	0.5143	0.5135	0.5145	0.5146	0.3200	0.6321	0.5584	0.5560	0.5582	0.5610	0.3613
	10ms	0.6201	0.5477	0.5471	0.5490	0.5497	0.3684	0.6774	0.5943	0.5933	0.5966	0.5999	0.3962
	15ms	0.6400	0.5708	0.5697	0.5720	0.5727	0.3911	0.7117	0.6144	0.6136	0.6185	0.6228	0.4119
	20ms	0.6663	0.5986	0.5975	0.5996	0.6006	0.4140	0.7514	0.6548	0.6540	0.6582	0.6628	0.4397
	25ms	0.6765	0.6136	0.6122	0.6143	0.6143	0.4327	0.7730	0.6805	0.6795	0.6827	0.6860	0.4492
	50ms	0.7400	0.6880	0.6863	0.6878	0.6873	0.5004	0.8641	0.7976	0.7969	0.7991	0.8017	0.5105
	75ms	0.7750	0.7275	0.7260	0.7262	0.7254	0.5326	0.8958	0.8408	0.8403	0.8413	0.8430	0.5430
	100ms	0.7958	0.7529	0.7510	0.7508	0.7492	0.5501	0.9111	0.8616	0.8615	0.8623	0.8633	0.5657
	150ms	0.8179	0.7803	0.7784	0.7762	0.7730	0.5680	0.9250	0.8813	0.8813	0.8821	0.8829	0.5896
First	**200ms**	0.8307	0.7952	0.7931	0.7903	0.7860	0.5784	0.9322	0.8917	0.8916	0.8923	0.8929	0.6089
Order	**500ms**	0.8606	0.8274	0.8245	0.8207	0.8150	0.6049	0.9466	0.9120	0.9116	0.9122	0.9125	0.6528
	750ms	0.8699	0.8378	0.8353	0.8308	0.8237	0.6146	0.9507	0.9177	0.9177	0.9180	0.9182	0.6665
	1s	0.8759	0.8444	0.8413	0.8368	0.8297	0.6216	0.9532	0.9209	0.9209	0.9211	0.9216	0.6756
	5s	0.8981	0.8696	0.8660	0.8609	0.8511	0.6501	0.9607	0.9332	0.9332	0.9337	0.9340	0.7082
	15s	0.9161	0.8916	0.8861	0.8801	0.8698	0.6696	0.9665	0.9424	0.9423	0.9425	0.9427	0.7277
	30s	0.9291	0.9067	0.9003	0.8935	0.8825	0.6818	0.9710	0.9488	0.9487	0.9488	0.9489	0.7376
	60s	0.9413	0.9219	0.9153	0.9078	0.8962	0.6881	0.9764	0.9558	0.9556	0.9555	0.9554	0.7378
	300s	0.9660	0.9531	0.9459	0.9376	0.9233	0.6883	0.9887	0.9747	0.9744	0.9740	0.9736	0.7301
	600s	0.9742	0.9624	0.9547	0.9462	0.9315	0.6858	0.9926	0.9819	0.9816	0.9810	0.9805	0.7243
	900s	0.9782	0.9670	0.9585	0.9499	0.9353	0.6844	0.9943	0.9853	0.9849	0.9845	0.9840	0.7194
	1200s	0.9805	0.9690	0.9605	0.9525	0.9379	0.6832	0.9953	0.9873	0.9870	0.9866	0.9862	0.7190
	1500s	0.9822	0.9705	0.9631	0.9543	0.9394	0.6815	0.9959	0.9888	0.9885	0.9880	0.9876	0.7149
	1800s	0.9833	0.9718	0.9644	0.9556	0.9407	0.6796	0.9964	0.9899	0.9896	0.9892	0.9888	0.7138
	Tick	-0.0018	-0.0189	-0.0186	-0.0187	-0.0197	-0.0075	-0.0003	-0.0185	-0.0185	-0.0188	-0.0189	-0.0004
	1ms	0.1398	0.0725	0.0724	0.0727	0.0727	0.0087	0.0902	0.0000	0.0000	0.0000	0.0000	-0.0001
	2ms	0.1733	0.1213	0.1210	0.1217	0.1214	0.0265	0.1129	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2388	0.1923	0.1919	0.1928	0.1929	0.0728	0.1605	0.1024	0.1016	0.1036	0.1039	0.0000
	10ms	0.3006	0.2486	0.2480	0.2493	0.2499	0.1226	0.2313	0.1612	0.1618	0.1635	0.1655	0.0000
	15ms	0.3393	0.2843	0.2836	0.2852	0.2857	0.1474	0.2885	0.2075	0.2066	0.2091	0.2113	0.0430
	20ms	0.3763	0.3178	0.3172	0.3187	0.3193	0.1692	0.3529	0.2529	0.2525	0.2560	0.2572	0.0767
	25ms	0.4002	0.3383	0.3374	0.3389	0.3396	0.1795	0.3969	0.2837	0.2818	0.2847	0.2851	0.0908
	50ms	0.4927	0.4205	0.4196	0.4210	0.4219	0.2181	0.5830	0.4482	0.4468	0.4495	0.4514	0.1444
	75ms	0.5360	0.4587	0.4578	0.4592	0.4600	0.2337	0.6602	0.5224	0.5213	0.5231	0.5266	0.1665
	100ms	0.5616	0.4834	0.4823	0.4835	0.4834	0.2437	0.6963	0.5666	0.5657	0.5676	0.5695	0.1832
	150ms	0.5929	0.5130	0.5118	0.5122	0.5117	0.2604	0.7363	0.6150	0.6145	0.6153	0.6174	0.2111
Fifth	**200ms**	0.6118	0.5310	0.5296	0.5298	0.5287	0.2704	0.7559	0.6392	0.6385	0.6400	0.6418	0.2266
Order	**500ms**	0.6586	0.5743	0.5730	0.5719	0.5694	0.3000	0.8015	0.6923	0.6923	0.6934	0.6943	0.2714
	750ms	0.6745	0.5902	0.5891	0.5877	0.5843	0.3114	0.8163	0.7082	0.7078	0.7088	0.7089	0.2871
	1s	0.6842	0.5991	0.5976	0.5961	0.5927	0.3197	0.8239	0.7166	0.7166	0.7176	0.7180	0.2974
	5s	0.7280	0.6435	0.6417	0.6391	0.6335	0.3653	0.8495	0.7532	0.7536	0.7556	0.7559	0.3678
	15s	0.7626	0.6856	0.6822	0.6780	0.6703	0.4008	0.8672	0.7814	0.7814	0.7821	0.7817	0.4196
	30s	0.7901	0.7207	0.7158	0.7102	0.7001	0.4286	0.8812	0.8044	0.8043	0.8049	0.8046	0.4579
	60s	0.8210	0.7614	0.7550	0.7472	0.7354	0.4511	0.8996	0.8285	0.8283	0.8283	0.8275	0.4904
	300s	0.8919	0.8537	0.8452	0.8331	0.8155	0.4866	0.9474	0.9012	0.9002	0.8984	0.8968	0.5091
	600s	0.9164	0.8849	0.8759	0.8629	0.8438	0.4945	0.9651	0.9297	0.9285	0.9264	0.9247	0.5047
	900s	0.9284	0.8996	0.8897	0.8767	0.8573	0.4979	0.9731	0.9423	0.9412	0.9395	0.9376	0.5009
	1200s	0.9361	0.9083	0.8982	0.8855	0.8661	0.5000	0.9776	0.9507	0.9495	0.9479	0.9463	0.5015
	1500s	0.9414	0.9147	0.9050	0.8918	0.8721	0.4996	0.9806	0.9561	0.9552	0.9536	0.9520	0.4997
	1800s	0.9453	0.9196	0.9096	0.8964	0.8767	0.5003	0.9829	0.9603	0.9595	0.9581	0.9567	0.4967
	Tick	0.0002	-0.0072	-0.0076	-0.0072	-0.0075	-0.0021	0.0010	-0.0059	-0.0059	-0.0057	-0.0057	0.0000
	1ms	0.0698	0.0288	0.0288	0.0290	0.0289	-0.0030	0.0294	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0863	0.0505	0.0503	0.0506	0.0505	0.0025	0.0351	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1334	0.0990	0.0987	0.0990	0.0993	0.0240	0.0550	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.1898	0.1483	0.1479	0.1485	0.1490	0.0574	0.0936	0.0363	0.0374	0.0385	0.0383	0.0000
	15ms	0.2268	0.1815	0.1808	0.1816	0.1821	0.0780	0.1328	0.0743	0.0745	0.0765	0.0777	0.0000
	20ms	0.2603	0.2103	0.2097	0.2107	0.2110	0.0934	0.1776	0.1118	0.1118	0.1144	0.1143	0.0000
	25ms	0.2847	0.2302	0.2296	0.2305	0.2307	0.1021	0.2205	0.1400	0.1397	0.1417	0.1418	0.0040
	50ms	0.3777	0.3057	0.3048	0.3057	0.3063	0.1331	0.4075	0.2774	0.2756	0.2772	0.2782	0.0335
	75ms	0.4237	0.3432	0.3425	0.3432	0.3438	0.1452	0.4927	0.3467	0.3458	0.3478	0.3484	0.0498
	100ms	0.4507	0.3661	0.3653	0.3660	0.3662	0.1523	0.5371	0.3887	0.3872	0.3897	0.3903	0.0613
	150ms	0.4833	0.3938	0.3930	0.3933	0.3933	0.1648	0.5847	0.4417	0.4402	0.4410	0.4429	0.0775
Tenth	**200ms**	0.5026	0.4099	0.4091	0.4094	0.4091	0.1714	0.6120	0.4676	0.4663	0.4673	0.4685	0.0875
Order	**500ms**	0.5508	0.4495	0.4490	0.4488	0.4476	0.1921	0.6765	0.5338	0.5332	0.5348	0.5353	0.1220
	750ms	0.5673	0.4652	0.4648	0.4646	0.4628	0.2007	0.6949	0.5541	0.5541	0.5556	0.5557	0.1357
	1s	0.5772	0.4737	0.4731	0.4728	0.4712	0.2070	0.7062	0.5661	0.5646	0.5671	0.5666	0.1457
	5s	0.6216	0.5183	0.5172	0.5164	0.5130	0.2439	0.7445	0.6115	0.6125	0.6140	0.6139	0.2016
	15s	0.6582	0.5609	0.5587	0.5563	0.5508	0.2760	0.7701	0.6495	0.6492	0.6498	0.6495	0.2538
	30s	0.6886	0.5987	0.5951	0.5913	0.5837	0.3032	0.7931	0.6808	0.6808	0.6821	0.6808	0.2921
	60s	0.7267	0.6472	0.6423	0.6368	0.6268	0.3289	0.8200	0.7184	0.7179	0.7179	0.7172	0.3322
	300s	0.8288	0.7759	0.7680	0.7570	0.7396	0.3822	0.9002	0.8329	0.8316	0.8300	0.8273	0.3734
	600s	0.8669	0.8235	0.8144	0.8019	0.7826	0.3973	0.9325	0.8807	0.8792	0.8764	0.8730	0.3722
	900s	0.8856	0.8462	0.8361	0.8232	0.8032	0.4035	0.9479	0.9021	0.9006	0.8979	0.8951	0.3692
	1200s	0.8975	0.8600	0.8499	0.8369	0.8168	0.4085	0.9565	0.9161	0.9148	0.9124	0.9092	0.3698
	1500s	0.9056	0.8698	0.8599	0.8462	0.8257	0.4076	0.9624	0.9256	0.9243	0.9220	0.9190	0.3684
	1800s	0.9119	0.8778	0.8676	0.8538	0.8331	0.4105	0.9666	0.9327	0.9315	0.9294	0.9267	0.3657

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 720 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.118: Mid-quoted Return Autocorrelation - 900 days before maturity

		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
	Tick	-0.0267	-0.0826	-0.0895	-0.0915	-0.0929	-0.3437	-0.0113	-0.0857	-0.0867	-0.0846	-0.0831	-0.3950
	1ms	0.3701	0.3522	0.3520	0.3525	0.3525	0.2572	0.3915	0.3997	0.3995	0.3996	0.3997	0.2272
	2ms	0.5058	0.4357	0.4360	0.4375	0.4375	0.2864	0.5531	0.4998	0.4998	0.4998	0.4998	0.3215
	5ms	0.5799	0.5092	0.5089	0.5111	0.5123	0.3108	0.6244	0.5578	0.5566	0.5605	0.5626	0.3458
	10ms	0.6076	0.5419	0.5430	0.5483	0.5513	0.3622	0.6690	0.5924	0.5931	0.5999	0.6048	0.3938
	15ms	0.6273	0.5629	0.5634	0.5702	0.5747	0.3866	0.7015	0.6111	0.6122	0.6226	0.6322	0.4132
	20ms	0.6540	0.5900	0.5907	0.5977	0.6027	0.4097	0.7421	0.6520	0.6522	0.6618	0.6685	0.4417
	25ms	0.6647	0.6045	0.6051	0.6122	0.6161	0.4292	0.7655	0.6768	0.6769	0.6863	0.6949	0.4522
	50ms	0.7282	0.6783	0.6781	0.6844	0.6884	0.4978	0.8566	0.7888	0.7897	0.7973	0.8028	0.5164
	75ms	0.7627	0.7173	0.7171	0.7219	0.7251	0.5288	0.8891	0.8307	0.8311	0.8363	0.8398	0.5459
	100ms	0.7837	0.7426	0.7417	0.7454	0.7477	0.5454	0.9042	0.8522	0.8532	0.8568	0.8597	0.5660
	150ms	0.8062	0.7702	0.7689	0.7702	0.7711	0.5630	0.9191	0.8724	0.8735	0.8768	0.8788	0.5875
First	200ms	0.8192	0.7856	0.7838	0.7843	0.7839	0.5736	0.9271	0.8837	0.8841	0.8870	0.8890	0.6058
Order	500ms	0.8504	0.8182	0.8151	0.8142	0.8121	0.5999	0.9432	0.9047	0.9054	0.9075	0.9092	0.6484
	750ms	0.8600	0.8285	0.8252	0.8233	0.8202	0.6100	0.9481	0.9113	0.9117	0.9139	0.9152	0.6632
	1s	0.8659	0.8341	0.8302	0.8283	0.8252	0.6167	0.9505	0.9145	0.9150	0.9170	0.9181	0.6694
	5s	0.8891	0.8597	0.8544	0.8513	0.8463	0.6462	0.9582	0.9264	0.9269	0.9288	0.9302	0.7020
	15s	0.9075	0.8823	0.8743	0.8701	0.8646	0.6665	0.9640	0.9358	0.9362	0.9375	0.9385	0.7214
	30s	0.9215	0.8981	0.8885	0.8833	0.8767	0.6776	0.9689	0.9428	0.9430	0.9441	0.9448	0.7298
	60s	0.9346	0.9141	0.9040	0.8979	0.8902	0.6838	0.9746	0.9508	0.9509	0.9514	0.9518	0.7314
	300s	0.9622	0.9484	0.9362	0.9286	0.9192	0.6851	0.9880	0.9729	0.9725	0.9723	0.9722	0.7247
	600s	0.9715	0.9590	0.9457	0.9382	0.9282	0.6819	0.9922	0.9809	0.9805	0.9801	0.9799	0.7201
	900s	0.9756	0.9637	0.9499	0.9419	0.9324	0.6801	0.9941	0.9846	0.9842	0.9838	0.9835	0.7153
	1200s	0.9782	0.9662	0.9522	0.9453	0.9347	0.6800	0.9951	0.9868	0.9864	0.9861	0.9857	0.7155
	1500s	0.9799	0.9680	0.9546	0.9467	0.9364	0.6781	0.9957	0.9884	0.9881	0.9877	0.9874	0.7123
	1800s	0.9813	0.9692	0.9560	0.9482	0.9375	0.6765	0.9962	0.9896	0.9893	0.9889	0.9886	0.7118
	Tick	-0.0010	-0.0182	-0.0183	-0.0185	-0.0192	-0.0066	0.0003	-0.0180	-0.0179	-0.0185	-0.0185	-0.0001
	1ms	0.1394	0.0702	0.0700	0.0704	0.0704	0.0073	0.0919	0.0000	0.0000	0.0000	0.0000	-0.0001
	2ms	0.1690	0.1186	0.1179	0.1187	0.1187	0.0245	0.1111	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2289	0.1880	0.1877	0.1891	0.1898	0.0693	0.1516	0.1042	0.1039	0.1070	0.1084	0.0000
	10ms	0.2872	0.2407	0.2406	0.2438	0.2456	0.1176	0.2155	0.1594	0.1608	0.1663	0.1708	0.0000
	15ms	0.3250	0.2738	0.2739	0.2783	0.2808	0.1420	0.2720	0.2043	0.2046	0.2128	0.2165	0.0443
	20ms	0.3613	0.3059	0.3062	0.3111	0.3141	0.1634	0.3330	0.2495	0.2503	0.2602	0.2657	0.0769
	25ms	0.3852	0.3255	0.3259	0.3309	0.3343	0.1744	0.3784	0.2788	0.2795	0.2886	0.2936	0.0926
	50ms	0.4779	0.4064	0.4070	0.4129	0.4172	0.2140	0.5638	0.4352	0.4351	0.4470	0.4520	0.1472
	75ms	0.5211	0.4443	0.4449	0.4511	0.4554	0.2298	0.6396	0.5078	0.5083	0.5171	0.5220	0.1705
	100ms	0.5470	0.4686	0.4691	0.4750	0.4787	0.2402	0.6776	0.5478	0.5483	0.5554	0.5613	0.1865
	150ms	0.5780	0.4978	0.4984	0.5037	0.5072	0.2569	0.7181	0.5946	0.5960	0.6025	0.6082	0.2129
Fifth	200ms	0.5968	0.5157	0.5161	0.5210	0.5242	0.2675	0.7409	0.6188	0.6194	0.6270	0.6322	0.2301
Order	500ms	0.6437	0.5595	0.5598	0.5634	0.5653	0.2980	0.7903	0.6747	0.6761	0.6815	0.6848	0.2743
	750ms	0.6596	0.5751	0.5753	0.5785	0.5796	0.3098	0.8048	0.6910	0.6923	0.6977	0.7013	0.2908
	1s	0.6690	0.5833	0.5830	0.5859	0.5873	0.3182	0.8129	0.7002	0.7020	0.7068	0.7098	0.3016
	5s	0.7117	0.6269	0.6253	0.6272	0.6268	0.3646	0.8385	0.7322	0.7345	0.7400	0.7433	0.3704
	15s	0.7455	0.6680	0.6642	0.6639	0.6615	0.4008	0.8564	0.7615	0.7629	0.7675	0.7702	0.4240
	30s	0.7728	0.7027	0.6967	0.6949	0.6900	0.4267	0.8728	0.7844	0.7849	0.7886	0.7906	0.4569
	60s	0.8043	0.7437	0.7358	0.7309	0.7242	0.4481	0.8916	0.8140	0.8142	0.8163	0.8170	0.4867
	300s	0.8813	0.8429	0.8301	0.8190	0.8068	0.4833	0.9443	0.8950	0.8941	0.8934	0.8924	0.5070
	600s	0.9084	0.8770	0.8622	0.8499	0.8362	0.4904	0.9633	0.9259	0.9248	0.9236	0.9221	0.5047
	900s	0.9213	0.8930	0.8772	0.8642	0.8505	0.4934	0.9718	0.9401	0.9388	0.9375	0.9361	0.5015
	1200s	0.9294	0.9024	0.8859	0.8735	0.8592	0.4965	0.9764	0.9490	0.9477	0.9465	0.9452	0.5032
	1500s	0.9349	0.9092	0.8927	0.8797	0.8652	0.4955	0.9796	0.9551	0.9539	0.9525	0.9513	0.5009
	1800s	0.9392	0.9143	0.8976	0.8845	0.8700	0.4967	0.9820	0.9596	0.9585	0.9572	0.9560	0.4998
	Tick	0.0002	-0.0069	-0.0071	-0.0071	-0.0074	-0.0023	0.0012	-0.0059	-0.0057	-0.0056	-0.0056	0.0000
	1ms	0.0697	0.0277	0.0276	0.0278	0.0278	-0.0027	0.0304	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0835	0.0488	0.0485	0.0488	0.0489	0.0021	0.0338	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1266	0.0960	0.0957	0.0962	0.0969	0.0226	0.0503	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.1790	0.1418	0.1417	0.1433	0.1447	0.0545	0.0826	0.0367	0.0385	0.0415	0.0429	0.0000
	15ms	0.2143	0.1724	0.1723	0.1747	0.1767	0.0742	0.1187	0.0716	0.0729	0.0787	0.0821	0.0000
	20ms	0.2466	0.1994	0.1994	0.2026	0.2047	0.0893	0.1659	0.1076	0.1087	0.1161	0.1202	0.0000
	25ms	0.2702	0.2179	0.2182	0.2215	0.2237	0.0979	0.2062	0.1340	0.1355	0.1427	0.1460	0.0052
	50ms	0.3620	0.2907	0.2910	0.2952	0.2982	0.1288	0.3845	0.2654	0.2653	0.2738	0.2773	0.0351
	75ms	0.4078	0.3271	0.3276	0.3321	0.3354	0.1407	0.4687	0.3327	0.3342	0.3407	0.3452	0.0509
	100ms	0.4348	0.3493	0.3498	0.3542	0.3574	0.1477	0.5125	0.3712	0.3715	0.3791	0.3827	0.0617
	150ms	0.4672	0.3764	0.3771	0.3812	0.3846	0.1604	0.5632	0.4192	0.4196	0.4267	0.4313	0.0786
Tenth	200ms	0.4863	0.3924	0.3933	0.3973	0.4004	0.1678	0.5881	0.4446	0.4457	0.4507	0.4554	0.0895
Order	500ms	0.5348	0.4332	0.4342	0.4380	0.4406	0.1904	0.6572	0.5103	0.5114	0.5175	0.5210	0.1250
	750ms	0.5514	0.4484	0.4496	0.4535	0.4556	0.1995	0.6765	0.5292	0.5315	0.5374	0.5413	0.1389
	1s	0.5613	0.4565	0.4573	0.4612	0.4636	0.2059	0.6894	0.5414	0.5434	0.5495	0.5535	0.1500
	5s	0.6040	0.4999	0.4998	0.5032	0.5045	0.2437	0.7281	0.5835	0.5857	0.5935	0.5965	0.2070
	15s	0.6384	0.5410	0.5395	0.5412	0.5405	0.2765	0.7543	0.6215	0.6236	0.6290	0.6317	0.2604
	30s	0.6677	0.5779	0.5747	0.5750	0.5722	0.3018	0.7769	0.6530	0.6540	0.6587	0.6607	0.2942
	60s	0.7056	0.6258	0.6208	0.6188	0.6138	0.3260	0.8069	0.6971	0.6973	0.7005	0.7022	0.3304
	300s	0.8139	0.7612	0.7506	0.7412	0.7291	0.3779	0.8940	0.8238	0.8230	0.8222	0.8206	0.3734
	600s	0.8554	0.8130	0.7993	0.7875	0.7736	0.3915	0.9290	0.8751	0.8735	0.8715	0.8692	0.3735
	900s	0.8759	0.8378	0.8225	0.8095	0.7952	0.3974	0.9450	0.8985	0.8970	0.8954	0.8931	0.3703
	1200s	0.8881	0.8524	0.8364	0.8233	0.8085	0.4031	0.9541	0.9133	0.9118	0.9097	0.9077	0.3736
	1500s	0.8967	0.8631	0.8468	0.8329	0.8176	0.4018	0.9604	0.9236	0.9220	0.9202	0.9179	0.3724
	1800s	0.9032	0.8710	0.8544	0.8405	0.8250	0.4050	0.9647	0.9312	0.9299	0.9276	0.9257	0.3726

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 900 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.119: Mid-quoted Return Autocorrelation - 1080 days before maturity

		Mean						Median					
		VWA	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**VWA**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	Tick	-0.0244	-0.0883	-0.0973	-0.0974	-0.0974	-0.3514	-0.0074	-0.0924	-0.0946	-0.0913	-0.0891	-0.4046
	1ms	0.3697	0.3488	0.3483	0.3485	0.3486	0.2547	0.3922	0.3966	0.3927	0.3922	0.3940	0.2220
	2ms	0.5007	0.4275	0.4272	0.4289	0.4293	0.2764	0.5492	0.4996	0.4995	0.4996	0.4996	0.2995
	5ms	0.5677	0.5009	0.5006	0.5034	0.5053	0.2988	0.6146	0.5497	0.5472	0.5517	0.5543	0.3332
	10ms	0.5933	0.5337	0.5352	0.5428	0.5477	0.3512	0.6569	0.5857	0.5862	0.5957	0.6005	0.3807
	15ms	0.6135	0.5526	0.5537	0.5644	0.5712	0.3762	0.6893	0.6045	0.6053	0.6196	0.6307	0.4000
	20ms	0.6411	0.5791	0.5810	0.5924	0.5995	0.4007	0.7304	0.6444	0.6462	0.6591	0.6667	0.4319
	25ms	0.6526	0.5932	0.5954	0.6074	0.6137	0.4218	0.7541	0.6666	0.6684	0.6835	0.6936	0.4465
	50ms	0.7170	0.6668	0.6687	0.6792	0.6860	0.4913	0.8459	0.7771	0.7787	0.7875	0.7949	0.5127
	75ms	0.7518	0.7055	0.7072	0.7162	0.7218	0.5220	0.8797	0.8185	0.8200	0.8264	0.8306	0.5419
	100ms	0.7730	0.7303	0.7314	0.7390	0.7438	0.5386	0.8957	0.8394	0.8409	0.8460	0.8502	0.5618
	150ms	0.7966	0.7584	0.7586	0.7641	0.7671	0.5561	0.9114	0.8614	0.8628	0.8670	0.8698	0.5825
First	**200ms**	0.8102	0.7744	0.7737	0.7782	0.7800	0.5665	0.9198	0.8725	0.8735	0.8780	0.8809	0.5999
Order	**500ms**	0.8422	0.8083	0.8057	0.8083	0.8084	0.5935	0.9375	0.8958	0.8970	0.9003	0.9023	0.6398
	750ms	0.8517	0.8186	0.8159	0.8175	0.8168	0.6040	0.9427	0.9020	0.9031	0.9070	0.9085	0.6533
	1s	0.8577	0.8240	0.8203	0.8218	0.8212	0.6110	0.9455	0.9051	0.9063	0.9095	0.9114	0.6633
	5s	0.8811	0.8497	0.8434	0.8437	0.8408	0.6420	0.9538	0.9169	0.9181	0.9215	0.9233	0.6962
	15s	0.9004	0.8729	0.8637	0.8627	0.8590	0.6620	0.9599	0.9275	0.9283	0.9309	0.9324	0.7134
	30s	0.9147	0.8895	0.8783	0.8760	0.8714	0.6724	0.9654	0.9350	0.9354	0.9376	0.9389	0.7221
	60s	0.9287	0.9060	0.8944	0.8908	0.8849	0.6788	0.9717	0.9447	0.9449	0.9465	0.9473	0.7253
	300s	0.9589	0.9441	0.9292	0.9235	0.9155	0.6816	0.9870	0.9705	0.9702	0.9703	0.9702	0.7191
	600s	0.9689	0.9558	0.9395	0.9342	0.9256	0.6789	0.9917	0.9797	0.9793	0.9791	0.9789	0.7151
	900s	0.9732	0.9612	0.9444	0.9378	0.9294	0.6772	0.9937	0.9838	0.9835	0.9832	0.9829	0.7118
	1200s	0.9761	0.9640	0.9470	0.9410	0.9320	0.6776	0.9948	0.9863	0.9859	0.9856	0.9853	0.7129
	1500s	0.9779	0.9660	0.9489	0.9426	0.9337	0.6760	0.9955	0.9880	0.9876	0.9873	0.9870	0.7100
	1800s	0.9794	0.9674	0.9504	0.9441	0.9354	0.6738	0.9960	0.9893	0.9889	0.9886	0.9883	0.7078
	Tick	-0.0004	-0.0178	-0.0179	-0.0183	-0.0190	-0.0068	0.0012	-0.0174	-0.0173	-0.0179	-0.0178	-0.0001
	1ms	0.1388	0.0691	0.0686	0.0688	0.0688	0.0081	0.0919	-0.0001	-0.0001	-0.0001	0.0000	-0.0001
	2ms	0.1647	0.1150	0.1143	0.1148	0.1150	0.0238	0.1075	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2178	0.1810	0.1805	0.1822	0.1833	0.0650	0.1417	0.0984	0.0975	0.1015	0.1042	0.0000
	10ms	0.2727	0.2306	0.2308	0.2350	0.2379	0.1110	0.1977	0.1510	0.1530	0.1615	0.1671	0.0000
	15ms	0.3097	0.2615	0.2619	0.2683	0.2721	0.1344	0.2506	0.1913	0.1930	0.2063	0.2133	0.0398
	20ms	0.3454	0.2921	0.2931	0.3005	0.3049	0.1555	0.3118	0.2370	0.2398	0.2526	0.2616	0.0705
	25ms	0.3690	0.3108	0.3120	0.3201	0.3248	0.1665	0.3570	0.2666	0.2704	0.2845	0.2911	0.0857
	50ms	0.4613	0.3898	0.3919	0.4012	0.4074	0.2063	0.5383	0.4150	0.4172	0.4316	0.4402	0.1422
	75ms	0.5052	0.4271	0.4294	0.4394	0.4456	0.2228	0.6159	0.4836	0.4867	0.4992	0.5067	0.1667
	100ms	0.5306	0.4501	0.4526	0.4623	0.4682	0.2335	0.6543	0.5217	0.5245	0.5347	0.5420	0.1836
	150ms	0.5614	0.4786	0.4814	0.4907	0.4964	0.2501	0.6958	0.5668	0.5686	0.5789	0.5864	0.2099
Fifth	**200ms**	0.5802	0.4963	0.4989	0.5081	0.5136	0.2608	0.7184	0.5924	0.5947	0.6040	0.6113	0.2265
Order	**500ms**	0.6273	0.5405	0.5431	0.5510	0.5556	0.2918	0.7699	0.6506	0.6540	0.6622	0.6675	0.2714
	750ms	0.6431	0.5561	0.5586	0.5664	0.5703	0.3043	0.7865	0.6676	0.6708	0.6790	0.6835	0.2869
	1s	0.6525	0.5642	0.5662	0.5737	0.5779	0.3136	0.7949	0.6746	0.6775	0.6874	0.6927	0.2999
	5s	0.6944	0.6071	0.6070	0.6132	0.6158	0.3611	0.8233	0.7072	0.7109	0.7196	0.7239	0.3687
	15s	0.7278	0.6482	0.6451	0.6488	0.6494	0.3961	0.8413	0.7369	0.7395	0.7473	0.7518	0.4184
	30s	0.7553	0.6832	0.6775	0.6795	0.6775	0.4213	0.8581	0.7613	0.7628	0.7693	0.7732	0.4514
	60s	0.7879	0.7252	0.7174	0.7162	0.7118	0.4431	0.8806	0.7941	0.7951	0.7997	0.8021	0.4804
	300s	0.8714	0.8322	0.8172	0.8088	0.7983	0.4795	0.9397	0.8878	0.8871	0.8871	0.8864	0.5034
	600s	0.9013	0.8700	0.8519	0.8420	0.8297	0.4868	0.9605	0.9220	0.9208	0.9200	0.9189	0.5032
	900s	0.9153	0.8874	0.8682	0.8566	0.8440	0.4899	0.9698	0.9375	0.9365	0.9354	0.9343	0.4998
	1200s	0.9240	0.8976	0.8775	0.8661	0.8528	0.4935	0.9750	0.9471	0.9461	0.9450	0.9437	0.5043
	1500s	0.9297	0.9048	0.8841	0.8727	0.8591	0.4930	0.9783	0.9535	0.9525	0.9515	0.9503	0.5038
	1800s	0.9343	0.9101	0.8890	0.8775	0.8640	0.4934	0.9808	0.9582	0.9574	0.9563	0.9552	0.5009
	Tick	0.0006	-0.0067	-0.0069	-0.0070	-0.0073	-0.0022	0.0015	-0.0056	-0.0053	-0.0052	-0.0053	0.0000
	1ms	0.0692	0.0269	0.0268	0.0269	0.0269	-0.0021	0.0294	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0810	0.0470	0.0466	0.0468	0.0470	0.0020	0.0317	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1196	0.0917	0.0913	0.0919	0.0928	0.0215	0.0453	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.1684	0.1344	0.1345	0.1366	0.1387	0.0511	0.0725	0.0319	0.0334	0.0382	0.0409	0.0000
	15ms	0.2021	0.1626	0.1627	0.1665	0.1691	0.0693	0.1061	0.0640	0.0651	0.0730	0.0778	0.0000
	20ms	0.2330	0.1879	0.1883	0.1932	0.1961	0.0836	0.1493	0.0964	0.0979	0.1092	0.1148	0.0000
	25ms	0.2558	0.2051	0.2059	0.2113	0.2143	0.0920	0.1857	0.1231	0.1260	0.1364	0.1423	0.0000
	50ms	0.3456	0.2749	0.2763	0.2829	0.2871	0.1223	0.3589	0.2468	0.2487	0.2600	0.2671	0.0312
	75ms	0.3909	0.3096	0.3114	0.3187	0.3232	0.1341	0.4402	0.3086	0.3115	0.3238	0.3301	0.0470
	100ms	0.4170	0.3304	0.3324	0.3396	0.3443	0.1413	0.4836	0.3414	0.3442	0.3550	0.3618	0.0577
	150ms	0.4486	0.3561	0.3583	0.3658	0.3706	0.1536	0.5324	0.3862	0.3883	0.3994	0.4067	0.0748
Tenth	**200ms**	0.4676	0.3716	0.3741	0.3816	0.3863	0.1607	0.5591	0.4126	0.4155	0.4254	0.4321	0.0865
Order	**500ms**	0.5159	0.4126	0.4157	0.4234	0.4281	0.1843	0.6289	0.4774	0.4815	0.4920	0.4976	0.1215
	750ms	0.5324	0.4277	0.4310	0.4389	0.4434	0.1941	0.6516	0.5003	0.5038	0.5132	0.5191	0.1361
	1s	0.5424	0.4358	0.4387	0.4467	0.4515	0.2012	0.6635	0.5090	0.5127	0.5234	0.5297	0.1477
	5s	0.5840	0.4782	0.4800	0.4873	0.4912	0.2403	0.7037	0.5504	0.5556	0.5660	0.5721	0.2066
	15s	0.6172	0.5187	0.5185	0.5239	0.5261	0.2716	0.7298	0.5895	0.5918	0.6008	0.6077	0.2554
	30s	0.6461	0.5552	0.5530	0.5571	0.5570	0.2963	0.7536	0.6234	0.6253	0.6331	0.6378	0.2912
	60s	0.6847	0.6036	0.5994	0.6010	0.5986	0.3208	0.7878	0.6699	0.6714	0.6780	0.6810	0.3243
	300s	0.7995	0.7465	0.7351	0.7286	0.7188	0.3726	0.8852	0.8117	0.8113	0.8121	0.8111	0.3712
	600s	0.8453	0.8036	0.7875	0.7780	0.7660	0.3867	0.9238	0.8681	0.8669	0.8662	0.8644	0.3735
	900s	0.8677	0.8305	0.8126	0.8010	0.7881	0.3926	0.9410	0.8944	0.8931	0.8920	0.8903	0.3701
	1200s	0.8808	0.8464	0.8274	0.8153	0.8016	0.3988	0.9510	0.9100	0.9088	0.9074	0.9053	0.3767
	1500s	0.8900	0.8579	0.8380	0.8255	0.8113	0.3984	0.9577	0.9210	0.9197	0.9182	0.9162	0.3757
	1800s	0.8971	0.8663	0.8457	0.8330	0.8189	0.4003	0.9625	0.9287	0.9273	0.9261	0.9242	0.3730

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 1080 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.120: Mid-quoted Return Autocorrelation - 1,800 days before maturity

		Mean						Median					
		VWA	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**VWA**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	Tick	-0.0371	-0.0928	-0.1219	-0.1296	-0.1168	-0.3652	-0.0084	-0.0962	-0.1032	-0.1054	-0.0984	-0.4167
	1ms	0.3585	0.3281	0.3275	0.3307	0.3353	0.2461	0.3793	0.3340	0.3338	0.3521	0.3635	0.1997
	2ms	0.4731	0.3991	0.3976	0.4040	0.4125	0.2621	0.5153	0.4535	0.4503	0.4605	0.4756	0.2725
	5ms	0.5249	0.4681	0.4644	0.4784	0.4916	0.2857	0.5650	0.5004	0.5001	0.5216	0.5386	0.3157
	10ms	0.5374	0.5053	0.5012	0.5213	0.5383	0.3401	0.5934	0.5555	0.5517	0.5743	0.5944	0.3640
	15ms	0.5511	0.5215	0.5161	0.5402	0.5610	0.3661	0.6150	0.5709	0.5670	0.5963	0.6215	0.3914
	20ms	0.5755	0.5463	0.5411	0.5654	0.5879	0.3908	0.6514	0.6046	0.6016	0.6303	0.6586	0.4197
	25ms	0.5860	0.5581	0.5527	0.5782	0.6015	0.4124	0.6718	0.6233	0.6197	0.6507	0.6785	0.4384
	50ms	0.6464	0.6215	0.6143	0.6400	0.6663	0.4773	0.7648	0.7124	0.7103	0.7411	0.7658	0.4998
	75ms	0.6779	0.6503	0.6437	0.6692	0.6975	0.5073	0.7987	0.7470	0.7463	0.7763	0.8012	0.5308
	100ms	0.6962	0.6680	0.6611	0.6870	0.7168	0.5234	0.8166	0.7637	0.7626	0.7954	0.8196	0.5487
	150ms	0.7180	0.6915	0.6828	0.7075	0.7378	0.5398	0.8374	0.7812	0.7811	0.8165	0.8406	0.5700
First	**200ms**	0.7317	0.7047	0.6953	0.7198	0.7494	0.5502	0.8493	0.7928	0.7930	0.8286	0.8513	0.5866
Order	**500ms**	0.7634	0.7365	0.7245	0.7476	0.7760	0.5783	0.8750	0.8181	0.8189	0.8522	0.8742	0.6276
	750ms	0.7724	0.7459	0.7340	0.7553	0.7843	0.5898	0.8827	0.8250	0.8261	0.8577	0.8808	0.6400
	1s	0.7781	0.7513	0.7381	0.7594	0.7883	0.5972	0.8868	0.8275	0.8291	0.8610	0.8841	0.6496
	5s	0.8068	0.7805	0.7623	0.7792	0.8048	0.6287	0.9029	0.8466	0.8474	0.8766	0.8977	0.6789
	15s	0.8293	0.8067	0.7839	0.7960	0.8214	0.6501	0.9180	0.8681	0.8684	0.8915	0.9093	0.6981
	30s	0.8465	0.8266	0.8001	0.8098	0.8340	0.6604	0.9300	0.8865	0.8860	0.9038	0.9194	0.7048
	60s	0.8655	0.8487	0.8188	0.8253	0.8472	0.6660	0.9448	0.9081	0.9073	0.9205	0.9311	0.7078
	300s	0.9112	0.9045	0.8643	0.8599	0.8779	0.6699	0.9763	0.9562	0.9551	0.9583	0.9622	0.7060
	600s	0.9296	0.9259	0.8808	0.8725	0.8892	0.6689	0.9850	0.9710	0.9699	0.9710	0.9734	0.7024
	900s	0.9385	0.9361	0.8874	0.8758	0.8931	0.6677	0.9888	0.9773	0.9763	0.9768	0.9785	0.7013
	1200s	0.9442	0.9419	0.8912	0.8795	0.8963	0.6696	0.9907	0.9810	0.9800	0.9803	0.9817	0.7040
	1500s	0.9480	0.9462	0.8940	0.8813	0.8984	0.6685	0.9920	0.9834	0.9825	0.9826	0.9839	0.7028
	1800s	0.9508	0.9492	0.8967	0.8826	0.9010	0.6670	0.9929	0.9853	0.9844	0.9844	0.9856	0.7014
	Tick	-0.0005	-0.0142	-0.0142	-0.0162	-0.0176	-0.0058	0.0015	-0.0148	-0.0128	-0.0138	-0.0149	0.0000
	1ms	0.1287	0.0604	0.0601	0.0614	0.0630	0.0087	0.0764	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1432	0.0996	0.0985	0.1016	0.1052	0.0219	0.0809	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.1777	0.1541	0.1526	0.1604	0.1691	0.0591	0.0908	0.0565	0.0546	0.0714	0.0868	0.0000
	10ms	0.2168	0.1948	0.1930	0.2066	0.2203	0.1003	0.1166	0.1019	0.0994	0.1247	0.1469	0.0000
	15ms	0.2452	0.2195	0.2174	0.2349	0.2516	0.1217	0.1498	0.1325	0.1300	0.1604	0.1899	0.0253
	20ms	0.2745	0.2455	0.2436	0.2631	0.2823	0.1411	0.1944	0.1703	0.1670	0.2025	0.2363	0.0525
	25ms	0.2935	0.2607	0.2587	0.2800	0.3007	0.1521	0.2243	0.1949	0.1917	0.2284	0.2667	0.0695
	50ms	0.3712	0.3261	0.3239	0.3488	0.3746	0.1903	0.3739	0.3140	0.3125	0.3514	0.3906	0.1247
	75ms	0.4090	0.3536	0.3517	0.3791	0.4080	0.2071	0.4424	0.3597	0.3586	0.4064	0.4474	0.1507
	100ms	0.4296	0.3696	0.3681	0.3970	0.4276	0.2179	0.4758	0.3862	0.3856	0.4371	0.4814	0.1660
	150ms	0.4564	0.3918	0.3904	0.4206	0.4529	0.2344	0.5177	0.4190	0.4197	0.4756	0.5209	0.1916
Fifth	**200ms**	0.4727	0.4056	0.4040	0.4354	0.4684	0.2448	0.5445	0.4375	0.4385	0.4976	0.5451	0.2083
Order	**500ms**	0.5142	0.4435	0.4414	0.4736	0.5085	0.2761	0.6015	0.4825	0.4846	0.5484	0.5999	0.2570
	750ms	0.5283	0.4570	0.4547	0.4869	0.5228	0.2897	0.6210	0.4980	0.5012	0.5652	0.6178	0.2730
	1s	0.5368	0.4640	0.4614	0.4935	0.5297	0.2991	0.6306	0.5035	0.5069	0.5720	0.6253	0.2874
	5s	0.5756	0.5026	0.4972	0.5270	0.5631	0.3462	0.6694	0.5440	0.5462	0.6095	0.6576	0.3538
	15s	0.6065	0.5411	0.5323	0.5570	0.5932	0.3811	0.7030	0.5860	0.5872	0.6441	0.6888	0.4045
	30s	0.6334	0.5741	0.5616	0.5836	0.6185	0.4054	0.7349	0.6304	0.6299	0.6785	0.7172	0.4343
	60s	0.6673	0.6165	0.6002	0.6171	0.6509	0.4260	0.7782	0.6884	0.6869	0.7252	0.7552	0.4586
	300s	0.7678	0.7400	0.7106	0.7080	0.7355	0.4628	0.8930	0.8396	0.8370	0.8482	0.8606	0.4870
	600s	0.8109	0.7920	0.7553	0.7434	0.7688	0.4714	0.9306	0.8904	0.8878	0.8931	0.9012	0.4896
	900s	0.8332	0.8184	0.7767	0.7587	0.7836	0.4752	0.9474	0.9138	0.9109	0.9140	0.9203	0.4886
	1200s	0.8471	0.8343	0.7897	0.7689	0.7930	0.4805	0.9563	0.9274	0.9244	0.9267	0.9317	0.4954
	1500s	0.8571	0.8463	0.7985	0.7756	0.8001	0.4809	0.9624	0.9362	0.9334	0.9349	0.9392	0.4954
	1800s	0.8649	0.8552	0.8059	0.7802	0.8057	0.4825	0.9666	0.9433	0.9405	0.9416	0.9455	0.4950
	Tick	0.0003	-0.0053	-0.0054	-0.0061	-0.0064	-0.0019	0.0013	-0.0047	-0.0026	-0.0021	-0.0029	0.0000
	1ms	0.0631	0.0228	0.0227	0.0233	0.0240	-0.0010	0.0165	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0684	0.0389	0.0386	0.0401	0.0420	0.0023	0.0177	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.0942	0.0754	0.0747	0.0789	0.0842	0.0194	0.0234	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.1284	0.1089	0.1081	0.1163	0.1253	0.0455	0.0352	0.0000	0.0000	0.0157	0.0285	-0.0001
	15ms	0.1532	0.1303	0.1291	0.1405	0.1522	0.0613	0.0494	0.0238	0.0224	0.0414	0.0582	0.0000
	20ms	0.1771	0.1505	0.1494	0.1628	0.1765	0.0739	0.0691	0.0461	0.0446	0.0680	0.0907	0.0000
	25ms	0.1944	0.1634	0.1624	0.1774	0.1926	0.0815	0.0879	0.0645	0.0631	0.0878	0.1147	0.0000
	50ms	0.2638	0.2170	0.2162	0.2354	0.2554	0.1089	0.1916	0.1529	0.1509	0.1847	0.2192	0.0204
	75ms	0.2996	0.2414	0.2411	0.2631	0.2857	0.1202	0.2543	0.1904	0.1899	0.2308	0.2695	0.0333
	100ms	0.3195	0.2553	0.2553	0.2786	0.3033	0.1272	0.2867	0.2130	0.2123	0.2568	0.2983	0.0423
	150ms	0.3447	0.2738	0.2740	0.2991	0.3261	0.1392	0.3316	0.2397	0.2408	0.2909	0.3369	0.0585
Tenth	**200ms**	0.3599	0.2850	0.2853	0.3118	0.3398	0.1462	0.3556	0.2553	0.2563	0.3116	0.3590	0.0691
Order	**500ms**	0.3996	0.3178	0.3185	0.3480	0.3790	0.1702	0.4182	0.2994	0.3024	0.3640	0.4185	0.1060
	750ms	0.4136	0.3304	0.3312	0.3615	0.3934	0.1807	0.4396	0.3140	0.3174	0.3819	0.4380	0.1229
	1s	0.4218	0.3369	0.3376	0.3683	0.4008	0.1875	0.4486	0.3204	0.3252	0.3907	0.4466	0.1338
	5s	0.4588	0.3734	0.3727	0.4029	0.4369	0.2261	0.4960	0.3617	0.3646	0.4346	0.4905	0.1915
	15s	0.4872	0.4090	0.4060	0.4332	0.4679	0.2567	0.5337	0.4079	0.4097	0.4738	0.5280	0.2396
	30s	0.5123	0.4407	0.4352	0.4611	0.4957	0.2800	0.5732	0.4584	0.4584	0.5138	0.5622	0.2736
	60s	0.5488	0.4848	0.4763	0.4992	0.5336	0.3026	0.6276	0.5265	0.5254	0.5744	0.6147	0.3029
	300s	0.6709	0.6321	0.6118	0.6183	0.6489	0.3526	0.8037	0.7360	0.7323	0.7522	0.7726	0.3478
	600s	0.7285	0.7003	0.6725	0.6683	0.6968	0.3668	0.8691	0.8159	0.8126	0.8236	0.8366	0.3529
	900s	0.7592	0.7357	0.7033	0.6919	0.7198	0.3731	0.8996	0.8540	0.8496	0.8573	0.8671	0.3546
	1200s	0.7783	0.7578	0.7224	0.7078	0.7341	0.3805	0.9165	0.8765	0.8723	0.8780	0.8859	0.3613
	1500s	0.7923	0.7742	0.7355	0.7178	0.7443	0.3813	0.9273	0.8909	0.8867	0.8909	0.8983	0.3624
	1800s	0.8032	0.7869	0.7461	0.7253	0.7525	0.3845	0.9357	0.9024	0.8987	0.9020	0.9084	0.3619

Notes: This table reports the mean and median of first-order, fifth-order, and tenth-order autocorrelations of mid-quote return for the 1,800 days before maturity group across all 40 Eurodollar contracts, using both the volume weighted average (VWA) mid-price (p^v_{mk}) and mid-quote prices (p_{mjk}) in each level of limit order book, where k is the intraday time index and j is the order book level. This table reports the average and median of return autocorrelations across all 40 Eurodollar contracts. For each order, mid-quote return autocorrelations are measured at varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Appendix C.2. The Autocorrelations of Mid-quote Returns Plots

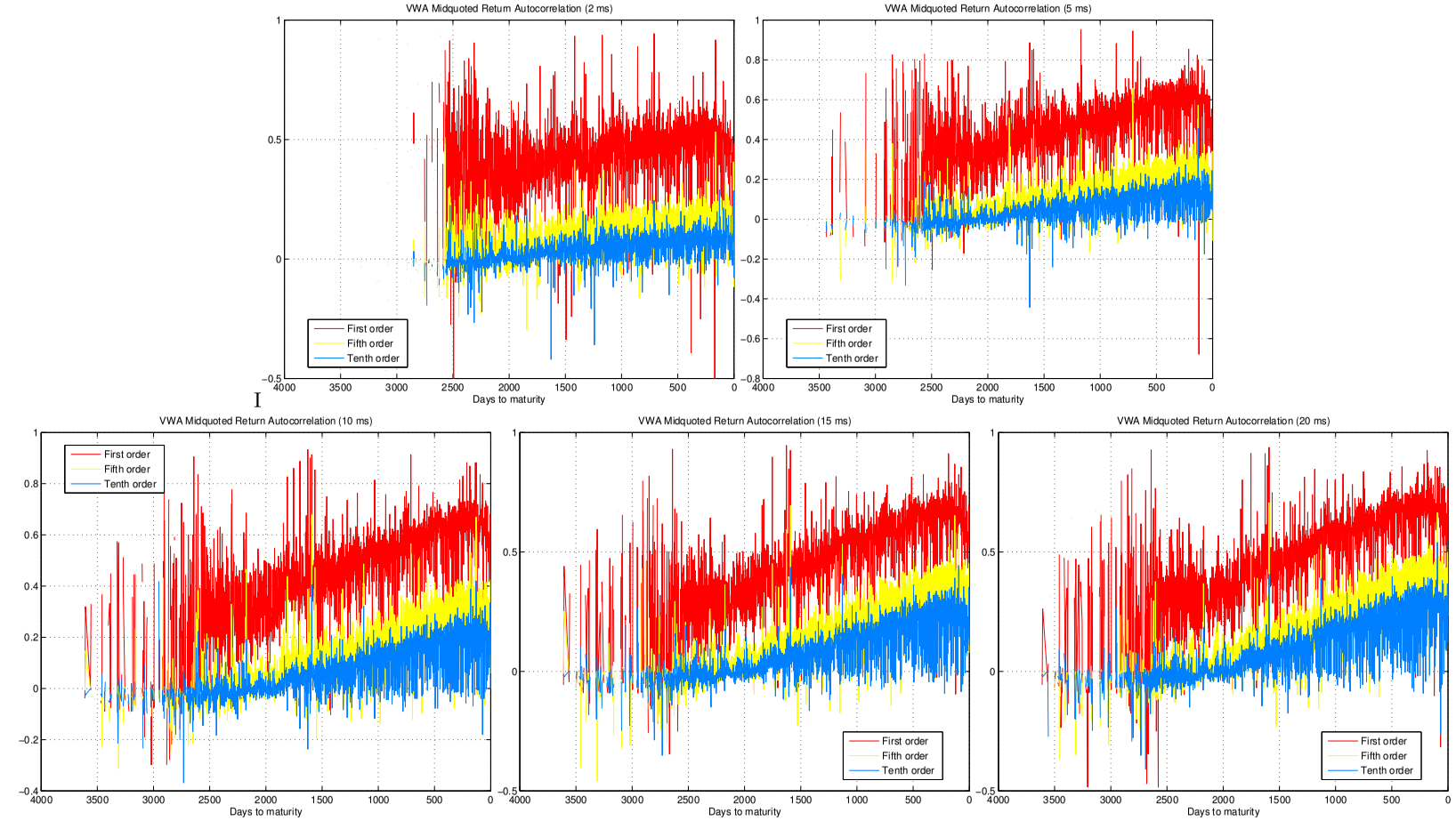


Figure C.149: Daily Volume Weighted Average Mid-quoted Return Autocorrelation (Sorted By Days To Maturity)

Notes: This figure represents the daily of the volume weighted average (VWA) of mid-quote return autocorrelations sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order mid-quote return autocorrelations are marked with red, yellow, and blue lines. The first step is to utilize the volume weighted average mid-price (p^v_{mk}) to get the mid-price returns ($r^v_{\tau k}$) at 6 varying time intervals $\tau \in \{1 \text{ ms}, 2 \text{ ms}, 5 \text{ ms}, 10 \text{ ms}, 15 \text{ ms}, \text{and } 20 \text{ ms}\}$. The next step is to calculate the volume weighted average return autocorrelations, $\Omega^{R,v}_{\tau\eta k} = \rho(r^v_{\tau k}, r^v_{\tau k-\eta})$, where k is the intraday time index and η is the orders of autocorrelations $\eta \in \{1^{st}, 5^{th}, 10^{th}\}$. Then, I take the average return autocorrelations for each day and each contract, and obtain 32,856 daily return autocorrelations based on the actual trading days for 40 contracts. Finally, I sort the 32,856 daily return autocorrelations by the days to maturity $\tilde{T}$, and obtain 2,434 average daily return autocorrelations over all 40 contracts. Because of the 10-year life cycle of Eurodollar contracts, the days to maturity spans from 2 days before maturity to time span 3,631 days to maturity.

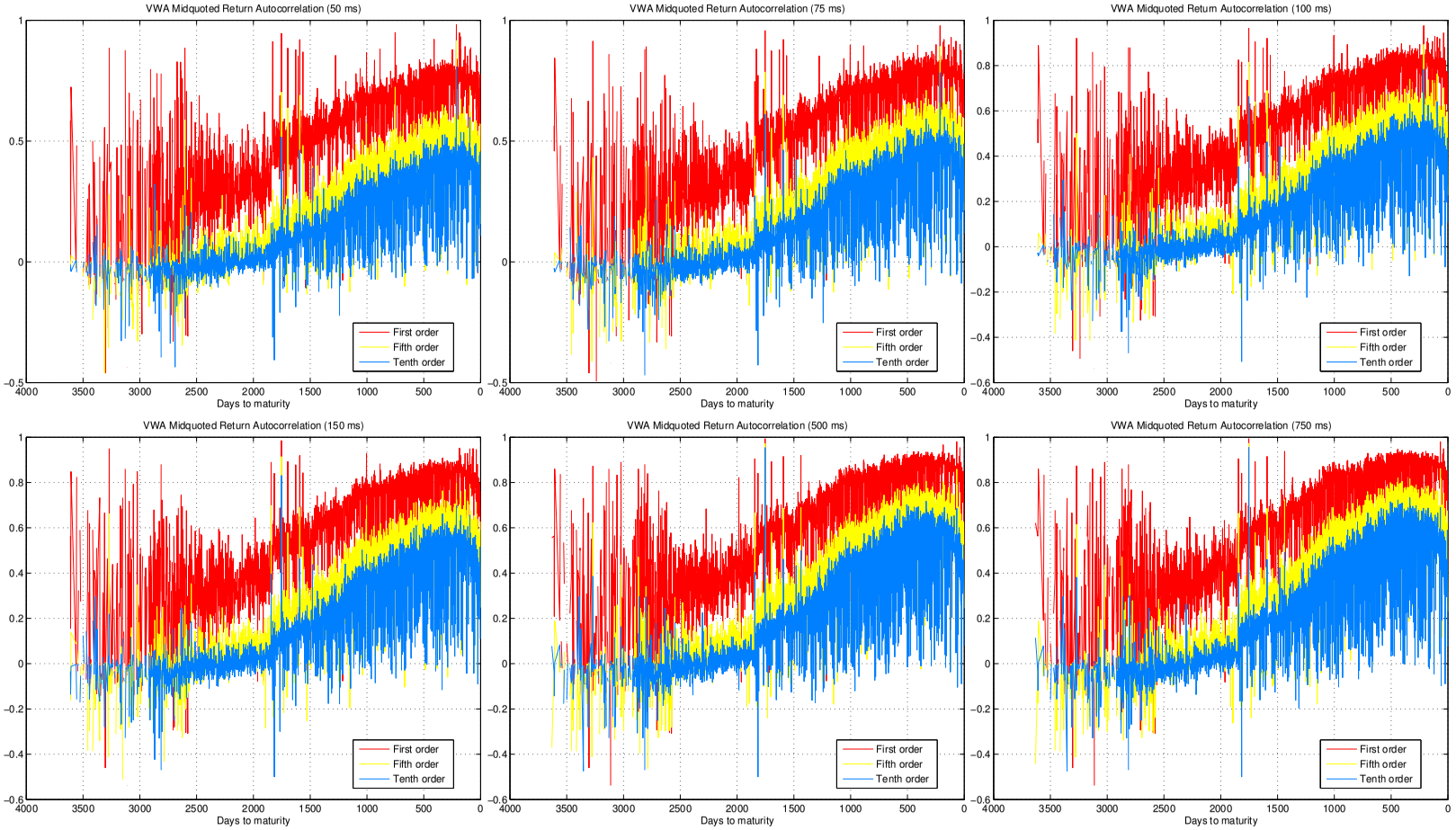


Figure C.150: Daily Volume Weighted Average Mid-quoted Return Autocorrelation (Sorted By Days To Maturity)

Notes: This figure represents the daily of the volume weighted average (VWA) of mid-quote return autocorrelations sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order mid-quote return autocorrelations are marked with red, yellow, and blue lines. The first step is to utilize the volume weighted average mid-price (p^v_{mk}) to get the mid-price returns ($r^v_{\tau k}$) at 6 varying time intervals $\tau \in \{50 \text{ ms}, 75 \text{ ms}, 100 \text{ ms}, 150 \text{ ms}, 500 \text{ ms}, \text{and } 750 \text{ ms}\}$. The next step is to calculate the volume weighted average return autocorrelations, $\Omega^{R,v}_{\tau\eta k} = \rho(r^v_{\tau k}, r^v_{\tau k-\eta})$, where k is the intraday time index and η is the orders of autocorrelations $\eta \in \{1^{st}, 5^{th}, 10^{th}\}$. Then, I take the average return autocorrelations for each day and each contract, and obtain 32,856 daily return autocorrelations based on the actual trading days for 40 contracts. Finally, I sort the 32,856 daily return autocorrelations by the days to maturity $\tilde{T}$, and obtain 2,434 average daily return autocorrelations over all 40 contracts. Because of the 10-year life cycle of Eurodollar contracts, the days to maturity spans from 2 days before maturity to time span 3,631 days to maturity.

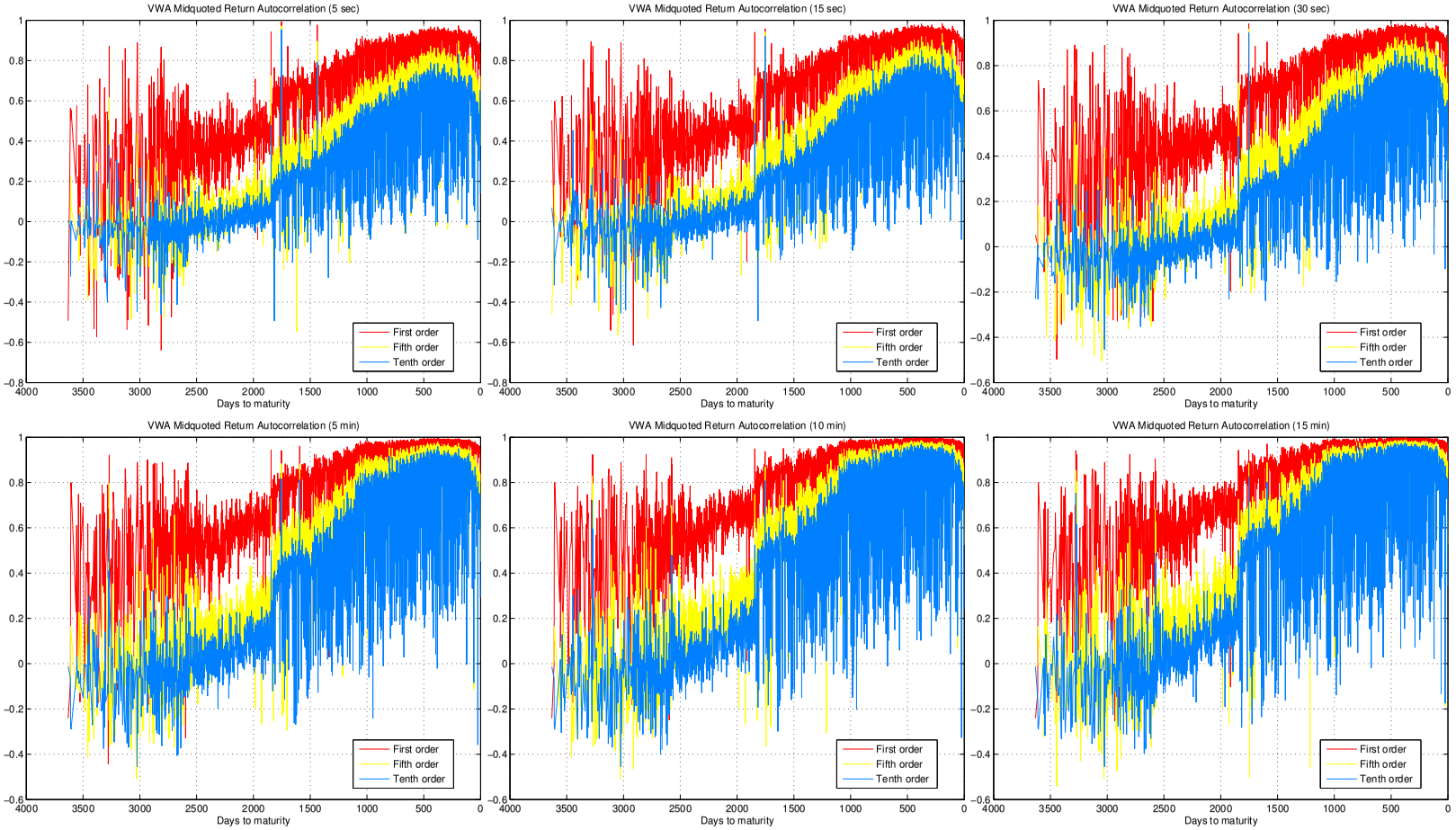


Figure C.151: Daily Volume Weighted Average Mid-quoted Return Autocorrelation (Sorted By Days To Maturity)

Notes: This figure represents the daily of the volume weighted average (VWA) of mid-quote return autocorrelations sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order mid-quote return autocorrelations are marked with red, yellow, and blue lines. The first step is to utilize the volume weighted average mid-price (p^v_{mk}) to get the mid-price returns ($r^v_{\tau k}$) at 6 varying time intervals $\tau \in \{5$ sec, 15 sec, 30 sec, 300 sec, 600 sec, and 900 sec$\}$. The next step is to calculate the volume weighted average return autocorrelations, $\Omega^{R,v}_{\tau\eta k} = \rho(r^v_{\tau k}, r^v_{\tau k-\eta})$, where k is the intraday time index and η is the orders of autocorrelations $\eta \in \{1^{st}, 5^{th}, 10^{th}\}$. Then, I take the average return autocorrelations for each day and each contract, and obtain 32,856 daily return autocorrelations based on the actual trading days for 40 contracts. Finally, I sort the 32,856 daily return autocorrelations by the days to maturity $\tilde{T}$, and obtain 2,434 average daily return autocorrelations over all 40 contracts. Because of the 10-year life cycle of Eurodollar contracts, the days to maturity spans from 2 days before maturity to time span 3,631 days to maturity.

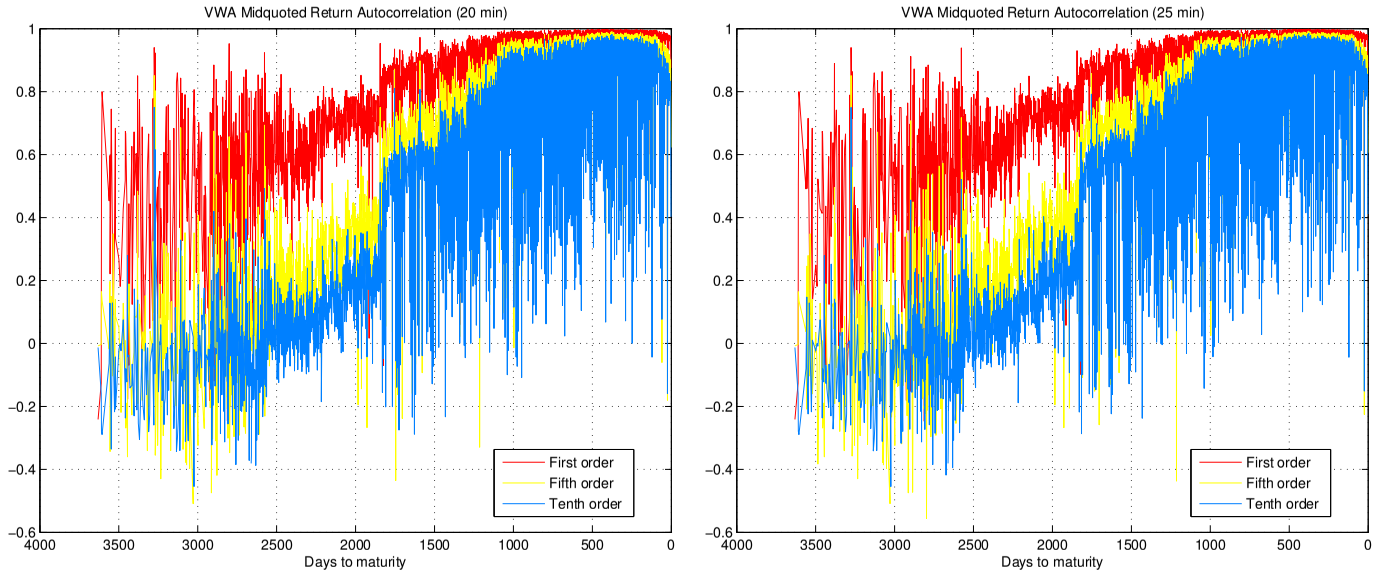


Figure C.152: Daily Volume Weighted Average Mid-quoted Return Autocorrelation (Sorted By Days To Maturity)

Notes: This figure represents the daily of the volume weighted average (VWA) of mid-quote return autocorrelations sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order mid-quote return autocorrelations are marked with red, yellow, and blue lines. The first step is to utilize the volume weighted average mid-price (p^v_{mk}) to get the mid-price returns ($r^v_{\tau k}$) at 2 varying time intervals $\tau \in \{1{,}200 \text{ sec and } 1{,}500 \text{ sec}\}$. The next step is to calculate the volume weighted average return autocorrelations, $\Omega^{R,v}_{\tau\eta k} = \rho(r^v_{\tau k}, r^v_{\tau k-\eta})$, where k is the intraday time index and η is the orders of autocorrelations $\eta \in \{1^{st}, 5^{th}, 10^{th}\}$. Then, I take the average return autocorrelations for each day and each contract, and obtain 32,856 daily return autocorrelations based on the actual trading days for 40 contracts. Finally, I sort the 32,856 daily return autocorrelations by the days to maturity $\tilde{T}$, and obtain 2,434 average daily return autocorrelations over all 40 contracts. Because of the 10-year life cycle of Eurodollar contracts, the days to maturity spans from 2 days before maturity to time span 3,631 days to maturity.

Appendix C.3. Market Liquidity Spreads (30 days – 1,800 days before maturity)

Table C.121: Market Liquidity Spreads (30 days before maturity)

30 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{S}}^{Q}$		99.9310	0.2654	0.7739	1.2814	1.7899	2.2917	102.2072	0.2596	0.7622	1.2648	1.7663	2.2590
$\tilde{\mathscr{S}}^{Q^{1/2}}$		49.9655	0.1327	0.3869	0.6407	0.8950	1.1458	51.1036	0.1298	0.3811	0.6324	0.8832	1.1295
$\tilde{\mathscr{S}}^{D}$		11,112,687,000	4,149,450	1,716,685	721,558	528,620	371,338	2,389,250	921,979	826,253	503,943	346,883	272,279
$\tilde{\mathscr{S}}^{E}$		0.1022	0.0743	-0.0023	-0.3712	-1.1472	-85.1776	0.0993	0.0870	0.0885	0.0886	0.0877	-7.0623
	Tick	0.1029	0.0831	-0.0166	-0.2445	-0.8923	-34.3858	0.0999	0.0839	0.0849	0.0853	0.0855	-1.0227
	1ms	0.1022	0.0743	-0.0005	-0.3694	-1.1433	-85.3767	0.0993	0.0868	0.0884	0.0884	0.0876	-6.7449
	2ms	0.1022	0.0743	0.0049	-0.3609	-1.1317	-85.2106	0.0993	0.0868	0.0885	0.0884	0.0876	-6.9951
	5ms	0.1021	0.0743	0.0096	-0.3537	-1.1270	-83.6461	0.0992	0.0867	0.0887	0.0887	0.0874	-5.8946
	10ms	0.1020	0.0742	0.0077	-0.3599	-1.1080	-83.0987	0.0991	0.0862	0.0887	0.0882	0.0877	-6.0333
	15ms	0.1018	0.0739	-0.0003	-0.3739	-1.1344	-80.5664	0.0990	0.0855	0.0882	0.0880	0.0863	-6.9196
	20ms	0.1016	0.0737	-0.0055	-0.3995	-1.1676	-78.7100	0.0988	0.0852	0.0883	0.0878	0.0853	-6.3697
	25ms	0.1014	0.0733	-0.0085	-0.3920	-1.1583	-75.9974	0.0986	0.0848	0.0878	0.0877	0.0858	-5.4315
	50ms	0.1004	0.0721	0.0063	-0.3414	-1.1301	-65.5642	0.0976	0.0846	0.0863	0.0867	0.0863	-4.5910
	75ms	0.0999	0.0714	0.0088	-0.3219	-1.1323	-59.2051	0.0972	0.0836	0.0844	0.0852	0.0848	-2.8246
	100ms	0.0995	0.0710	0.0084	-0.3161	-1.0933	-57.9318	0.0968	0.0828	0.0839	0.0849	0.0844	-2.6497
	150ms	0.0991	0.0706	0.0101	-0.3236	-1.0833	-56.3470	0.0963	0.0824	0.0830	0.0834	0.0834	-2.1997
	200ms	0.0988	0.0702	0.0108	-0.3184	-1.1008	-56.8419	0.0958	0.0814	0.0826	0.0831	0.0827	-2.0067
$\tilde{\mathscr{S}}^{R}$	**500ms**	0.0975	0.0688	0.0009	-0.3318	-1.1430	-51.4399	0.0945	0.0788	0.0799	0.0813	0.0797	0.0248
	750ms	0.0968	0.0612	-0.0024	-0.3149	-1.0532	-49.7207	0.0940	0.0776	0.0792	0.0801	0.0793	0.0500
	1sec	0.0962	0.0605	-0.0030	-0.3109	-1.0487	-48.2844	0.0932	0.0772	0.0784	0.0791	0.0782	0.0491
	5sec	0.0915	0.0520	0.0136	-0.3139	-1.1526	-42.3421	0.0881	0.0685	0.0706	0.0710	0.0699	0.0446
	15sec	0.0874	0.0479	0.0179	-0.2326	-1.0832	-24.6971	0.0841	0.0639	0.0671	0.0674	0.0659	0.0598
	30sec	0.0851	0.0462	0.0117	-0.2974	-0.5426	-25.8567	0.0825	0.0632	0.0657	0.0658	0.0667	0.0562
	60sec	0.0816	0.0467	-0.0099	-0.2694	-0.5695	-16.0570	0.0785	0.0608	0.0620	0.0635	0.0635	0.0664
	300sec	0.0776	0.0509	-0.0217	-0.1550	-0.5775	-13.1949	0.0769	0.0596	0.0606	0.0597	0.0602	0.0713
	600sec	0.0760	0.0506	-0.0243	-0.1145	-0.4776	-12.0841	0.0775	0.0625	0.0636	0.0630	0.0626	0.0716
	900sec	0.0761	0.0511	-0.0238	-0.1042	-0.2598	-9.1812	0.0778	0.0658	0.0664	0.0659	0.0665	0.0634
	1200sec	0.0757	0.0513	-0.0173	-0.0434	-0.3263	-12.5811	0.0784	0.0646	0.0652	0.0652	0.0643	0.0792
	1500sec	0.0752	0.0565	-0.0173	-0.0258	-0.2150	-6.9756	0.0779	0.0657	0.0658	0.0659	0.0682	0.0712
	1800sec	0.0759	0.0579	-0.0162	-0.0130	-0.2395	-6.1683	0.0780	0.0677	0.0696	0.0684	0.0681	0.0777
	Tick	0.0007	0.0088	0.0480	0.0570	0.0891	49.2296	0.0002	-0.0009	-0.0011	-0.0009	-0.0008	5.4702
	1ms	0.0000	0.0000	-0.0018	-0.0018	-0.0039	0.1991	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0000	0.0000	-0.0072	-0.0102	-0.0154	0.0330	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	5ms	0.0001	0.0000	-0.0119	-0.0175	-0.0202	-1.5316	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	10ms	0.0002	0.0001	-0.0100	-0.0113	-0.0392	-2.0789	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
	15ms	0.0003	0.0004	-0.0020	0.0027	-0.0127	-4.6111	0.0002	0.0001	0.0001	0.0001	0.0000	0.0000
	20ms	0.0005	0.0006	0.0032	0.0284	0.0205	-6.4674	0.0002	0.0002	0.0002	0.0002	0.0001	0.0000
	25ms	0.0008	0.0010	0.0061	0.0208	0.0111	-9.1799	0.0003	0.0003	0.0003	0.0003	0.0001	0.0000
	50ms	0.0017	0.0022	-0.0087	-0.0297	-0.0171	-19.6124	0.0006	0.0008	0.0007	0.0006	0.0003	0.0000
	75ms	0.0023	0.0029	-0.0112	-0.0493	-0.0149	-25.9716	0.0008	0.0013	0.0012	0.0010	0.0006	-0.0001
	100ms	0.0026	0.0033	-0.0108	-0.0551	-0.0539	-27.2449	0.0010	0.0016	0.0015	0.0012	0.0006	-0.0001
	150ms	0.0030	0.0038	-0.0125	-0.0476	-0.0639	-28.8300	0.0015	0.0019	0.0019	0.0015	0.0009	-0.0002
	200ms	0.0034	0.0041	-0.0131	-0.0529	-0.0464	-28.3364	0.0016	0.0023	0.0022	0.0017	0.0010	-0.0002
$\tilde{\mathscr{S}}^{AS}$	**500ms**	0.0046	0.0055	-0.0032	-0.0394	-0.0042	-33.7398	0.0024	0.0036	0.0036	0.0029	0.0019	-0.0008
	750ms	0.0053	0.0131	0.0000	-0.0564	-0.0941	-35.4591	0.0027	0.0042	0.0042	0.0033	0.0019	-0.0003
	1sec	0.0060	0.0138	0.0007	-0.0604	-0.0985	-36.8924	0.0031	0.0047	0.0047	0.0036	0.0023	-0.0011
	5sec	0.0107	0.0223	-0.0160	-0.0574	0.0054	-42.9451	0.0054	0.0103	0.0095	0.0081	0.0057	-0.0063
	15sec	0.0147	0.0264	-0.0202	-0.1387	-0.0554	-60.6067	0.0079	0.0118	0.0122	0.0104	0.0086	-0.0067
	30sec	0.0171	0.0281	-0.0140	-0.1183	-0.5961	-59.4246	0.0086	0.0125	0.0134	0.0117	0.0082	-1.8601
	60sec	0.0206	0.0276	0.0076	-0.1467	-0.5777	-69.2306	0.0111	0.0169	0.0173	0.0152	0.0115	-2.5557
	300sec	0.0246	0.0234	0.0194	-0.2613	-0.5637	-72.1578	0.0128	0.0156	0.0165	0.0154	0.0118	-4.1063
	600sec	0.0261	0.0237	0.0220	-0.3018	-0.6636	-73.3911	0.0131	0.0185	0.0186	0.0165	0.0130	-5.2244
	900sec	0.0261	0.0232	0.0215	-0.3060	-0.8813	-76.3229	0.0124	0.0177	0.0172	0.0147	0.0088	-5.9554
	1200sec	0.0265	0.0230	0.0150	-0.3668	-0.8149	-72.7624	0.0115	0.0153	0.0154	0.0135	0.0084	-8.1381
	1500sec	0.0270	0.0178	0.0150	-0.3844	-0.9262	-78.3675	0.0114	0.0135	0.0141	0.0112	0.0088	-8.2554
	1800sec	0.0262	0.0164	0.0139	-0.3911	-0.9017	-79.1768	0.0118	0.0111	0.0135	0.0108	0.0075	-8.2587

Notes: This table describes that the average and median of a range of market liquidity spreads within 30 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Table C.122: Market Liquidity Spreads (60 days before maturity)

30 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{S}}^{Q}$		99.9310	0.2654	0.7739	1.2814	1.7899	2.2917	102.2072	0.2596	0.7622	1.2648	1.7663	2.2590
$\tilde{\mathscr{S}}^{Q^{1/2}}$		49.9655	0.1327	0.3869	0.6407	0.8950	1.1458	51.1036	0.1298	0.3811	0.6324	0.8832	1.1295
$\tilde{\mathscr{S}}^{D}$		11,112,687,000	4,149,450	1,716,685	721,558	528,620	371,338	2,389,250	921,979	826,253	503,943	346,883	272,279
$\tilde{\mathscr{S}}^{E}$		0.1022	0.0743	-0.0023	-0.3712	-1.1472	-85.1776	0.0993	0.0870	0.0885	0.0886	0.0877	-7.0623
	Tick	0.1029	0.0831	-0.0166	-0.2445	-0.8923	-34.3858	0.0999	0.0839	0.0849	0.0853	0.0855	-1.0227
	1ms	0.1022	0.0743	-0.0005	-0.3694	-1.1433	-85.3767	0.0993	0.0868	0.0884	0.0884	0.0876	-6.7449
	2ms	0.1022	0.0743	0.0049	-0.3609	-1.1317	-85.2106	0.0993	0.0868	0.0885	0.0884	0.0876	-6.9951
	5ms	0.1021	0.0743	0.0096	-0.3537	-1.1270	-83.6461	0.0992	0.0867	0.0887	0.0887	0.0874	-5.8946
	10ms	0.1020	0.0742	0.0077	-0.3599	-1.1080	-83.0987	0.0991	0.0862	0.0887	0.0882	0.0877	-6.0333
	15ms	0.1018	0.0739	-0.0003	-0.3739	-1.1344	-80.5664	0.0990	0.0855	0.0882	0.0880	0.0863	-6.9196
	20ms	0.1016	0.0737	-0.0055	-0.3995	-1.1676	-78.7100	0.0988	0.0852	0.0883	0.0878	0.0853	-6.3697
	25ms	0.1014	0.0733	-0.0085	-0.3920	-1.1583	-75.9974	0.0986	0.0848	0.0878	0.0877	0.0858	-5.4315
	50ms	0.1004	0.0721	0.0063	-0.3414	-1.1301	-65.5642	0.0976	0.0846	0.0863	0.0867	0.0863	-4.5910
	75ms	0.0999	0.0714	0.0088	-0.3219	-1.1323	-59.2051	0.0972	0.0836	0.0844	0.0852	0.0848	-2.8246
	100ms	0.0995	0.0710	0.0084	-0.3161	-1.0933	-57.9318	0.0968	0.0828	0.0839	0.0849	0.0844	-2.6497
	150ms	0.0991	0.0706	0.0101	-0.3236	-1.0833	-56.3470	0.0963	0.0824	0.0830	0.0834	0.0834	-2.1997
	200ms	0.0988	0.0702	0.0108	-0.3184	-1.1008	-56.8419	0.0958	0.0814	0.0826	0.0831	0.0827	-2.0067
$\tilde{\mathscr{S}}^{R}$	**500ms**	0.0975	0.0688	0.0009	-0.3318	-1.1430	-51.4399	0.0945	0.0788	0.0799	0.0813	0.0797	0.0248
	750ms	0.0968	0.0612	-0.0024	-0.3149	-1.0532	-49.7207	0.0940	0.0776	0.0792	0.0801	0.0793	0.0500
	1sec	0.0962	0.0605	-0.0030	-0.3109	-1.0487	-48.2844	0.0932	0.0772	0.0784	0.0791	0.0782	0.0491
	5sec	0.0915	0.0520	0.0136	-0.3139	-1.1526	-42.3421	0.0881	0.0685	0.0706	0.0710	0.0699	0.0446
	15sec	0.0874	0.0479	0.0179	-0.2326	-1.0832	-24.6971	0.0841	0.0639	0.0671	0.0674	0.0659	0.0598
	30sec	0.0851	0.0462	0.0117	-0.2974	-0.5426	-25.8567	0.0825	0.0632	0.0657	0.0658	0.0667	0.0562
	60sec	0.0816	0.0467	-0.0099	-0.2694	-0.5695	-16.0570	0.0785	0.0608	0.0620	0.0635	0.0635	0.0664
	300sec	0.0776	0.0509	-0.0217	-0.1550	-0.5775	-13.1949	0.0769	0.0596	0.0606	0.0597	0.0602	0.0713
	600sec	0.0760	0.0506	-0.0243	-0.1145	-0.4776	-12.0841	0.0775	0.0625	0.0636	0.0630	0.0626	0.0716
	900sec	0.0761	0.0511	-0.0238	-0.1042	-0.2598	-9.1812	0.0778	0.0658	0.0664	0.0659	0.0665	0.0634
	1200sec	0.0757	0.0513	-0.0173	-0.0434	-0.3263	-12.5811	0.0784	0.0646	0.0652	0.0652	0.0643	0.0792
	1500sec	0.0752	0.0565	-0.0173	-0.0258	-0.2150	-6.9756	0.0779	0.0657	0.0658	0.0659	0.0682	0.0712
	1800sec	0.0759	0.0579	-0.0162	-0.0130	-0.2395	-6.1683	0.0780	0.0677	0.0696	0.0684	0.0681	0.0777
	Tick	0.0007	0.0088	0.0480	0.0570	0.0891	49.2296	0.0002	-0.0009	-0.0011	-0.0009	-0.0008	5.4702
	1ms	0.0000	0.0000	-0.0018	-0.0018	-0.0039	0.1991	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0000	0.0000	-0.0072	-0.0102	-0.0154	0.0330	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	5ms	0.0001	0.0000	-0.0119	-0.0175	-0.0202	-1.5316	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	10ms	0.0002	0.0001	-0.0100	-0.0113	-0.0392	-2.0789	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
	15ms	0.0003	0.0004	-0.0020	0.0027	-0.0127	-4.6111	0.0002	0.0001	0.0001	0.0001	0.0000	0.0000
	20ms	0.0005	0.0006	0.0032	0.0284	0.0205	-6.4674	0.0002	0.0002	0.0002	0.0002	0.0001	0.0000
	25ms	0.0008	0.0010	0.0061	0.0208	0.0111	-9.1799	0.0003	0.0003	0.0003	0.0003	0.0001	0.0000
	50ms	0.0017	0.0022	-0.0087	-0.0297	-0.0171	-19.6124	0.0006	0.0008	0.0007	0.0006	0.0003	0.0000
	75ms	0.0023	0.0029	-0.0112	-0.0493	-0.0149	-25.9716	0.0008	0.0013	0.0012	0.0010	0.0006	-0.0001
	100ms	0.0026	0.0033	-0.0108	-0.0551	-0.0539	-27.2449	0.0010	0.0016	0.0015	0.0012	0.0006	-0.0001
	150ms	0.0030	0.0038	-0.0125	-0.0476	-0.0639	-28.8300	0.0015	0.0019	0.0019	0.0015	0.0009	-0.0002
	200ms	0.0034	0.0041	-0.0131	-0.0529	-0.0464	-28.3364	0.0016	0.0023	0.0022	0.0017	0.0010	-0.0002
$\tilde{\mathscr{S}}^{AS}$	**500ms**	0.0046	0.0055	-0.0032	-0.0394	-0.0042	-33.7398	0.0024	0.0036	0.0036	0.0029	0.0019	-0.0008
	750ms	0.0053	0.0131	0.0000	-0.0564	-0.0941	-35.4591	0.0027	0.0042	0.0042	0.0033	0.0019	-0.0003
	1sec	0.0060	0.0138	0.0007	-0.0604	-0.0985	-36.8924	0.0031	0.0047	0.0047	0.0036	0.0023	-0.0011
	5sec	0.0107	0.0223	-0.0160	-0.0574	0.0054	-42.9451	0.0054	0.0103	0.0095	0.0081	0.0057	-0.0063
	15sec	0.0147	0.0264	-0.0202	-0.1387	-0.0554	-60.6067	0.0079	0.0118	0.0122	0.0104	0.0086	-0.0067
	30sec	0.0171	0.0281	-0.0140	-0.1183	-0.5961	-59.4246	0.0086	0.0125	0.0134	0.0117	0.0082	-1.8601
	60sec	0.0206	0.0276	0.0076	-0.1467	-0.5777	-69.2306	0.0111	0.0169	0.0173	0.0152	0.0115	-2.5557
	300sec	0.0246	0.0234	0.0194	-0.2613	-0.5637	-72.1578	0.0128	0.0156	0.0165	0.0154	0.0118	-4.1063
	600sec	0.0261	0.0237	0.0220	-0.3018	-0.6636	-73.3911	0.0131	0.0185	0.0186	0.0165	0.0130	-5.2244
	900sec	0.0261	0.0232	0.0215	-0.3060	-0.8813	-76.3229	0.0124	0.0177	0.0172	0.0147	0.0088	-5.9554
	1200sec	0.0265	0.0230	0.0150	-0.3668	-0.8149	-72.7624	0.0115	0.0153	0.0154	0.0135	0.0084	-8.1381
	1500sec	0.0270	0.0178	0.0150	-0.3844	-0.9262	-78.3675	0.0114	0.0135	0.0141	0.0112	0.0088	-8.2554
	1800sec	0.0262	0.0164	0.0139	-0.3911	-0.9017	-79.1768	0.0118	0.0111	0.0135	0.0108	0.0075	-8.2587

Notes: This table describes that the average and median of a range of market liquidity spreads within 60 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Table C.123: Market Liquidity Spreads (90 days before maturity)

90 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{F}}^{Q}$		159.1923	0.4306	1.2734	2.1169	2.9619	3.8016	159.2648	0.5012	1.5044	2.5074	3.5108	4.5122
$\tilde{\mathscr{F}}^{Q^{1/2}}$		79.5962	0.2153	0.6367	1.0584	1.4809	1.9008	79.6324	0.2506	0.7522	1.2537	1.7554	2.2561
$\tilde{\mathscr{F}}^{D}$		18,245,923,000	4,942,462	3,309,421	1,066,888	607,048	458,192	3,546,789	1,418,335	1,507,921	715,294	427,264	330,548
$\tilde{\mathscr{F}}^{E}$		0.1557	0.1659	0.1223	0.0577	-0.0907	-43.4048	0.1528	0.1574	0.1644	0.1677	0.1720	-1.7226
	Tick	0.1558	0.1654	0.1161	0.0561	-0.0277	-18.2606	0.1535	0.1534	0.1600	0.1630	0.1671	0.1039
	1ms	0.1557	0.1659	0.1229	0.0583	-0.0895	-43.2150	0.1528	0.1574	0.1644	0.1677	0.1719	-1.5627
	2ms	0.1556	0.1658	0.1245	0.0610	-0.0869	-42.9585	0.1528	0.1572	0.1644	0.1676	0.1717	-1.5349
	5ms	0.1555	0.1657	0.1258	0.0633	-0.0929	-41.7364	0.1523	0.1572	0.1642	0.1675	0.1713	-1.2570
	10ms	0.1553	0.1653	0.1249	0.0613	-0.0924	-40.9078	0.1523	0.1568	0.1639	0.1673	0.1710	0.0331
	15ms	0.1550	0.1648	0.1219	0.0564	-0.1083	-39.2124	0.1519	0.1563	0.1622	0.1671	0.1689	0.0108
	20ms	0.1547	0.1643	0.1199	0.0477	-0.1188	-37.8989	0.1513	0.1559	0.1623	0.1667	0.1688	0.0653
	25ms	0.1543	0.1638	0.1186	0.0497	-0.1153	-36.0020	0.1508	0.1553	0.1610	0.1660	0.1675	0.0735
	50ms	0.1530	0.1619	0.1217	0.0629	-0.1511	-30.8706	0.1491	0.1535	0.1599	0.1625	0.1638	0.0788
	75ms	0.1521	0.1604	0.1213	0.0666	-0.2332	-28.5374	0.1481	0.1521	0.1577	0.1607	0.1610	0.0846
	100ms	0.1514	0.1595	0.1204	0.0735	-0.2785	-28.4414	0.1467	0.1500	0.1560	0.1588	0.1597	0.0810
	150ms	0.1506	0.1584	0.1199	0.0643	-0.3904	-27.2197	0.1451	0.1482	0.1555	0.1575	0.1587	0.0896
$\tilde{\mathscr{F}}^{R}$	**200ms**	0.1500	0.1574	0.1193	0.0651	-0.3989	-26.7966	0.1437	0.1475	0.1531	0.1552	0.1567	0.0902
	500ms	0.1476	0.1541	0.1132	0.0548	-0.4244	-24.8462	0.1401	0.1425	0.1449	0.1476	0.1485	0.0933
	750ms	0.1464	0.1501	0.1106	0.0586	-0.3949	-24.0805	0.1386	0.1396	0.1425	0.1447	0.1457	0.0948
	1sec	0.1453	0.1486	0.1091	0.0586	-0.3976	-23.3130	0.1370	0.1376	0.1404	0.1429	0.1429	0.1004
	5sec	0.1377	0.1373	0.1000	0.0486	-0.4365	-20.0769	0.1287	0.1231	0.1254	0.1264	0.1258	0.1025
	15sec	0.1315	0.1283	0.0948	0.0659	-0.4259	-10.7391	0.1229	0.1131	0.1144	0.1166	0.1170	0.1128
	30sec	0.1274	0.1237	0.0928	0.0468	-0.4401	-12.6323	0.1187	0.1061	0.1072	0.1096	0.1103	0.1087
	60sec	0.1235	0.1207	0.0844	0.0489	-0.1339	-7.8522	0.1155	0.1016	0.1027	0.1045	0.1054	0.1113
	300sec	0.1167	0.1043	0.0786	0.0549	-0.4526	-7.3560	0.1080	0.0967	0.0972	0.0975	0.0979	0.1063
	600sec	0.1136	0.1010	0.0740	0.0649	-0.4431	-2.8312	0.1067	0.0958	0.0962	0.0958	0.0957	0.1151
	900sec	0.1130	0.1010	0.0711	0.0630	-0.4165	-4.7136	0.1070	0.1004	0.1005	0.0997	0.0987	0.1058
	1200sec	0.1127	0.1004	0.0724	0.0850	-0.4097	-5.6323	0.1063	0.0990	0.0991	0.0995	0.0981	0.1132
	1500sec	0.1123	0.1020	0.0750	0.0951	-0.3420	-2.9786	0.1075	0.1004	0.1013	0.1004	0.1019	0.1099
	1800sec	0.1113	0.1012	0.0761	0.1002	-0.2774	-1.9278	0.1082	0.0998	0.1008	0.1011	0.1000	0.1197
	Tick	-0.0001	-0.0012	-0.0134	0.0182	-0.0363	-24.9634	-0.0003	0.0014	0.0016	0.0016	0.0014	-1.7038
	1ms	0.0000	0.0000	-0.0005	-0.0006	-0.0012	-0.1898	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0001	0.0001	-0.0022	-0.0033	-0.0038	-0.4464	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	5ms	0.0002	0.0002	-0.0035	-0.0056	0.0022	-1.6684	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	10ms	0.0004	0.0006	-0.0026	-0.0036	0.0017	-2.4970	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000
	15ms	0.0007	0.0011	0.0004	0.0013	0.0176	-4.1922	0.0003	0.0003	0.0003	0.0003	0.0003	0.0000
	20ms	0.0010	0.0016	0.0024	0.0100	0.0281	-5.5057	0.0004	0.0005	0.0005	0.0005	0.0004	0.0000
	25ms	0.0014	0.0021	0.0037	0.0080	0.0246	-7.4026	0.0006	0.0007	0.0007	0.0007	0.0006	0.0000
	50ms	0.0027	0.0040	0.0006	-0.0052	0.0603	-12.5336	0.0012	0.0017	0.0017	0.0017	0.0016	0.0000
	75ms	0.0036	0.0055	0.0010	-0.0089	0.1425	-14.8670	0.0017	0.0024	0.0024	0.0023	0.0022	0.0000
	100ms	0.0043	0.0064	0.0020	-0.0158	0.1877	-14.9629	0.0022	0.0030	0.0029	0.0028	0.0027	0.0000
	150ms	0.0051	0.0075	0.0024	-0.0066	0.2996	-16.1849	0.0027	0.0038	0.0039	0.0037	0.0034	0.0000
$\tilde{\mathscr{F}}^{AS}$	**200ms**	0.0057	0.0085	0.0030	-0.0074	0.3082	-16.6084	0.0032	0.0047	0.0045	0.0045	0.0043	0.0000
	500ms	0.0081	0.0118	0.0091	0.0028	0.3336	-18.5579	0.0050	0.0070	0.0071	0.0070	0.0064	0.0000
	750ms	0.0093	0.0158	0.0117	-0.0009	0.3042	-19.3237	0.0060	0.0085	0.0088	0.0085	0.0077	0.0000
	1sec	0.0104	0.0173	0.0132	-0.0009	0.3069	-20.0903	0.0068	0.0097	0.0098	0.0096	0.0091	0.0000
	5sec	0.0180	0.0286	0.0224	0.0090	0.3457	-23.3611	0.0120	0.0179	0.0193	0.0184	0.0170	0.0000
	15sec	0.0242	0.0376	0.0276	-0.0082	0.3378	-32.6985	0.0165	0.0242	0.0252	0.0241	0.0230	0.0000
	30sec	0.0283	0.0422	0.0295	0.0008	0.3520	-30.7952	0.0185	0.0284	0.0293	0.0288	0.0265	0.0000
	60sec	0.0322	0.0452	0.0379	-0.0015	0.0431	-35.5486	0.0216	0.0315	0.0324	0.0317	0.0302	0.0000
	300sec	0.0391	0.0616	0.0437	-0.0114	0.3638	-35.9672	0.0243	0.0371	0.0385	0.0386	0.0354	-0.0097
	600sec	0.0421	0.0649	0.0483	-0.0214	0.3542	-40.6666	0.0245	0.0381	0.0391	0.0382	0.0378	-0.0126
	900sec	0.0427	0.0649	0.0512	-0.0176	0.3277	-38.7956	0.0237	0.0394	0.0398	0.0398	0.0395	-0.0441
	1200sec	0.0430	0.0655	0.0499	-0.0395	0.3209	-37.8236	0.0215	0.0361	0.0374	0.0370	0.0367	-0.0790
	1500sec	0.0434	0.0638	0.0473	-0.0497	0.2531	-40.4800	0.0201	0.0351	0.0360	0.0358	0.0347	-0.1039
	1800sec	0.0444	0.0647	0.0462	-0.0528	0.1885	-41.5316	0.0214	0.0372	0.0377	0.0387	0.0364	-1.8456

Notes: This table describes that the average and median of a range of market liquidity spreads within 90 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{F}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{F}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{F}}^{D}$), effective half-spreads ($\tilde{\mathscr{F}}^{E}$), realized spreads ($\tilde{\mathscr{F}}^{R}$), and adverse selection ($\tilde{\mathscr{F}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Table C.124: Market Liquidity Spreads (180 days before maturity)

180 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{F}}^{Q}$		173.6588	0.4745	1.4041	2.3352	3.2681	4.1983	177.5995	0.5042	1.5081	2.5121	3.5161	4.5172
$\tilde{\mathscr{F}}^{Q^{1/2}}$		86.8294	0.2373	0.7021	1.1676	1.6341	2.0992	88.7998	0.2521	0.7541	1.2561	1.7580	2.2586
$\tilde{\mathscr{F}}^{D}$		21,769,251,000	4,214,820	4,075,326	1,136,602	553,495	427,323	3,580,841	1,202,312	1,722,969	755,523	376,938	301,682
$\tilde{\mathscr{F}}^{E}$		0.1662	0.1778	0.1674	0.1761	0.3772	-32.3777	0.1619	0.1862	0.1879	0.1893	0.1913	-1.7237
	Tick	0.1664	0.1789	0.1581	0.1734	0.3668	-14.9323	0.1627	0.1779	0.1788	0.1808	0.1832	0.1279
	1ms	0.1662	0.1778	0.1677	0.1763	0.3682	-31.9874	0.1619	0.1862	0.1878	0.1892	0.1912	-1.5277
	2ms	0.1661	0.1777	0.1684	0.1773	0.3603	-31.5123	0.1619	0.1860	0.1878	0.1891	0.1912	-1.5350
	5ms	0.1660	0.1774	0.1688	0.1784	0.3082	-30.0695	0.1616	0.1856	0.1875	0.1888	0.1909	-1.1770
	10ms	0.1657	0.1768	0.1679	0.1768	0.2633	-28.9007	0.1612	0.1849	0.1868	0.1880	0.1905	0.0298
	15ms	0.1653	0.1762	0.1663	0.1740	0.1873	-26.9689	0.1607	0.1841	0.1863	0.1874	0.1893	0.0159
	20ms	0.1649	0.1755	0.1647	0.1694	0.1820	-25.7935	0.1600	0.1835	0.1853	0.1867	0.1885	0.0766
	25ms	0.1645	0.1748	0.1636	0.1698	0.1474	-24.3848	0.1596	0.1826	0.1843	0.1859	0.1873	0.0941
	50ms	0.1628	0.1717	0.1604	0.1744	0.1275	-20.8311	0.1565	0.1774	0.1794	0.1811	0.1827	0.1104
	75ms	0.1615	0.1694	0.1588	0.1734	0.0826	-19.1043	0.1547	0.1736	0.1755	0.1774	0.1794	0.1254
	100ms	0.1606	0.1679	0.1568	0.1756	0.0601	-18.8198	0.1535	0.1715	0.1737	0.1750	0.1767	0.1156
	150ms	0.1592	0.1665	0.1560	0.1705	0.0048	-17.8268	0.1514	0.1688	0.1707	0.1721	0.1739	0.1251
$\tilde{\mathscr{F}}^{R}$	**200ms**	0.1583	0.1654	0.1570	0.1690	-0.0011	-17.6918	0.1500	0.1659	0.1682	0.1693	0.1716	0.1220
	500ms	0.1547	0.1592	0.1482	0.1647	-0.0153	-16.3261	0.1446	0.1563	0.1594	0.1610	0.1630	0.1255
	750ms	0.1529	0.1555	0.1448	0.1635	-0.0026	-15.5105	0.1428	0.1520	0.1543	0.1561	0.1578	0.1257
	1sec	0.1515	0.1536	0.1416	0.1616	-0.0049	-14.6374	0.1414	0.1489	0.1516	0.1535	0.1552	0.1256
	5sec	0.1423	0.1382	0.1324	0.1528	-0.0305	-11.8998	0.1308	0.1293	0.1308	0.1320	0.1332	0.1173
	15sec	0.1349	0.1314	0.1227	0.1545	-0.0316	-7.8254	0.1243	0.1182	0.1187	0.1201	0.1217	0.1126
	30sec	0.1302	0.1253	0.1182	0.1417	-0.0425	-9.1264	0.1203	0.1109	0.1122	0.1135	0.1154	0.1087
	60sec	0.1259	0.1191	0.1109	0.1333	0.0933	-4.6475	0.1170	0.1074	0.1081	0.1085	0.1101	0.1066
	300sec	0.1191	0.1099	0.1017	0.1311	-0.0864	-4.1045	0.1113	0.1010	0.1016	0.1025	0.1033	0.1055
	600sec	0.1164	0.1095	0.1001	0.1380	-0.0561	-3.4329	0.1105	0.1021	0.1030	0.1029	0.1029	0.1126
	900sec	0.1159	0.1089	0.0954	0.1330	-0.0152	-4.6121	0.1109	0.1040	0.1044	0.1040	0.1039	0.1126
	1200sec	0.1154	0.1091	0.0969	0.1428	-0.0265	-4.9182	0.1119	0.1058	0.1063	0.1065	0.1058	0.1138
	1500sec	0.1151	0.1110	0.0952	0.1443	-0.0264	-3.3262	0.1124	0.1064	0.1068	0.1077	0.1079	0.1142
	1800sec	0.1141	0.1100	0.0952	0.1117	-0.0463	1.2227	0.1124	0.1058	0.1062	0.1069	0.1063	0.1240
	Tick	0.0002	0.0019	0.0015	-0.0120	-0.0106	17.6283	0.0004	-0.0017	-0.0019	-0.0018	-0.0017	1.9035
	1ms	0.0000	0.0000	-0.0002	-0.0002	0.0090	-0.3903	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0001	0.0001	-0.0010	-0.0012	0.0169	-0.8654	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	5ms	0.0002	0.0004	-0.0014	-0.0023	0.0690	-2.3083	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000
	10ms	0.0006	0.0010	-0.0005	-0.0007	0.1139	-3.4770	0.0002	0.0002	0.0002	0.0002	0.0002	0.0000
	15ms	0.0009	0.0016	0.0011	0.0020	0.1899	-5.4088	0.0004	0.0005	0.0005	0.0005	0.0005	0.0000
	20ms	0.0013	0.0023	0.0028	0.0067	0.1952	-6.5842	0.0006	0.0008	0.0008	0.0008	0.0008	0.0000
	25ms	0.0017	0.0031	0.0039	0.0063	0.2298	-7.9931	0.0008	0.0013	0.0013	0.0013	0.0013	0.0000
	50ms	0.0034	0.0061	0.0070	0.0017	0.2497	-11.5465	0.0018	0.0031	0.0030	0.0030	0.0029	0.0000
	75ms	0.0047	0.0084	0.0087	0.0027	0.2946	-13.2734	0.0027	0.0045	0.0045	0.0044	0.0044	0.0000
	100ms	0.0057	0.0099	0.0107	0.0005	0.3171	-13.5579	0.0034	0.0055	0.0055	0.0054	0.0054	0.0000
	150ms	0.0070	0.0113	0.0114	0.0056	0.3724	-14.5509	0.0043	0.0071	0.0071	0.0070	0.0070	0.0000
$\tilde{\mathscr{F}}^{AS}$	**200ms**	0.0080	0.0125	0.0104	0.0071	0.3783	-14.6862	0.0050	0.0083	0.0083	0.0081	0.0081	0.0000
	500ms	0.0115	0.0186	0.0193	0.0114	0.3925	-16.0515	0.0079	0.0131	0.0130	0.0129	0.0127	0.0000
	750ms	0.0133	0.0223	0.0226	0.0126	0.3798	-16.8671	0.0095	0.0155	0.0156	0.0154	0.0151	0.0000
	1sec	0.0147	0.0243	0.0258	0.0145	0.3821	-17.7398	0.0107	0.0172	0.0175	0.0173	0.0170	0.0000
	5sec	0.0239	0.0396	0.0351	0.0233	0.4077	-20.4940	0.0183	0.0309	0.0319	0.0319	0.0314	0.0000
	15sec	0.0313	0.0465	0.0447	0.0216	0.4110	-24.5674	0.0237	0.0399	0.0422	0.0422	0.0416	0.0000
	30sec	0.0360	0.0526	0.0493	0.0295	0.4219	-23.2621	0.0270	0.0458	0.0481	0.0481	0.0476	0.0000
	60sec	0.0403	0.0587	0.0566	0.0378	0.2848	-27.7285	0.0302	0.0497	0.0534	0.0536	0.0524	0.0000
	300sec	0.0471	0.0679	0.0657	0.0381	0.4645	-28.2345	0.0332	0.0578	0.0592	0.0592	0.0597	-0.0105
	600sec	0.0498	0.0683	0.0673	0.0312	0.4342	-28.9926	0.0316	0.0567	0.0580	0.0578	0.0581	-0.0109
	900sec	0.0503	0.0689	0.0720	0.0372	0.3933	-27.8161	0.0315	0.0596	0.0599	0.0599	0.0605	-0.0549
	1200sec	0.0508	0.0687	0.0705	0.0274	0.4046	-27.4811	0.0309	0.0576	0.0591	0.0588	0.0595	-1.0496
	1500sec	0.0511	0.0669	0.0722	0.0258	0.4045	-29.0777	0.0293	0.0547	0.0572	0.0568	0.0565	-0.1867
	1800sec	0.0521	0.0678	0.0722	0.0594	0.4244	-33.6287	0.0299	0.0551	0.0566	0.0566	0.0562	-1.4844

Notes: This table describes that the average and median of a range of market liquidity spreads within 180 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{F}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{F}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{F}}^{D}$), effective half-spreads ($\tilde{\mathscr{F}}^{E}$), realized spreads ($\tilde{\mathscr{F}}^{R}$), and adverse selection ($\tilde{\mathscr{F}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Table C.125: Market Liquidity Spreads (360 days before maturity)

360 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{S}}^{Q}$		179.8064	0.4996	1.4715	2.4482	3.4286	4.4097	179.5854	0.5084	1.5134	2.5186	3.5235	4.5248
$\tilde{\mathscr{S}}^{Q^{1/2}}$		89.9032	0.2498	0.7358	1.2241	1.7143	2.2048	89.7927	0.2542	0.7567	1.2593	1.7617	2.2624
$\tilde{\mathscr{S}}^{D}$		23,590,779,000	3,109,437	4,519,765	1,116,958	425,148	339,920	3,377,910	904,389	1,858,279	714,917	267,372	214,622
$\tilde{\mathscr{S}}^{E}$		0.1724	0.1937	0.2545	0.3271	0.6312	-21.6087	0.1641	0.1976	0.1984	0.2000	0.2015	-1.3635
	Tick	0.1724	0.1906	0.2286	0.2993	0.6317	-9.2478	0.1648	0.1896	0.1901	0.1918	0.1941	0.1562
	1ms	0.1724	0.1936	0.2545	0.3197	0.6306	-21.3426	0.1640	0.1976	0.1983	0.2000	0.2015	-1.2694
	2ms	0.1723	0.1935	0.2543	0.3201	0.6341	-20.9979	0.1639	0.1975	0.1981	0.1998	0.2013	-1.2403
	5ms	0.1721	0.1931	0.2535	0.3193	0.6235	-19.9283	0.1636	0.1970	0.1975	0.1994	0.2009	-0.9471
	10ms	0.1717	0.1923	0.2514	0.3163	0.6226	-18.7996	0.1632	0.1962	0.1970	0.1986	0.2000	-0.0199
	15ms	0.1714	0.1914	0.2486	0.3140	0.6092	-17.2763	0.1626	0.1949	0.1960	0.1974	0.1987	0.0243
	20ms	0.1710	0.1906	0.2443	0.3106	0.6227	-16.4609	0.1621	0.1941	0.1950	0.1964	0.1977	0.0813
	25ms	0.1705	0.1897	0.2393	0.3081	0.6036	-15.6125	0.1617	0.1929	0.1939	0.1951	0.1967	0.1077
	50ms	0.1686	0.1856	0.2196	0.2951	0.7574	-13.1039	0.1587	0.1870	0.1883	0.1898	0.1912	0.1328
	75ms	0.1670	0.1824	0.2317	0.2934	0.7212	-11.9225	0.1567	0.1826	0.1840	0.1855	0.1865	0.1444
	100ms	0.1658	0.1800	0.2291	0.2901	0.6942	-11.7037	0.1552	0.1791	0.1809	0.1822	0.1834	0.1438
	150ms	0.1638	0.1770	0.2161	0.2751	0.6567	-11.0675	0.1530	0.1747	0.1761	0.1779	0.1790	0.1438
$\tilde{\mathscr{S}}^{R}$	**200ms**	0.1624	0.1748	0.2261	0.2890	0.4933	-11.2973	0.1511	0.1714	0.1730	0.1745	0.1757	0.1414
	500ms	0.1571	0.1658	0.1626	0.2268	0.3074	-10.6383	0.1439	0.1590	0.1607	0.1626	0.1640	0.1371
	750ms	0.1546	0.1614	0.1586	0.2211	0.3258	-9.8453	0.1417	0.1533	0.1551	0.1570	0.1586	0.1323
	1sec	0.1527	0.1587	0.1553	0.2172	0.3208	-9.2346	0.1396	0.1498	0.1516	0.1534	0.1552	0.1300
	5sec	0.1413	0.1414	0.1426	0.2011	0.2549	-8.4808	0.1281	0.1292	0.1302	0.1317	0.1335	0.1133
	15sec	0.1329	0.1315	0.1262	0.1934	0.2547	-6.6441	0.1195	0.1163	0.1168	0.1185	0.1205	0.1069
	30sec	0.1277	0.1237	0.1204	0.1838	0.1360	-7.8773	0.1152	0.1094	0.1101	0.1112	0.1136	0.1000
	60sec	0.1227	0.1175	0.1100	0.1750	0.1998	-6.2208	0.1117	0.1046	0.1052	0.1062	0.1086	0.0955
	300sec	0.1165	0.1101	0.1027	0.1709	0.1117	-3.5167	0.1092	0.1021	0.1027	0.1033	0.1042	0.0996
	600sec	0.1140	0.1072	0.1005	0.1813	0.0998	-2.3214	0.1099	0.1035	0.1038	0.1041	0.1050	0.1103
	900sec	0.1134	0.1059	0.0979	0.1721	0.1368	-4.2432	0.1112	0.1061	0.1066	0.1069	0.1075	0.1107
	1200sec	0.1127	0.1069	0.0982	0.1712	0.1204	-3.1830	0.1113	0.1067	0.1071	0.1073	0.1074	0.1122
	1500sec	0.1125	0.1069	0.0971	0.1706	0.1001	-2.0493	0.1127	0.1089	0.1091	0.1093	0.1097	0.1130
	1800sec	0.1114	0.1049	0.1008	0.1601	0.0908	1.1366	0.1130	0.1094	0.1097	0.1100	0.1099	0.1186
	Tick	0.0000	-0.0026	0.0107	-0.0073	0.0104	12.6678	0.0004	-0.0022	-0.0025	-0.0024	-0.0022	1.9035
	1ms	0.0000	0.0001	-0.0001	0.0074	0.0005	-0.2661	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0001	0.0002	0.0001	0.0070	-0.0029	-0.6108	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	5ms	0.0003	0.0006	0.0010	0.0078	0.0077	-1.6805	0.0001	0.0002	0.0002	0.0002	0.0002	0.0000
	10ms	0.0006	0.0014	0.0031	0.0108	0.0086	-2.8091	0.0003	0.0005	0.0005	0.0005	0.0005	0.0000
	15ms	0.0010	0.0022	0.0058	0.0131	0.0220	-4.3325	0.0006	0.0010	0.0010	0.0010	0.0010	0.0000
	20ms	0.0014	0.0031	0.0101	0.0165	0.0085	-5.1478	0.0008	0.0015	0.0015	0.0015	0.0015	0.0000
	25ms	0.0018	0.0040	0.0152	0.0190	0.0276	-5.9964	0.0011	0.0023	0.0023	0.0023	0.0023	0.0000
	50ms	0.0038	0.0081	0.0348	0.0320	-0.1263	-8.5048	0.0025	0.0055	0.0055	0.0055	0.0055	0.0000
	75ms	0.0054	0.0113	0.0228	0.0337	-0.0901	-9.6862	0.0037	0.0080	0.0080	0.0080	0.0080	0.0000
	100ms	0.0066	0.0136	0.0254	0.0370	-0.0630	-9.9050	0.0046	0.0100	0.0100	0.0100	0.0099	0.0000
	150ms	0.0085	0.0166	0.0383	0.0520	-0.0255	-10.5411	0.0060	0.0128	0.0128	0.0127	0.0127	0.0000
$\tilde{\mathscr{S}}^{AS}$	**200ms**	0.0100	0.0189	0.0284	0.0381	0.1378	-10.3114	0.0071	0.0146	0.0147	0.0146	0.0144	0.0000
	500ms	0.0153	0.0278	0.0919	0.1003	0.3237	-10.9670	0.0115	0.0227	0.0229	0.0226	0.0223	0.0000
	750ms	0.0178	0.0323	0.0959	0.1060	0.3054	-11.7632	0.0139	0.0272	0.0274	0.0271	0.0267	0.0000
	1sec	0.0197	0.0350	0.0992	0.1099	0.3104	-12.3737	0.0158	0.0300	0.0304	0.0302	0.0296	0.0000
	5sec	0.0311	0.0523	0.1119	0.1260	0.3763	-13.1322	0.0262	0.0480	0.0488	0.0488	0.0483	0.0000
	15sec	0.0395	0.0621	0.1283	0.1373	0.3775	-14.9615	0.0334	0.0603	0.0626	0.0629	0.0618	0.0000
	30sec	0.0447	0.0699	0.1341	0.1446	0.4962	-13.7263	0.0376	0.0674	0.0697	0.0697	0.0690	0.0000
	60sec	0.0497	0.0762	0.1445	0.1497	0.4318	-15.3769	0.0409	0.0741	0.0760	0.0766	0.0759	0.0000
	300sec	0.0558	0.0835	0.1518	0.1529	0.5233	-18.0632	0.0424	0.0776	0.0793	0.0798	0.0794	0.0000
	600sec	0.0584	0.0864	0.1540	0.1425	0.5352	-19.3109	0.0410	0.0782	0.0799	0.0798	0.0799	-0.0073
	900sec	0.0590	0.0878	0.1566	0.1522	0.4982	-17.3862	0.0406	0.0772	0.0785	0.0788	0.0786	-0.0384
	1200sec	0.0597	0.0868	0.1563	0.1531	0.5146	-18.4367	0.0404	0.0768	0.0783	0.0785	0.0782	-0.2603
	1500sec	0.0599	0.0867	0.1574	0.1537	0.5349	-19.5729	0.0391	0.0758	0.0771	0.0772	0.0768	-0.1269
	1800sec	0.0610	0.0888	0.1536	0.1647	0.5408	-22.7590	0.0394	0.0758	0.0777	0.0778	0.0772	-0.6318

Notes: This table describes that the average and median of a range of market liquidity spreads within 360 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Table C.126: Market Liquidity Spreads (480 days before maturity)

480 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{S}}^{Q}$		182.3261	0.5065	1.4895	2.4777	3.4715	4.4698	180.7460	0.5102	1.5160	2.5217	3.5273	4.5292
$\tilde{\mathscr{S}}^{Q^{1/2}}$		91.1630	0.2532	0.7448	1.2388	1.7358	2.2349	90.3730	0.2551	0.7580	1.2608	1.7637	2.2646
$\tilde{\mathscr{S}}^{D}$		23,727,350,000	2,636,481	4,333,346	1,053,708	369,263	296,896	3,168,779	783,629	1,808,016	673,832	231,303	186,148
$\tilde{\mathscr{S}}^{E}$		0.1734	0.1529	0.2408	0.2999	0.6087	-20.2689	0.1624	0.2003	0.2008	0.2023	0.2034	-1.3742
	Tick	0.1732	0.2165	0.2210	0.2667	0.5963	-8.9163	0.1632	0.1923	0.1928	0.1944	0.1962	0.1592
	1ms	0.1734	0.1528	0.2409	0.2944	0.6084	-20.0446	0.1623	0.2002	0.2007	0.2022	0.2033	-1.3277
	2ms	0.1733	0.1527	0.2407	0.2946	0.6106	-19.7346	0.1622	0.2000	0.2006	0.2020	0.2031	-1.2957
	5ms	0.1731	0.1522	0.2399	0.2939	0.6025	-18.7067	0.1620	0.1995	0.2002	0.2016	0.2028	-1.0050
	10ms	0.1727	0.1513	0.2380	0.2914	0.6019	-17.5889	0.1616	0.1987	0.1993	0.2007	0.2019	-0.1437
	15ms	0.1723	0.1504	0.2357	0.2967	0.5915	-16.2363	0.1613	0.1975	0.1982	0.1997	0.2010	0.0338
	20ms	0.1719	0.1495	0.2322	0.2938	0.6005	-15.4889	0.1608	0.1965	0.1972	0.1987	0.2000	0.0948
	25ms	0.1715	0.1485	0.2282	0.2989	0.5863	-14.6185	0.1603	0.1951	0.1960	0.1976	0.1987	0.1269
	50ms	0.1694	0.1440	0.2121	0.2881	0.6989	-12.3532	0.1575	0.1891	0.1903	0.1916	0.1929	0.1543
	75ms	0.1676	0.1404	0.2198	0.2856	0.6718	-11.4633	0.1550	0.1843	0.1857	0.1869	0.1880	0.1557
	100ms	0.1662	0.1377	0.2170	0.2823	0.6531	-11.4519	0.1533	0.1804	0.1820	0.1834	0.1843	0.1540
	150ms	0.1641	0.1340	0.2061	0.2698	0.6170	-10.8698	0.1505	0.1749	0.1766	0.1781	0.1791	0.1504
$\tilde{\mathscr{S}}^{R}$	**200ms**	0.1624	0.1311	0.2124	0.2787	0.4942	-10.8431	0.1486	0.1712	0.1727	0.1742	0.1753	0.1477
	500ms	0.1562	0.1657	0.1623	0.2263	0.3599	-9.9780	0.1411	0.1576	0.1593	0.1610	0.1623	0.1356
	750ms	0.1532	0.1607	0.1581	0.2068	0.3518	-9.2756	0.1380	0.1515	0.1531	0.1550	0.1564	0.1311
	1sec	0.1511	0.1574	0.1537	0.1995	0.3450	-8.7523	0.1360	0.1472	0.1491	0.1510	0.1526	0.1287
	5sec	0.1380	0.1385	0.1352	0.1787	0.2069	-7.8737	0.1235	0.1254	0.1265	0.1281	0.1298	0.1088
	15sec	0.1284	0.1268	0.1196	0.1829	0.2341	-5.7514	0.1145	0.1119	0.1128	0.1141	0.1157	0.0973
	30sec	0.1227	0.1189	0.1125	0.1845	0.1676	-6.7505	0.1094	0.1045	0.1051	0.1065	0.1080	0.0923
	60sec	0.1175	0.1124	0.1048	0.1775	0.1829	-5.8873	0.1050	0.0994	0.0999	0.1011	0.1025	0.0875
	300sec	0.1112	0.1048	0.0997	0.3252	0.0298	-3.8356	0.1036	0.0975	0.0980	0.0986	0.0998	0.0937
	600sec	0.1087	0.1023	0.0965	0.2008	0.1024	-3.1283	0.1048	0.0990	0.0993	0.0997	0.1006	0.0996
	900sec	0.1084	0.1011	0.0951	0.1454	0.1310	-3.4709	0.1070	0.1019	0.1021	0.1023	0.1029	0.1056
	1200sec	0.1075	0.1009	0.0947	0.1444	0.1133	-2.9016	0.1067	0.1018	0.1024	0.1025	0.1028	0.1022
	1500sec	0.1072	0.1008	0.0933	0.1422	0.0967	-2.4427	0.1077	0.1038	0.1044	0.1045	0.1052	0.1051
	1800sec	0.1064	0.0990	0.0965	0.1340	0.0837	-1.9123	0.1084	0.1046	0.1049	0.1050	0.1050	0.1093
	Tick	-0.0001	0.0192	0.0071	-0.0334	0.0026	11.6396	0.0004	-0.0026	-0.0028	-0.0027	-0.0026	1.9196
	1ms	0.0000	0.0001	0.0000	0.0055	0.0003	-0.2244	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0001	0.0002	0.0002	0.0052	-0.0019	-0.5343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	5ms	0.0003	0.0007	0.0009	0.0060	0.0062	-1.5623	0.0001	0.0002	0.0002	0.0002	0.0002	0.0000
	10ms	0.0007	0.0015	0.0028	0.0085	0.0068	-2.6801	0.0004	0.0007	0.0007	0.0007	0.0007	0.0000
	15ms	0.0011	0.0025	0.0051	0.0032	0.0173	-4.0327	0.0006	0.0013	0.0013	0.0013	0.0013	0.0000
	20ms	0.0015	0.0034	0.0086	0.0061	0.0082	-4.7801	0.0009	0.0019	0.0019	0.0019	0.0020	0.0000
	25ms	0.0019	0.0044	0.0127	0.0010	0.0224	-5.6506	0.0013	0.0028	0.0028	0.0028	0.0028	0.0000
	50ms	0.0040	0.0089	0.0287	0.0118	-0.0902	-7.9158	0.0028	0.0066	0.0066	0.0066	0.0067	0.0000
	75ms	0.0058	0.0125	0.0210	0.0143	-0.0631	-8.8057	0.0042	0.0095	0.0095	0.0095	0.0095	0.0000
	100ms	0.0072	0.0152	0.0239	0.0176	-0.0444	-8.8171	0.0052	0.0119	0.0119	0.0119	0.0119	0.0000
	150ms	0.0093	0.0189	0.0348	0.0301	-0.0083	-9.3990	0.0069	0.0151	0.0151	0.0150	0.0150	0.0000
$\tilde{\mathscr{S}}^{AS}$	**200ms**	0.0110	0.0218	0.0285	0.0211	0.1146	-9.4249	0.0082	0.0175	0.0176	0.0174	0.0173	0.0000
	500ms	0.0172	-0.0128	0.0786	0.0736	0.2488	-10.2871	0.0134	0.0269	0.0272	0.0267	0.0264	0.0000
	750ms	0.0202	-0.0078	0.0827	0.0931	0.2570	-10.9919	0.0162	0.0318	0.0322	0.0317	0.0311	0.0000
	1sec	0.0223	-0.0045	0.0871	0.1004	0.2637	-11.5149	0.0183	0.0355	0.0359	0.0355	0.0351	0.0000
	5sec	0.0353	0.0144	0.1056	0.1212	0.4018	-12.3971	0.0300	0.0559	0.0569	0.0568	0.0561	0.0000
	15sec	0.0450	0.0260	0.1213	0.1196	0.3754	-14.5144	0.0393	0.0701	0.0714	0.0716	0.0712	0.0000
	30sec	0.0507	0.0340	0.1283	0.1163	0.4445	-13.5130	0.0443	0.0777	0.0795	0.0797	0.0795	0.0000
	60sec	0.0559	0.0404	0.1361	0.1206	0.4261	-14.3732	0.0478	0.0839	0.0856	0.0862	0.0862	0.0000
	300sec	0.0622	0.0481	0.1412	-0.0277	0.5817	-16.4124	0.0485	0.0885	0.0899	0.0905	0.0904	0.0000
	600sec	0.0647	0.0506	0.1443	0.0967	0.5092	-17.1565	0.0478	0.0883	0.0899	0.0900	0.0902	-0.0007
	900sec	0.0650	0.0518	0.1458	0.1524	0.4805	-16.8118	0.0471	0.0880	0.0893	0.0896	0.0895	-0.0535
	1200sec	0.0659	0.0520	0.1461	0.1534	0.4982	-17.3738	0.0465	0.0878	0.0888	0.0891	0.0890	-0.0738
	1500sec	0.0662	0.0521	0.1476	0.1556	0.5148	-17.8348	0.0449	0.0863	0.0876	0.0881	0.0879	-0.1769
	1800sec	0.0671	0.0538	0.1443	0.1642	0.5253	-18.3669	0.0443	0.0855	0.0864	0.0868	0.0866	-0.2275

Notes: This table describes that the average and median of a range of market liquidity spreads within 480 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Table C.127: Market Liquidity Spreads (720 days before maturity)

720 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{S}}^{Q}$		188.2943	0.5194	1.5180	2.5492	3.6060	4.6740	180.4020	0.5157	1.5236	2.5310	3.5382	4.5409
$\tilde{\mathscr{S}}^{Q^{1/2}}$		94.1471	0.2597	0.7590	1.2746	1.8030	2.3370	90.2010	0.2579	0.7618	1.2655	1.7691	2.2705
$\tilde{\mathscr{S}}^{D}$		21,457,312,000	2,030,286	3,796,956	919,497	285,456	229,686	2,804,554	612,304	1,629,808	578,142	173,318	140,050
$\tilde{\mathscr{S}}^{E}$		0.1929	0.1742	0.5194	0.9238	1.9387	-12.0619	0.1612	0.2001	0.2012	0.2029	0.2043	-1.0137
	Tick	0.1919	0.2114	0.4556	0.7918	1.6564	-3.0086	0.1619	0.1923	0.1936	0.1955	0.1974	0.1606
	1ms	0.1928	0.1741	0.5193	0.9202	1.9423	-11.8818	0.1612	0.2000	0.2011	0.2028	0.2043	-0.9370
	2ms	0.1928	0.1739	0.5191	0.9203	1.9472	-11.6612	0.1611	0.1998	0.2009	0.2027	0.2042	-0.8789
	5ms	0.1925	0.1734	0.5184	0.9196	1.9533	-10.8261	0.1609	0.1993	0.2005	0.2022	0.2035	-0.7027
	10ms	0.1921	0.1723	0.5169	0.9175	1.9749	-9.7938	0.1604	0.1983	0.1995	0.2012	0.2027	0.0609
	15ms	0.1917	0.1713	0.5150	0.9203	1.9746	-8.7290	0.1598	0.1971	0.1984	0.2003	0.2017	0.1138
	20ms	0.1912	0.1702	0.5124	0.9177	1.9807	-8.1318	0.1593	0.1961	0.1974	0.1992	0.2006	0.1319
	25ms	0.1907	0.1690	0.5096	0.9203	1.9642	-7.5559	0.1587	0.1948	0.1961	0.1978	0.1993	0.1517
	50ms	0.1885	0.1639	0.4967	0.9103	2.0276	-5.8224	0.1560	0.1884	0.1901	0.1915	0.1927	0.1617
	75ms	0.1865	0.1603	0.5009	0.9068	1.9590	-5.1541	0.1535	0.1830	0.1848	0.1861	0.1872	0.1589
	100ms	0.1849	0.1571	0.4969	0.9057	1.9187	-5.2444	0.1514	0.1785	0.1807	0.1818	0.1828	0.1568
	150ms	0.1822	0.1526	0.4886	0.8849	1.8971	-4.8392	0.1486	0.1722	0.1741	0.1757	0.1767	0.1518
$\tilde{\mathscr{S}}^{R}$	**200ms**	0.1802	0.1490	0.4905	0.8981	1.8020	-4.9574	0.1461	0.1676	0.1697	0.1714	0.1724	0.1486
	500ms	0.1726	0.1660	0.4456	0.8574	1.6903	-4.3479	0.1379	0.1524	0.1550	0.1569	0.1582	0.1338
	750ms	0.1689	0.1602	0.4419	0.8392	1.6913	-3.8350	0.1346	0.1460	0.1485	0.1505	0.1520	0.1296
	1sec	0.1662	0.1562	0.4351	0.8300	1.6733	-3.9583	0.1320	0.1419	0.1443	0.1460	0.1478	0.1254
	5sec	0.1502	0.1348	0.4155	0.8004	1.5058	-3.0250	0.1182	0.1184	0.1206	0.1224	0.1247	0.1071
	15sec	0.1385	0.1216	0.4017	0.7872	1.4462	-1.7507	0.1082	0.1037	0.1054	0.1076	0.1097	0.0916
	30sec	0.1314	0.1136	0.3807	0.7663	1.3424	-2.5624	0.1022	0.0955	0.0967	0.0993	0.1017	0.0851
	60sec	0.1247	0.1067	0.3669	0.6913	1.3011	-1.2393	0.0978	0.0899	0.0913	0.0938	0.0958	0.0812
	300sec	0.1146	0.0973	0.3234	0.6916	0.9080	0.6129	0.0960	0.0886	0.0896	0.0917	0.0929	0.0876
	600sec	0.1110	0.0979	0.3176	0.5537	0.8410	1.4804	0.0981	0.0909	0.0918	0.0935	0.0945	0.0941
	900sec	0.1099	0.0969	0.3098	0.4807	0.7903	-0.0496	0.1005	0.0932	0.0943	0.0954	0.0969	0.0994
	1200sec	0.1087	0.0949	0.2989	0.5671	0.7282	0.2179	0.1005	0.0945	0.0950	0.0970	0.0978	0.0983
	1500sec	0.1083	0.0942	0.2966	0.5321	0.7288	0.0964	0.1016	0.0965	0.0971	0.0985	0.0992	0.1009
	1800sec	0.1067	0.0928	0.1394	0.3400	0.6589	-0.4087	0.1025	0.0972	0.0978	0.0994	0.1002	0.1066
	Tick	-0.0010	0.0089	-0.0338	-0.1006	-0.1459	9.7951	0.0005	-0.0033	-0.0035	-0.0034	-0.0032	1.9273
	1ms	0.0000	0.0001	0.0000	0.0036	-0.0036	-0.1801	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0001	0.0003	0.0002	0.0035	-0.0085	-0.4007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	5ms	0.0003	0.0008	0.0010	0.0042	-0.0146	-1.2358	0.0002	0.0003	0.0003	0.0003	0.0003	0.0000
	10ms	0.0008	0.0019	0.0025	0.0063	-0.0362	-2.2682	0.0005	0.0009	0.0009	0.0009	0.0009	0.0000
	15ms	0.0012	0.0029	0.0044	0.0036	-0.0359	-3.3330	0.0008	0.0017	0.0017	0.0017	0.0017	0.0000
	20ms	0.0017	0.0040	0.0070	0.0062	-0.0422	-3.9325	0.0011	0.0025	0.0025	0.0026	0.0026	0.0000
	25ms	0.0021	0.0051	0.0098	0.0035	-0.0257	-4.5086	0.0015	0.0037	0.0037	0.0037	0.0037	0.0000
	50ms	0.0044	0.0103	0.0227	0.0135	-0.0889	-6.2468	0.0034	0.0085	0.0085	0.0085	0.0086	0.0000
	75ms	0.0064	0.0139	0.0185	0.0170	-0.0202	-6.9180	0.0050	0.0121	0.0121	0.0121	0.0123	0.0000
	100ms	0.0080	0.0171	0.0225	0.0182	0.0201	-6.8253	0.0062	0.0148	0.0148	0.0149	0.0151	0.0000
	150ms	0.0106	0.0216	0.0308	0.0390	0.0417	-7.2340	0.0084	0.0187	0.0188	0.0190	0.0191	0.0000
$\tilde{\mathscr{S}}^{AS}$	**200ms**	0.0127	0.0252	0.0289	0.0257	0.1366	-7.1129	0.0100	0.0216	0.0216	0.0218	0.0218	0.0000
	500ms	0.0202	0.0081	0.0736	0.0665	0.2477	-7.7228	0.0164	0.0328	0.0330	0.0329	0.0328	0.0000
	750ms	0.0239	0.0140	0.0773	0.0841	0.2460	-8.2396	0.0197	0.0383	0.0387	0.0385	0.0380	0.0000
	1sec	0.0267	0.0180	0.0841	0.0922	0.2640	-8.1175	0.0223	0.0426	0.0431	0.0429	0.0423	0.0000
	5sec	0.0427	0.0394	0.1036	0.1193	0.4178	-9.0734	0.0369	0.0671	0.0676	0.0674	0.0666	0.0017
	15sec	0.0544	0.0525	0.1174	0.1333	0.4655	-10.3686	0.0477	0.0826	0.0834	0.0832	0.0825	0.0000
	30sec	0.0615	0.0606	0.1353	0.1510	0.5495	-9.5786	0.0533	0.0912	0.0924	0.0919	0.0912	0.0000
	60sec	0.0682	0.0674	0.1457	0.2049	0.5746	-10.9116	0.0573	0.0968	0.0980	0.0980	0.0974	0.0000
	300sec	0.0782	0.0769	0.1825	0.1774	0.9687	-12.8424	0.0594	0.1017	0.1030	0.1030	0.1030	0.0000
	600sec	0.0819	0.0763	0.1881	0.3167	1.0364	-13.6996	0.0579	0.1001	0.1020	0.1011	0.1017	0.0000
	900sec	0.0830	0.0772	0.1957	0.3897	1.0713	-12.2881	0.0567	0.0991	0.1003	0.1000	0.1005	-0.0243
	1200sec	0.0842	0.0793	0.2063	0.3046	1.1317	-12.4981	0.0553	0.0988	0.1000	0.0999	0.1000	-0.0422
	1500sec	0.0845	0.0800	0.2079	0.3358	1.1323	-12.3768	0.0550	0.0979	0.0989	0.0989	0.0990	-0.0672
	1800sec	0.0861	0.0814	0.3649	0.5357	1.1828	-11.9272	0.0550	0.0965	0.0982	0.0982	0.0984	-0.0860

Notes: This table describes that the average and median of a range of market liquidity spreads within 720 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Table C.128: Market Liquidity Spreads (900 days before maturity)

900 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{S}}^{Q}$		208.3761	0.5342	1.5585	2.6950	3.9518	5.2925	180.1343	0.5202	1.5296	2.5389	3.5478	4.5520
$\tilde{\mathscr{S}}^{Q^{1/2}}$		104.1880	0.2671	0.7792	1.3475	1.9759	2.6463	90.0671	0.2601	0.7648	1.2695	1.7739	2.2760
$\tilde{\mathscr{S}}^{D}$		19,217,072,000	1,705,076	3,364,598	819,806	242,114	194,414	2,482,801	496,146	1,453,933	505,451	140,409	110,787
$\tilde{\mathscr{S}}^{E}$		0.2574	0.1665	-1.5346	-4.2995	-8.5420	-22.1944	0.1610	0.1986	0.1998	0.2016	0.2029	-1.9059
	Tick	0.2530	0.2013	-1.3693	-3.8571	-8.1425	-13.3546	0.1617	0.1902	0.1914	0.1935	0.1952	0.1537
	1ms	0.2574	0.1664	-1.5346	-4.3021	-8.5398	-22.0518	0.1609	0.1985	0.1996	0.2016	0.2028	-1.8795
	2ms	0.2573	0.1663	-1.5348	-4.3017	-8.5402	-21.8434	0.1609	0.1983	0.1995	0.2014	0.2027	-1.7369
	5ms	0.2570	0.1657	-1.5355	-4.3019	-8.5429	-21.0576	0.1606	0.1977	0.1989	0.2010	0.2022	-1.4988
	10ms	0.2566	0.1644	-1.5366	-4.2993	-8.5310	-20.1505	0.1601	0.1968	0.1980	0.1999	0.2013	-0.7583
	15ms	0.2561	0.1633	-1.5380	-4.3047	-8.5291	-19.1708	0.1596	0.1956	0.1968	0.1987	0.2001	-0.3351
	20ms	0.2557	0.1618	-1.5417	-4.3069	-8.5192	-18.5412	0.1590	0.1945	0.1957	0.1976	0.1988	-0.0045
	25ms	0.2551	0.1605	-1.5444	-4.3139	-8.5411	-17.9741	0.1584	0.1932	0.1944	0.1962	0.1973	0.1046
	50ms	0.2526	0.1535	-1.5521	-4.3225	-8.4531	-16.2543	0.1555	0.1865	0.1879	0.1897	0.1908	0.1513
	75ms	0.2503	0.1477	-1.5450	-4.3029	-8.5126	-15.4576	0.1528	0.1811	0.1827	0.1841	0.1850	0.1513
	100ms	0.2483	0.1444	-1.5416	-4.2783	-8.5243	-15.4431	0.1508	0.1767	0.1783	0.1797	0.1808	0.1490
	150ms	0.2451	0.1402	-1.5420	-4.2717	-8.5306	-15.1203	0.1475	0.1702	0.1716	0.1732	0.1740	0.1445
$\tilde{\mathscr{S}}^{R}$	**200ms**	0.2426	0.1345	-1.5335	-4.2637	-8.5582	-15.1509	0.1451	0.1653	0.1669	0.1686	0.1695	0.1408
	500ms	0.2331	0.1429	-1.5591	-4.2986	-8.5804	-14.6310	0.1365	0.1494	0.1518	0.1534	0.1547	0.1269
	750ms	0.2286	0.1320	-1.5592	-4.3274	-8.4977	-14.2158	0.1329	0.1432	0.1453	0.1468	0.1482	0.1222
	1sec	0.2254	0.1293	-1.5456	-4.3222	-8.5095	-14.3546	0.1301	0.1389	0.1408	0.1424	0.1439	0.1176
	5sec	0.2047	0.1056	-1.5308	-4.2398	-8.4223	-13.2362	0.1160	0.1146	0.1160	0.1183	0.1202	0.1018
	15sec	0.1883	0.0937	-1.4749	-4.0622	-8.1808	-12.4348	0.1049	0.0987	0.0999	0.1028	0.1050	0.0857
	30sec	0.1773	0.0936	-1.4778	-3.9423	-7.8959	-13.2428	0.0991	0.0906	0.0919	0.0947	0.0967	0.0790
	60sec	0.1662	0.0837	-1.4470	-3.9613	-7.9959	-12.0006	0.0947	0.0850	0.0859	0.0889	0.0911	0.0767
	300sec	0.1453	0.0674	-1.4907	-3.4167	-7.5930	-9.4771	0.0930	0.0832	0.0840	0.0864	0.0878	0.0823
	600sec	0.1387	0.0814	-1.5599	-3.6093	-6.1943	-9.6669	0.0947	0.0862	0.0869	0.0885	0.0901	0.0889
	900sec	0.1328	0.0771	-1.2590	-3.0563	-6.2919	-9.0273	0.0968	0.0884	0.0890	0.0910	0.0921	0.0927
	1200sec	0.1313	0.0633	-1.2511	-3.3174	-5.8520	-7.8240	0.0978	0.0905	0.0906	0.0928	0.0936	0.0928
	1500sec	0.1293	0.0536	-1.1112	-3.5973	-6.0174	-8.0860	0.0987	0.0922	0.0925	0.0939	0.0947	0.0969
	1800sec	0.1285	0.0512	-1.2651	-3.6592	-5.8797	-8.3656	0.0996	0.0931	0.0931	0.0946	0.0953	0.0986
	Tick	-0.0044	0.0066	0.1421	0.3119	0.1605	8.8867	0.0005	-0.0037	-0.0038	-0.0036	-0.0034	2.0485
	1ms	0.0000	0.0001	0.0001	0.0026	-0.0022	-0.1427	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0001	0.0003	0.0002	0.0023	-0.0020	-0.3511	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	5ms	0.0003	0.0009	0.0010	0.0024	0.0007	-1.1413	0.0002	0.0003	0.0003	0.0003	0.0003	0.0000
	10ms	0.0008	0.0021	0.0020	0.0013	-0.0142	-2.0480	0.0005	0.0010	0.0010	0.0010	0.0010	0.0000
	15ms	0.0013	0.0032	0.0034	0.0068	-0.0138	-3.0246	0.0009	0.0019	0.0019	0.0019	0.0019	0.0000
	20ms	0.0017	0.0048	0.0071	0.0091	-0.0228	-3.6495	0.0013	0.0028	0.0028	0.0029	0.0029	0.0000
	25ms	0.0023	0.0060	0.0095	0.0135	0.0004	-4.2180	0.0017	0.0040	0.0041	0.0041	0.0042	0.0000
	50ms	0.0048	0.0124	0.0172	0.0365	-0.0887	-5.9281	0.0038	0.0093	0.0093	0.0095	0.0096	0.0000
	75ms	0.0071	0.0183	0.0102	0.0326	-0.0320	-6.7068	0.0055	0.0133	0.0134	0.0136	0.0138	0.0000
	100ms	0.0091	0.0216	0.0069	0.0095	-0.0096	-6.7076	0.0069	0.0162	0.0164	0.0166	0.0170	0.0000
	150ms	0.0123	0.0257	0.0076	0.0038	0.0044	-7.0092	0.0092	0.0206	0.0208	0.0212	0.0214	0.0000
$\tilde{\mathscr{S}}^{AS}$	**200ms**	0.0148	0.0315	-0.0013	-0.0028	0.0440	-6.9671	0.0110	0.0238	0.0241	0.0246	0.0248	0.0000
	500ms	0.0243	0.0231	0.0244	0.0430	0.1195	-7.4626	0.0179	0.0357	0.0362	0.0366	0.0366	0.0000
	750ms	0.0288	0.0341	0.0246	0.0663	0.0746	-7.8205	0.0215	0.0415	0.0422	0.0426	0.0423	0.0000
	1sec	0.0320	0.0367	0.0145	0.0665	0.0855	-7.7112	0.0242	0.0458	0.0466	0.0468	0.0466	0.0000
	5sec	0.0527	0.0604	0.0129	0.0661	0.0284	-8.7570	0.0400	0.0709	0.0720	0.0721	0.0716	0.0007
	15sec	0.0691	0.0705	-0.0408	-0.1074	0.0478	-9.3575	0.0516	0.0877	0.0889	0.0884	0.0877	0.0018
	30sec	0.0801	0.0712	-0.0403	-0.1941	-0.1647	-9.1978	0.0581	0.0971	0.0981	0.0974	0.0968	0.0000
	60sec	0.0912	0.0812	-0.0765	-0.2352	0.0198	-10.1833	0.0625	0.1032	0.1040	0.1033	0.1029	0.0000
	300sec	0.1121	0.0955	-0.0285	-0.6474	0.0594	-12.1792	0.0650	0.1073	0.1080	0.1075	0.1072	0.0000
	600sec	0.1186	0.0812	0.0298	-0.4665	-1.4023	-13.1401	0.0634	0.1061	0.1072	0.1065	0.1065	-0.0062
	900sec	0.1245	0.0892	-0.2339	-0.9860	-1.2684	-12.3878	0.0618	0.1043	0.1049	0.1046	0.1047	-0.0587
	1200sec	0.1261	0.1032	-0.2179	-0.7335	-1.6262	-12.9646	0.0608	0.1038	0.1044	0.1040	0.1040	-0.0890
	1500sec	0.1281	0.1120	-0.3602	-0.3574	-1.5729	-13.0085	0.0600	0.1023	0.1030	0.1029	0.1031	-0.1931
	1800sec	0.1289	0.1143	-0.2161	-0.3301	-1.7752	-12.6603	0.0593	0.1008	0.1016	0.1015	0.1016	-0.2075

Notes: This table describes that the average and median of a range of market liquidity spreads within 900 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Table C.129: Market Liquidity Spreads (1,080 days before maturity)

1080 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{S}}^{Q}$		229.6659	0.5488	1.5931	2.7956	4.2204	5.8453	180.6161	0.5253	1.5368	2.5480	3.5592	4.5652
$\tilde{\mathscr{S}}^{Q^{1/2}}$		114.8329	0.2744	0.7965	1.3978	2.1102	2.9226	90.3080	0.2626	0.7684	1.2740	1.7796	2.2826
$\tilde{\mathscr{S}}^{D}$		16,787,292,000	1,454,725	2,957,028	725,892	209,092	167,481	2,152,720	400,008	1,237,066	429,790	113,077	89,035
$\tilde{\mathscr{S}}^{E}$		0.3066	0.1746	-1.3286	-2.3538	-4.6088	-18.8972	0.1601	0.1973	0.1984	0.2002	0.2013	-2.4757
	Tick	0.2997	0.2084	-1.1704	-2.0790	-3.7881	-10.3528	0.1609	0.1883	0.1892	0.1911	0.1926	0.1481
	1ms	0.3065	0.1745	-1.3287	-2.3564	-4.6067	-18.7555	0.1600	0.1972	0.1983	0.2001	0.2013	-2.3696
	2ms	0.3064	0.1744	-1.3287	-2.3559	-4.6072	-18.5587	0.1600	0.1971	0.1982	0.2000	0.2011	-2.2272
	5ms	0.3062	0.1738	-1.3295	-2.3557	-4.6032	-17.8126	0.1598	0.1965	0.1975	0.1994	0.2007	-1.8813
	10ms	0.3057	0.1725	-1.3319	-2.3550	-4.5926	-16.9068	0.1593	0.1954	0.1967	0.1985	0.1996	-1.0568
	15ms	0.3052	0.1713	-1.3355	-2.3651	-4.5953	-15.9873	0.1587	0.1942	0.1954	0.1972	0.1983	-0.7107
	20ms	0.3047	0.1698	-1.3379	-2.3660	-4.5874	-15.3534	0.1581	0.1930	0.1943	0.1960	0.1971	-0.3053
	25ms	0.3042	0.1682	-1.3407	-2.3811	-4.5999	-14.7457	0.1574	0.1916	0.1930	0.1947	0.1957	0.0419
	50ms	0.3015	0.1592	-1.3615	-2.3858	-4.5464	-13.1540	0.1544	0.1851	0.1864	0.1878	0.1889	0.1457
	75ms	0.2989	0.1532	-1.3593	-2.3800	-4.5954	-12.4140	0.1518	0.1796	0.1810	0.1824	0.1832	0.1465
	100ms	0.2967	0.1495	-1.3529	-2.3607	-4.6056	-12.4013	0.1497	0.1752	0.1766	0.1779	0.1786	0.1450
	150ms	0.2930	0.1448	-1.3521	-2.3979	-4.6079	-12.1028	0.1462	0.1686	0.1701	0.1712	0.1720	0.1417
$\tilde{\mathscr{S}}^{R}$	**200ms**	0.2901	0.1402	-1.3350	-2.4039	-4.6402	-12.1627	0.1436	0.1636	0.1651	0.1663	0.1672	0.1391
	500ms	0.2791	0.1420	-1.3762	-2.4449	-4.6682	-11.4545	0.1346	0.1476	0.1490	0.1506	0.1515	0.1255
	750ms	0.2738	0.1337	-1.3500	-2.4886	-4.6941	-11.2775	0.1308	0.1411	0.1425	0.1440	0.1449	0.1209
	1sec	0.2699	0.1290	-1.3384	-2.4617	-4.6872	-11.4613	0.1281	0.1366	0.1380	0.1394	0.1403	0.1160
	5sec	0.2459	0.1056	-1.3218	-2.6064	-4.6157	-10.2126	0.1139	0.1120	0.1127	0.1147	0.1163	0.0996
	15sec	0.2254	0.1002	-1.2531	-2.5028	-4.4196	-9.8789	0.1027	0.0959	0.0964	0.0987	0.1006	0.0840
	30sec	0.2109	0.1056	-1.1302	-2.3322	-4.1245	-10.3007	0.0967	0.0866	0.0876	0.0905	0.0925	0.0775
	60sec	0.1970	0.0851	-1.3043	-2.3976	-3.8983	-8.8596	0.0918	0.0800	0.0811	0.0848	0.0865	0.0763
	300sec	0.1656	0.0779	-1.0747	-2.5812	-3.5956	-7.7344	0.0898	0.0790	0.0797	0.0822	0.0835	0.0793
	600sec	0.1550	0.1341	-1.1349	-3.1616	-2.1211	-7.9804	0.0917	0.0818	0.0824	0.0846	0.0860	0.0843
	900sec	0.1471	0.1031	-1.2624	-2.1272	-2.5756	-7.2236	0.0938	0.0847	0.0851	0.0869	0.0883	0.0913
	1200sec	0.1453	0.0889	-1.1327	-2.5120	-2.4267	-5.1539	0.0952	0.0867	0.0870	0.0891	0.0899	0.0896
	1500sec	0.1418	0.0564	-1.1694	-2.5632	-2.9476	-5.0521	0.0961	0.0880	0.0882	0.0903	0.0914	0.0942
	1800sec	0.1396	0.0676	-1.0690	-2.2863	-2.0053	-4.9486	0.0966	0.0894	0.0896	0.0912	0.0919	0.0965
	Tick	-0.0068	0.0104	0.0831	-0.0572	0.0692	8.2210	0.0005	-0.0042	-0.0043	-0.0041	-0.0039	2.0826
	1ms	0.0000	0.0001	0.0001	0.0026	-0.0021	-0.1417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0001	0.0003	0.0000	0.0022	-0.0019	-0.3374	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000
	5ms	0.0004	0.0009	0.0008	0.0020	-0.0061	-1.0840	0.0002	0.0003	0.0003	0.0003	0.0003	0.0000
	10ms	0.0008	0.0021	0.0032	0.0026	-0.0170	-1.9893	0.0005	0.0010	0.0011	0.0011	0.0011	0.0000
	15ms	0.0013	0.0033	0.0069	0.0122	-0.0140	-2.9013	0.0009	0.0020	0.0020	0.0020	0.0021	0.0000
	20ms	0.0018	0.0048	0.0092	0.0132	-0.0223	-3.5264	0.0013	0.0030	0.0030	0.0030	0.0031	0.0000
	25ms	0.0024	0.0064	0.0118	0.0244	-0.0053	-4.1145	0.0018	0.0042	0.0043	0.0043	0.0044	0.0000
	50ms	0.0051	0.0149	0.0329	0.0413	-0.0576	-5.6572	0.0041	0.0098	0.0099	0.0101	0.0103	0.0000
	75ms	0.0076	0.0210	0.0311	0.0453	-0.0132	-6.3347	0.0059	0.0140	0.0142	0.0145	0.0148	0.0000
	100ms	0.0098	0.0247	0.0248	0.0280	-0.0024	-6.3478	0.0074	0.0172	0.0174	0.0180	0.0183	0.0000
	150ms	0.0136	0.0293	0.0217	0.0627	0.0231	-6.6347	0.0098	0.0219	0.0223	0.0229	0.0233	0.0000
$\tilde{\mathscr{S}}^{AS}$	**200ms**	0.0165	0.0340	0.0028	0.0724	0.0646	-6.6005	0.0118	0.0255	0.0259	0.0267	0.0271	0.0000
	500ms	0.0274	0.0323	0.0436	0.1325	0.1624	-7.2371	0.0191	0.0380	0.0388	0.0395	0.0398	0.0000
	750ms	0.0327	0.0405	0.0156	0.1640	0.1821	-7.4263	0.0229	0.0441	0.0449	0.0457	0.0459	0.0000
	1sec	0.0366	0.0452	0.0069	0.1435	0.1548	-7.2623	0.0256	0.0484	0.0494	0.0503	0.0504	0.0000
	5sec	0.0607	0.0686	0.0028	0.3220	0.0419	-8.3492	0.0419	0.0736	0.0749	0.0756	0.0751	0.0028
	15sec	0.0811	0.0714	-0.0482	0.2593	-0.0413	-8.6084	0.0542	0.0911	0.0925	0.0928	0.0922	0.0037
	30sec	0.0957	0.0648	-0.1722	0.1645	-0.1431	-8.8069	0.0611	0.1006	0.1016	0.1017	0.1012	0.0000
	60sec	0.1096	0.0836	-0.0596	0.3117	-0.1189	-10.2041	0.0660	0.1078	0.1086	0.1083	0.1076	0.0000
	300sec	0.1410	0.0943	-0.2382	0.6600	-0.8843	-12.0470	0.0690	0.1121	0.1125	0.1125	0.1120	0.0000
	600sec	0.1515	0.0373	-0.2099	1.2360	-0.9533	-12.4841	0.0677	0.1103	0.1110	0.1105	0.1102	-0.0004
	900sec	0.1594	0.0713	-0.0903	0.1954	-1.0025	-13.2531	0.0661	0.1086	0.1089	0.1085	0.1085	-0.1097
	1200sec	0.1613	0.0857	-0.3303	0.6986	-1.5602	-14.7129	0.0652	0.1077	0.1082	0.1080	0.1075	-0.1237
	1500sec	0.1648	0.1173	-0.2847	0.7351	-1.1852	-13.6043	0.0646	0.1063	0.1066	0.1064	0.1064	-0.2395
	1800sec	0.1669	0.1061	-0.4461	0.1132	-2.5269	-14.0792	0.0637	0.1052	0.1055	0.1056	0.1053	-0.3615

Notes: This table describes that the average and median of a range of market liquidity spreads within 1080 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Table C.130: Market Liquidity Spreads (1,800 days before maturity)

1800 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\tilde{\mathscr{S}}^{Q}$		271.3707	0.6568	1.7969	3.5950	6.5543	9.0121	184.8202	0.5467	1.5685	2.5948	3.6198	4.6342
$\tilde{\mathscr{S}}^{Q^{1/2}}$		135.6854	0.3284	0.8985	1.7975	3.2771	4.5061	92.4101	0.2733	0.7842	1.2974	1.8099	2.3171
$\tilde{\mathscr{S}}^{D}$		10,308,978,000	891,109	1,873,006	467,432	131,800	107,532	1,153,849	142,476	512,781	180,033	39,299	30,338
$\tilde{\mathscr{S}}^{E}$		0.4502	0.0223	-2.5578	-30.8109	-124.0681	-186.3192	0.1733	0.1945	0.1948	0.1980	0.1990	-4.5738
	Tick	0.4389	0.0382	-1.9219	-25.0174	-110.2456	-173.9360	0.1741	0.1847	0.1845	0.1877	0.1893	0.0373
	1ms	0.4502	0.0222	-2.5577	-30.8150	-124.0747	-186.2494	0.1733	0.1944	0.1948	0.1980	0.1990	-4.3810
	2ms	0.4501	0.0220	-2.5542	-30.8189	-124.0776	-186.1286	0.1732	0.1943	0.1946	0.1978	0.1988	-4.3125
	5ms	0.4499	0.0214	-2.5710	-30.8462	-124.0888	-185.6027	0.1728	0.1938	0.1942	0.1972	0.1983	-3.7115
	10ms	0.4494	0.0203	-2.5711	-30.8624	-124.2486	-184.4355	0.1723	0.1928	0.1932	0.1962	0.1973	-3.0131
	15ms	0.4489	0.0191	-2.5759	-30.8481	-124.1374	-183.6454	0.1717	0.1917	0.1921	0.1949	0.1961	-2.4945
	20ms	0.4485	0.0185	-2.5822	-30.8432	-124.1482	-183.2164	0.1712	0.1906	0.1910	0.1937	0.1948	-2.1378
	25ms	0.4479	0.0171	-2.5764	-30.8560	-124.1815	-182.8206	0.1706	0.1891	0.1897	0.1924	0.1935	-1.7228
	50ms	0.4459	0.0101	-2.5691	-30.8512	-124.3533	-181.1392	0.1677	0.1832	0.1838	0.1858	0.1866	-0.7864
	75ms	0.4438	0.0049	-2.5519	-30.8185	-125.0587	-180.2943	0.1654	0.1784	0.1788	0.1806	0.1812	-0.6122
	100ms	0.4420	0.0005	-2.5745	-30.6373	-125.1579	-180.1138	0.1636	0.1746	0.1748	0.1764	0.1769	-0.4493
	150ms	0.4379	-0.0046	-2.5692	-30.5636	-124.9838	-180.5843	0.1606	0.1687	0.1688	0.1699	0.1704	-0.2481
$\tilde{\mathscr{S}}^{R}$	**200ms**	0.4347	-0.0100	-2.5777	-30.8173	-124.9985	-180.4009	0.1581	0.1642	0.1644	0.1651	0.1655	-0.2415
	500ms	0.4245	-0.0189	-2.6694	-30.3145	-124.7220	-178.9337	0.1505	0.1505	0.1502	0.1498	0.1500	-0.0046
	750ms	0.4197	-0.0361	-2.7309	-30.2733	-124.8268	-179.1659	0.1469	0.1449	0.1444	0.1435	0.1437	0.0520
	1sec	0.4164	-0.0468	-2.6967	-30.3366	-125.1713	-179.0552	0.1444	0.1410	0.1404	0.1392	0.1395	0.0593
	5sec	0.3948	-0.0389	-3.0720	-29.5541	-124.7470	-176.0113	0.1299	0.1193	0.1178	0.1155	0.1158	0.0819
	15sec	0.3724	0.0207	-2.9794	-29.3141	-123.2665	-172.8383	0.1194	0.1041	0.1023	0.1000	0.1001	0.0711
	30sec	0.3572	0.0553	-2.7558	-27.8139	-121.7716	-171.6773	0.1128	0.0950	0.0937	0.0918	0.0920	0.0624
	60sec	0.3416	0.0466	-2.4622	-27.5776	-120.7669	-170.5220	0.1067	0.0876	0.0864	0.0853	0.0858	0.0634
	300sec	0.3009	0.0603	-1.8351	-24.3693	-114.0196	-171.2615	0.0991	0.0805	0.0801	0.0813	0.0814	0.0648
	600sec	0.2851	0.1414	-2.6299	-23.9873	-113.5449	-173.4271	0.0998	0.0820	0.0818	0.0823	0.0834	0.0685
	900sec	0.2732	-0.0001	-1.5664	-21.5813	-113.8056	-163.7700	0.1015	0.0848	0.0847	0.0855	0.0853	0.0742
	1200sec	0.2656	0.0013	-2.9327	-21.9144	-111.9144	-167.8702	0.1019	0.0865	0.0862	0.0871	0.0859	0.0718
	1500sec	0.2603	0.0058	-3.1506	-21.0299	-108.6940	-168.8804	0.1023	0.0878	0.0872	0.0875	0.0871	0.0737
	1800sec	0.2568	0.0180	-2.4907	-20.9358	-109.7590	-173.1902	0.1033	0.0895	0.0891	0.0893	0.0877	0.0735
	Tick	-0.0112	0.0097	0.4224	5.0233	9.1579	11.4114	0.0005	-0.0055	-0.0055	-0.0050	-0.0046	2.2836
	1ms	0.0000	0.0001	0.0000	0.0041	-0.0065	-0.0739	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2ms	0.0001	0.0003	-0.0036	0.0080	-0.0054	-0.2067	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	5ms	0.0004	0.0009	0.0127	0.0344	-0.0029	-0.7509	0.0002	0.0003	0.0003	0.0003	0.0003	0.0000
	10ms	0.0009	0.0020	0.0133	0.0454	-0.0144	-1.5005	0.0005	0.0010	0.0010	0.0010	0.0010	0.0000
	15ms	0.0013	0.0032	0.0181	0.0161	0.0192	-2.3063	0.0009	0.0018	0.0018	0.0019	0.0019	0.0000
	20ms	0.0018	0.0038	0.0244	0.0081	0.0509	-2.8094	0.0013	0.0027	0.0027	0.0028	0.0029	0.0000
	25ms	0.0023	0.0052	0.0185	0.0153	0.0610	-3.3142	0.0017	0.0038	0.0038	0.0040	0.0041	0.0000
	50ms	0.0043	0.0119	0.0102	0.0232	0.0269	-4.8266	0.0039	0.0085	0.0086	0.0092	0.0095	0.0000
	75ms	0.0065	0.0171	-0.0063	0.0136	-0.0055	-5.5916	0.0057	0.0121	0.0123	0.0132	0.0137	0.0000
	100ms	0.0083	0.0215	0.0134	-0.1250	-0.0659	-5.6997	0.0072	0.0149	0.0151	0.0162	0.0168	0.0000
	150ms	0.0124	0.0262	0.0130	-0.3200	-0.2505	-5.9673	0.0097	0.0190	0.0194	0.0209	0.0216	0.0000
$\tilde{\mathscr{S}}^{AS}$	**200ms**	0.0155	0.0312	0.0369	-0.4082	-0.4033	-6.0152	0.0116	0.0220	0.0226	0.0245	0.0251	0.0000
	500ms	0.0257	0.0378	0.0711	-0.6514	-0.4916	-6.8094	0.0186	0.0333	0.0343	0.0366	0.0373	0.0000
	750ms	0.0305	0.0559	0.0842	-0.6813	-0.8435	-7.2409	0.0221	0.0384	0.0398	0.0424	0.0430	0.0000
	1sec	0.0338	0.0659	0.0255	-0.6780	-0.9235	-7.3691	0.0246	0.0422	0.0436	0.0464	0.0469	0.0000
	5sec	0.0554	0.0540	0.2029	-1.1060	-1.7988	-8.4575	0.0397	0.0641	0.0662	0.0700	0.0704	0.0000
	15sec	0.0778	-0.0021	0.4887	-1.5516	-3.1564	-9.3547	0.0515	0.0799	0.0819	0.0863	0.0864	0.0000
	30sec	0.0930	-0.0352	0.2970	-2.2250	-5.0637	-9.8392	0.0590	0.0896	0.0913	0.0960	0.0960	0.0000
	60sec	0.1086	-0.0279	0.2560	-3.3731	-6.5313	-11.6427	0.0659	0.0979	0.0996	0.1034	0.1032	0.0000
	300sec	0.1494	-0.0395	-0.0804	-5.0511	-9.8511	-14.4444	0.0754	0.1099	0.1099	0.1107	0.1107	0.0000
	600sec	0.1652	-0.1211	-0.2169	-5.0424	-12.4861	-15.1209	0.0757	0.1094	0.1092	0.1091	0.1087	-0.0063
	900sec	0.1771	0.0223	-0.7364	-6.7492	-13.0051	-17.0204	0.0758	0.1086	0.1081	0.1076	0.1073	-0.2212
	1200sec	0.1846	0.0215	0.0657	-7.4279	-15.8818	-18.0102	0.0750	0.1078	0.1075	0.1066	0.1068	-0.1594
	1500sec	0.1899	0.0187	0.2425	-8.3442	-14.6088	-17.4515	0.0744	0.1069	0.1066	0.1059	0.1052	-0.2079
	1800sec	0.1934	0.0079	-0.5230	-9.9579	-17.0921	-18.2171	0.0745	0.1064	0.1056	0.1053	0.1043	-0.5175

Notes: This table describes that the average and median of a range of market liquidity spreads within 1,800 days to maturity period, including bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). All the spreads are calculated by the volume weighted average (VWA) quote prices and the prices for order book level 1 to level 5. Both realized spreads and adverse selection are measured at 26 varying time intervals: tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. Except for the quotes depth, all spreads are reported in basis point (*bps*).

Appendix C.4. Spreads Autocorrelations (30 days – 1,800 days before maturity)

Table C.131: The First-order Spreads Autocorrelations (30 days before maturity)

30 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}^Q}$		0.9564	0.6175	0.6274	0.6464	0.6534	0.7351	0.9825	0.6033	0.6551	0.6927	0.7056	0.7296
$\Omega^{\tilde{\mathscr{P}}^{Q^{1/2}}}$		0.9564	0.6175	0.6274	0.6464	0.6534	0.7351	0.9825	0.6033	0.6551	0.6927	0.7056	0.7296
$\Omega^{\tilde{\mathscr{P}}^D}$		0.8410	0.9290	0.9286	0.9248	0.9240	0.9063	0.9822	0.9590	0.9516	0.9529	0.9586	0.9206
$\Omega^{\tilde{\mathscr{P}}^E}$		0.7504	0.7505	0.7417	0.7287	0.6920	0.4717	0.7477	0.8007	0.7941	0.8006	0.7924	0.4998
$\Omega^{\tilde{\mathscr{P}}^R}$	**Tick**	0.7446	0.6963	0.6899	0.6832	0.6579	0.4880	0.7659	0.7655	0.7735	0.7690	0.5038	0.0000
	1ms	0.7504	0.7505	0.7413	0.7288	0.6921	0.4701	0.7477	0.8008	0.7941	0.8008	0.7924	0.4996
	2ms	0.7503	0.7504	0.7403	0.7282	0.6931	0.4684	0.7477	0.8010	0.7941	0.8006	0.7924	0.4996
	5ms	0.7500	0.7500	0.7444	0.7288	0.6938	0.4660	0.7477	0.8017	0.7941	0.8017	0.8000	0.4981
	10ms	0.7495	0.7497	0.7424	0.7298	0.7023	0.4674	0.7477	0.7993	0.7945	0.8012	0.7989	0.4998
	15ms	0.7491	0.7502	0.7440	0.7292	0.7052	0.4666	0.7477	0.7995	0.7944	0.8007	0.7996	0.4996
	20ms	0.7487	0.7501	0.7449	0.7326	0.7032	0.4589	0.7477	0.8011	0.7978	0.8018	0.8006	0.4611
	25ms	0.7487	0.7501	0.7462	0.7378	0.7101	0.4583	0.7477	0.7979	0.7958	0.8000	0.7978	0.4692
	50ms	0.7492	0.7503	0.7483	0.7416	0.7265	0.4493	0.7476	0.7932	0.7934	0.7999	0.7968	0.4524
	75ms	0.7502	0.7509	0.7462	0.7431	0.7293	0.4499	0.7474	0.7939	0.7938	0.8007	0.7982	0.4513
	100ms	0.7503	0.7512	0.7464	0.7402	0.7281	0.4415	0.7461	0.7946	0.7938	0.8007	0.8013	0.4269
	150ms	0.7501	0.7510	0.7503	0.7446	0.7277	0.4497	0.7457	0.7949	0.7941	0.8007	0.8013	0.4874
	200ms	0.7504	0.7516	0.7531	0.7421	0.7265	0.4507	0.7461	0.7941	0.7939	0.7991	0.8005	0.4901
	500ms	0.7527	0.7549	0.7578	0.7502	0.7392	0.4722	0.7524	0.8013	0.7941	0.8022	0.8031	0.4996
	750ms	0.7536	0.7542	0.7585	0.7502	0.7386	0.4765	0.7524	0.7982	0.7952	0.8036	0.8011	0.4992
	1sec	0.7544	0.7547	0.7591	0.7479	0.7411	0.4849	0.7519	0.7993	0.7953	0.8032	0.8030	0.4996
	5sec	0.7579	0.7596	0.7624	0.7534	0.7460	0.5308	0.7575	0.8002	0.8000	0.8014	0.8018	0.5527
	15sec	0.7599	0.7613	0.7637	0.7572	0.7509	0.5654	0.7608	0.8036	0.7991	0.8068	0.8070	0.5929
	30sec	0.7618	0.7640	0.7671	0.7609	0.7493	0.5953	0.7630	0.8022	0.8036	0.8102	0.8069	0.6391
	60sec	0.7644	0.7675	0.7708	0.7641	0.7499	0.6168	0.7620	0.8097	0.8048	0.8082	0.8091	0.6449
	300sec	0.7659	0.7640	0.7691	0.7604	0.7480	0.6522	0.7628	0.8083	0.8055	0.8076	0.8078	0.6845
	600sec	0.7674	0.7598	0.7654	0.7589	0.7532	0.6526	0.7659	0.8004	0.7976	0.8000	0.7985	0.6788
	900sec	0.7694	0.7633	0.7691	0.7623	0.7559	0.6593	0.7782	0.7985	0.7968	0.7995	0.7990	0.6868
	1200sec	0.7700	0.7624	0.7670	0.7613	0.7582	0.6689	0.7706	0.7942	0.7941	0.7967	0.7967	0.6979
	1500sec	0.7705	0.7627	0.7654	0.7608	0.7604	0.6645	0.7759	0.7954	0.7945	0.7954	0.7955	0.6881
	1800sec	0.7719	0.7634	0.7662	0.7641	0.7596	0.6678	0.7761	0.7939	0.7889	0.7943	0.7981	0.6943
$\Omega^{\tilde{\mathscr{P}}^{AS}}$	**Tick**	0.5077	-0.0308	-0.0299	-0.0316	-0.0447	-0.0924	-0.0365	-0.0323	-0.0360	-0.0401	-0.0841	0.0000
	1ms	0.2992	0.3214	0.3199	0.3207	0.3153	0.2514	0.3170	0.2507	0.2843	0.3333	0.3177	0.1495
	2ms	0.4019	0.3963	0.3920	0.3987	0.3980	0.2765	0.4208	0.4072	0.4436	0.4380	0.4665	0.2000
	5ms	0.4737	0.4119	0.4156	0.4108	0.4082	0.2969	0.4863	0.4818	0.4855	0.4854	0.4838	0.3348
	10ms	0.5313	0.4391	0.4428	0.4388	0.4286	0.3538	0.5542	0.4314	0.4402	0.4623	0.4673	0.3507
	15ms	0.5502	0.4816	0.4832	0.4781	0.4670	0.3834	0.5964	0.4996	0.4992	0.4997	0.4891	0.4314
	20ms	0.5682	0.4972	0.4950	0.4970	0.4801	0.3825	0.6144	0.4997	0.4991	0.4998	0.4997	0.3988
	25ms	0.5868	0.5225	0.5179	0.5194	0.5075	0.3946	0.6179	0.4997	0.4996	0.4998	0.5093	0.3746
	50ms	0.6562	0.6024	0.5956	0.5894	0.5845	0.4684	0.7018	0.6043	0.5965	0.6087	0.6119	0.4380
	75ms	0.6900	0.6479	0.6391	0.6303	0.6216	0.4894	0.7622	0.6551	0.6597	0.6631	0.6597	0.4576
	100ms	0.6999	0.6649	0.6541	0.6442	0.6274	0.4929	0.7533	0.6686	0.6788	0.6825	0.6643	0.4879
	150ms	0.7069	0.6787	0.6709	0.6588	0.6345	0.5052	0.7655	0.6945	0.7031	0.7016	0.7024	0.5057
	200ms	0.7145	0.6888	0.6794	0.6691	0.6386	0.5046	0.7547	0.7019	0.7059	0.7126	0.7129	0.5194
	500ms	0.7321	0.7148	0.7049	0.6944	0.6698	0.5144	0.8045	0.7510	0.7336	0.7547	0.7520	0.5436
	750ms	0.7419	0.7287	0.7183	0.7079	0.6803	0.5259	0.7893	0.7595	0.7586	0.7732	0.7673	0.5431
	1sec	0.7501	0.7351	0.7243	0.7128	0.6846	0.5247	0.7978	0.7718	0.7588	0.7732	0.7659	0.5380
	5sec	0.7742	0.7593	0.7473	0.7394	0.7061	0.5282	0.8252	0.7995	0.7954	0.7976	0.7881	0.5691
	15sec	0.7830	0.7669	0.7555	0.7469	0.7058	0.5285	0.8403	0.7888	0.7769	0.7971	0.7778	0.5545
	30sec	0.7853	0.7709	0.7600	0.7520	0.7114	0.5262	0.8341	0.7918	0.7874	0.7927	0.7899	0.5810
	60sec	0.7843	0.7744	0.7640	0.7563	0.7141	0.5299	0.8131	0.7908	0.7869	0.7908	0.7870	0.5742
	300sec	0.7917	0.7899	0.7775	0.7689	0.7290	0.5155	0.8376	0.8217	0.8227	0.8256	0.8217	0.5460
	600sec	0.7888	0.7801	0.7690	0.7567	0.7131	0.5060	0.8240	0.8235	0.8224	0.8234	0.8204	0.5471
	900sec	0.7868	0.7887	0.7772	0.7636	0.7196	0.5088	0.8155	0.8173	0.8172	0.8173	0.8151	0.5444
	1200sec	0.7874	0.7903	0.7755	0.7653	0.7205	0.5077	0.8156	0.8150	0.8098	0.8150	0.8076	0.5341
	1500sec	0.7865	0.7872	0.7741	0.7613	0.7195	0.5050	0.8168	0.8140	0.8127	0.8118	0.8100	0.5464
	1800sec	0.7871	0.7872	0.7741	0.7612	0.7178	0.5031	0.8102	0.8165	0.8170	0.8209	0.8116	0.5385

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 30 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}^{AS}}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.132: The Fifth-order Spreads Autocorrelations (30 days before maturity)

30 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8878	0.4210	0.4290	0.4486	0.4614	0.6171	0.9382	0.3437	0.3861	0.4376	0.4494	0.5596
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8878	0.4210	0.4290	0.4486	0.4614	0.6171	0.9382	0.3437	0.3861	0.4376	0.4494	0.5596
$\Omega^{\tilde{\mathscr{P}}D}$		0.7676	0.8472	0.8393	0.8279	0.8273	0.7908	0.9378	0.9026	0.8782	0.8675	0.8784	0.7943
$\Omega^{\tilde{\mathscr{P}}E}$		0.5340	0.5444	0.5332	0.5255	0.4997	0.2714	0.5417	0.5837	0.5807	0.5837	0.5657	0.1428
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5307	0.5110	0.5017	0.4952	0.4753	0.2721	0.5488	0.5464	0.5476	0.5360	0.1329	0.0000
	1ms	0.5339	0.5442	0.5331	0.5253	0.4996	0.2712	0.5412	0.5837	0.5807	0.5837	0.5657	0.1388
	2ms	0.5337	0.5438	0.5328	0.5250	0.4991	0.2716	0.5407	0.5837	0.5807	0.5837	0.5659	0.1398
	5ms	0.5331	0.5430	0.5345	0.5267	0.4992	0.2725	0.5390	0.5837	0.5866	0.5865	0.5664	0.1428
	10ms	0.5322	0.5417	0.5333	0.5266	0.5018	0.2731	0.5380	0.5824	0.5834	0.5873	0.5667	0.1535
	15ms	0.5314	0.5418	0.5333	0.5250	0.5052	0.2766	0.5382	0.5855	0.5861	0.5878	0.5750	0.1599
	20ms	0.5307	0.5407	0.5352	0.5262	0.5062	0.2733	0.5390	0.5838	0.5852	0.5881	0.5814	0.1428
	25ms	0.5306	0.5406	0.5342	0.5279	0.5067	0.2725	0.5402	0.5837	0.5850	0.5869	0.5781	0.1428
	50ms	0.5310	0.5397	0.5345	0.5280	0.5176	0.2649	0.5427	0.5712	0.5769	0.5712	0.5746	0.1287
	75ms	0.5315	0.5387	0.5344	0.5332	0.5220	0.2606	0.5424	0.5674	0.5783	0.5785	0.5799	0.1410
	100ms	0.5315	0.5381	0.5337	0.5302	0.5230	0.2530	0.5424	0.5718	0.5791	0.5740	0.5822	0.1238
	150ms	0.5307	0.5375	0.5335	0.5324	0.5230	0.2577	0.5404	0.5731	0.5773	0.5821	0.5824	0.1497
	200ms	0.5304	0.5372	0.5344	0.5305	0.5222	0.2571	0.5371	0.5696	0.5766	0.5697	0.5810	0.1497
	500ms	0.5321	0.5386	0.5362	0.5350	0.5285	0.2670	0.5416	0.5700	0.5698	0.5700	0.5718	0.1717
	750ms	0.5314	0.5388	0.5371	0.5351	0.5286	0.2708	0.5423	0.5673	0.5682	0.5661	0.5644	0.1606
	1sec	0.5326	0.5391	0.5375	0.5341	0.5298	0.2721	0.5463	0.5704	0.5735	0.5675	0.5753	0.1717
	5sec	0.5360	0.5423	0.5398	0.5367	0.5355	0.2951	0.5452	0.5660	0.5727	0.5742	0.5751	0.2209
	15sec	0.5407	0.5474	0.5451	0.5430	0.5369	0.3198	0.5656	0.5569	0.5566	0.5571	0.5589	0.2647
	30sec	0.5431	0.5537	0.5516	0.5501	0.5429	0.3516	0.5741	0.5704	0.5796	0.5909	0.5864	0.3148
	60sec	0.5474	0.5593	0.5584	0.5544	0.5478	0.3625	0.5620	0.5871	0.5909	0.5922	0.5924	0.3206
	300sec	0.5504	0.5621	0.5610	0.5582	0.5503	0.4030	0.5660	0.6018	0.6025	0.6051	0.6038	0.3679
	600sec	0.5532	0.5600	0.5591	0.5584	0.5539	0.4129	0.5529	0.5780	0.5819	0.5750	0.5724	0.3791
	900sec	0.5547	0.5622	0.5612	0.5600	0.5589	0.4038	0.5558	0.5908	0.5898	0.5943	0.5932	0.3913
	1200sec	0.5591	0.5641	0.5629	0.5633	0.5627	0.4160	0.5686	0.5995	0.6011	0.6032	0.6044	0.3905
	1500sec	0.5612	0.5620	0.5596	0.5606	0.5626	0.4074	0.5638	0.5911	0.5911	0.5979	0.6011	0.3886
	1800sec	0.5613	0.5619	0.5595	0.5612	0.5604	0.4062	0.5663	0.5861	0.5858	0.5918	0.5926	0.3881
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.3261	-0.0009	0.0001	-0.0016	0.0003	0.0071	0.0000	0.0000	0.0000	-0.0001	0.0000	0.0000
	1ms	0.1240	0.0898	0.0897	0.0851	0.0897	0.0286	0.0547	-0.0002	-0.0001	-0.0001	-0.0001	-0.0002
	2ms	0.1411	0.1158	0.1149	0.1149	0.1130	0.0310	0.0451	0.0000	0.0000	0.0000	-0.0001	-0.0002
	5ms	0.1958	0.1660	0.1644	0.1628	0.1637	0.0697	0.0897	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.2576	0.2029	0.1996	0.1994	0.1997	0.1104	0.1152	0.0151	0.0000	0.0000	0.0000	-0.0001
	15ms	0.2928	0.2349	0.2324	0.2346	0.2324	0.1345	0.1717	0.0635	0.0577	0.0575	0.0536	0.0025
	20ms	0.3238	0.2623	0.2602	0.2620	0.2596	0.1467	0.2089	0.0668	0.0679	0.0574	0.0387	0.0149
	25ms	0.3421	0.2791	0.2749	0.2758	0.2736	0.1568	0.2192	0.0980	0.0831	0.0646	0.0680	0.0185
	50ms	0.3918	0.3421	0.3359	0.3343	0.3320	0.1932	0.2863	0.1698	0.1442	0.1405	0.1430	0.0354
	75ms	0.4212	0.3730	0.3690	0.3672	0.3613	0.1998	0.3674	0.2422	0.2210	0.2190	0.2203	0.0361
	100ms	0.4302	0.3803	0.3765	0.3743	0.3651	0.2034	0.3780	0.2588	0.2327	0.2250	0.2291	0.0468
	150ms	0.4438	0.3966	0.3938	0.3864	0.3760	0.2130	0.3885	0.2762	0.2737	0.2630	0.2571	0.0507
	200ms	0.4521	0.4061	0.4015	0.3941	0.3834	0.2210	0.3796	0.2906	0.2964	0.2804	0.2660	0.0616
	500ms	0.4811	0.4453	0.4345	0.4292	0.4158	0.2410	0.5048	0.3995	0.3710	0.3620	0.3626	0.1179
	750ms	0.4915	0.4590	0.4521	0.4455	0.4299	0.2488	0.5172	0.4113	0.4018	0.4025	0.4005	0.1273
	1sec	0.5040	0.4712	0.4633	0.4577	0.4400	0.2529	0.5243	0.4265	0.3997	0.4107	0.4040	0.1284
	5sec	0.5401	0.5106	0.5018	0.4970	0.4780	0.2656	0.5563	0.5022	0.4782	0.4952	0.4781	0.1762
	15sec	0.5580	0.5272	0.5194	0.5137	0.4887	0.2737	0.5877	0.5048	0.4836	0.5000	0.4772	0.1961
	30sec	0.5590	0.5314	0.5246	0.5196	0.4944	0.2767	0.5718	0.5176	0.5165	0.5203	0.5165	0.2116
	60sec	0.5629	0.5384	0.5312	0.5253	0.4946	0.2874	0.5501	0.5173	0.4943	0.5189	0.4862	0.2323
	300sec	0.5750	0.5711	0.5610	0.5577	0.5270	0.2923	0.6036	0.5968	0.5983	0.5983	0.5841	0.2274
	600sec	0.5768	0.5717	0.5623	0.5563	0.5198	0.2928	0.5969	0.5761	0.5758	0.5770	0.5615	0.2264
	900sec	0.5761	0.5816	0.5712	0.5647	0.5299	0.2928	0.5979	0.5843	0.5793	0.5882	0.5759	0.2290
	1200sec	0.5829	0.5872	0.5744	0.5706	0.5330	0.2942	0.6003	0.6056	0.5986	0.6036	0.5895	0.2224
	1500sec	0.5821	0.5861	0.5735	0.5701	0.5354	0.2896	0.5995	0.6168	0.6148	0.6168	0.5912	0.2139
	1800sec	0.5821	0.5850	0.5727	0.5683	0.5318	0.2928	0.6037	0.5980	0.5959	0.5987	0.5926	0.2260

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 30 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.133: The Tenth-order Spreads Autocorrelations (30 days before maturity)

30 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8379	0.3440	0.3531	0.3662	0.3812	0.5716	0.8983	0.2385	0.2683	0.2864	0.3018	0.4450
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8379	0.3440	0.3531	0.3662	0.3812	0.5716	0.8983	0.2385	0.2683	0.2864	0.3018	0.4450
$\Omega^{\tilde{\mathscr{P}}D}$		0.7256	0.7989	0.7836	0.7656	0.7643	0.7242	0.9034	0.8608	0.8299	0.8094	0.8184	0.7172
$\Omega^{\tilde{\mathscr{P}}E}$		0.4313	0.4492	0.4410	0.4364	0.4172	0.1998	0.4294	0.4780	0.4741	0.4746	0.4328	0.0798
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.4305	0.4234	0.4164	0.4120	0.3968	0.1989	0.4440	0.4301	0.4517	0.4115	0.0599	0.0000
	1ms	0.4312	0.4489	0.4407	0.4361	0.4169	0.2009	0.4293	0.4780	0.4758	0.4746	0.4328	0.0795
	2ms	0.4310	0.4483	0.4400	0.4354	0.4162	0.2008	0.4291	0.4771	0.4752	0.4746	0.4328	0.0795
	5ms	0.4303	0.4475	0.4414	0.4369	0.4156	0.2017	0.4283	0.4759	0.4758	0.4759	0.4324	0.0832
	10ms	0.4292	0.4457	0.4397	0.4360	0.4177	0.2012	0.4277	0.4757	0.4759	0.4774	0.4441	0.0885
	15ms	0.4284	0.4467	0.4405	0.4343	0.4203	0.2011	0.4261	0.4768	0.4769	0.4768	0.4621	0.0889
	20ms	0.4278	0.4450	0.4399	0.4354	0.4208	0.1997	0.4263	0.4788	0.4786	0.4791	0.4715	0.0852
	25ms	0.4278	0.4448	0.4395	0.4355	0.4199	0.2005	0.4239	0.4793	0.4811	0.4741	0.4751	0.0854
	50ms	0.4278	0.4421	0.4388	0.4372	0.4281	0.1924	0.4214	0.4764	0.4837	0.4789	0.4690	0.0633
	75ms	0.4276	0.4413	0.4383	0.4378	0.4288	0.1882	0.4221	0.4697	0.4788	0.4697	0.4692	0.0591
	100ms	0.4272	0.4405	0.4377	0.4359	0.4310	0.1823	0.4184	0.4683	0.4751	0.4683	0.4762	0.0544
	150ms	0.4258	0.4390	0.4364	0.4366	0.4293	0.1843	0.4174	0.4591	0.4718	0.4615	0.4720	0.0615
	200ms	0.4252	0.4381	0.4364	0.4342	0.4278	0.1838	0.4167	0.4573	0.4657	0.4573	0.4751	0.0740
	500ms	0.4253	0.4375	0.4359	0.4356	0.4299	0.1928	0.4370	0.4585	0.4593	0.4585	0.4594	0.0961
	750ms	0.4242	0.4360	0.4352	0.4338	0.4279	0.1963	0.4310	0.4582	0.4609	0.4582	0.4609	0.0898
	1sec	0.4255	0.4356	0.4346	0.4325	0.4286	0.1952	0.4332	0.4612	0.4657	0.4617	0.4665	0.0898
	5sec	0.4279	0.4342	0.4326	0.4317	0.4286	0.2033	0.4370	0.4391	0.4380	0.4385	0.4410	0.1113
	15sec	0.4326	0.4411	0.4390	0.4392	0.4328	0.2273	0.4429	0.4543	0.4542	0.4549	0.4565	0.1273
	30sec	0.4368	0.4484	0.4469	0.4470	0.4403	0.2480	0.4519	0.4445	0.4476	0.4505	0.4475	0.1792
	60sec	0.4421	0.4584	0.4574	0.4539	0.4486	0.2620	0.4469	0.4611	0.4602	0.4640	0.4695	0.1991
	300sec	0.4459	0.4645	0.4626	0.4605	0.4534	0.2966	0.4429	0.4831	0.4793	0.4832	0.4827	0.2317
	600sec	0.4496	0.4627	0.4618	0.4603	0.4561	0.3097	0.4531	0.4627	0.4680	0.4772	0.4759	0.2260
	900sec	0.4516	0.4650	0.4641	0.4624	0.4617	0.3010	0.4546	0.4808	0.4852	0.4791	0.4782	0.2365
	1200sec	0.4563	0.4696	0.4681	0.4675	0.4661	0.3167	0.4578	0.4922	0.4877	0.4887	0.4931	0.2541
	1500sec	0.4598	0.4678	0.4654	0.4654	0.4646	0.3038	0.4631	0.4711	0.4704	0.4824	0.4818	0.2578
	1800sec	0.4590	0.4659	0.4638	0.4647	0.4621	0.3023	0.4593	0.4733	0.4770	0.4824	0.4827	0.2583
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2550	0.0059	0.0054	0.0045	0.0048	0.0081	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1ms	0.0632	0.0576	0.0569	0.0572	0.0555	0.0178	0.0024	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	2ms	0.0744	0.0565	0.0555	0.0562	0.0561	0.0103	0.0108	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002
	5ms	0.1120	0.0832	0.0839	0.0839	0.0846	0.0253	0.0217	-0.0001	-0.0001	-0.0002	-0.0001	-0.0002
	10ms	0.1643	0.1229	0.1242	0.1248	0.1246	0.0522	0.0325	-0.0002	-0.0002	-0.0002	-0.0001	-0.0002
	15ms	0.1920	0.1499	0.1501	0.1493	0.1477	0.0696	0.0495	-0.0001	-0.0001	-0.0001	-0.0001	-0.0002
	20ms	0.2253	0.1822	0.1801	0.1829	0.1822	0.0818	0.0816	0.0078	0.0097	0.0078	0.0000	-0.0001
	25ms	0.2445	0.2012	0.1975	0.2008	0.1984	0.0926	0.0729	0.0178	0.0180	0.0194	0.0143	-0.0001
	50ms	0.2901	0.2538	0.2494	0.2510	0.2492	0.1239	0.0896	0.0414	0.0333	0.0334	0.0298	0.0000
	75ms	0.3171	0.2844	0.2807	0.2819	0.2745	0.1347	0.1419	0.0801	0.0689	0.0695	0.0527	0.0027
	100ms	0.3248	0.2917	0.2881	0.2887	0.2832	0.1346	0.1311	0.0990	0.0868	0.0846	0.0855	0.0044
	150ms	0.3330	0.3008	0.2976	0.2957	0.2894	0.1398	0.1614	0.1128	0.1050	0.1001	0.0986	0.0083
	200ms	0.3379	0.3039	0.3012	0.2984	0.2916	0.1448	0.1959	0.1193	0.1202	0.1098	0.0974	0.0185
	500ms	0.3630	0.3354	0.3276	0.3239	0.3167	0.1615	0.2799	0.2045	0.1774	0.1677	0.1615	0.0297
	750ms	0.3734	0.3510	0.3460	0.3418	0.3335	0.1694	0.3478	0.2716	0.2392	0.2373	0.2310	0.0339
	1sec	0.3865	0.3617	0.3569	0.3534	0.3430	0.1675	0.3721	0.2772	0.2499	0.2511	0.2467	0.0283
	5sec	0.4233	0.4011	0.3944	0.3931	0.3811	0.1781	0.3994	0.3478	0.3518	0.3352	0.3302	0.0673
	15sec	0.4387	0.4217	0.4147	0.4123	0.3952	0.1897	0.4382	0.3473	0.3424	0.3323	0.3249	0.1044
	30sec	0.4428	0.4202	0.4139	0.4105	0.3934	0.1910	0.4210	0.3629	0.3525	0.3573	0.3522	0.1064
	60sec	0.4489	0.4292	0.4233	0.4184	0.3977	0.1995	0.4112	0.3637	0.3612	0.3660	0.3564	0.1265
	300sec	0.4639	0.4614	0.4530	0.4540	0.4313	0.2067	0.4518	0.4560	0.4388	0.4444	0.4410	0.1103
	600sec	0.4671	0.4634	0.4568	0.4538	0.4267	0.2097	0.4592	0.4302	0.4340	0.4328	0.4048	0.1283
	900sec	0.4647	0.4773	0.4693	0.4655	0.4395	0.2128	0.4581	0.4602	0.4606	0.4588	0.4543	0.1311
	1200sec	0.4733	0.4849	0.4750	0.4736	0.4445	0.2139	0.4787	0.4871	0.4797	0.4804	0.4581	0.1258
	1500sec	0.4789	0.4859	0.4762	0.4740	0.4465	0.2105	0.4775	0.4805	0.4711	0.4771	0.4668	0.1175
	1800sec	0.4777	0.4840	0.4749	0.4721	0.4438	0.2114	0.4729	0.4893	0.4758	0.4801	0.4712	0.1175

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 30 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.134: The First-order Spreads Autocorrelations (60 days before maturity)

60 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.9660	0.5876	0.5935	0.6175	0.6302	0.7064	0.9862	0.5904	0.6323	0.6805	0.6924	0.8030
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.9660	0.5876	0.5935	0.6175	0.6302	0.7064	0.9862	0.5904	0.6323	0.6805	0.6924	0.8030
$\Omega^{\tilde{\mathscr{P}}D}$		0.8411	0.9389	0.9490	0.9209	0.9422	0.9218	0.9843	0.9690	0.9694	0.9441	0.9669	0.9393
$\Omega^{\tilde{\mathscr{P}}E}$		0.7623	0.7784	0.7694	0.7555	0.7354	0.4738	0.7883	0.8351	0.8303	0.8309	0.8296	0.5432
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.7592	0.7264	0.7180	0.7094	0.6951	0.4831	0.8095	0.8056	0.8071	0.8059	0.5205	0.0000
	1ms	0.7623	0.7784	0.7692	0.7555	0.7353	0.4704	0.7883	0.8350	0.8303	0.8309	0.8296	0.5405
	2ms	0.7622	0.7783	0.7687	0.7552	0.7362	0.4665	0.7882	0.8350	0.8303	0.8309	0.8294	0.5169
	5ms	0.7621	0.7781	0.7706	0.7555	0.7368	0.4640	0.7885	0.8350	0.8304	0.8307	0.8294	0.5121
	10ms	0.7618	0.7779	0.7696	0.7559	0.7425	0.4683	0.7886	0.8323	0.8297	0.8299	0.8297	0.5320
	15ms	0.7616	0.7780	0.7703	0.7556	0.7441	0.4702	0.7890	0.8309	0.8294	0.8295	0.8294	0.5272
	20ms	0.7615	0.7782	0.7710	0.7574	0.7430	0.4647	0.7893	0.8326	0.8294	0.8296	0.8295	0.5009
	25ms	0.7614	0.7779	0.7712	0.7596	0.7485	0.4656	0.7894	0.8313	0.8289	0.8294	0.8291	0.4998
	50ms	0.7617	0.7783	0.7726	0.7631	0.7584	0.4562	0.7900	0.8334	0.8305	0.8330	0.8349	0.4690
	75ms	0.7621	0.7791	0.7722	0.7657	0.7611	0.4564	0.7890	0.8340	0.8302	0.8344	0.8355	0.4660
	100ms	0.7623	0.7794	0.7724	0.7646	0.7625	0.4564	0.7895	0.8330	0.8315	0.8330	0.8374	0.4684
	150ms	0.7621	0.7795	0.7745	0.7668	0.7627	0.4600	0.7899	0.8349	0.8326	0.8349	0.8373	0.4968
	200ms	0.7623	0.7787	0.7749	0.7646	0.7595	0.4654	0.7896	0.8357	0.8335	0.8349	0.8381	0.5012
	500ms	0.7637	0.7824	0.7791	0.7714	0.7708	0.4825	0.7894	0.8347	0.8341	0.8349	0.8374	0.5370
	750ms	0.7646	0.7829	0.7804	0.7723	0.7713	0.4847	0.7890	0.8350	0.8336	0.8349	0.8366	0.5396
	1sec	0.7654	0.7837	0.7811	0.7717	0.7733	0.4975	0.7900	0.8383	0.8372	0.8381	0.8404	0.5538
	5sec	0.7693	0.7876	0.7854	0.7755	0.7772	0.5552	0.7962	0.8388	0.8381	0.8394	0.8437	0.6000
	15sec	0.7711	0.7894	0.7869	0.7786	0.7796	0.5867	0.7965	0.8423	0.8396	0.8423	0.8450	0.6466
	30sec	0.7727	0.7910	0.7899	0.7817	0.7790	0.6145	0.8017	0.8478	0.8426	0.8476	0.8487	0.6664
	60sec	0.7742	0.7909	0.7895	0.7799	0.7755	0.6320	0.8017	0.8458	0.8435	0.8437	0.8498	0.6715
	300sec	0.7767	0.7859	0.7849	0.7772	0.7725	0.6737	0.7991	0.8371	0.8325	0.8360	0.8431	0.7175
	600sec	0.7794	0.7837	0.7836	0.7771	0.7764	0.6803	0.8044	0.8330	0.8300	0.8325	0.8365	0.7184
	900sec	0.7801	0.7841	0.7857	0.7790	0.7772	0.6709	0.8068	0.8310	0.8295	0.8303	0.8340	0.7142
	1200sec	0.7809	0.7828	0.7836	0.7784	0.7774	0.6861	0.8049	0.8306	0.8289	0.8306	0.8324	0.7307
	1500sec	0.7816	0.7830	0.7836	0.7778	0.7787	0.6763	0.8060	0.8305	0.8297	0.8303	0.8360	0.7217
	1800sec	0.7837	0.7840	0.7847	0.7800	0.7792	0.6867	0.8040	0.8329	0.8316	0.8329	0.8348	0.7302
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.4881	-0.0264	-0.0280	-0.0274	-0.0342	-0.0829	-0.0325	-0.0284	-0.0279	-0.0283	-0.0726	0.0000
	1ms	0.3333	0.3472	0.3467	0.3468	0.3457	0.2803	0.3756	0.3635	0.3530	0.3635	0.3426	0.1817
	2ms	0.4454	0.4166	0.4148	0.4193	0.4094	0.3121	0.4830	0.4989	0.4991	0.4990	0.4993	0.3137
	5ms	0.5156	0.4505	0.4531	0.4531	0.4481	0.3312	0.5585	0.4999	0.4999	0.4999	0.4999	0.3834
	10ms	0.5613	0.4650	0.4707	0.4708	0.4646	0.3672	0.6184	0.4990	0.4994	0.4996	0.4995	0.4080
	15ms	0.5725	0.5036	0.5068	0.5070	0.5030	0.3865	0.6508	0.5315	0.5399	0.5467	0.5367	0.4441
	20ms	0.5938	0.5309	0.5317	0.5331	0.5224	0.3899	0.6860	0.5713	0.5726	0.5802	0.5713	0.4000
	25ms	0.6084	0.5477	0.5464	0.5475	0.5383	0.3952	0.6982	0.5847	0.5863	0.5942	0.5966	0.3577
	50ms	0.6702	0.6230	0.6212	0.6170	0.6121	0.4569	0.7568	0.6936	0.6936	0.6965	0.6961	0.4257
	75ms	0.6993	0.6621	0.6593	0.6552	0.6473	0.4799	0.8053	0.7368	0.7351	0.7419	0.7351	0.4605
	100ms	0.7107	0.6804	0.6756	0.6722	0.6583	0.4835	0.8166	0.7447	0.7434	0.7504	0.7433	0.4933
	150ms	0.7238	0.6972	0.6945	0.6884	0.6697	0.4939	0.8271	0.7676	0.7694	0.7715	0.7606	0.4999
	200ms	0.7337	0.7127	0.7091	0.7031	0.6816	0.5042	0.8375	0.7859	0.7849	0.7885	0.7735	0.5212
	500ms	0.7568	0.7413	0.7368	0.7285	0.7097	0.5152	0.8485	0.8024	0.8022	0.8024	0.7995	0.5645
	750ms	0.7672	0.7542	0.7493	0.7405	0.7203	0.5247	0.8517	0.8123	0.8094	0.8097	0.8081	0.5594
	1sec	0.7744	0.7626	0.7574	0.7480	0.7275	0.5273	0.8467	0.8340	0.8335	0.8328	0.8242	0.5674
	5sec	0.7958	0.7892	0.7826	0.7756	0.7516	0.5336	0.8576	0.8601	0.8567	0.8566	0.8462	0.5801
	15sec	0.7996	0.7967	0.7884	0.7834	0.7578	0.5337	0.8603	0.8624	0.8590	0.8605	0.8519	0.5760
	30sec	0.8017	0.8017	0.7931	0.7891	0.7639	0.5370	0.8570	0.8613	0.8607	0.8613	0.8572	0.6001
	60sec	0.8009	0.8042	0.7953	0.7907	0.7659	0.5373	0.8447	0.8614	0.8612	0.8620	0.8513	0.6022
	300sec	0.8010	0.8068	0.7970	0.7903	0.7666	0.5184	0.8481	0.8666	0.8638	0.8680	0.8637	0.5807
	600sec	0.7983	0.8010	0.7903	0.7830	0.7558	0.5095	0.8446	0.8623	0.8586	0.8623	0.8558	0.5707
	900sec	0.7970	0.8042	0.7925	0.7838	0.7583	0.5114	0.8316	0.8606	0.8586	0.8640	0.8568	0.5866
	1200sec	0.7974	0.8056	0.7925	0.7852	0.7596	0.5093	0.8409	0.8605	0.8559	0.8615	0.8516	0.5819
	1500sec	0.7977	0.8038	0.7917	0.7825	0.7597	0.5065	0.8387	0.8609	0.8564	0.8617	0.8549	0.5644
	1800sec	0.7980	0.8026	0.7899	0.7816	0.7575	0.5073	0.8374	0.8599	0.8573	0.8613	0.8531	0.5831

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 60 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.135: The Fifth-order Spreads Autocorrelations (60 days before maturity)

60 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.9067	0.3882	0.3913	0.4145	0.4323	0.5859	0.9509	0.3030	0.3311	0.3849	0.4177	0.5617
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.9067	0.3882	0.3913	0.4145	0.4323	0.5859	0.9509	0.3030	0.3311	0.3849	0.4177	0.5617
$\Omega^{\tilde{\mathscr{P}}D}$		0.7733	0.8694	0.8763	0.8122	0.8583	0.8174	0.9460	0.9198	0.9141	0.8441	0.9010	0.8425
$\Omega^{\tilde{\mathscr{P}}E}$		0.5615	0.5817	0.5739	0.5634	0.5481	0.2686	0.5783	0.6300	0.6286	0.6277	0.6206	0.1570
$\Omega^{\tilde{\mathscr{P}}R}$	**Tick**	0.5604	0.5489	0.5417	0.5341	0.5212	0.2708	0.6023	0.5988	0.6013	0.5896	0.1531	0.0000
	1ms	0.5615	0.5815	0.5738	0.5632	0.5480	0.2675	0.5788	0.6298	0.6287	0.6277	0.6194	0.1570
	2ms	0.5615	0.5811	0.5735	0.5629	0.5476	0.2682	0.5793	0.6290	0.6286	0.6267	0.6185	0.1637
	5ms	0.5614	0.5801	0.5737	0.5631	0.5475	0.2702	0.5797	0.6292	0.6286	0.6260	0.6187	0.1671
	10ms	0.5608	0.5790	0.5726	0.5625	0.5487	0.2756	0.5795	0.6288	0.6259	0.6214	0.6177	0.1731
	15ms	0.5603	0.5788	0.5723	0.5616	0.5513	0.2796	0.5770	0.6277	0.6240	0.6198	0.6170	0.2012
	20ms	0.5601	0.5784	0.5733	0.5623	0.5522	0.2803	0.5770	0.6257	0.6232	0.6198	0.6197	0.1780
	25ms	0.5599	0.5779	0.5724	0.5627	0.5529	0.2807	0.5770	0.6270	0.6222	0.6196	0.6190	0.1753
	50ms	0.5598	0.5771	0.5722	0.5635	0.5584	0.2746	0.5796	0.6231	0.6231	0.6184	0.6180	0.1587
	75ms	0.5601	0.5770	0.5731	0.5678	0.5626	0.2726	0.5787	0.6221	0.6215	0.6214	0.6205	0.1580
	100ms	0.5596	0.5770	0.5726	0.5657	0.5640	0.2715	0.5813	0.6247	0.6245	0.6234	0.6252	0.1651
	150ms	0.5591	0.5767	0.5724	0.5673	0.5647	0.2740	0.5814	0.6272	0.6238	0.6229	0.6286	0.1804
	200ms	0.5587	0.5764	0.5727	0.5664	0.5633	0.2776	0.5789	0.6278	0.6249	0.6249	0.6322	0.1859
	500ms	0.5598	0.5780	0.5744	0.5700	0.5701	0.2819	0.5792	0.6318	0.6286	0.6277	0.6316	0.2125
	750ms	0.5599	0.5793	0.5760	0.5712	0.5714	0.2822	0.5807	0.6339	0.6305	0.6328	0.6339	0.2053
	1sec	0.5607	0.5802	0.5769	0.5714	0.5724	0.2879	0.5813	0.6367	0.6287	0.6332	0.6381	0.2199
	5sec	0.5641	0.5840	0.5808	0.5749	0.5774	0.3252	0.5884	0.6331	0.6300	0.6320	0.6347	0.2888
	15sec	0.5665	0.5890	0.5857	0.5803	0.5798	0.3507	0.5953	0.6435	0.6445	0.6428	0.6441	0.3199
	30sec	0.5679	0.5933	0.5907	0.5843	0.5830	0.3745	0.5970	0.6524	0.6521	0.6481	0.6524	0.3557
	60sec	0.5710	0.5969	0.5945	0.5865	0.5858	0.3893	0.5929	0.6531	0.6483	0.6479	0.6547	0.3678
	300sec	0.5766	0.5979	0.5953	0.5899	0.5873	0.4325	0.5939	0.6396	0.6352	0.6348	0.6375	0.4302
	600sec	0.5813	0.5980	0.5954	0.5911	0.5904	0.4414	0.5978	0.6381	0.6388	0.6381	0.6385	0.4399
	900sec	0.5819	0.5955	0.5930	0.5900	0.5901	0.4270	0.5982	0.6386	0.6372	0.6372	0.6385	0.4257
	1200sec	0.5845	0.5949	0.5922	0.5910	0.5902	0.4387	0.5989	0.6390	0.6377	0.6358	0.6392	0.4476
	1500sec	0.5863	0.5948	0.5923	0.5897	0.5912	0.4346	0.6079	0.6355	0.6357	0.6357	0.6422	0.4402
	1800sec	0.5878	0.5956	0.5931	0.5908	0.5908	0.4376	0.6055	0.6425	0.6428	0.6428	0.6426	0.4413
$\Omega^{\tilde{\mathscr{P}}AS}$	**Tick**	0.3158	0.0012	0.0018	0.0013	0.0016	0.0051	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1ms	0.1402	0.0978	0.0975	0.0956	0.0980	0.0404	0.0711	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1596	0.1352	0.1341	0.1345	0.1321	0.0512	0.0610	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2127	0.1818	0.1810	0.1812	0.1814	0.0837	0.0964	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.2723	0.2133	0.2129	0.2141	0.2165	0.1193	0.1436	0.0164	0.0121	0.0146	0.0000	-0.0001
	15ms	0.3061	0.2491	0.2483	0.2509	0.2521	0.1416	0.1808	0.0672	0.0660	0.0704	0.0667	0.0000
	20ms	0.3390	0.2828	0.2817	0.2838	0.2825	0.1542	0.2505	0.1162	0.1157	0.1245	0.1016	0.0000
	25ms	0.3577	0.3007	0.2983	0.3002	0.2981	0.1594	0.2960	0.1425	0.1349	0.1459	0.1173	0.0000
	50ms	0.4190	0.3675	0.3648	0.3652	0.3607	0.1892	0.4299	0.2857	0.2785	0.2718	0.2708	0.0262
	75ms	0.4495	0.3998	0.3981	0.3984	0.3926	0.1953	0.4889	0.3328	0.3347	0.3344	0.3232	0.0361
	100ms	0.4615	0.4122	0.4108	0.4117	0.4043	0.1991	0.5150	0.3488	0.3499	0.3675	0.3452	0.0435
	150ms	0.4795	0.4340	0.4329	0.4307	0.4205	0.2089	0.5393	0.4074	0.4075	0.4070	0.3733	0.0561
	200ms	0.4889	0.4476	0.4459	0.4425	0.4311	0.2197	0.5517	0.4271	0.4251	0.4251	0.4106	0.0795
	500ms	0.5203	0.4790	0.4743	0.4708	0.4581	0.2323	0.5804	0.4778	0.4694	0.4682	0.4631	0.1216
	750ms	0.5321	0.4938	0.4909	0.4855	0.4728	0.2405	0.5808	0.5090	0.5006	0.5053	0.4974	0.1389
	1sec	0.5422	0.5061	0.5024	0.4977	0.4844	0.2460	0.5907	0.5285	0.5175	0.5201	0.5111	0.1348
	5sec	0.5741	0.5495	0.5453	0.5413	0.5264	0.2647	0.6282	0.6020	0.6005	0.6013	0.5900	0.1816
	15sec	0.5852	0.5672	0.5629	0.5592	0.5423	0.2752	0.6400	0.6103	0.6059	0.6072	0.5992	0.2191
	30sec	0.5882	0.5760	0.5704	0.5673	0.5506	0.2834	0.6357	0.6204	0.6186	0.6204	0.6103	0.2449
	60sec	0.5909	0.5867	0.5807	0.5772	0.5591	0.2917	0.6237	0.6207	0.6201	0.6209	0.6171	0.2472
	300sec	0.5972	0.6072	0.5995	0.5969	0.5777	0.2922	0.6212	0.6485	0.6471	0.6589	0.6459	0.2573
	600sec	0.6006	0.6092	0.6007	0.5981	0.5741	0.2914	0.6322	0.6653	0.6581	0.6661	0.6611	0.2725
	900sec	0.5991	0.6112	0.6022	0.5982	0.5762	0.2915	0.6210	0.6528	0.6523	0.6527	0.6483	0.2501
	1200sec	0.6032	0.6161	0.6060	0.6023	0.5787	0.2897	0.6303	0.6638	0.6554	0.6655	0.6530	0.2514
	1500sec	0.6043	0.6155	0.6054	0.6018	0.5795	0.2864	0.6303	0.6571	0.6559	0.6571	0.6541	0.2492
	1800sec	0.6041	0.6142	0.6042	0.6000	0.5767	0.2903	0.6308	0.6618	0.6614	0.6655	0.6609	0.2523

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 60 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.136: The Tenth-order Spreads Autocorrelations (60 days before maturity)

60 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{F}}Q}$		0.8607	0.3143	0.3167	0.3343	0.3523	0.5392	0.9168	0.2059	0.2324	0.2552	0.2819	0.4710
$\Omega^{\tilde{\mathscr{F}}Q^{1/2}}$		0.8607	0.3143	0.3167	0.3343	0.3523	0.5392	0.9168	0.2059	0.2324	0.2552	0.2819	0.4710
$\Omega^{\tilde{\mathscr{F}}D}$		0.7329	0.8241	0.8275	0.7414	0.7994	0.7506	0.9107	0.8829	0.8720	0.7753	0.8509	0.7663
$\Omega^{\tilde{\mathscr{F}}E}$		0.4669	0.4858	0.4799	0.4722	0.4597	0.1957	0.4774	0.5203	0.5185	0.5183	0.5099	0.0757
$\Omega^{\tilde{\mathscr{F}}R}$	Tick	0.4677	0.4595	0.4539	0.4482	0.4372	0.1941	0.4844	0.4810	0.4811	0.4731	0.0605	0.0000
	1ms	0.4668	0.4855	0.4796	0.4719	0.4594	0.1960	0.4774	0.5197	0.5185	0.5176	0.5099	0.0749
	2ms	0.4669	0.4850	0.4791	0.4714	0.4590	0.1952	0.4769	0.5188	0.5185	0.5171	0.5094	0.0691
	5ms	0.4668	0.4839	0.4790	0.4713	0.4579	0.1989	0.4762	0.5185	0.5182	0.5172	0.5118	0.0803
	10ms	0.4660	0.4820	0.4772	0.4699	0.4588	0.2043	0.4743	0.5143	0.5144	0.5143	0.5079	0.0862
	15ms	0.4654	0.4820	0.4771	0.4687	0.4608	0.2058	0.4735	0.5185	0.5174	0.5161	0.5100	0.0959
	20ms	0.4651	0.4811	0.4768	0.4692	0.4614	0.2092	0.4734	0.5175	0.5170	0.5172	0.5172	0.0912
	25ms	0.4650	0.4803	0.4758	0.4686	0.4608	0.2106	0.4739	0.5155	0.5136	0.5111	0.5108	0.0984
	50ms	0.4646	0.4785	0.4749	0.4696	0.4642	0.2050	0.4760	0.5100	0.5102	0.5070	0.5063	0.0771
	75ms	0.4647	0.4791	0.4758	0.4718	0.4666	0.2037	0.4765	0.5074	0.5077	0.5064	0.5065	0.0790
	100ms	0.4644	0.4790	0.4758	0.4704	0.4685	0.2028	0.4741	0.5077	0.5079	0.5075	0.5080	0.0796
	150ms	0.4636	0.4784	0.4753	0.4716	0.4688	0.2027	0.4771	0.5102	0.5102	0.5094	0.5106	0.0852
	200ms	0.4630	0.4782	0.4755	0.4707	0.4677	0.2057	0.4765	0.5106	0.5105	0.5102	0.5152	0.0981
	500ms	0.4628	0.4777	0.4750	0.4717	0.4711	0.2097	0.4770	0.5102	0.5084	0.5102	0.5138	0.1181
	750ms	0.4623	0.4775	0.4752	0.4716	0.4710	0.2086	0.4781	0.5094	0.5089	0.5094	0.5153	0.1086
	1sec	0.4627	0.4768	0.4744	0.4706	0.4710	0.2114	0.4782	0.5102	0.5091	0.5092	0.5145	0.1120
	5sec	0.4647	0.4789	0.4761	0.4725	0.4733	0.2370	0.4803	0.5169	0.5168	0.5102	0.5160	0.1537
	15sec	0.4676	0.4858	0.4827	0.4797	0.4783	0.2559	0.4880	0.5271	0.5271	0.5185	0.5257	0.1801
	30sec	0.4685	0.4897	0.4874	0.4835	0.4819	0.2741	0.4837	0.5283	0.5280	0.5239	0.5247	0.2109
	60sec	0.4735	0.4983	0.4963	0.4897	0.4893	0.2892	0.4834	0.5371	0.5328	0.5252	0.5286	0.2343
	300sec	0.4797	0.5052	0.5024	0.4983	0.4960	0.3292	0.4912	0.5287	0.5232	0.5287	0.5299	0.2909
	600sec	0.4838	0.5040	0.5019	0.4977	0.4964	0.3363	0.4903	0.5226	0.5228	0.5217	0.5221	0.2986
	900sec	0.4861	0.5037	0.5016	0.4985	0.4979	0.3251	0.4898	0.5190	0.5139	0.5107	0.5157	0.2817
	1200sec	0.4894	0.5037	0.5013	0.4992	0.4980	0.3381	0.4905	0.5230	0.5186	0.5185	0.5228	0.3052
	1500sec	0.4919	0.5036	0.5012	0.4982	0.4978	0.3333	0.4909	0.5244	0.5244	0.5244	0.5278	0.2954
	1800sec	0.4931	0.5030	0.5008	0.4982	0.4966	0.3381	0.4963	0.5302	0.5262	0.5256	0.5267	0.3004
$\Omega^{\tilde{\mathscr{F}}AS}$	Tick	0.2483	0.0063	0.0062	0.0057	0.0053	0.0057	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
	1ms	0.0720	0.0433	0.0432	0.0431	0.0425	0.0055	0.0111	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	2ms	0.0815	0.0634	0.0628	0.0632	0.0625	0.0204	0.0141	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	5ms	0.1245	0.0990	0.0992	0.0998	0.1007	0.0395	0.0267	-0.0001	-0.0001	-0.0002	-0.0001	-0.0002
	10ms	0.1790	0.1329	0.1342	0.1350	0.1366	0.0604	0.0428	-0.0001	-0.0001	-0.0001	-0.0001	-0.0002
	15ms	0.2067	0.1635	0.1639	0.1644	0.1653	0.0765	0.0646	0.0000	0.0000	0.0000	0.0000	-0.0002
	20ms	0.2365	0.1938	0.1929	0.1949	0.1957	0.0848	0.0904	0.0102	0.0110	0.0131	0.0022	-0.0001
	25ms	0.2579	0.2130	0.2112	0.2128	0.2126	0.0916	0.1076	0.0305	0.0304	0.0285	0.0217	-0.0001
	50ms	0.3195	0.2728	0.2706	0.2718	0.2702	0.1173	0.2071	0.0853	0.0815	0.0806	0.0777	0.0000
	75ms	0.3509	0.3051	0.3033	0.3042	0.2997	0.1248	0.2875	0.1702	0.1612	0.1613	0.1449	0.0000
	100ms	0.3633	0.3166	0.3151	0.3160	0.3130	0.1273	0.3295	0.1793	0.1785	0.1786	0.1609	0.0033
	150ms	0.3785	0.3320	0.3311	0.3303	0.3255	0.1339	0.3522	0.1992	0.2044	0.1981	0.1870	0.0074
	200ms	0.3850	0.3393	0.3391	0.3370	0.3318	0.1403	0.3650	0.2339	0.2329	0.2224	0.2096	0.0185
	500ms	0.4106	0.3641	0.3607	0.3579	0.3516	0.1488	0.4168	0.2993	0.2898	0.2800	0.2844	0.0306
	750ms	0.4202	0.3791	0.3773	0.3739	0.3672	0.1570	0.4236	0.3488	0.3233	0.3317	0.3099	0.0333
	1sec	0.4278	0.3887	0.3868	0.3836	0.3763	0.1582	0.4294	0.3728	0.3542	0.3614	0.3426	0.0368
	5sec	0.4618	0.4341	0.4307	0.4288	0.4195	0.1720	0.4820	0.4455	0.4371	0.4374	0.4321	0.0866
	15sec	0.4740	0.4563	0.4525	0.4505	0.4393	0.1847	0.4914	0.4608	0.4524	0.4536	0.4401	0.1137
	30sec	0.4767	0.4606	0.4555	0.4540	0.4426	0.1895	0.4815	0.4654	0.4563	0.4654	0.4301	0.1180
	60sec	0.4807	0.4742	0.4692	0.4666	0.4542	0.2000	0.4835	0.4702	0.4650	0.4684	0.4629	0.1305
	300sec	0.4909	0.5025	0.4958	0.4962	0.4820	0.2063	0.4891	0.5038	0.4997	0.5078	0.4989	0.1418
	600sec	0.4950	0.5050	0.4986	0.4972	0.4793	0.2084	0.5074	0.5184	0.5080	0.5185	0.5098	0.1444
	900sec	0.4950	0.5116	0.5042	0.5022	0.4847	0.2097	0.4981	0.5154	0.5127	0.5187	0.5117	0.1396
	1200sec	0.4998	0.5172	0.5090	0.5074	0.4889	0.2094	0.5069	0.5262	0.5233	0.5252	0.5195	0.1396
	1500sec	0.5045	0.5183	0.5100	0.5080	0.4899	0.2084	0.5022	0.5352	0.5311	0.5336	0.5225	0.1311
	1800sec	0.5042	0.5164	0.5083	0.5058	0.4864	0.2108	0.5065	0.5363	0.5358	0.5381	0.5337	0.1384

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 60 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{F}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{F}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{F}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{F}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{F}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{F}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.137: The First-order Spreads Autocorrelations (90 days before maturity)

90 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.9691	0.5789	0.5870	0.6099	0.6273	0.6857	0.9885	0.5999	0.6301	0.6716	0.6919	0.7937
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.9691	0.5789	0.5870	0.6099	0.6273	0.6857	0.9885	0.5999	0.6301	0.6716	0.6919	0.7937
$\Omega^{\tilde{\mathscr{P}}D}$		0.8431	0.9443	0.9571	0.9207	0.9493	0.9276	0.9849	0.9713	0.9743	0.9431	0.9712	0.9393
$\Omega^{\tilde{\mathscr{P}}E}$		0.7698	0.7904	0.7858	0.7744	0.7580	0.4731	0.7990	0.8448	0.8419	0.8412	0.8401	0.5436
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.7677	0.7379	0.7334	0.7261	0.7155	0.4842	0.8139	0.8127	0.8146	0.8140	0.5444	0.0000
	1ms	0.7697	0.7904	0.7857	0.7745	0.7580	0.4701	0.7989	0.8443	0.8419	0.8415	0.8413	0.5416
	2ms	0.7696	0.7905	0.7855	0.7744	0.7587	0.4664	0.7983	0.8439	0.8422	0.8419	0.8413	0.5286
	5ms	0.7696	0.7908	0.7871	0.7750	0.7595	0.4629	0.7982	0.8455	0.8439	0.8425	0.8413	0.5153
	10ms	0.7695	0.7913	0.7871	0.7759	0.7638	0.4669	0.7981	0.8438	0.8420	0.8419	0.8401	0.5119
	15ms	0.7693	0.7916	0.7877	0.7759	0.7649	0.4661	0.7990	0.8432	0.8419	0.8410	0.8406	0.5260
	20ms	0.7693	0.7918	0.7883	0.7772	0.7644	0.4639	0.7992	0.8424	0.8419	0.8413	0.8413	0.5095
	25ms	0.7693	0.7918	0.7886	0.7787	0.7680	0.4652	0.7998	0.8424	0.8424	0.8417	0.8424	0.5079
	50ms	0.7696	0.7927	0.7901	0.7817	0.7750	0.4560	0.8009	0.8454	0.8444	0.8431	0.8454	0.4775
	75ms	0.7698	0.7937	0.7904	0.7838	0.7772	0.4526	0.8018	0.8492	0.8479	0.8485	0.8490	0.4707
	100ms	0.7698	0.7939	0.7906	0.7831	0.7781	0.4541	0.8028	0.8474	0.8471	0.8464	0.8498	0.4705
	150ms	0.7698	0.7941	0.7921	0.7846	0.7784	0.4573	0.8038	0.8515	0.8515	0.8508	0.8526	0.4966
	200ms	0.7698	0.7939	0.7926	0.7835	0.7767	0.4620	0.8030	0.8540	0.8540	0.8523	0.8540	0.4996
	500ms	0.7712	0.7972	0.7962	0.7893	0.7855	0.4822	0.8029	0.8557	0.8557	0.8558	0.8566	0.5376
	750ms	0.7723	0.7983	0.7977	0.7905	0.7863	0.4855	0.8053	0.8562	0.8562	0.8557	0.8567	0.5445
	1sec	0.7731	0.7991	0.7986	0.7905	0.7880	0.4973	0.8046	0.8574	0.8574	0.8576	0.8588	0.5536
	5sec	0.7776	0.8040	0.8036	0.7951	0.7926	0.5571	0.8100	0.8637	0.8627	0.8616	0.8638	0.6117
	15sec	0.7803	0.8059	0.8052	0.7977	0.7949	0.5951	0.8145	0.8644	0.8644	0.8630	0.8644	0.6545
	30sec	0.7828	0.8076	0.8077	0.8002	0.7959	0.6215	0.8184	0.8663	0.8644	0.8640	0.8644	0.6739
	60sec	0.7841	0.8066	0.8066	0.7987	0.7947	0.6428	0.8184	0.8587	0.8587	0.8607	0.8618	0.6989
	300sec	0.7874	0.8017	0.8018	0.7959	0.7901	0.6697	0.8161	0.8586	0.8593	0.8594	0.8598	0.7216
	600sec	0.7902	0.7991	0.7991	0.7951	0.7918	0.6828	0.8205	0.8515	0.8509	0.8517	0.8528	0.7279
	900sec	0.7914	0.7992	0.8003	0.7961	0.7929	0.6772	0.8206	0.8501	0.8499	0.8507	0.8540	0.7259
	1200sec	0.7928	0.7981	0.7987	0.7954	0.7909	0.6884	0.8260	0.8444	0.8439	0.8447	0.8471	0.7345
	1500sec	0.7937	0.7980	0.7985	0.7949	0.7939	0.6819	0.8273	0.8458	0.8445	0.8459	0.8484	0.7268
	1800sec	0.7957	0.7986	0.7991	0.7962	0.7945	0.6861	0.8339	0.8488	0.8480	0.8499	0.8523	0.7334
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.4959	-0.0246	-0.0248	-0.0250	-0.0290	-0.0788	-0.0246	-0.0205	-0.0192	-0.0184	-0.0649	0.0000
	1ms	0.3572	0.3595	0.3608	0.3612	0.3606	0.2793	0.3999	0.3752	0.3748	0.3749	0.3748	0.1907
	2ms	0.4639	0.4286	0.4290	0.4315	0.4268	0.3060	0.5133	0.4995	0.4996	0.4996	0.4996	0.3281
	5ms	0.5331	0.4730	0.4747	0.4743	0.4707	0.3344	0.5870	0.5383	0.5413	0.5482	0.5487	0.3560
	10ms	0.5732	0.4909	0.4940	0.4942	0.4935	0.3674	0.6492	0.5356	0.5311	0.5357	0.5334	0.3997
	15ms	0.5877	0.5209	0.5231	0.5240	0.5243	0.3846	0.6730	0.5727	0.5710	0.5811	0.5826	0.4221
	20ms	0.6106	0.5487	0.5488	0.5497	0.5460	0.3918	0.7152	0.6001	0.5996	0.6028	0.6003	0.4002
	25ms	0.6247	0.5680	0.5674	0.5682	0.5646	0.4013	0.7279	0.6248	0.6246	0.6366	0.6388	0.3938
	50ms	0.6855	0.6434	0.6432	0.6402	0.6393	0.4598	0.8127	0.7403	0.7371	0.7438	0.7497	0.4418
	75ms	0.7142	0.6816	0.6808	0.6781	0.6749	0.4863	0.8417	0.7772	0.7762	0.7845	0.7773	0.4837
	100ms	0.7267	0.6993	0.6972	0.6949	0.6880	0.4915	0.8474	0.7977	0.7966	0.7998	0.7992	0.4996
	150ms	0.7405	0.7158	0.7153	0.7117	0.7018	0.5015	0.8598	0.8157	0.8137	0.8160	0.8157	0.5116
	200ms	0.7486	0.7293	0.7280	0.7246	0.7127	0.5093	0.8581	0.8270	0.8269	0.8273	0.8273	0.5333
	500ms	0.7734	0.7596	0.7573	0.7516	0.7399	0.5218	0.8643	0.8390	0.8364	0.8408	0.8352	0.5667
	750ms	0.7850	0.7738	0.7711	0.7650	0.7525	0.5318	0.8699	0.8548	0.8548	0.8540	0.8512	0.5689
	1sec	0.7924	0.7809	0.7782	0.7717	0.7589	0.5341	0.8724	0.8620	0.8620	0.8610	0.8579	0.5784
	5sec	0.8113	0.8060	0.8022	0.7971	0.7812	0.5422	0.8716	0.8760	0.8766	0.8768	0.8750	0.6016
	15sec	0.8146	0.8133	0.8081	0.8046	0.7869	0.5409	0.8757	0.8830	0.8832	0.8834	0.8832	0.5955
	30sec	0.8170	0.8186	0.8133	0.8104	0.7924	0.5433	0.8756	0.8827	0.8819	0.8831	0.8835	0.6141
	60sec	0.8160	0.8200	0.8149	0.8107	0.7936	0.5429	0.8695	0.8838	0.8838	0.8850	0.8843	0.6194
	300sec	0.8143	0.8196	0.8134	0.8071	0.7924	0.5231	0.8631	0.8817	0.8817	0.8827	0.8819	0.6058
	600sec	0.8113	0.8146	0.8086	0.8011	0.7843	0.5102	0.8564	0.8743	0.8739	0.8748	0.8745	0.5770
	900sec	0.8102	0.8163	0.8098	0.8012	0.7846	0.5125	0.8572	0.8747	0.8731	0.8762	0.8753	0.5873
	1200sec	0.8111	0.8164	0.8090	0.8013	0.7844	0.5113	0.8550	0.8734	0.8723	0.8737	0.8715	0.5761
	1500sec	0.8111	0.8150	0.8083	0.7995	0.7847	0.5086	0.8561	0.8709	0.8699	0.8715	0.8696	0.5689
	1800sec	0.8113	0.8139	0.8068	0.7987	0.7829	0.5061	0.8573	0.8710	0.8705	0.8719	0.8694	0.5786

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 90 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.138: The Fifth-order Spreads Autocorrelations (90 days before maturity)

90 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.9145	0.3741	0.3808	0.4025	0.4225	0.5647	0.9576	0.3030	0.3323	0.3616	0.4034	0.5617
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.9145	0.3741	0.3808	0.4025	0.4225	0.5647	0.9576	0.3030	0.3323	0.3616	0.4034	0.5617
$\Omega^{\tilde{\mathscr{P}}D}$		0.7770	0.8792	0.8913	0.8078	0.8705	0.8217	0.9476	0.9277	0.9266	0.8411	0.9094	0.8435
$\Omega^{\tilde{\mathscr{P}}E}$		0.5796	0.5965	0.5929	0.5852	0.5726	0.2683	0.6067	0.6498	0.6471	0.6455	0.6418	0.1908
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5787	0.5620	0.5585	0.5531	0.5430	0.2726	0.6201	0.6183	0.6179	0.6130	0.1874	0.0000
	1ms	0.5796	0.5964	0.5928	0.5851	0.5725	0.2670	0.6065	0.6514	0.6479	0.6472	0.6425	0.1794
	2ms	0.5795	0.5962	0.5926	0.5849	0.5722	0.2668	0.6065	0.6498	0.6464	0.6453	0.6403	0.1887
	5ms	0.5794	0.5956	0.5928	0.5850	0.5722	0.2693	0.6063	0.6512	0.6466	0.6452	0.6389	0.1952
	10ms	0.5789	0.5956	0.5928	0.5854	0.5738	0.2763	0.6062	0.6488	0.6482	0.6454	0.6418	0.2071
	15ms	0.5786	0.5954	0.5926	0.5848	0.5754	0.2781	0.6067	0.6493	0.6476	0.6462	0.6432	0.2124
	20ms	0.5784	0.5952	0.5932	0.5853	0.5760	0.2790	0.6073	0.6495	0.6474	0.6466	0.6454	0.2052
	25ms	0.5783	0.5949	0.5927	0.5856	0.5765	0.2802	0.6067	0.6474	0.6461	0.6461	0.6449	0.2071
	50ms	0.5782	0.5948	0.5931	0.5867	0.5806	0.2759	0.6050	0.6478	0.6477	0.6471	0.6465	0.1958
	75ms	0.5780	0.5952	0.5941	0.5899	0.5838	0.2694	0.6057	0.6511	0.6511	0.6514	0.6512	0.1639
	100ms	0.5776	0.5952	0.5939	0.5886	0.5847	0.2692	0.6060	0.6519	0.6519	0.6524	0.6537	0.1662
	150ms	0.5771	0.5954	0.5941	0.5900	0.5856	0.2712	0.6030	0.6530	0.6528	0.6523	0.6531	0.1798
	200ms	0.5767	0.5957	0.5947	0.5899	0.5852	0.2744	0.6022	0.6566	0.6565	0.6562	0.6583	0.1879
	500ms	0.5777	0.5979	0.5970	0.5935	0.5911	0.2819	0.6068	0.6589	0.6587	0.6612	0.6634	0.2174
	750ms	0.5782	0.5993	0.5985	0.5947	0.5924	0.2822	0.6078	0.6605	0.6600	0.6595	0.6639	0.2132
	1sec	0.5789	0.6005	0.5997	0.5955	0.5936	0.2898	0.6081	0.6623	0.6607	0.6624	0.6644	0.2346
	5sec	0.5832	0.6064	0.6055	0.6008	0.5997	0.3301	0.6120	0.6706	0.6706	0.6708	0.6714	0.3008
	15sec	0.5861	0.6119	0.6107	0.6061	0.6027	0.3574	0.6171	0.6775	0.6773	0.6770	0.6773	0.3381
	30sec	0.5885	0.6165	0.6156	0.6105	0.6059	0.3821	0.6183	0.6821	0.6821	0.6819	0.6824	0.3630
	60sec	0.5910	0.6193	0.6188	0.6125	0.6104	0.4019	0.6195	0.6801	0.6802	0.6814	0.6839	0.3929
	300sec	0.5983	0.6210	0.6201	0.6159	0.6108	0.4331	0.6269	0.6719	0.6719	0.6735	0.6727	0.4275
	600sec	0.6027	0.6208	0.6194	0.6168	0.6137	0.4463	0.6286	0.6657	0.6657	0.6662	0.6670	0.4531
	900sec	0.6037	0.6196	0.6182	0.6164	0.6134	0.4369	0.6263	0.6690	0.6681	0.6677	0.6683	0.4411
	1200sec	0.6056	0.6179	0.6164	0.6157	0.6119	0.4429	0.6260	0.6648	0.6612	0.6616	0.6648	0.4523
	1500sec	0.6063	0.6161	0.6148	0.6133	0.6124	0.4430	0.6313	0.6615	0.6602	0.6608	0.6619	0.4464
	1800sec	0.6082	0.6166	0.6152	0.6139	0.6123	0.4392	0.6383	0.6660	0.6656	0.6659	0.6687	0.4429
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.3232	0.0027	0.0034	0.0030	0.0030	0.0053	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1ms	0.1385	0.0984	0.0985	0.0983	0.0998	0.0402	0.0752	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1641	0.1320	0.1327	0.1334	0.1323	0.0545	0.0721	0.0000	0.0000	0.0000	-0.0001	-0.0001
	5ms	0.2181	0.1840	0.1847	0.1852	0.1859	0.0874	0.0996	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.2839	0.2290	0.2294	0.2304	0.2331	0.1234	0.1614	0.0458	0.0421	0.0425	0.0454	-0.0001
	15ms	0.3213	0.2673	0.2682	0.2702	0.2716	0.1453	0.2215	0.1091	0.1111	0.1112	0.1118	0.0000
	20ms	0.3532	0.3008	0.3006	0.3022	0.3022	0.1632	0.2771	0.1544	0.1530	0.1561	0.1554	0.0000
	25ms	0.3731	0.3201	0.3192	0.3209	0.3206	0.1709	0.3275	0.1860	0.1819	0.1944	0.1940	0.0050
	50ms	0.4401	0.3907	0.3901	0.3908	0.3900	0.2018	0.4740	0.3536	0.3424	0.3531	0.3544	0.0424
	75ms	0.4711	0.4242	0.4246	0.4251	0.4228	0.2088	0.5350	0.4122	0.4084	0.4110	0.4124	0.0566
	100ms	0.4840	0.4386	0.4391	0.4401	0.4368	0.2142	0.5655	0.4449	0.4428	0.4524	0.4523	0.0638
	150ms	0.5016	0.4594	0.4594	0.4587	0.4542	0.2259	0.5879	0.5003	0.4992	0.5028	0.5008	0.0994
	200ms	0.5111	0.4730	0.4726	0.4715	0.4659	0.2333	0.5882	0.5207	0.5210	0.5236	0.5193	0.1135
	500ms	0.5442	0.5072	0.5051	0.5031	0.4961	0.2470	0.6324	0.5493	0.5449	0.5567	0.5461	0.1479
	750ms	0.5583	0.5250	0.5240	0.5210	0.5138	0.2560	0.6332	0.5846	0.5843	0.5833	0.5789	0.1701
	1sec	0.5698	0.5353	0.5343	0.5314	0.5240	0.2607	0.6469	0.5992	0.5993	0.5971	0.5949	0.1750
	5sec	0.6034	0.5788	0.5773	0.5746	0.5656	0.2838	0.6797	0.6396	0.6387	0.6416	0.6375	0.2438
	15sec	0.6124	0.5947	0.5925	0.5905	0.5792	0.2896	0.6736	0.6728	0.6727	0.6732	0.6728	0.2777
	30sec	0.6157	0.6046	0.6015	0.5999	0.5888	0.2974	0.6785	0.6682	0.6694	0.6700	0.6694	0.2795
	60sec	0.6171	0.6136	0.6105	0.6080	0.5963	0.3017	0.6667	0.6736	0.6737	0.6747	0.6737	0.2863
	300sec	0.6228	0.6304	0.6259	0.6233	0.6105	0.3013	0.6623	0.6890	0.6899	0.6909	0.6911	0.2938
	600sec	0.6240	0.6336	0.6290	0.6257	0.6102	0.2959	0.6692	0.6871	0.6877	0.6896	0.6894	0.2840
	900sec	0.6236	0.6355	0.6306	0.6259	0.6099	0.2963	0.6635	0.6909	0.6904	0.6912	0.6911	0.2874
	1200sec	0.6262	0.6372	0.6316	0.6273	0.6106	0.2932	0.6608	0.6877	0.6866	0.6894	0.6869	0.2771
	1500sec	0.6257	0.6353	0.6300	0.6258	0.6108	0.2926	0.6621	0.6865	0.6860	0.6868	0.6869	0.2759
	1800sec	0.6261	0.6342	0.6288	0.6242	0.6085	0.2918	0.6609	0.6923	0.6923	0.6925	0.6923	0.2777

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 90 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.139: The Tenth-order Spreads Autocorrelations (90 days before maturity)

90 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8712	0.2955	0.3006	0.3181	0.3364	0.5139	0.9263	0.1969	0.2209	0.2353	0.2658	0.4614
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8712	0.2955	0.3006	0.3181	0.3364	0.5139	0.9263	0.1969	0.2209	0.2353	0.2658	0.4614
$\Omega^{\tilde{\mathscr{P}}D}$		0.7372	0.8358	0.8459	0.7343	0.8150	0.7528	0.9137	0.8928	0.8866	0.7701	0.8639	0.7757
$\Omega^{\tilde{\mathscr{P}}E}$		0.4915	0.5012	0.4982	0.4930	0.4818	0.1943	0.5070	0.5391	0.5361	0.5370	0.5312	0.0865
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.4921	0.4739	0.4711	0.4672	0.4580	0.1946	0.5086	0.5080	0.5081	0.5018	0.0722	0.0000
	1ms	0.4915	0.5010	0.4981	0.4929	0.4817	0.1937	0.5070	0.5384	0.5362	0.5364	0.5312	0.0749
	2ms	0.4915	0.5006	0.4977	0.4925	0.4813	0.1931	0.5070	0.5382	0.5331	0.5345	0.5312	0.0691
	5ms	0.4913	0.4998	0.4975	0.4923	0.4805	0.1980	0.5070	0.5379	0.5353	0.5357	0.5314	0.0832
	10ms	0.4906	0.4991	0.4969	0.4919	0.4816	0.2036	0.5069	0.5361	0.5348	0.5352	0.5317	0.0889
	15ms	0.4902	0.4990	0.4967	0.4911	0.4828	0.2031	0.5061	0.5360	0.5332	0.5345	0.5324	0.0988
	20ms	0.4898	0.4983	0.4964	0.4913	0.4830	0.2056	0.5058	0.5362	0.5343	0.5356	0.5339	0.0973
	25ms	0.4897	0.4979	0.4959	0.4910	0.4828	0.2077	0.5054	0.5353	0.5343	0.5352	0.5317	0.0897
	50ms	0.4891	0.4966	0.4953	0.4916	0.4851	0.2053	0.5048	0.5354	0.5341	0.5350	0.5337	0.0814
	75ms	0.4888	0.4977	0.4967	0.4939	0.4875	0.2001	0.5046	0.5365	0.5343	0.5358	0.5365	0.0758
	100ms	0.4883	0.4979	0.4968	0.4932	0.4889	0.1998	0.5033	0.5401	0.5383	0.5385	0.5400	0.0768
	150ms	0.4875	0.4978	0.4968	0.4942	0.4896	0.2004	0.5045	0.5412	0.5376	0.5385	0.5411	0.0816
	200ms	0.4870	0.4984	0.4975	0.4943	0.4896	0.2031	0.5029	0.5441	0.5435	0.5434	0.5442	0.0905
	500ms	0.4869	0.4989	0.4982	0.4961	0.4932	0.2091	0.5053	0.5435	0.5429	0.5437	0.5442	0.1117
	750ms	0.4868	0.4990	0.4987	0.4962	0.4935	0.2080	0.5057	0.5432	0.5417	0.5421	0.5441	0.1097
	1sec	0.4871	0.4989	0.4986	0.4959	0.4938	0.2118	0.5060	0.5443	0.5419	0.5443	0.5466	0.1182
	5sec	0.4902	0.5041	0.5034	0.5006	0.4988	0.2405	0.5085	0.5565	0.5565	0.5545	0.5595	0.1611
	15sec	0.4932	0.5109	0.5097	0.5072	0.5038	0.2615	0.5144	0.5683	0.5682	0.5677	0.5677	0.1872
	30sec	0.4942	0.5155	0.5147	0.5118	0.5072	0.2834	0.5164	0.5628	0.5629	0.5620	0.5628	0.2214
	60sec	0.4982	0.5221	0.5216	0.5169	0.5148	0.2997	0.5193	0.5682	0.5682	0.5656	0.5682	0.2481
	300sec	0.5044	0.5291	0.5281	0.5252	0.5207	0.3330	0.5176	0.5716	0.5716	0.5720	0.5723	0.2831
	600sec	0.5084	0.5288	0.5278	0.5255	0.5216	0.3390	0.5176	0.5544	0.5556	0.5550	0.5544	0.3074
	900sec	0.5103	0.5290	0.5280	0.5262	0.5231	0.3322	0.5154	0.5544	0.5542	0.5516	0.5544	0.2922
	1200sec	0.5129	0.5280	0.5267	0.5256	0.5223	0.3392	0.5177	0.5568	0.5545	0.5556	0.5586	0.3060
	1500sec	0.5139	0.5255	0.5244	0.5226	0.5209	0.3397	0.5203	0.5500	0.5503	0.5485	0.5496	0.3045
	1800sec	0.5161	0.5256	0.5245	0.5228	0.5204	0.3384	0.5263	0.5535	0.5530	0.5528	0.5535	0.3011
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2553	0.0069	0.0068	0.0066	0.0054	0.0052	0.0026	0.0017	0.0001	0.0000	-0.0001	0.0000
	1ms	0.0711	0.0463	0.0463	0.0470	0.0467	0.0100	0.0147	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	2ms	0.0833	0.0621	0.0621	0.0630	0.0627	0.0190	0.0171	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	5ms	0.1256	0.0983	0.0990	0.0997	0.1004	0.0375	0.0288	-0.0001	-0.0001	-0.0001	-0.0001	-0.0002
	10ms	0.1843	0.1393	0.1404	0.1411	0.1428	0.0611	0.0497	-0.0001	-0.0001	-0.0001	-0.0001	-0.0002
	15ms	0.2163	0.1733	0.1744	0.1752	0.1762	0.0783	0.0767	0.0000	0.0000	0.0000	0.0000	-0.0001
	20ms	0.2473	0.2054	0.2053	0.2068	0.2077	0.0902	0.1070	0.0177	0.0171	0.0175	0.0155	-0.0001
	25ms	0.2699	0.2270	0.2265	0.2277	0.2282	0.1016	0.1316	0.0488	0.0482	0.0493	0.0442	-0.0001
	50ms	0.3376	0.2926	0.2922	0.2931	0.2938	0.1277	0.2668	0.1525	0.1518	0.1529	0.1536	0.0000
	75ms	0.3717	0.3254	0.3255	0.3265	0.3252	0.1351	0.3630	0.2182	0.2179	0.2182	0.2180	0.0000
	100ms	0.3852	0.3387	0.3388	0.3398	0.3393	0.1383	0.3951	0.2447	0.2499	0.2511	0.2480	0.0051
	150ms	0.4007	0.3546	0.3543	0.3546	0.3531	0.1479	0.4157	0.2902	0.2893	0.2917	0.2901	0.0140
	200ms	0.4096	0.3640	0.3646	0.3641	0.3623	0.1523	0.4317	0.3135	0.3195	0.3135	0.3136	0.0198
	500ms	0.4376	0.3917	0.3907	0.3895	0.3867	0.1607	0.4796	0.3691	0.3664	0.3634	0.3631	0.0381
	750ms	0.4490	0.4087	0.4087	0.4070	0.4036	0.1685	0.4805	0.4024	0.4022	0.4023	0.4023	0.0459
	1sec	0.4585	0.4177	0.4177	0.4160	0.4122	0.1697	0.4920	0.4292	0.4286	0.4282	0.4265	0.0515
	5sec	0.4935	0.4634	0.4626	0.4616	0.4559	0.1887	0.5441	0.4818	0.4831	0.4834	0.4824	0.1103
	15sec	0.5039	0.4820	0.4804	0.4799	0.4725	0.1973	0.5367	0.5215	0.5208	0.5249	0.5237	0.1349
	30sec	0.5071	0.4899	0.4872	0.4871	0.4800	0.2020	0.5377	0.5249	0.5249	0.5315	0.5274	0.1412
	60sec	0.5101	0.5020	0.4994	0.4981	0.4904	0.2077	0.5363	0.5442	0.5434	0.5452	0.5446	0.1574
	300sec	0.5192	0.5272	0.5236	0.5235	0.5147	0.2148	0.5401	0.5637	0.5643	0.5681	0.5684	0.1613
	600sec	0.5216	0.5329	0.5297	0.5275	0.5155	0.2111	0.5512	0.5678	0.5675	0.5695	0.5689	0.1554
	900sec	0.5235	0.5381	0.5343	0.5312	0.5191	0.2129	0.5487	0.5661	0.5650	0.5709	0.5642	0.1575
	1200sec	0.5263	0.5406	0.5362	0.5336	0.5207	0.2112	0.5534	0.5741	0.5726	0.5742	0.5719	0.1493
	1500sec	0.5280	0.5394	0.5351	0.5322	0.5200	0.2124	0.5563	0.5661	0.5666	0.5685	0.5663	0.1496
	1800sec	0.5290	0.5383	0.5340	0.5307	0.5172	0.2107	0.5499	0.5734	0.5728	0.5745	0.5696	0.1423

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 90 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.140: The First-order Spreads Autocorrelations (180 days before maturity)

180 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.9685	0.5771	0.5864	0.6101	0.6299	0.6459	0.9886	0.5972	0.6297	0.6664	0.6993	0.7084
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.9685	0.5771	0.5864	0.6101	0.6299	0.6459	0.9886	0.5972	0.6297	0.6664	0.6993	0.7084
$\Omega^{\tilde{\mathscr{P}}D}$		0.8331	0.9406	0.9643	0.9139	0.9543	0.9238	0.9825	0.9714	0.9818	0.9405	0.9768	0.9323
$\Omega^{\tilde{\mathscr{P}}E}$		0.7545	0.7842	0.7806	0.7744	0.7609	0.4664	0.7899	0.8422	0.8413	0.8417	0.8419	0.5253
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.7522	0.7300	0.7262	0.7232	0.7144	0.4808	0.8110	0.8108	0.8122	0.8127	0.5333	0.0000
	1ms	0.7545	0.7843	0.7807	0.7745	0.7609	0.4638	0.7899	0.8424	0.8416	0.8419	0.8419	0.5213
	2ms	0.7545	0.7845	0.7807	0.7746	0.7614	0.4609	0.7899	0.8435	0.8419	0.8421	0.8422	0.5094
	5ms	0.7544	0.7848	0.7816	0.7751	0.7620	0.4574	0.7899	0.8439	0.8428	0.8430	0.8430	0.5065
	10ms	0.7544	0.7859	0.7826	0.7768	0.7658	0.4630	0.7904	0.8436	0.8423	0.8427	0.8435	0.5120
	15ms	0.7544	0.7864	0.7832	0.7771	0.7675	0.4625	0.7903	0.8444	0.8424	0.8425	0.8454	0.5178
	20ms	0.7545	0.7869	0.7839	0.7781	0.7677	0.4614	0.7914	0.8457	0.8445	0.8448	0.8458	0.5125
	25ms	0.7546	0.7870	0.7842	0.7790	0.7697	0.4626	0.7924	0.8467	0.8458	0.8463	0.8471	0.5108
	50ms	0.7550	0.7887	0.7863	0.7819	0.7752	0.4625	0.7923	0.8493	0.8480	0.8490	0.8508	0.4997
	75ms	0.7552	0.7903	0.7875	0.7838	0.7778	0.4577	0.7927	0.8529	0.8524	0.8529	0.8541	0.4930
	100ms	0.7555	0.7914	0.7886	0.7845	0.7789	0.4580	0.7938	0.8544	0.8540	0.8545	0.8560	0.4817
	150ms	0.7558	0.7928	0.7903	0.7864	0.7806	0.4608	0.7943	0.8563	0.8557	0.8563	0.8584	0.4996
	200ms	0.7559	0.7927	0.7906	0.7860	0.7798	0.4647	0.7950	0.8565	0.8562	0.8565	0.8572	0.4998
	500ms	0.7582	0.7974	0.7948	0.7910	0.7859	0.4892	0.7965	0.8614	0.8602	0.8613	0.8629	0.5463
	750ms	0.7597	0.7991	0.7968	0.7931	0.7883	0.4982	0.7977	0.8614	0.8609	0.8616	0.8630	0.5582
	1sec	0.7613	0.8005	0.7983	0.7941	0.7901	0.5070	0.7985	0.8621	0.8618	0.8623	0.8643	0.5619
	5sec	0.7690	0.8071	0.8049	0.8001	0.7960	0.5664	0.8083	0.8679	0.8676	0.8679	0.8693	0.6243
	15sec	0.7741	0.8087	0.8060	0.8021	0.7984	0.6070	0.8146	0.8710	0.8701	0.8705	0.8716	0.6650
	30sec	0.7766	0.8086	0.8061	0.8024	0.7982	0.6314	0.8173	0.8715	0.8710	0.8717	0.8730	0.6846
	60sec	0.7796	0.8069	0.8047	0.8008	0.7974	0.6511	0.8194	0.8652	0.8646	0.8653	0.8679	0.7008
	300sec	0.7871	0.8024	0.7995	0.7978	0.7967	0.6794	0.8234	0.8607	0.8602	0.8608	0.8623	0.7276
	600sec	0.7905	0.7996	0.7980	0.7961	0.7956	0.6877	0.8274	0.8569	0.8558	0.8572	0.8593	0.7348
	900sec	0.7910	0.7996	0.7989	0.7975	0.7980	0.6832	0.8294	0.8540	0.8532	0.8543	0.8566	0.7334
	1200sec	0.7926	0.7995	0.7980	0.7974	0.7970	0.6921	0.8321	0.8522	0.8512	0.8515	0.8551	0.7363
	1500sec	0.7942	0.7999	0.7991	0.7978	0.7986	0.6902	0.8337	0.8513	0.8511	0.8514	0.8542	0.7354
	1800sec	0.7967	0.8020	0.8008	0.7998	0.8006	0.6885	0.8370	0.8533	0.8529	0.8534	0.8552	0.7396
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.4852	-0.0219	-0.0215	-0.0211	-0.0261	-0.0760	-0.0192	-0.0178	-0.0169	-0.0163	-0.0622	0.0000
	1ms	0.3863	0.3638	0.3637	0.3635	0.3639	0.2808	0.4458	0.3990	0.3992	0.3993	0.3990	0.2221
	2ms	0.4721	0.4163	0.4159	0.4180	0.4187	0.2912	0.5350	0.4993	0.4993	0.4994	0.4994	0.2999
	5ms	0.5349	0.4573	0.4587	0.4592	0.4606	0.3043	0.6030	0.5179	0.5176	0.5199	0.5252	0.3329
	10ms	0.5746	0.5002	0.5025	0.5047	0.5063	0.3480	0.6577	0.5542	0.5530	0.5574	0.5611	0.3457
	15ms	0.5966	0.5344	0.5359	0.5383	0.5406	0.3691	0.6972	0.6019	0.6018	0.6067	0.6109	0.3553
	20ms	0.6214	0.5650	0.5659	0.5677	0.5682	0.3837	0.7342	0.6399	0.6419	0.6484	0.6526	0.3729
	25ms	0.6356	0.5876	0.5881	0.5898	0.5896	0.4009	0.7511	0.6707	0.6664	0.6732	0.6768	0.3687
	50ms	0.6969	0.6639	0.6644	0.6634	0.6645	0.4566	0.8370	0.7850	0.7863	0.7899	0.7934	0.4262
	75ms	0.7252	0.7016	0.7014	0.7005	0.7013	0.4813	0.8635	0.8250	0.8254	0.8260	0.8295	0.4717
	100ms	0.7395	0.7211	0.7207	0.7194	0.7175	0.4894	0.8718	0.8433	0.8437	0.8458	0.8477	0.4935
	150ms	0.7548	0.7411	0.7421	0.7396	0.7360	0.5035	0.8806	0.8594	0.8594	0.8615	0.8619	0.5111
	200ms	0.7629	0.7517	0.7521	0.7493	0.7447	0.5097	0.8827	0.8638	0.8635	0.8642	0.8657	0.5337
	500ms	0.7844	0.7794	0.7789	0.7754	0.7700	0.5248	0.8917	0.8752	0.8746	0.8758	0.8758	0.5719
	750ms	0.7940	0.7908	0.7899	0.7863	0.7786	0.5334	0.8947	0.8823	0.8824	0.8824	0.8831	0.5861
	1sec	0.8000	0.7972	0.7962	0.7924	0.7846	0.5358	0.8926	0.8834	0.8833	0.8833	0.8841	0.5940
	5sec	0.8168	0.8177	0.8162	0.8133	0.8029	0.5411	0.8920	0.8913	0.8924	0.8926	0.8947	0.6024
	15sec	0.8171	0.8227	0.8208	0.8178	0.8060	0.5395	0.8871	0.8962	0.8971	0.8974	0.8990	0.5953
	30sec	0.8170	0.8248	0.8221	0.8201	0.8074	0.5401	0.8848	0.8977	0.8979	0.8982	0.9000	0.6014
	60sec	0.8159	0.8245	0.8224	0.8190	0.8067	0.5364	0.8777	0.8922	0.8923	0.8927	0.8944	0.5962
	300sec	0.8153	0.8199	0.8170	0.8121	0.7993	0.5221	0.8683	0.8834	0.8835	0.8845	0.8863	0.5854
	600sec	0.8130	0.8151	0.8120	0.8060	0.7922	0.5111	0.8617	0.8764	0.8762	0.8770	0.8781	0.5732
	900sec	0.8113	0.8155	0.8108	0.8047	0.7907	0.5127	0.8629	0.8760	0.8757	0.8763	0.8773	0.5780
	1200sec	0.8117	0.8144	0.8085	0.8042	0.7898	0.5108	0.8611	0.8744	0.8728	0.8751	0.8752	0.5784
	1500sec	0.8124	0.8138	0.8086	0.8035	0.7899	0.5116	0.8612	0.8713	0.8709	0.8719	0.8719	0.5768
	1800sec	0.8130	0.8146	0.8090	0.8044	0.7893	0.5087	0.8604	0.8715	0.8707	0.8718	0.8718	0.5771

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 180 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.141: The Fifth-order Spreads Autocorrelations (180 days before maturity)

180 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.9104	0.3557	0.3648	0.3863	0.4068	0.4982	0.9580	0.2882	0.3184	0.3492	0.3963	0.4265
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.9104	0.3557	0.3648	0.3863	0.4068	0.4982	0.9580	0.2882	0.3184	0.3492	0.3963	0.4265
$\Omega^{\tilde{\mathscr{P}}D}$		0.7599	0.8725	0.9065	0.7924	0.8776	0.8011	0.9430	0.9277	0.9422	0.8327	0.9235	0.8166
$\Omega^{\tilde{\mathscr{P}}E}$		0.5804	0.5873	0.5843	0.5808	0.5730	0.2545	0.6166	0.6510	0.6474	0.6478	0.6475	0.1802
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5790	0.5532	0.5501	0.5483	0.5430	0.2616	0.6219	0.6212	0.6214	0.6214	0.1856	0.0000
	1ms	0.5804	0.5874	0.5844	0.5809	0.5730	0.2547	0.6165	0.6514	0.6480	0.6489	0.6488	0.1790
	2ms	0.5803	0.5873	0.5844	0.5809	0.5729	0.2548	0.6166	0.6509	0.6471	0.6474	0.6470	0.1859
	5ms	0.5802	0.5870	0.5844	0.5809	0.5729	0.2573	0.6169	0.6519	0.6502	0.6512	0.6508	0.1887
	10ms	0.5799	0.5873	0.5847	0.5815	0.5744	0.2656	0.6166	0.6522	0.6497	0.6501	0.6501	0.2001
	15ms	0.5798	0.5875	0.5849	0.5814	0.5760	0.2683	0.6167	0.6519	0.6491	0.6491	0.6495	0.2064
	20ms	0.5797	0.5876	0.5855	0.5819	0.5766	0.2699	0.6164	0.6519	0.6504	0.6511	0.6544	0.2060
	25ms	0.5796	0.5874	0.5852	0.5820	0.5767	0.2714	0.6163	0.6518	0.6495	0.6500	0.6528	0.2092
	50ms	0.5795	0.5885	0.5867	0.5839	0.5805	0.2720	0.6162	0.6586	0.6580	0.6585	0.6601	0.2104
	75ms	0.5792	0.5903	0.5887	0.5871	0.5844	0.2661	0.6161	0.6627	0.6608	0.6625	0.6658	0.1909
	100ms	0.5790	0.5914	0.5897	0.5876	0.5859	0.2644	0.6160	0.6648	0.6642	0.6650	0.6687	0.1891
	150ms	0.5790	0.5928	0.5912	0.5896	0.5881	0.2646	0.6178	0.6686	0.6676	0.6687	0.6734	0.1952
	200ms	0.5785	0.5931	0.5916	0.5900	0.5881	0.2661	0.6182	0.6704	0.6697	0.6722	0.6757	0.1975
	500ms	0.5796	0.5973	0.5955	0.5945	0.5939	0.2822	0.6229	0.6758	0.6746	0.6769	0.6795	0.2272
	750ms	0.5803	0.5995	0.5977	0.5965	0.5960	0.2861	0.6233	0.6787	0.6776	0.6799	0.6820	0.2347
	1sec	0.5814	0.6012	0.5994	0.5982	0.5975	0.2901	0.6238	0.6819	0.6808	0.6827	0.6855	0.2397
	5sec	0.5881	0.6118	0.6098	0.6078	0.6073	0.3312	0.6317	0.6962	0.6959	0.6966	0.6988	0.3052
	15sec	0.5933	0.6198	0.6173	0.6154	0.6134	0.3658	0.6402	0.7034	0.7025	0.7032	0.7057	0.3463
	30sec	0.5950	0.6242	0.6216	0.6196	0.6166	0.3910	0.6413	0.7073	0.7068	0.7073	0.7092	0.3790
	60sec	0.5987	0.6268	0.6245	0.6217	0.6206	0.4050	0.6417	0.7041	0.7021	0.7036	0.7072	0.3991
	300sec	0.6063	0.6275	0.6247	0.6233	0.6224	0.4394	0.6474	0.6927	0.6925	0.6944	0.6963	0.4341
	600sec	0.6103	0.6267	0.6243	0.6229	0.6233	0.4484	0.6533	0.6916	0.6905	0.6921	0.6936	0.4557
	900sec	0.6103	0.6248	0.6228	0.6223	0.6233	0.4457	0.6471	0.6865	0.6857	0.6868	0.6888	0.4534
	1200sec	0.6117	0.6241	0.6221	0.6223	0.6224	0.4506	0.6511	0.6825	0.6824	0.6835	0.6876	0.4603
	1500sec	0.6130	0.6233	0.6216	0.6212	0.6222	0.4509	0.6531	0.6833	0.6827	0.6836	0.6862	0.4570
	1800sec	0.6152	0.6244	0.6226	0.6225	0.6229	0.4480	0.6566	0.6860	0.6850	0.6863	0.6891	0.4588
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.3127	0.0043	0.0046	0.0044	0.0041	0.0025	0.0017	0.0016	0.0004	0.0000	0.0000	0.0000
	1ms	0.1463	0.0864	0.0865	0.0861	0.0867	0.0328	0.0900	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1686	0.1263	0.1262	0.1264	0.1261	0.0460	0.0917	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2218	0.1792	0.1796	0.1800	0.1814	0.0776	0.1171	0.0152	0.0190	0.0225	0.0251	-0.0001
	10ms	0.2878	0.2359	0.2359	0.2370	0.2400	0.1163	0.1904	0.0919	0.0917	0.0956	0.1043	0.0000
	15ms	0.3300	0.2784	0.2787	0.2807	0.2834	0.1400	0.2596	0.1546	0.1547	0.1570	0.1599	0.0000
	20ms	0.3661	0.3143	0.3144	0.3162	0.3186	0.1595	0.3286	0.2087	0.2092	0.2114	0.2154	0.0139
	25ms	0.3901	0.3389	0.3383	0.3405	0.3425	0.1697	0.3749	0.2492	0.2497	0.2588	0.2610	0.0234
	50ms	0.4659	0.4192	0.4193	0.4204	0.4219	0.1982	0.5447	0.4390	0.4396	0.4416	0.4451	0.0604
	75ms	0.4980	0.4558	0.4565	0.4575	0.4587	0.2074	0.6127	0.5162	0.5180	0.5191	0.5218	0.0721
	100ms	0.5136	0.4739	0.4751	0.4760	0.4764	0.2123	0.6375	0.5600	0.5621	0.5631	0.5649	0.0911
	150ms	0.5340	0.4965	0.4978	0.4974	0.4976	0.2251	0.6587	0.5992	0.6008	0.6029	0.6115	0.1175
	200ms	0.5445	0.5096	0.5101	0.5096	0.5092	0.2317	0.6664	0.6149	0.6149	0.6157	0.6215	0.1330
	500ms	0.5744	0.5424	0.5422	0.5412	0.5400	0.2501	0.6954	0.6401	0.6400	0.6406	0.6417	0.1704
	750ms	0.5865	0.5561	0.5562	0.5545	0.5518	0.2592	0.7047	0.6608	0.6601	0.6604	0.6621	0.1868
	1sec	0.5955	0.5651	0.5650	0.5634	0.5606	0.2630	0.7101	0.6697	0.6688	0.6674	0.6715	0.1974
	5sec	0.6247	0.6009	0.6009	0.5994	0.5954	0.2818	0.7198	0.6986	0.7000	0.7011	0.7060	0.2467
	15sec	0.6310	0.6159	0.6155	0.6136	0.6078	0.2878	0.7167	0.7121	0.7128	0.7144	0.7171	0.2574
	30sec	0.6320	0.6238	0.6223	0.6212	0.6144	0.2949	0.7113	0.7147	0.7154	0.7163	0.7184	0.2748
	60sec	0.6323	0.6312	0.6299	0.6280	0.6207	0.2962	0.7060	0.7158	0.7162	0.7175	0.7216	0.2786
	300sec	0.6346	0.6391	0.6367	0.6344	0.6243	0.2969	0.6969	0.7126	0.7134	0.7138	0.7162	0.2833
	600sec	0.6334	0.6394	0.6369	0.6342	0.6227	0.2934	0.6947	0.7056	0.7075	0.7093	0.7104	0.2821
	900sec	0.6320	0.6390	0.6357	0.6324	0.6211	0.2930	0.6854	0.7075	0.7064	0.7083	0.7104	0.2855
	1200sec	0.6324	0.6387	0.6347	0.6324	0.6208	0.2900	0.6830	0.7034	0.7017	0.7039	0.7049	0.2765
	1500sec	0.6327	0.6384	0.6344	0.6318	0.6210	0.2929	0.6864	0.7016	0.7006	0.7022	0.7031	0.2783
	1800sec	0.6330	0.6385	0.6344	0.6316	0.6197	0.2911	0.6858	0.7035	0.7036	0.7050	0.7056	0.2793

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 180 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.142: The Tenth-order Spreads Autocorrelations (180 days before maturity)

180 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8662	0.2709	0.2783	0.2950	0.3128	0.4361	0.9271	0.1749	0.1952	0.2190	0.2479	0.3011
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8662	0.2709	0.2783	0.2950	0.3128	0.4361	0.9271	0.1749	0.1952	0.2190	0.2479	0.3011
$\Omega^{\tilde{\mathscr{P}}D}$		0.7189	0.8287	0.8662	0.7149	0.8265	0.7290	0.9086	0.8928	0.9109	0.7570	0.8812	0.7489
$\Omega^{\tilde{\mathscr{P}}E}$		0.5195	0.4998	0.4972	0.4951	0.4882	0.1834	0.5408	0.5442	0.5411	0.5437	0.5441	0.0660
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5199	0.4724	0.4698	0.4683	0.4635	0.1857	0.5198	0.5185	0.5197	0.5195	0.0577	0.0000
	1ms	0.5195	0.4999	0.4973	0.4951	0.4883	0.1838	0.5408	0.5441	0.5411	0.5436	0.5437	0.0664
	2ms	0.5195	0.4997	0.4971	0.4949	0.4880	0.1839	0.5407	0.5449	0.5412	0.5440	0.5441	0.0653
	5ms	0.5193	0.4990	0.4968	0.4946	0.4876	0.1882	0.5406	0.5442	0.5432	0.5440	0.5441	0.0713
	10ms	0.5188	0.4985	0.4963	0.4943	0.4882	0.1946	0.5396	0.5479	0.5441	0.5451	0.5442	0.0869
	15ms	0.5185	0.4985	0.4963	0.4940	0.4892	0.1968	0.5406	0.5458	0.5439	0.5448	0.5458	0.0929
	20ms	0.5182	0.4982	0.4962	0.4941	0.4893	0.1983	0.5405	0.5442	0.5430	0.5438	0.5456	0.0938
	25ms	0.5180	0.4977	0.4957	0.4937	0.4892	0.2001	0.5401	0.5445	0.5415	0.5439	0.5451	0.0903
	50ms	0.5172	0.4978	0.4963	0.4949	0.4913	0.2020	0.5382	0.5477	0.5458	0.5471	0.5483	0.1004
	75ms	0.5165	0.5000	0.4985	0.4977	0.4950	0.1969	0.5373	0.5502	0.5482	0.5486	0.5533	0.0857
	100ms	0.5159	0.5012	0.4997	0.4985	0.4966	0.1956	0.5392	0.5537	0.5535	0.5536	0.5549	0.0858
	150ms	0.5153	0.5027	0.5012	0.5005	0.4989	0.1942	0.5383	0.5587	0.5580	0.5584	0.5615	0.0901
	200ms	0.5146	0.5033	0.5019	0.5013	0.4995	0.1952	0.5370	0.5620	0.5609	0.5614	0.5634	0.0916
	500ms	0.5137	0.5055	0.5041	0.5042	0.5038	0.2086	0.5385	0.5652	0.5645	0.5651	0.5685	0.1231
	750ms	0.5137	0.5065	0.5054	0.5054	0.5053	0.2101	0.5395	0.5688	0.5673	0.5686	0.5722	0.1180
	1sec	0.5141	0.5075	0.5064	0.5063	0.5065	0.2119	0.5413	0.5729	0.5713	0.5734	0.5789	0.1238
	5sec	0.5161	0.5167	0.5152	0.5146	0.5147	0.2409	0.5434	0.5886	0.5865	0.5882	0.5921	0.1708
	15sec	0.5188	0.5271	0.5252	0.5249	0.5234	0.2700	0.5491	0.5997	0.5939	0.5978	0.6019	0.2079
	30sec	0.5197	0.5338	0.5319	0.5314	0.5289	0.2915	0.5508	0.6047	0.6038	0.6051	0.6066	0.2384
	60sec	0.5222	0.5394	0.5376	0.5359	0.5348	0.3020	0.5547	0.6042	0.6029	0.6046	0.6082	0.2539
	300sec	0.5263	0.5458	0.5434	0.5427	0.5416	0.3414	0.5581	0.6018	0.6012	0.6028	0.6049	0.2935
	600sec	0.5296	0.5458	0.5437	0.5428	0.5419	0.3481	0.5624	0.5978	0.5950	0.5979	0.6000	0.3150
	900sec	0.5301	0.5443	0.5427	0.5423	0.5425	0.3463	0.5591	0.5946	0.5918	0.5924	0.5986	0.3112
	1200sec	0.5319	0.5446	0.5428	0.5429	0.5427	0.3533	0.5597	0.5891	0.5875	0.5902	0.5974	0.3211
	1500sec	0.5328	0.5431	0.5417	0.5413	0.5415	0.3525	0.5580	0.5878	0.5859	0.5889	0.5962	0.3229
	1800sec	0.5346	0.5431	0.5416	0.5413	0.5412	0.3523	0.5633	0.5937	0.5931	0.5939	0.5965	0.3232
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2527	0.0068	0.0067	0.0067	0.0058	0.0045	0.0036	0.0033	0.0021	0.0000	-0.0001	0.0000
	1ms	0.0774	0.0393	0.0388	0.0391	0.0393	0.0056	0.0288	-0.0002	-0.0002	-0.0002	-0.0001	-0.0001
	2ms	0.0901	0.0584	0.0581	0.0584	0.0584	0.0134	0.0274	-0.0001	-0.0002	-0.0001	-0.0002	-0.0001
	5ms	0.1315	0.0968	0.0969	0.0972	0.0981	0.0327	0.0399	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	10ms	0.1918	0.1460	0.1461	0.1468	0.1484	0.0591	0.0747	0.0000	0.0000	0.0000	0.0000	-0.0001
	15ms	0.2311	0.1847	0.1849	0.1860	0.1876	0.0778	0.1147	0.0237	0.0246	0.0260	0.0261	-0.0001
	20ms	0.2663	0.2189	0.2188	0.2202	0.2221	0.0923	0.1585	0.0585	0.0580	0.0597	0.0611	-0.0001
	25ms	0.2915	0.2438	0.2434	0.2448	0.2466	0.1028	0.2056	0.0901	0.0904	0.0918	0.0952	0.0000
	50ms	0.3717	0.3196	0.3196	0.3206	0.3226	0.1288	0.3757	0.2486	0.2500	0.2521	0.2555	0.0042
	75ms	0.4091	0.3582	0.3583	0.3594	0.3608	0.1367	0.4657	0.3438	0.3453	0.3473	0.3520	0.0118
	100ms	0.4268	0.3760	0.3763	0.3772	0.3784	0.1400	0.4969	0.3878	0.3858	0.3894	0.3951	0.0157
	150ms	0.4476	0.3963	0.3969	0.3974	0.3986	0.1495	0.5237	0.4360	0.4353	0.4361	0.4427	0.0259
	200ms	0.4595	0.4074	0.4082	0.4083	0.4096	0.1531	0.5379	0.4523	0.4536	0.4558	0.4603	0.0315
	500ms	0.4873	0.4336	0.4339	0.4332	0.4339	0.1649	0.5722	0.4872	0.4896	0.4882	0.4948	0.0514
	750ms	0.4978	0.4465	0.4472	0.4461	0.4458	0.1726	0.5810	0.5120	0.5116	0.5129	0.5152	0.0604
	1sec	0.5050	0.4547	0.4551	0.4542	0.4538	0.1747	0.5851	0.5212	0.5204	0.5210	0.5230	0.0680
	5sec	0.5333	0.4921	0.4924	0.4915	0.4899	0.1885	0.6067	0.5694	0.5702	0.5738	0.5763	0.1115
	15sec	0.5400	0.5100	0.5101	0.5089	0.5059	0.1972	0.6090	0.5871	0.5869	0.5875	0.5908	0.1293
	30sec	0.5415	0.5192	0.5182	0.5176	0.5139	0.2034	0.6030	0.5923	0.5946	0.5955	0.5968	0.1449
	60sec	0.5421	0.5298	0.5287	0.5275	0.5229	0.2047	0.6012	0.5954	0.5953	0.5958	0.5988	0.1574
	300sec	0.5443	0.5467	0.5450	0.5434	0.5370	0.2143	0.5948	0.6069	0.6089	0.6112	0.6130	0.1687
	600sec	0.5445	0.5503	0.5484	0.5461	0.5377	0.2145	0.5873	0.6025	0.6016	0.6068	0.6079	0.1622
	900sec	0.5442	0.5518	0.5491	0.5467	0.5382	0.2143	0.5852	0.6022	0.6002	0.6036	0.6061	0.1657
	1200sec	0.5451	0.5533	0.5499	0.5485	0.5397	0.2134	0.5847	0.6050	0.6035	0.6063	0.6061	0.1559
	1500sec	0.5461	0.5529	0.5495	0.5476	0.5391	0.2157	0.5910	0.5979	0.5972	0.5994	0.6020	0.1648
	1800sec	0.5462	0.5524	0.5490	0.5468	0.5372	0.2133	0.5905	0.6009	0.5995	0.6025	0.6029	0.1618

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 180 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.143: The First-order Spreads Autocorrelations (360 days before maturity)

360 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}^Q}$		0.9606	0.5827	0.5898	0.6156	0.6356	0.6017	0.9856	0.6112	0.6346	0.6714	0.6948	0.6212
$\Omega^{\tilde{\mathscr{P}}^{Q^{1/2}}}$		0.9606	0.5827	0.5898	0.6156	0.6356	0.6017	0.9856	0.6112	0.6346	0.6714	0.6948	0.6212
$\Omega^{\tilde{\mathscr{P}}^D}$		0.8190	0.9254	0.9648	0.8989	0.9559	0.9139	0.9763	0.9605	0.9840	0.9327	0.9769	0.9208
$\Omega^{\tilde{\mathscr{P}}^E}$		0.7059	0.7457	0.7444	0.7420	0.7319	0.4474	0.7478	0.8038	0.8034	0.8036	0.8041	0.4996
$\Omega^{\tilde{\mathscr{P}}^R}$	Tick	0.7027	0.6865	0.6847	0.6847	0.6787	0.4704	0.7635	0.7636	0.7644	0.7656	0.4994	0.0000
	1ms	0.7059	0.7458	0.7446	0.7422	0.7321	0.4444	0.7477	0.8044	0.8043	0.8043	0.8045	0.4969
	2ms	0.7059	0.7460	0.7447	0.7424	0.7325	0.4411	0.7478	0.8050	0.8049	0.8046	0.8052	0.4874
	5ms	0.7060	0.7466	0.7455	0.7432	0.7338	0.4370	0.7477	0.8068	0.8066	0.8063	0.8068	0.4715
	10ms	0.7061	0.7479	0.7469	0.7448	0.7364	0.4387	0.7479	0.8088	0.8088	0.8087	0.8091	0.4689
	15ms	0.7063	0.7488	0.7479	0.7457	0.7387	0.4401	0.7482	0.8103	0.8102	0.8101	0.8112	0.4712
	20ms	0.7066	0.7496	0.7488	0.7470	0.7389	0.4402	0.7488	0.8121	0.8120	0.8120	0.8133	0.4721
	25ms	0.7068	0.7506	0.7497	0.7482	0.7411	0.4430	0.7493	0.8136	0.8133	0.8132	0.8146	0.4696
	50ms	0.7079	0.7550	0.7544	0.7531	0.7482	0.4454	0.7511	0.8209	0.8207	0.8208	0.8225	0.4679
	75ms	0.7087	0.7581	0.7573	0.7566	0.7528	0.4450	0.7517	0.8260	0.8260	0.8262	0.8282	0.4671
	100ms	0.7094	0.7605	0.7598	0.7587	0.7550	0.4470	0.7526	0.8294	0.8292	0.8299	0.8316	0.4704
	150ms	0.7102	0.7636	0.7629	0.7621	0.7586	0.4512	0.7539	0.8343	0.8342	0.8345	0.8355	0.4848
	200ms	0.7106	0.7650	0.7647	0.7635	0.7594	0.4558	0.7547	0.8353	0.8353	0.8364	0.8373	0.4922
	500ms	0.7143	0.7722	0.7715	0.7704	0.7665	0.4767	0.7595	0.8409	0.8407	0.8410	0.8430	0.5218
	750ms	0.7169	0.7748	0.7743	0.7731	0.7692	0.4880	0.7628	0.8431	0.8430	0.8434	0.8443	0.5351
	1sec	0.7196	0.7767	0.7763	0.7748	0.7713	0.4973	0.7643	0.8444	0.8442	0.8449	0.8461	0.5453
	5sec	0.7334	0.7833	0.7828	0.7808	0.7770	0.5591	0.7765	0.8512	0.8513	0.8513	0.8529	0.6045
	15sec	0.7420	0.7843	0.7834	0.7817	0.7784	0.5984	0.7847	0.8519	0.8520	0.8523	0.8534	0.6417
	30sec	0.7466	0.7831	0.7824	0.7805	0.7774	0.6220	0.7923	0.8514	0.8513	0.8514	0.8521	0.6663
	60sec	0.7512	0.7807	0.7801	0.7782	0.7757	0.6327	0.7979	0.8480	0.8480	0.8483	0.8497	0.6769
	300sec	0.7624	0.7756	0.7747	0.7737	0.7719	0.6599	0.8087	0.8378	0.8374	0.8379	0.8389	0.7064
	600sec	0.7667	0.7762	0.7757	0.7744	0.7734	0.6632	0.8120	0.8331	0.8327	0.8335	0.8356	0.7072
	900sec	0.7674	0.7757	0.7752	0.7747	0.7736	0.6679	0.8148	0.8321	0.8317	0.8323	0.8338	0.7141
	1200sec	0.7680	0.7750	0.7745	0.7743	0.7728	0.6661	0.8175	0.8333	0.8329	0.8335	0.8340	0.7135
	1500sec	0.7686	0.7747	0.7745	0.7736	0.7728	0.6659	0.8175	0.8310	0.8306	0.8314	0.8323	0.7132
	1800sec	0.7704	0.7760	0.7753	0.7746	0.7734	0.6659	0.8212	0.8320	0.8316	0.8320	0.8330	0.7170
$\Omega^{\tilde{\mathscr{P}}^{AS}}$	Tick	0.4592	-0.0198	-0.0208	-0.0212	-0.0249	-0.0854	-0.0181	-0.0173	-0.0170	-0.0161	-0.0745	0.0000
	1ms	0.3899	0.3386	0.3395	0.3397	0.3400	0.2597	0.4520	0.3340	0.3529	0.3462	0.3530	0.1968
	2ms	0.4684	0.4017	0.4022	0.4032	0.4040	0.2773	0.5563	0.4810	0.4830	0.4846	0.4895	0.2916
	5ms	0.5253	0.4628	0.4639	0.4641	0.4656	0.2913	0.5931	0.5094	0.5121	0.5140	0.5160	0.3102
	10ms	0.5661	0.5081	0.5097	0.5098	0.5106	0.3332	0.6466	0.5648	0.5665	0.5688	0.5697	0.3331
	15ms	0.5917	0.5415	0.5420	0.5430	0.5433	0.3550	0.6882	0.6018	0.6022	0.6062	0.6085	0.3367
	20ms	0.6170	0.5730	0.5734	0.5737	0.5732	0.3744	0.7294	0.6389	0.6408	0.6433	0.6487	0.3599
	25ms	0.6308	0.5930	0.5928	0.5933	0.5917	0.3911	0.7519	0.6706	0.6690	0.6716	0.6732	0.3622
	50ms	0.6888	0.6672	0.6669	0.6659	0.6651	0.4459	0.8402	0.7898	0.7893	0.7924	0.7936	0.4190
	75ms	0.7148	0.7032	0.7028	0.7017	0.7003	0.4715	0.8649	0.8301	0.8305	0.8313	0.8322	0.4613
	100ms	0.7284	0.7233	0.7227	0.7209	0.7189	0.4832	0.8753	0.8480	0.8486	0.8488	0.8495	0.4842
	150ms	0.7428	0.7455	0.7455	0.7429	0.7390	0.4981	0.8827	0.8633	0.8633	0.8639	0.8641	0.5111
	200ms	0.7518	0.7566	0.7564	0.7536	0.7493	0.5053	0.8851	0.8704	0.8709	0.8717	0.8718	0.5293
	500ms	0.7735	0.7833	0.7826	0.7798	0.7747	0.5225	0.8923	0.8835	0.8837	0.8838	0.8837	0.5714
	750ms	0.7811	0.7909	0.7902	0.7876	0.7804	0.5285	0.8955	0.8871	0.8872	0.8873	0.8875	0.5805
	1sec	0.7863	0.7964	0.7956	0.7929	0.7858	0.5328	0.8949	0.8878	0.8878	0.8879	0.8887	0.5890
	5sec	0.7960	0.8072	0.8061	0.8041	0.7943	0.5351	0.8886	0.8885	0.8888	0.8889	0.8898	0.5860
	15sec	0.7942	0.8080	0.8071	0.8045	0.7941	0.5326	0.8799	0.8867	0.8869	0.8873	0.8875	0.5797
	30sec	0.7936	0.8062	0.8049	0.8020	0.7917	0.5327	0.8747	0.8844	0.8846	0.8847	0.8849	0.5825
	60sec	0.7919	0.8024	0.8014	0.7980	0.7877	0.5280	0.8669	0.8766	0.8767	0.8770	0.8772	0.5750
	300sec	0.7904	0.7939	0.7923	0.7888	0.7769	0.5145	0.8558	0.8609	0.8610	0.8612	0.8611	0.5661
	600sec	0.7904	0.7918	0.7897	0.7855	0.7727	0.5069	0.8477	0.8563	0.8562	0.8568	0.8567	0.5613
	900sec	0.7886	0.7905	0.7875	0.7833	0.7703	0.5075	0.8468	0.8508	0.8506	0.8514	0.8509	0.5627
	1200sec	0.7875	0.7882	0.7849	0.7819	0.7685	0.5046	0.8447	0.8493	0.8488	0.8494	0.8492	0.5589
	1500sec	0.7875	0.7868	0.7843	0.7806	0.7674	0.5026	0.8436	0.8466	0.8461	0.8469	0.8466	0.5547
	1800sec	0.7879	0.7862	0.7838	0.7802	0.7662	0.5018	0.8435	0.8461	0.8457	0.8463	0.8459	0.5542

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 360 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}^{AS}}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.144: The Fifth-order Spreads Autocorrelations (360 days before maturity)

360 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8892	0.3495	0.3574	0.3810	0.4020	0.4272	0.9473	0.3059	0.3262	0.3651	0.3981	0.3292
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8892	0.3495	0.3574	0.3810	0.4020	0.4272	0.9473	0.3059	0.3262	0.3651	0.3981	0.3292
$\Omega^{\tilde{\mathscr{P}}D}$		0.7327	0.8417	0.9078	0.7588	0.8783	0.7714	0.9250	0.9022	0.9474	0.8136	0.9239	0.7899
$\Omega^{\tilde{\mathscr{P}}E}$		0.5474	0.5382	0.5372	0.5367	0.5325	0.2318	0.5922	0.6017	0.6019	0.6021	0.6014	0.1704
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5448	0.5037	0.5024	0.5033	0.5004	0.2437	0.5687	0.5697	0.5705	0.5698	0.1633	0.0000
	1ms	0.5474	0.5384	0.5374	0.5369	0.5327	0.2321	0.5923	0.6023	0.6025	0.6026	0.6018	0.1723
	2ms	0.5474	0.5385	0.5375	0.5370	0.5328	0.2326	0.5923	0.6033	0.6033	0.6034	0.6026	0.1731
	5ms	0.5473	0.5386	0.5379	0.5374	0.5334	0.2338	0.5922	0.6037	0.6039	0.6041	0.6038	0.1666
	10ms	0.5473	0.5392	0.5384	0.5380	0.5348	0.2390	0.5924	0.6048	0.6053	0.6052	0.6049	0.1712
	15ms	0.5473	0.5395	0.5388	0.5383	0.5364	0.2405	0.5927	0.6062	0.6065	0.6068	0.6075	0.1735
	20ms	0.5474	0.5400	0.5395	0.5391	0.5369	0.2416	0.5934	0.6064	0.6065	0.6069	0.6080	0.1735
	25ms	0.5475	0.5403	0.5398	0.5396	0.5376	0.2429	0.5933	0.6081	0.6080	0.6084	0.6094	0.1722
	50ms	0.5478	0.5449	0.5443	0.5445	0.5440	0.2438	0.5945	0.6173	0.6174	0.6176	0.6201	0.1752
	75ms	0.5479	0.5486	0.5483	0.5493	0.5498	0.2420	0.5954	0.6264	0.6262	0.6265	0.6300	0.1765
	100ms	0.5480	0.5512	0.5508	0.5516	0.5524	0.2424	0.5960	0.6301	0.6297	0.6309	0.6341	0.1786
	150ms	0.5481	0.5550	0.5545	0.5555	0.5569	0.2434	0.5965	0.6398	0.6396	0.6401	0.6424	0.1823
	200ms	0.5478	0.5569	0.5565	0.5575	0.5587	0.2458	0.5964	0.6430	0.6428	0.6434	0.6472	0.1844
	500ms	0.5494	0.5651	0.5644	0.5656	0.5671	0.2584	0.6021	0.6562	0.6558	0.6570	0.6600	0.2073
	750ms	0.5508	0.5683	0.5677	0.5686	0.5702	0.2647	0.6058	0.6578	0.6573	0.6586	0.6603	0.2158
	1sec	0.5527	0.5709	0.5703	0.5711	0.5726	0.2703	0.6071	0.6607	0.6605	0.6611	0.6628	0.2228
	5sec	0.5641	0.5843	0.5835	0.5836	0.5847	0.3128	0.6196	0.6778	0.6783	0.6790	0.6804	0.2824
	15sec	0.5706	0.5931	0.5918	0.5917	0.5914	0.3461	0.6287	0.6865	0.6863	0.6869	0.6889	0.3195
	30sec	0.5734	0.5975	0.5962	0.5960	0.5951	0.3719	0.6336	0.6905	0.6904	0.6908	0.6927	0.3504
	60sec	0.5770	0.5999	0.5988	0.5979	0.5977	0.3816	0.6377	0.6881	0.6881	0.6896	0.6902	0.3627
	300sec	0.5849	0.5995	0.5981	0.5976	0.5964	0.4124	0.6445	0.6780	0.6778	0.6787	0.6799	0.4007
	600sec	0.5883	0.6005	0.5989	0.5984	0.5976	0.4155	0.6483	0.6739	0.6733	0.6745	0.6758	0.4109
	900sec	0.5886	0.5993	0.5978	0.5979	0.5968	0.4235	0.6457	0.6712	0.6706	0.6711	0.6724	0.4143
	1200sec	0.5888	0.5981	0.5969	0.5972	0.5959	0.4220	0.6480	0.6687	0.6682	0.6688	0.6702	0.4092
	1500sec	0.5888	0.5965	0.5953	0.5953	0.5944	0.4195	0.6485	0.6662	0.6660	0.6663	0.6679	0.4110
	1800sec	0.5902	0.5973	0.5961	0.5963	0.5949	0.4219	0.6514	0.6684	0.6681	0.6688	0.6705	0.4125
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2869	0.0041	0.0043	0.0042	0.0039	0.0029	0.0036	0.0035	0.0028	0.0015	0.0000	0.0000
	1ms	0.1370	0.0723	0.0724	0.0725	0.0726	0.0207	0.0857	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1586	0.1165	0.1165	0.1173	0.1168	0.0393	0.0937	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2153	0.1788	0.1793	0.1798	0.1804	0.0738	0.1282	0.0596	0.0598	0.0623	0.0654	0.0000
	10ms	0.2800	0.2389	0.2391	0.2395	0.2414	0.1114	0.1927	0.1266	0.1266	0.1308	0.1331	0.0000
	15ms	0.3207	0.2788	0.2789	0.2800	0.2816	0.1336	0.2598	0.1853	0.1859	0.1886	0.1897	0.0000
	20ms	0.3560	0.3147	0.3148	0.3155	0.3169	0.1518	0.3265	0.2365	0.2374	0.2389	0.2413	0.0309
	25ms	0.3805	0.3387	0.3384	0.3392	0.3403	0.1616	0.3722	0.2740	0.2746	0.2782	0.2794	0.0416
	50ms	0.4616	0.4224	0.4222	0.4227	0.4231	0.1902	0.5586	0.4565	0.4550	0.4577	0.4611	0.0764
	75ms	0.4933	0.4581	0.4583	0.4589	0.4591	0.1999	0.6231	0.5328	0.5332	0.5344	0.5361	0.0952
	100ms	0.5100	0.4777	0.4779	0.4781	0.4773	0.2070	0.6496	0.5718	0.5726	0.5746	0.5750	0.1094
	150ms	0.5318	0.5024	0.5028	0.5024	0.5011	0.2195	0.6792	0.6154	0.6161	0.6168	0.6175	0.1293
	200ms	0.5438	0.5150	0.5151	0.5146	0.5132	0.2266	0.6911	0.6310	0.6311	0.6315	0.6335	0.1443
	500ms	0.5758	0.5485	0.5482	0.5471	0.5450	0.2461	0.7224	0.6679	0.6673	0.6675	0.6675	0.1843
	750ms	0.5869	0.5593	0.5595	0.5582	0.5550	0.2536	0.7279	0.6755	0.6752	0.6754	0.6760	0.1974
	1sec	0.5939	0.5660	0.5663	0.5649	0.5615	0.2581	0.7289	0.6840	0.6833	0.6832	0.6841	0.2065
	5sec	0.6142	0.5896	0.5897	0.5882	0.5838	0.2729	0.7299	0.6997	0.7004	0.7005	0.7024	0.2358
	15sec	0.6151	0.5993	0.5997	0.5976	0.5920	0.2773	0.7195	0.7060	0.7069	0.7072	0.7078	0.2460
	30sec	0.6142	0.6051	0.6047	0.6029	0.5967	0.2840	0.7125	0.7076	0.7083	0.7095	0.7098	0.2619
	60sec	0.6129	0.6087	0.6083	0.6060	0.5996	0.2856	0.7030	0.7061	0.7064	0.7069	0.7071	0.2664
	300sec	0.6107	0.6099	0.6087	0.6065	0.5977	0.2861	0.6894	0.6914	0.6921	0.6922	0.6926	0.2688
	600sec	0.6099	0.6108	0.6093	0.6068	0.5972	0.2837	0.6823	0.6889	0.6897	0.6906	0.6900	0.2734
	900sec	0.6078	0.6097	0.6075	0.6049	0.5953	0.2842	0.6767	0.6860	0.6861	0.6862	0.6863	0.2765
	1200sec	0.6064	0.6080	0.6056	0.6038	0.5938	0.2821	0.6745	0.6842	0.6839	0.6843	0.6844	0.2697
	1500sec	0.6055	0.6066	0.6043	0.6023	0.5924	0.2798	0.6746	0.6805	0.6803	0.6812	0.6810	0.2659
	1800sec	0.6059	0.6065	0.6041	0.6021	0.5917	0.2806	0.6749	0.6819	0.6818	0.6823	0.6821	0.2704

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 360 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.145: The Tenth-order Spreads Autocorrelations (360 days before maturity)

360 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8364	0.2593	0.2659	0.2846	0.3027	0.3572	0.9101	0.1882	0.2040	0.2312	0.2563	0.2154
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8364	0.2593	0.2659	0.2846	0.3027	0.3572	0.9101	0.1882	0.2040	0.2312	0.2563	0.2154
$\Omega^{\tilde{\mathscr{P}}D}$		0.6867	0.7911	0.8686	0.6737	0.8272	0.6902	0.8852	0.8599	0.9157	0.7275	0.8830	0.7175
$\Omega^{\tilde{\mathscr{P}}E}$		0.5298	0.4660	0.4650	0.4641	0.4596	0.1679	0.5589	0.5057	0.5055	0.5058	0.5053	0.0714
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5291	0.4366	0.4357	0.4354	0.4324	0.1721	0.4787	0.4791	0.4796	0.4789	0.0666	0.0000
	1ms	0.5298	0.4661	0.4651	0.4643	0.4598	0.1682	0.5590	0.5062	0.5062	0.5067	0.5059	0.0709
	2ms	0.5298	0.4660	0.4650	0.4642	0.4597	0.1691	0.5590	0.5063	0.5066	0.5070	0.5060	0.0749
	5ms	0.5297	0.4657	0.4649	0.4640	0.4596	0.1712	0.5584	0.5069	0.5075	0.5080	0.5065	0.0766
	10ms	0.5293	0.4655	0.4647	0.4639	0.4602	0.1759	0.5583	0.5077	0.5084	0.5090	0.5084	0.0828
	15ms	0.5290	0.4655	0.4645	0.4637	0.4612	0.1767	0.5582	0.5078	0.5078	0.5084	0.5093	0.0816
	20ms	0.5288	0.4653	0.4645	0.4639	0.4611	0.1774	0.5589	0.5091	0.5092	0.5101	0.5114	0.0820
	25ms	0.5285	0.4652	0.4644	0.4639	0.4613	0.1783	0.5586	0.5109	0.5113	0.5126	0.5143	0.0854
	50ms	0.5275	0.4677	0.4670	0.4670	0.4653	0.1793	0.5575	0.5176	0.5176	0.5184	0.5192	0.0877
	75ms	0.5265	0.4714	0.4709	0.4711	0.4708	0.1771	0.5568	0.5248	0.5246	0.5255	0.5283	0.0884
	100ms	0.5258	0.4738	0.4732	0.4734	0.4730	0.1775	0.5570	0.5301	0.5296	0.5307	0.5338	0.0928
	150ms	0.5248	0.4773	0.4766	0.4770	0.4776	0.1773	0.5568	0.5373	0.5370	0.5380	0.5409	0.0993
	200ms	0.5239	0.4789	0.4782	0.4788	0.4793	0.1787	0.5556	0.5388	0.5388	0.5396	0.5441	0.0990
	500ms	0.5222	0.4852	0.4844	0.4853	0.4865	0.1874	0.5569	0.5544	0.5543	0.5552	0.5589	0.1149
	750ms	0.5220	0.4881	0.4875	0.4883	0.4899	0.1914	0.5586	0.5586	0.5583	0.5594	0.5628	0.1194
	1sec	0.5222	0.4899	0.4893	0.4901	0.4917	0.1948	0.5601	0.5646	0.5641	0.5652	0.5682	0.1221
	5sec	0.5245	0.5027	0.5022	0.5024	0.5039	0.2244	0.5671	0.5831	0.5827	0.5839	0.5865	0.1617
	15sec	0.5246	0.5148	0.5137	0.5136	0.5139	0.2531	0.5710	0.5938	0.5936	0.5940	0.5959	0.1978
	30sec	0.5244	0.5226	0.5214	0.5212	0.5205	0.2756	0.5738	0.6008	0.6008	0.6023	0.6039	0.2255
	60sec	0.5247	0.5285	0.5274	0.5265	0.5260	0.2860	0.5730	0.6021	0.6023	0.6028	0.6042	0.2390
	300sec	0.5253	0.5343	0.5331	0.5323	0.5310	0.3202	0.5741	0.5987	0.5987	0.5989	0.6009	0.2749
	600sec	0.5258	0.5335	0.5321	0.5315	0.5301	0.3254	0.5746	0.5953	0.5945	0.5970	0.5980	0.2868
	900sec	0.5256	0.5321	0.5309	0.5307	0.5297	0.3283	0.5731	0.5910	0.5909	0.5913	0.5931	0.2892
	1200sec	0.5256	0.5315	0.5304	0.5305	0.5294	0.3317	0.5713	0.5862	0.5861	0.5866	0.5893	0.2919
	1500sec	0.5252	0.5298	0.5288	0.5285	0.5276	0.3270	0.5708	0.5843	0.5843	0.5844	0.5861	0.2891
	1800sec	0.5256	0.5300	0.5290	0.5292	0.5277	0.3315	0.5725	0.5886	0.5884	0.5890	0.5905	0.2936
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2351	0.0062	0.0063	0.0063	0.0058	0.0039	0.0046	0.0049	0.0042	0.0028	0.0000	0.0000
	1ms	0.0797	0.0300	0.0298	0.0299	0.0300	0.0007	0.0349	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0925	0.0521	0.0519	0.0522	0.0521	0.0098	0.0346	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1336	0.0981	0.0981	0.0985	0.0988	0.0303	0.0472	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.1918	0.1517	0.1517	0.1520	0.1528	0.0586	0.0858	0.0199	0.0219	0.0225	0.0221	-0.0001
	15ms	0.2301	0.1891	0.1891	0.1898	0.1903	0.0774	0.1247	0.0601	0.0610	0.0637	0.0634	0.0000
	20ms	0.2640	0.2214	0.2213	0.2220	0.2225	0.0917	0.1707	0.1030	0.1053	0.1074	0.1066	0.0000
	25ms	0.2886	0.2445	0.2444	0.2450	0.2453	0.1001	0.2152	0.1405	0.1417	0.1416	0.1422	0.0000
	50ms	0.3777	0.3252	0.3250	0.3254	0.3259	0.1260	0.3990	0.2865	0.2851	0.2878	0.2899	0.0175
	75ms	0.4185	0.3643	0.3640	0.3644	0.3646	0.1345	0.4836	0.3673	0.3668	0.3675	0.3687	0.0281
	100ms	0.4401	0.3845	0.3842	0.3845	0.3840	0.1398	0.5146	0.4130	0.4122	0.4127	0.4132	0.0348
	150ms	0.4659	0.4078	0.4075	0.4076	0.4065	0.1482	0.5507	0.4589	0.4587	0.4591	0.4597	0.0423
	200ms	0.4800	0.4189	0.4188	0.4188	0.4178	0.1526	0.5752	0.4788	0.4797	0.4806	0.4808	0.0516
	500ms	0.5129	0.4478	0.4477	0.4471	0.4455	0.1651	0.6146	0.5249	0.5252	0.5248	0.5248	0.0740
	750ms	0.5237	0.4592	0.4594	0.4587	0.4566	0.1712	0.6264	0.5384	0.5378	0.5374	0.5369	0.0878
	1sec	0.5289	0.4650	0.4652	0.4646	0.4622	0.1741	0.6256	0.5477	0.5474	0.5475	0.5473	0.0926
	5sec	0.5472	0.4903	0.4904	0.4896	0.4865	0.1862	0.6394	0.5776	0.5782	0.5807	0.5815	0.1194
	15sec	0.5469	0.5037	0.5040	0.5027	0.4988	0.1925	0.6361	0.5904	0.5907	0.5916	0.5931	0.1379
	30sec	0.5453	0.5124	0.5120	0.5107	0.5064	0.1996	0.6273	0.5936	0.5946	0.5963	0.5959	0.1504
	60sec	0.5437	0.5212	0.5207	0.5191	0.5140	0.2021	0.6146	0.5963	0.5969	0.5976	0.5981	0.1636
	300sec	0.5383	0.5322	0.5313	0.5294	0.5227	0.2096	0.6014	0.5978	0.5982	0.5995	0.6001	0.1714
	600sec	0.5358	0.5340	0.5328	0.5307	0.5230	0.2097	0.5911	0.5959	0.5962	0.5979	0.5977	0.1725
	900sec	0.5342	0.5345	0.5326	0.5306	0.5227	0.2100	0.5887	0.5946	0.5943	0.5953	0.5953	0.1759
	1200sec	0.5331	0.5342	0.5322	0.5308	0.5227	0.2096	0.5861	0.5943	0.5942	0.5956	0.5951	0.1731
	1500sec	0.5324	0.5333	0.5314	0.5295	0.5215	0.2066	0.5891	0.5905	0.5905	0.5913	0.5913	0.1700
	1800sec	0.5322	0.5332	0.5313	0.5296	0.5208	0.2073	0.5894	0.5927	0.5925	0.5937	0.5929	0.1704

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 360 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.146: The First-order Spreads Autocorrelations (480 days before maturity)

480 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.9560	0.5801	0.5863	0.6113	0.6302	0.5776	0.9837	0.6110	0.6312	0.6653	0.6854	0.5705
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.9560	0.5801	0.5863	0.6113	0.6302	0.5776	0.9837	0.6110	0.6312	0.6653	0.6854	0.5705
$\Omega^{\tilde{\mathscr{P}}D}$		0.8126	0.9152	0.9635	0.8908	0.9544	0.9072	0.9726	0.9538	0.9836	0.9263	0.9751	0.9164
$\Omega^{\tilde{\mathscr{P}}E}$		0.6974	0.7334	0.7324	0.7314	0.7229	0.4359	0.7422	0.7943	0.7940	0.7949	0.7952	0.4816
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.6937	0.6691	0.6671	0.6686	0.6641	0.4616	0.7438	0.7443	0.7455	0.7460	0.4790	0.0000
	1ms	0.6974	0.7336	0.7325	0.7317	0.7230	0.4328	0.7422	0.7945	0.7943	0.7949	0.7954	0.4773
	2ms	0.6974	0.7339	0.7327	0.7319	0.7235	0.4289	0.7422	0.7951	0.7946	0.7955	0.7959	0.4676
	5ms	0.6974	0.7346	0.7335	0.7328	0.7246	0.4242	0.7421	0.7964	0.7961	0.7968	0.7972	0.4513
	10ms	0.6975	0.7359	0.7350	0.7344	0.7272	0.4260	0.7423	0.7987	0.7985	0.7992	0.8000	0.4487
	15ms	0.6978	0.7371	0.7362	0.7355	0.7295	0.4285	0.7427	0.8003	0.7998	0.8005	0.8013	0.4508
	20ms	0.6981	0.7380	0.7373	0.7368	0.7304	0.4291	0.7430	0.8013	0.8012	0.8015	0.8023	0.4553
	25ms	0.6983	0.7392	0.7384	0.7382	0.7325	0.4326	0.7436	0.8030	0.8028	0.8029	0.8039	0.4554
	50ms	0.6994	0.7447	0.7441	0.7440	0.7402	0.4368	0.7451	0.8124	0.8121	0.8124	0.8138	0.4560
	75ms	0.7002	0.7487	0.7479	0.7482	0.7453	0.4384	0.7463	0.8186	0.8181	0.8188	0.8202	0.4602
	100ms	0.7009	0.7515	0.7508	0.7508	0.7481	0.4410	0.7472	0.8235	0.8227	0.8238	0.8255	0.4617
	150ms	0.7019	0.7555	0.7548	0.7549	0.7525	0.4475	0.7492	0.8293	0.8290	0.8297	0.8309	0.4793
	200ms	0.7025	0.7577	0.7572	0.7572	0.7543	0.4516	0.7505	0.8319	0.8317	0.8324	0.8338	0.4841
	500ms	0.7062	0.7656	0.7648	0.7647	0.7619	0.4736	0.7551	0.8392	0.8389	0.8396	0.8406	0.5164
	750ms	0.7091	0.7682	0.7676	0.7672	0.7645	0.4855	0.7592	0.8409	0.8407	0.8413	0.8421	0.5299
	1sec	0.7119	0.7701	0.7696	0.7690	0.7667	0.4959	0.7618	0.8423	0.8420	0.8426	0.8441	0.5419
	5sec	0.7281	0.7778	0.7771	0.7761	0.7734	0.5596	0.7744	0.8488	0.8486	0.8492	0.8504	0.6043
	15sec	0.7373	0.7782	0.7773	0.7764	0.7742	0.5991	0.7849	0.8489	0.8487	0.8491	0.8503	0.6384
	30sec	0.7421	0.7765	0.7760	0.7748	0.7725	0.6220	0.7916	0.8470	0.8467	0.8472	0.8479	0.6628
	60sec	0.7475	0.7746	0.7739	0.7727	0.7710	0.6361	0.7980	0.8434	0.8431	0.8435	0.8444	0.6742
	300sec	0.7593	0.7706	0.7699	0.7691	0.7678	0.6578	0.8096	0.8334	0.8331	0.8334	0.8343	0.7000
	600sec	0.7636	0.7713	0.7710	0.7699	0.7690	0.6643	0.8128	0.8300	0.8299	0.8305	0.8312	0.7036
	900sec	0.7643	0.7712	0.7704	0.7702	0.7696	0.6660	0.8149	0.8288	0.8285	0.8290	0.8298	0.7085
	1200sec	0.7649	0.7707	0.7704	0.7701	0.7690	0.6663	0.8169	0.8294	0.8292	0.8297	0.8306	0.7069
	1500sec	0.7659	0.7707	0.7705	0.7697	0.7695	0.6633	0.8168	0.8276	0.8274	0.8280	0.8292	0.7044
	1800sec	0.7673	0.7716	0.7711	0.7705	0.7696	0.6643	0.8187	0.8279	0.8276	0.8280	0.8287	0.7125
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.4487	-0.0206	-0.0214	-0.0223	-0.0254	-0.0886	-0.0187	-0.0180	-0.0178	-0.0171	-0.0801	0.0000
	1ms	0.3906	0.3371	0.3380	0.3380	0.3385	0.2559	0.4561	0.3573	0.3629	0.3630	0.3634	0.1999
	2ms	0.4631	0.3972	0.3976	0.3985	0.3994	0.2688	0.5530	0.4735	0.4759	0.4768	0.4800	0.2854
	5ms	0.5201	0.4589	0.4595	0.4598	0.4603	0.2868	0.5873	0.5005	0.5004	0.5009	0.5047	0.3099
	10ms	0.5592	0.5051	0.5063	0.5064	0.5071	0.3282	0.6378	0.5557	0.5556	0.5575	0.5586	0.3326
	15ms	0.5863	0.5375	0.5378	0.5384	0.5386	0.3493	0.6818	0.5909	0.5912	0.5941	0.5973	0.3380
	20ms	0.6126	0.5688	0.5691	0.5694	0.5688	0.3688	0.7244	0.6323	0.6340	0.6356	0.6376	0.3596
	25ms	0.6263	0.5875	0.5873	0.5877	0.5860	0.3844	0.7467	0.6638	0.6632	0.6653	0.6664	0.3627
	50ms	0.6838	0.6613	0.6605	0.6598	0.6583	0.4390	0.8378	0.7837	0.7835	0.7850	0.7858	0.4180
	75ms	0.7098	0.6975	0.6967	0.6957	0.6934	0.4655	0.8613	0.8246	0.8253	0.8255	0.8260	0.4558
	100ms	0.7245	0.7189	0.7179	0.7164	0.7140	0.4785	0.8721	0.8426	0.8432	0.8434	0.8440	0.4775
	150ms	0.7385	0.7417	0.7411	0.7389	0.7353	0.4938	0.8801	0.8605	0.8605	0.8608	0.8614	0.5026
	200ms	0.7473	0.7537	0.7527	0.7506	0.7464	0.5005	0.8831	0.8688	0.8687	0.8690	0.8691	0.5207
	500ms	0.7684	0.7800	0.7788	0.7769	0.7715	0.5169	0.8919	0.8830	0.8830	0.8830	0.8827	0.5628
	750ms	0.7757	0.7866	0.7857	0.7838	0.7764	0.5212	0.8946	0.8858	0.8858	0.8858	0.8858	0.5711
	1sec	0.7802	0.7914	0.7905	0.7883	0.7809	0.5249	0.8940	0.8865	0.8865	0.8864	0.8863	0.5767
	5sec	0.7892	0.8013	0.8004	0.7988	0.7894	0.5276	0.8859	0.8861	0.8861	0.8864	0.8866	0.5756
	15sec	0.7875	0.8005	0.7996	0.7978	0.7880	0.5260	0.8767	0.8799	0.8801	0.8805	0.8807	0.5699
	30sec	0.7872	0.7986	0.7973	0.7950	0.7857	0.5255	0.8709	0.8768	0.8770	0.8772	0.8772	0.5688
	60sec	0.7870	0.7952	0.7940	0.7911	0.7817	0.5228	0.8629	0.8673	0.8671	0.8678	0.8680	0.5665
	300sec	0.7858	0.7873	0.7856	0.7831	0.7725	0.5086	0.8513	0.8531	0.8528	0.8535	0.8535	0.5559
	600sec	0.7859	0.7854	0.7830	0.7798	0.7687	0.5031	0.8450	0.8482	0.8481	0.8486	0.8486	0.5490
	900sec	0.7841	0.7837	0.7808	0.7776	0.7663	0.5024	0.8423	0.8438	0.8433	0.8440	0.8437	0.5502
	1200sec	0.7833	0.7816	0.7788	0.7766	0.7647	0.4998	0.8409	0.8425	0.8421	0.8427	0.8424	0.5470
	1500sec	0.7836	0.7805	0.7787	0.7756	0.7641	0.4984	0.8403	0.8418	0.8410	0.8420	0.8415	0.5454
	1800sec	0.7838	0.7801	0.7780	0.7752	0.7631	0.4978	0.8405	0.8407	0.8402	0.8409	0.8404	0.5474

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 480 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.147: The Fifth-order Spreads Autocorrelations (480 days before maturity)

480 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8781	0.3436	0.3506	0.3742	0.3940	0.3968	0.9407	0.3070	0.3231	0.3580	0.3870	0.2885
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8781	0.3436	0.3506	0.3742	0.3940	0.3968	0.9407	0.3070	0.3231	0.3580	0.3870	0.2885
$\Omega^{\tilde{\mathscr{P}}D}$		0.7206	0.8219	0.9056	0.7426	0.8745	0.7601	0.9157	0.8864	0.9457	0.7998	0.9195	0.7811
$\Omega^{\tilde{\mathscr{P}}E}$		0.5388	0.5188	0.5180	0.5183	0.5145	0.2199	0.5883	0.5815	0.5820	0.5825	0.5815	0.1655
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5359	0.4833	0.4823	0.4835	0.4810	0.2335	0.5435	0.5443	0.5455	0.5452	0.1588	0.0000
	1ms	0.5388	0.5190	0.5182	0.5185	0.5147	0.2200	0.5884	0.5820	0.5822	0.5828	0.5820	0.1645
	2ms	0.5388	0.5191	0.5183	0.5186	0.5148	0.2203	0.5886	0.5825	0.5828	0.5834	0.5825	0.1628
	5ms	0.5387	0.5194	0.5188	0.5190	0.5155	0.2215	0.5887	0.5839	0.5843	0.5846	0.5837	0.1616
	10ms	0.5386	0.5200	0.5194	0.5197	0.5168	0.2262	0.5892	0.5850	0.5858	0.5864	0.5853	0.1660
	15ms	0.5387	0.5204	0.5198	0.5201	0.5182	0.2281	0.5897	0.5877	0.5880	0.5884	0.5881	0.1681
	20ms	0.5388	0.5212	0.5208	0.5212	0.5192	0.2292	0.5903	0.5892	0.5900	0.5901	0.5903	0.1667
	25ms	0.5388	0.5215	0.5211	0.5217	0.5200	0.2302	0.5905	0.5893	0.5896	0.5897	0.5898	0.1677
	50ms	0.5391	0.5272	0.5268	0.5276	0.5271	0.2310	0.5909	0.6011	0.6011	0.6020	0.6026	0.1680
	75ms	0.5391	0.5316	0.5313	0.5328	0.5332	0.2308	0.5909	0.6112	0.6104	0.6114	0.6125	0.1716
	100ms	0.5391	0.5349	0.5344	0.5358	0.5364	0.2313	0.5922	0.6173	0.6173	0.6181	0.6192	0.1749
	150ms	0.5392	0.5397	0.5392	0.5405	0.5420	0.2343	0.5926	0.6253	0.6253	0.6255	0.6277	0.1813
	200ms	0.5390	0.5425	0.5421	0.5435	0.5450	0.2358	0.5937	0.6322	0.6324	0.6330	0.6353	0.1838
	500ms	0.5404	0.5526	0.5519	0.5533	0.5549	0.2497	0.5990	0.6487	0.6487	0.6498	0.6523	0.2046
	750ms	0.5420	0.5564	0.5558	0.5571	0.5587	0.2567	0.6023	0.6529	0.6526	0.6540	0.6555	0.2109
	1sec	0.5440	0.5589	0.5584	0.5596	0.5612	0.2637	0.6045	0.6558	0.6558	0.6565	0.6588	0.2214
	5sec	0.5572	0.5737	0.5730	0.5734	0.5745	0.3077	0.6202	0.6733	0.6735	0.6740	0.6762	0.2771
	15sec	0.5638	0.5826	0.5814	0.5815	0.5816	0.3412	0.6289	0.6805	0.6801	0.6812	0.6823	0.3146
	30sec	0.5657	0.5860	0.5848	0.5846	0.5840	0.3653	0.6322	0.6837	0.6833	0.6839	0.6849	0.3428
	60sec	0.5692	0.5883	0.5872	0.5866	0.5864	0.3797	0.6376	0.6796	0.6798	0.6811	0.6827	0.3592
	300sec	0.5769	0.5887	0.5874	0.5868	0.5859	0.4038	0.6452	0.6720	0.6718	0.6725	0.6732	0.3875
	600sec	0.5803	0.5897	0.5885	0.5878	0.5867	0.4104	0.6494	0.6679	0.6679	0.6683	0.6690	0.3996
	900sec	0.5804	0.5884	0.5869	0.5869	0.5861	0.4148	0.6455	0.6666	0.6653	0.6665	0.6677	0.4028
	1200sec	0.5809	0.5878	0.5868	0.5867	0.5856	0.4148	0.6480	0.6636	0.6632	0.6639	0.6648	0.3994
	1500sec	0.5810	0.5867	0.5857	0.5855	0.5847	0.4109	0.6493	0.6617	0.6610	0.6619	0.6628	0.3992
	1800sec	0.5819	0.5870	0.5861	0.5862	0.5847	0.4152	0.6493	0.6631	0.6629	0.6637	0.6645	0.4020
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2763	0.0044	0.0045	0.0044	0.0039	0.0029	0.0044	0.0043	0.0039	0.0025	0.0000	0.0000
	1ms	0.1365	0.0688	0.0690	0.0691	0.0692	0.0167	0.0870	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1546	0.1149	0.1148	0.1155	0.1153	0.0348	0.0940	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2109	0.1780	0.1781	0.1785	0.1788	0.0705	0.1279	0.0672	0.0681	0.0690	0.0691	0.0000
	10ms	0.2731	0.2356	0.2356	0.2358	0.2371	0.1084	0.1921	0.1329	0.1324	0.1332	0.1352	0.0000
	15ms	0.3139	0.2743	0.2742	0.2749	0.2756	0.1297	0.2577	0.1863	0.1866	0.1890	0.1885	0.0171
	20ms	0.3495	0.3093	0.3094	0.3099	0.3105	0.1469	0.3227	0.2359	0.2367	0.2383	0.2392	0.0388
	25ms	0.3741	0.3324	0.3320	0.3326	0.3331	0.1562	0.3684	0.2700	0.2728	0.2748	0.2748	0.0481
	50ms	0.4560	0.4147	0.4143	0.4147	0.4144	0.1855	0.5529	0.4513	0.4493	0.4509	0.4516	0.0818
	75ms	0.4884	0.4505	0.4502	0.4508	0.4500	0.1962	0.6203	0.5241	0.5234	0.5256	0.5260	0.1001
	100ms	0.5064	0.4712	0.4709	0.4711	0.4695	0.2033	0.6478	0.5640	0.5644	0.5658	0.5645	0.1145
	150ms	0.5284	0.4964	0.4963	0.4961	0.4945	0.2160	0.6787	0.6087	0.6087	0.6092	0.6103	0.1350
	200ms	0.5410	0.5104	0.5098	0.5098	0.5080	0.2226	0.6921	0.6265	0.6263	0.6273	0.6278	0.1480
	500ms	0.5736	0.5443	0.5436	0.5431	0.5406	0.2414	0.7255	0.6684	0.6677	0.6684	0.6675	0.1847
	750ms	0.5845	0.5545	0.5543	0.5536	0.5498	0.2476	0.7318	0.6753	0.6751	0.6754	0.6755	0.1959
	1sec	0.5906	0.5604	0.5603	0.5594	0.5555	0.2519	0.7325	0.6818	0.6816	0.6815	0.6817	0.2059
	5sec	0.6087	0.5818	0.5818	0.5806	0.5761	0.2662	0.7313	0.6962	0.6974	0.6975	0.6983	0.2319
	15sec	0.6085	0.5894	0.5895	0.5881	0.5827	0.2718	0.7184	0.7005	0.7012	0.7015	0.7016	0.2426
	30sec	0.6061	0.5934	0.5929	0.5917	0.5857	0.2770	0.7097	0.6995	0.7001	0.7005	0.7006	0.2554
	60sec	0.6048	0.5962	0.5956	0.5940	0.5878	0.2800	0.6986	0.6920	0.6924	0.6932	0.6935	0.2620
	300sec	0.6007	0.5974	0.5961	0.5947	0.5867	0.2790	0.6839	0.6832	0.6835	0.6838	0.6838	0.2643
	600sec	0.6001	0.5981	0.5964	0.5945	0.5860	0.2780	0.6774	0.6815	0.6816	0.6820	0.6818	0.2682
	900sec	0.5977	0.5964	0.5943	0.5924	0.5840	0.2770	0.6722	0.6759	0.6760	0.6764	0.6763	0.2666
	1200sec	0.5972	0.5955	0.5934	0.5919	0.5830	0.2755	0.6704	0.6748	0.6747	0.6755	0.6749	0.2639
	1500sec	0.5965	0.5944	0.5927	0.5909	0.5822	0.2739	0.6708	0.6724	0.6724	0.6737	0.6726	0.2599
	1800sec	0.5964	0.5941	0.5922	0.5906	0.5815	0.2750	0.6694	0.6741	0.6741	0.6749	0.6742	0.2639

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 480 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.148: The Tenth-order Spreads Autocorrelations (480 days before maturity)

480 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8217	0.2530	0.2589	0.2781	0.2951	0.3261	0.8998	0.1906	0.2034	0.2295	0.2525	0.1923
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8217	0.2530	0.2589	0.2781	0.2951	0.3261	0.8998	0.1906	0.2034	0.2295	0.2525	0.1923
$\Omega^{\tilde{\mathscr{P}}D}$		0.6722	0.7679	0.8658	0.6541	0.8221	0.6766	0.8728	0.8402	0.9138	0.7083	0.8766	0.7076
$\Omega^{\tilde{\mathscr{P}}E}$		0.5269	0.4480	0.4471	0.4465	0.4426	0.1593	0.5569	0.4846	0.4843	0.4857	0.4846	0.0708
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5260	0.4175	0.4165	0.4167	0.4141	0.1644	0.4533	0.4535	0.4546	0.4521	0.0668	0.0000
	1ms	0.5269	0.4482	0.4473	0.4467	0.4429	0.1595	0.5569	0.4849	0.4847	0.4859	0.4852	0.0690
	2ms	0.5268	0.4481	0.4472	0.4466	0.4428	0.1602	0.5570	0.4848	0.4844	0.4857	0.4853	0.0722
	5ms	0.5267	0.4479	0.4472	0.4466	0.4429	0.1627	0.5573	0.4854	0.4854	0.4865	0.4857	0.0762
	10ms	0.5263	0.4477	0.4469	0.4464	0.4433	0.1665	0.5568	0.4867	0.4871	0.4877	0.4871	0.0816
	15ms	0.5260	0.4476	0.4467	0.4462	0.4441	0.1675	0.5559	0.4861	0.4868	0.4882	0.4886	0.0816
	20ms	0.5257	0.4476	0.4468	0.4465	0.4443	0.1680	0.5567	0.4873	0.4874	0.4896	0.4897	0.0827
	25ms	0.5255	0.4475	0.4468	0.4465	0.4445	0.1686	0.5566	0.4873	0.4874	0.4890	0.4905	0.0854
	50ms	0.5243	0.4510	0.4504	0.4505	0.4492	0.1689	0.5559	0.4962	0.4961	0.4969	0.4975	0.0875
	75ms	0.5232	0.4551	0.4545	0.4549	0.4546	0.1679	0.5559	0.5067	0.5063	0.5070	0.5086	0.0878
	100ms	0.5223	0.4581	0.4574	0.4577	0.4575	0.1679	0.5561	0.5123	0.5123	0.5140	0.5167	0.0920
	150ms	0.5211	0.4622	0.4615	0.4619	0.4628	0.1693	0.5554	0.5199	0.5204	0.5210	0.5237	0.0999
	200ms	0.5199	0.4647	0.4640	0.4645	0.4656	0.1698	0.5551	0.5266	0.5270	0.5284	0.5313	0.0982
	500ms	0.5177	0.4730	0.4723	0.4730	0.4746	0.1796	0.5574	0.5430	0.5429	0.5438	0.5458	0.1148
	750ms	0.5177	0.4771	0.4765	0.4773	0.4791	0.1834	0.5597	0.5528	0.5520	0.5534	0.5542	0.1186
	1sec	0.5180	0.4793	0.4788	0.4795	0.4814	0.1885	0.5615	0.5551	0.5549	0.5558	0.5581	0.1237
	5sec	0.5206	0.4938	0.4932	0.4934	0.4949	0.2193	0.5688	0.5767	0.5760	0.5776	0.5792	0.1614
	15sec	0.5197	0.5059	0.5048	0.5048	0.5053	0.2472	0.5713	0.5891	0.5889	0.5902	0.5910	0.1933
	30sec	0.5183	0.5124	0.5113	0.5111	0.5106	0.2688	0.5730	0.5918	0.5916	0.5920	0.5933	0.2203
	60sec	0.5177	0.5178	0.5166	0.5160	0.5156	0.2828	0.5710	0.5931	0.5931	0.5938	0.5956	0.2407
	300sec	0.5174	0.5232	0.5220	0.5213	0.5203	0.3118	0.5726	0.5901	0.5898	0.5902	0.5909	0.2719
	600sec	0.5171	0.5224	0.5214	0.5206	0.5190	0.3184	0.5720	0.5868	0.5864	0.5876	0.5888	0.2806
	900sec	0.5164	0.5205	0.5194	0.5191	0.5183	0.3196	0.5681	0.5813	0.5804	0.5812	0.5824	0.2826
	1200sec	0.5162	0.5203	0.5194	0.5194	0.5182	0.3238	0.5682	0.5781	0.5778	0.5787	0.5796	0.2867
	1500sec	0.5156	0.5190	0.5180	0.5178	0.5170	0.3168	0.5683	0.5765	0.5763	0.5769	0.5782	0.2794
	1800sec	0.5159	0.5187	0.5179	0.5180	0.5165	0.3222	0.5699	0.5804	0.5801	0.5812	0.5825	0.2836
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2283	0.0056	0.0057	0.0058	0.0056	0.0037	0.0046	0.0048	0.0042	0.0031	0.0000	0.0000
	1ms	0.0802	0.0280	0.0278	0.0279	0.0279	-0.0003	0.0367	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0914	0.0505	0.0504	0.0506	0.0505	0.0073	0.0364	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1310	0.0983	0.0980	0.0984	0.0986	0.0279	0.0482	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.1862	0.1500	0.1497	0.1500	0.1504	0.0565	0.0854	0.0285	0.0300	0.0304	0.0294	-0.0001
	15ms	0.2240	0.1858	0.1854	0.1861	0.1862	0.0747	0.1245	0.0706	0.0709	0.0732	0.0715	0.0000
	20ms	0.2577	0.2172	0.2168	0.2174	0.2175	0.0886	0.1708	0.1125	0.1152	0.1165	0.1139	0.0000
	25ms	0.2826	0.2391	0.2388	0.2393	0.2391	0.0966	0.2151	0.1449	0.1460	0.1453	0.1450	0.0000
	50ms	0.3731	0.3187	0.3183	0.3187	0.3184	0.1232	0.3969	0.2850	0.2844	0.2852	0.2851	0.0223
	75ms	0.4149	0.3568	0.3563	0.3566	0.3560	0.1321	0.4782	0.3600	0.3598	0.3604	0.3599	0.0333
	100ms	0.4387	0.3785	0.3778	0.3780	0.3768	0.1375	0.5141	0.4057	0.4045	0.4050	0.4039	0.0406
	150ms	0.4663	0.4025	0.4019	0.4019	0.4003	0.1459	0.5521	0.4528	0.4524	0.4524	0.4526	0.0500
	200ms	0.4817	0.4149	0.4143	0.4143	0.4129	0.1499	0.5754	0.4727	0.4729	0.4738	0.4738	0.0575
	500ms	0.5173	0.4449	0.4444	0.4441	0.4420	0.1623	0.6203	0.5255	0.5250	0.5250	0.5247	0.0807
	750ms	0.5278	0.4559	0.4558	0.4554	0.4526	0.1676	0.6338	0.5380	0.5379	0.5382	0.5369	0.0913
	1sec	0.5330	0.4618	0.4617	0.4613	0.4583	0.1707	0.6353	0.5473	0.5472	0.5472	0.5460	0.0983
	5sec	0.5467	0.4843	0.4843	0.4838	0.4801	0.1820	0.6413	0.5732	0.5735	0.5739	0.5744	0.1215
	15sec	0.5442	0.4959	0.4961	0.4951	0.4911	0.1890	0.6346	0.5834	0.5838	0.5846	0.5843	0.1388
	30sec	0.5401	0.5026	0.5021	0.5013	0.4971	0.1953	0.6248	0.5851	0.5857	0.5864	0.5859	0.1499
	60sec	0.5372	0.5100	0.5095	0.5085	0.5036	0.1991	0.6116	0.5840	0.5853	0.5866	0.5861	0.1639
	300sec	0.5291	0.5198	0.5188	0.5175	0.5115	0.2049	0.5932	0.5863	0.5862	0.5867	0.5865	0.1703
	600sec	0.5262	0.5210	0.5197	0.5183	0.5116	0.2055	0.5864	0.5868	0.5872	0.5881	0.5876	0.1726
	900sec	0.5239	0.5206	0.5189	0.5173	0.5107	0.2042	0.5816	0.5827	0.5825	0.5831	0.5829	0.1723
	1200sec	0.5232	0.5209	0.5191	0.5181	0.5111	0.2047	0.5802	0.5822	0.5819	0.5831	0.5820	0.1712
	1500sec	0.5223	0.5202	0.5186	0.5173	0.5102	0.2019	0.5818	0.5812	0.5812	0.5827	0.5821	0.1694
	1800sec	0.5219	0.5199	0.5182	0.5169	0.5094	0.2027	0.5807	0.5829	0.5824	0.5845	0.5830	0.1700

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 480 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.149: The First-order Spreads Autocorrelations (720 days before maturity)

720 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.9402	0.5728	0.5790	0.6071	0.6276	0.5596	0.9772	0.6041	0.6237	0.6583	0.6808	0.5423
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.9402	0.5728	0.5790	0.6071	0.6276	0.5596	0.9772	0.6041	0.6237	0.6583	0.6808	0.5423
$\Omega^{\tilde{\mathscr{P}}D}$		0.7952	0.8902	0.9565	0.8695	0.9485	0.8909	0.9626	0.9350	0.9805	0.9103	0.9712	0.9091
$\Omega^{\tilde{\mathscr{P}}E}$		0.6943	0.7086	0.7061	0.7086	0.7069	0.4163	0.7406	0.7699	0.7705	0.7730	0.7749	0.4459
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.6906	0.6366	0.6351	0.6417	0.6444	0.4516	0.7093	0.7109	0.7159	0.7203	0.4613	0.0000
	1ms	0.6943	0.7088	0.7063	0.7089	0.7070	0.4133	0.7407	0.7703	0.7708	0.7736	0.7752	0.4421
	2ms	0.6943	0.7090	0.7066	0.7093	0.7075	0.4091	0.7406	0.7709	0.7713	0.7741	0.7759	0.4326
	5ms	0.6943	0.7099	0.7075	0.7102	0.7088	0.4047	0.7406	0.7722	0.7728	0.7750	0.7771	0.4199
	10ms	0.6943	0.7115	0.7092	0.7120	0.7116	0.4070	0.7411	0.7748	0.7753	0.7775	0.7798	0.4134
	15ms	0.6946	0.7130	0.7107	0.7136	0.7140	0.4101	0.7412	0.7764	0.7772	0.7793	0.7826	0.4175
	20ms	0.6948	0.7143	0.7121	0.7151	0.7155	0.4113	0.7417	0.7783	0.7787	0.7815	0.7848	0.4163
	25ms	0.6949	0.7159	0.7138	0.7169	0.7175	0.4158	0.7420	0.7806	0.7811	0.7840	0.7869	0.4180
	50ms	0.6959	0.7234	0.7212	0.7243	0.7261	0.4249	0.7433	0.7913	0.7923	0.7939	0.7971	0.4330
	75ms	0.6966	0.7287	0.7263	0.7296	0.7320	0.4284	0.7439	0.7987	0.7989	0.8011	0.8038	0.4398
	100ms	0.6971	0.7324	0.7301	0.7331	0.7353	0.4322	0.7447	0.8044	0.8044	0.8062	0.8093	0.4436
	150ms	0.6979	0.7376	0.7354	0.7383	0.7406	0.4394	0.7461	0.8125	0.8127	0.8145	0.8171	0.4593
	200ms	0.6984	0.7410	0.7387	0.7415	0.7435	0.4445	0.7480	0.8168	0.8169	0.8182	0.8206	0.4685
	500ms	0.7018	0.7502	0.7482	0.7502	0.7523	0.4679	0.7531	0.8275	0.8276	0.8288	0.8309	0.4999
	750ms	0.7046	0.7531	0.7513	0.7532	0.7551	0.4808	0.7570	0.8295	0.8295	0.8314	0.8336	0.5133
	1sec	0.7077	0.7552	0.7534	0.7551	0.7569	0.4916	0.7606	0.8316	0.8316	0.8331	0.8348	0.5282
	5sec	0.7253	0.7635	0.7618	0.7626	0.7639	0.5599	0.7753	0.8368	0.8371	0.8382	0.8398	0.5997
	15sec	0.7347	0.7646	0.7630	0.7636	0.7652	0.6004	0.7850	0.8369	0.8370	0.8381	0.8400	0.6368
	30sec	0.7395	0.7639	0.7627	0.7625	0.7642	0.6236	0.7914	0.8346	0.8349	0.8360	0.8380	0.6624
	60sec	0.7447	0.7632	0.7622	0.7617	0.7633	0.6404	0.7964	0.8321	0.8324	0.8336	0.8352	0.6769
	300sec	0.7559	0.7623	0.7614	0.7612	0.7632	0.6622	0.8088	0.8254	0.8255	0.8272	0.8286	0.7043
	600sec	0.7595	0.7636	0.7630	0.7629	0.7643	0.6685	0.8121	0.8240	0.8243	0.8257	0.8270	0.7102
	900sec	0.7606	0.7638	0.7630	0.7637	0.7656	0.6692	0.8138	0.8236	0.8237	0.8250	0.8270	0.7142
	1200sec	0.7613	0.7639	0.7636	0.7642	0.7655	0.6702	0.8164	0.8239	0.8240	0.8258	0.8276	0.7151
	1500sec	0.7619	0.7640	0.7637	0.7642	0.7655	0.6690	0.8164	0.8229	0.8234	0.8246	0.8266	0.7130
	1800sec	0.7631	0.7648	0.7637	0.7643	0.7648	0.6688	0.8181	0.8238	0.8238	0.8251	0.8266	0.7155
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.4305	-0.0243	-0.0277	-0.0296	-0.0305	-0.0995	-0.0220	-0.0218	-0.0215	-0.0206	-0.0970	0.0000
	1ms	0.3902	0.3259	0.3259	0.3265	0.3266	0.2370	0.4565	0.3473	0.3396	0.3495	0.3511	0.1667
	2ms	0.4589	0.3918	0.3914	0.3929	0.3937	0.2557	0.5480	0.4613	0.4612	0.4630	0.4661	0.2640
	5ms	0.5098	0.4560	0.4558	0.4569	0.4577	0.2788	0.5742	0.4999	0.4999	0.4999	0.5000	0.2998
	10ms	0.5471	0.4965	0.4969	0.4985	0.5006	0.3185	0.6245	0.5429	0.5424	0.5458	0.5490	0.3223
	15ms	0.5735	0.5263	0.5261	0.5281	0.5299	0.3376	0.6656	0.5725	0.5710	0.5770	0.5814	0.3329
	20ms	0.5997	0.5556	0.5555	0.5574	0.5590	0.3562	0.7065	0.6150	0.6151	0.6190	0.6242	0.3524
	25ms	0.6131	0.5737	0.5733	0.5751	0.5757	0.3719	0.7314	0.6478	0.6460	0.6508	0.6549	0.3575
	50ms	0.6710	0.6456	0.6446	0.6457	0.6459	0.4263	0.8243	0.7653	0.7649	0.7665	0.7689	0.4121
	75ms	0.6986	0.6818	0.6809	0.6812	0.6805	0.4522	0.8506	0.8059	0.8056	0.8064	0.8079	0.4449
	100ms	0.7143	0.7042	0.7032	0.7029	0.7020	0.4659	0.8629	0.8260	0.8259	0.8263	0.8278	0.4637
	150ms	0.7290	0.7287	0.7276	0.7258	0.7237	0.4807	0.8739	0.8454	0.8456	0.8461	0.8477	0.4920
	200ms	0.7384	0.7424	0.7410	0.7387	0.7359	0.4883	0.8789	0.8549	0.8547	0.8555	0.8564	0.5031
	500ms	0.7598	0.7690	0.7667	0.7640	0.7602	0.5039	0.8885	0.8697	0.8695	0.8699	0.8706	0.5352
	750ms	0.7672	0.7754	0.7735	0.7705	0.7651	0.5086	0.8901	0.8730	0.8729	0.8733	0.8739	0.5465
	1sec	0.7715	0.7794	0.7772	0.7738	0.7686	0.5116	0.8902	0.8735	0.8738	0.8741	0.8749	0.5495
	5sec	0.7788	0.7856	0.7834	0.7803	0.7738	0.5151	0.8794	0.8706	0.8709	0.8713	0.8720	0.5519
	15sec	0.7777	0.7842	0.7813	0.7782	0.7720	0.5126	0.8684	0.8639	0.8640	0.8647	0.8656	0.5476
	30sec	0.7776	0.7825	0.7789	0.7763	0.7701	0.5132	0.8621	0.8580	0.8580	0.8589	0.8599	0.5477
	60sec	0.7771	0.7796	0.7761	0.7730	0.7667	0.5104	0.8539	0.8500	0.8501	0.8511	0.8521	0.5440
	300sec	0.7769	0.7756	0.7721	0.7696	0.7614	0.4990	0.8419	0.8411	0.8411	0.8421	0.8428	0.5333
	600sec	0.7770	0.7743	0.7705	0.7679	0.7592	0.4948	0.8383	0.8371	0.8373	0.8379	0.8383	0.5322
	900sec	0.7761	0.7730	0.7685	0.7662	0.7578	0.4933	0.8353	0.8342	0.8341	0.8353	0.8356	0.5320
	1200sec	0.7754	0.7716	0.7673	0.7657	0.7572	0.4923	0.8348	0.8344	0.8342	0.8352	0.8354	0.5305
	1500sec	0.7755	0.7706	0.7676	0.7648	0.7568	0.4911	0.8340	0.8328	0.8326	0.8340	0.8342	0.5291
	1800sec	0.7759	0.7704	0.7668	0.7647	0.7566	0.4900	0.8337	0.8326	0.8325	0.8334	0.8340	0.5280

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 720 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.150: The Fifth-order Spreads Autocorrelations (720 days before maturity)

720 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8428	0.3301	0.3381	0.3641	0.3847	0.3659	0.9191	0.3021	0.3171	0.3515	0.3756	0.2499
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8428	0.3301	0.3381	0.3641	0.3847	0.3659	0.9191	0.3021	0.3171	0.3515	0.3756	0.2499
$\Omega^{\tilde{\mathscr{P}}D}$		0.6919	0.7739	0.8937	0.7041	0.8643	0.7371	0.8897	0.8448	0.9375	0.7625	0.9117	0.7691
$\Omega^{\tilde{\mathscr{P}}E}$		0.5294	0.4790	0.4785	0.4819	0.4833	0.2026	0.5794	0.5357	0.5363	0.5403	0.5438	0.1430
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5265	0.4427	0.4423	0.4472	0.4496	0.2210	0.4935	0.4948	0.5009	0.5055	0.1422	0.0000
	1ms	0.5294	0.4792	0.4788	0.4822	0.4836	0.2024	0.5794	0.5356	0.5364	0.5404	0.5438	0.1415
	2ms	0.5294	0.4794	0.4790	0.4825	0.4839	0.2027	0.5793	0.5367	0.5372	0.5410	0.5441	0.1405
	5ms	0.5293	0.4800	0.4797	0.4832	0.4849	0.2044	0.5792	0.5384	0.5389	0.5426	0.5468	0.1390
	10ms	0.5291	0.4810	0.4806	0.4843	0.4865	0.2080	0.5794	0.5404	0.5409	0.5460	0.5496	0.1425
	15ms	0.5291	0.4818	0.4814	0.4851	0.4880	0.2089	0.5795	0.5432	0.5436	0.5472	0.5520	0.1431
	20ms	0.5291	0.4829	0.4827	0.4865	0.4896	0.2096	0.5798	0.5450	0.5457	0.5490	0.5534	0.1441
	25ms	0.5291	0.4838	0.4836	0.4875	0.4906	0.2105	0.5797	0.5463	0.5465	0.5506	0.5558	0.1466
	50ms	0.5291	0.4911	0.4909	0.4951	0.4993	0.2129	0.5807	0.5597	0.5603	0.5646	0.5688	0.1508
	75ms	0.5287	0.4966	0.4965	0.5012	0.5058	0.2137	0.5816	0.5711	0.5712	0.5751	0.5791	0.1558
	100ms	0.5285	0.5008	0.5006	0.5052	0.5100	0.2153	0.5814	0.5796	0.5803	0.5837	0.5871	0.1599
	150ms	0.5284	0.5072	0.5069	0.5115	0.5169	0.2190	0.5823	0.5907	0.5913	0.5937	0.5975	0.1668
	200ms	0.5280	0.5115	0.5113	0.5158	0.5212	0.2218	0.5830	0.5982	0.5984	0.6017	0.6049	0.1712
	500ms	0.5287	0.5240	0.5239	0.5281	0.5336	0.2371	0.5872	0.6186	0.6190	0.6218	0.6251	0.1937
	750ms	0.5300	0.5285	0.5284	0.5326	0.5380	0.2451	0.5901	0.6248	0.6251	0.6278	0.6312	0.2027
	1sec	0.5324	0.5316	0.5315	0.5354	0.5406	0.2525	0.5942	0.6308	0.6308	0.6332	0.6363	0.2115
	5sec	0.5468	0.5475	0.5470	0.5500	0.5545	0.3020	0.6116	0.6463	0.6464	0.6486	0.6513	0.2756
	15sec	0.5519	0.5563	0.5554	0.5579	0.5618	0.3373	0.6177	0.6519	0.6520	0.6542	0.6573	0.3179
	30sec	0.5526	0.5602	0.5591	0.5610	0.5641	0.3603	0.6219	0.6536	0.6538	0.6558	0.6586	0.3431
	60sec	0.5546	0.5625	0.5614	0.5629	0.5659	0.3774	0.6257	0.6514	0.6516	0.6535	0.6562	0.3634
	300sec	0.5600	0.5647	0.5634	0.5645	0.5669	0.3981	0.6334	0.6462	0.6461	0.6476	0.6505	0.3866
	600sec	0.5627	0.5668	0.5658	0.5667	0.5683	0.4062	0.6338	0.6472	0.6472	0.6487	0.6511	0.4015
	900sec	0.5628	0.5657	0.5644	0.5662	0.5684	0.4079	0.6347	0.6447	0.6446	0.6468	0.6495	0.3998
	1200sec	0.5635	0.5659	0.5648	0.5666	0.5687	0.4092	0.6369	0.6459	0.6458	0.6475	0.6498	0.3995
	1500sec	0.5630	0.5650	0.5639	0.5654	0.5673	0.4066	0.6375	0.6447	0.6449	0.6464	0.6486	0.3994
	1800sec	0.5634	0.5650	0.5636	0.5653	0.5662	0.4081	0.6376	0.6452	0.6451	0.6474	0.6488	0.4002
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2569	0.0036	0.0038	0.0040	0.0032	0.0018	0.0041	0.0040	0.0036	0.0026	0.0000	0.0000
	1ms	0.1359	0.0638	0.0639	0.0641	0.0639	0.0116	0.0908	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1492	0.1080	0.1077	0.1084	0.1081	0.0269	0.0932	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.2001	0.1719	0.1717	0.1724	0.1728	0.0626	0.1195	0.0753	0.0758	0.0769	0.0771	0.0000
	10ms	0.2592	0.2253	0.2251	0.2262	0.2276	0.1000	0.1796	0.1317	0.1303	0.1328	0.1344	0.0000
	15ms	0.2977	0.2605	0.2602	0.2616	0.2627	0.1201	0.2398	0.1755	0.1749	0.1787	0.1807	0.0209
	20ms	0.3316	0.2931	0.2928	0.2943	0.2956	0.1368	0.3008	0.2241	0.2245	0.2272	0.2290	0.0410
	25ms	0.3556	0.3149	0.3143	0.3156	0.3171	0.1461	0.3466	0.2563	0.2551	0.2594	0.2612	0.0500
	50ms	0.4386	0.3934	0.3929	0.3942	0.3955	0.1761	0.5295	0.4235	0.4228	0.4253	0.4273	0.0860
	75ms	0.4727	0.4278	0.4274	0.4290	0.4300	0.1875	0.5957	0.4947	0.4928	0.4947	0.4966	0.1018
	100ms	0.4916	0.4488	0.4484	0.4498	0.4500	0.1947	0.6296	0.5320	0.5311	0.5326	0.5345	0.1137
	150ms	0.5143	0.4750	0.4745	0.4754	0.4757	0.2070	0.6596	0.5752	0.5746	0.5764	0.5793	0.1332
	200ms	0.5280	0.4905	0.4899	0.4907	0.4905	0.2140	0.6755	0.5979	0.5969	0.5990	0.6008	0.1448
	500ms	0.5622	0.5253	0.5246	0.5244	0.5234	0.2322	0.7129	0.6402	0.6401	0.6408	0.6419	0.1780
	750ms	0.5731	0.5353	0.5348	0.5346	0.5328	0.2385	0.7217	0.6506	0.6505	0.6516	0.6526	0.1882
	1sec	0.5790	0.5406	0.5399	0.5395	0.5379	0.2424	0.7252	0.6556	0.6552	0.6568	0.6579	0.1956
	5sec	0.5938	0.5571	0.5567	0.5562	0.5536	0.2574	0.7181	0.6631	0.6640	0.6656	0.6666	0.2243
	15sec	0.5907	0.5619	0.5613	0.5604	0.5577	0.2616	0.6997	0.6617	0.6621	0.6638	0.6651	0.2337
	30sec	0.5871	0.5647	0.5632	0.5628	0.5594	0.2673	0.6893	0.6607	0.6608	0.6632	0.6646	0.2454
	60sec	0.5838	0.5665	0.5647	0.5638	0.5605	0.2696	0.6782	0.6559	0.6564	0.6585	0.6598	0.2498
	300sec	0.5781	0.5696	0.5676	0.5663	0.5614	0.2692	0.6608	0.6489	0.6494	0.6520	0.6532	0.2504
	600sec	0.5775	0.5714	0.5691	0.5677	0.5625	0.2690	0.6573	0.6521	0.6526	0.6543	0.6553	0.2526
	900sec	0.5756	0.5699	0.5673	0.5662	0.5609	0.2670	0.6519	0.6495	0.6497	0.6509	0.6521	0.2500
	1200sec	0.5754	0.5700	0.5673	0.5664	0.5613	0.2669	0.6524	0.6501	0.6500	0.6517	0.6523	0.2511
	1500sec	0.5745	0.5693	0.5671	0.5659	0.5610	0.2653	0.6519	0.6493	0.6494	0.6505	0.6512	0.2499
	1800sec	0.5742	0.5688	0.5663	0.5654	0.5603	0.2657	0.6515	0.6503	0.6503	0.6519	0.6525	0.2507

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 720 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.151: The Tenth-order Spreads Autocorrelations (720 days before maturity)

720 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.7766	0.2403	0.2469	0.2678	0.2852	0.2881	0.8669	0.1885	0.1989	0.2251	0.2462	0.1586
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.7766	0.2403	0.2469	0.2678	0.2852	0.2881	0.8669	0.1885	0.1989	0.2251	0.2462	0.1586
$\Omega^{\tilde{\mathscr{P}}D}$		0.6397	0.7126	0.8520	0.6096	0.8097	0.6542	0.8386	0.7847	0.9022	0.6596	0.8669	0.6944
$\Omega^{\tilde{\mathscr{P}}E}$		0.5132	0.4078	0.4067	0.4076	0.4078	0.1457	0.5440	0.4330	0.4341	0.4381	0.4412	0.0602
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5119	0.3772	0.3765	0.3787	0.3799	0.1543	0.3989	0.3996	0.4044	0.4073	0.0563	0.0000
	1ms	0.5131	0.4080	0.4069	0.4079	0.4080	0.1457	0.5439	0.4337	0.4346	0.4382	0.4412	0.0588
	2ms	0.5131	0.4080	0.4069	0.4080	0.4081	0.1465	0.5438	0.4338	0.4341	0.4386	0.4412	0.0598
	5ms	0.5129	0.4081	0.4071	0.4081	0.4085	0.1486	0.5435	0.4347	0.4353	0.4396	0.4419	0.0625
	10ms	0.5125	0.4083	0.4073	0.4085	0.4093	0.1510	0.5438	0.4363	0.4371	0.4412	0.4443	0.0670
	15ms	0.5121	0.4084	0.4074	0.4086	0.4101	0.1512	0.5438	0.4370	0.4379	0.4423	0.4453	0.0671
	20ms	0.5118	0.4088	0.4079	0.4092	0.4108	0.1511	0.5440	0.4372	0.4383	0.4428	0.4463	0.0660
	25ms	0.5115	0.4091	0.4082	0.4096	0.4112	0.1514	0.5435	0.4386	0.4391	0.4434	0.4470	0.0676
	50ms	0.5101	0.4139	0.4130	0.4148	0.4173	0.1520	0.5419	0.4492	0.4492	0.4533	0.4580	0.0766
	75ms	0.5086	0.4186	0.4177	0.4197	0.4227	0.1518	0.5406	0.4575	0.4576	0.4619	0.4671	0.0782
	100ms	0.5074	0.4221	0.4212	0.4232	0.4263	0.1524	0.5400	0.4655	0.4656	0.4690	0.4740	0.0806
	150ms	0.5059	0.4275	0.4266	0.4287	0.4327	0.1540	0.5390	0.4754	0.4761	0.4782	0.4831	0.0877
	200ms	0.5044	0.4311	0.4303	0.4324	0.4366	0.1556	0.5383	0.4823	0.4832	0.4864	0.4906	0.0909
	500ms	0.5016	0.4421	0.4415	0.4439	0.4484	0.1664	0.5391	0.5053	0.5057	0.5086	0.5137	0.1072
	750ms	0.5013	0.4470	0.4465	0.4489	0.4536	0.1712	0.5409	0.5133	0.5140	0.5170	0.5229	0.1106
	1sec	0.5021	0.4499	0.4493	0.4518	0.4563	0.1764	0.5440	0.5201	0.5205	0.5234	0.5281	0.1176
	5sec	0.5057	0.4655	0.4648	0.4670	0.4710	0.2119	0.5561	0.5398	0.5398	0.5424	0.5468	0.1592
	15sec	0.5031	0.4769	0.4760	0.4777	0.4810	0.2409	0.5557	0.5517	0.5516	0.5542	0.5583	0.1935
	30sec	0.4993	0.4825	0.4816	0.4828	0.4853	0.2610	0.5544	0.5544	0.5544	0.5569	0.5611	0.2186
	60sec	0.4965	0.4866	0.4856	0.4864	0.4890	0.2765	0.5512	0.5539	0.5539	0.5558	0.5601	0.2392
	300sec	0.4930	0.4923	0.4912	0.4918	0.4939	0.2997	0.5479	0.5536	0.5533	0.5552	0.5591	0.2625
	600sec	0.4923	0.4929	0.4921	0.4924	0.4940	0.3066	0.5471	0.5538	0.5533	0.5559	0.5600	0.2726
	900sec	0.4916	0.4915	0.4904	0.4915	0.4935	0.3070	0.5453	0.5511	0.5508	0.5529	0.5563	0.2745
	1200sec	0.4915	0.4918	0.4908	0.4921	0.4940	0.3128	0.5440	0.5506	0.5506	0.5525	0.5567	0.2774
	1500sec	0.4907	0.4907	0.4897	0.4906	0.4922	0.3059	0.5445	0.5494	0.5495	0.5512	0.5538	0.2722
	1800sec	0.4906	0.4904	0.4893	0.4903	0.4914	0.3093	0.5459	0.5514	0.5510	0.5529	0.5552	0.2749
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2088	0.0046	0.0044	0.0049	0.0045	0.0027	0.0042	0.0041	0.0038	0.0030	0.0000	0.0000
	1ms	0.0797	0.0250	0.0249	0.0252	0.0250	-0.0008	0.0370	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.0872	0.0455	0.0453	0.0456	0.0454	0.0049	0.0361	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1228	0.0924	0.0922	0.0925	0.0928	0.0242	0.0457	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.1747	0.1409	0.1407	0.1414	0.1420	0.0521	0.0765	0.0324	0.0333	0.0343	0.0342	0.0000
	15ms	0.2101	0.1736	0.1732	0.1742	0.1747	0.0695	0.1130	0.0702	0.0702	0.0723	0.0729	0.0000
	20ms	0.2418	0.2020	0.2014	0.2025	0.2031	0.0827	0.1574	0.1051	0.1056	0.1068	0.1070	0.0000
	25ms	0.2650	0.2218	0.2213	0.2221	0.2226	0.0902	0.1973	0.1337	0.1325	0.1344	0.1344	0.0057
	50ms	0.3536	0.2960	0.2953	0.2961	0.2968	0.1163	0.3715	0.2655	0.2643	0.2657	0.2674	0.0257
	75ms	0.3957	0.3322	0.3314	0.3321	0.3327	0.1257	0.4486	0.3320	0.3297	0.3329	0.3335	0.0361
	100ms	0.4202	0.3537	0.3528	0.3535	0.3537	0.1314	0.4892	0.3700	0.3678	0.3703	0.3706	0.0435
	150ms	0.4490	0.3788	0.3780	0.3784	0.3783	0.1398	0.5323	0.4185	0.4165	0.4173	0.4189	0.0524
	200ms	0.4653	0.3926	0.3921	0.3924	0.3921	0.1442	0.5562	0.4417	0.4403	0.4419	0.4428	0.0604
	500ms	0.5044	0.4248	0.4244	0.4243	0.4234	0.1570	0.6059	0.4926	0.4926	0.4934	0.4949	0.0817
	750ms	0.5156	0.4357	0.4355	0.4354	0.4340	0.1618	0.6211	0.5070	0.5070	0.5084	0.5094	0.0908
	1sec	0.5212	0.4410	0.4406	0.4406	0.4394	0.1645	0.6244	0.5153	0.5154	0.5161	0.5163	0.0971
	5sec	0.5313	0.4587	0.4584	0.4585	0.4565	0.1766	0.6273	0.5331	0.5338	0.5357	0.5358	0.1224
	15sec	0.5245	0.4670	0.4665	0.4662	0.4639	0.1832	0.6119	0.5369	0.5372	0.5392	0.5404	0.1362
	30sec	0.5175	0.4713	0.4702	0.4700	0.4675	0.1891	0.5984	0.5407	0.5411	0.5429	0.5434	0.1469
	60sec	0.5110	0.4762	0.4748	0.4747	0.4718	0.1921	0.5825	0.5406	0.5412	0.5427	0.5439	0.1554
	300sec	0.5007	0.4858	0.4841	0.4835	0.4797	0.1965	0.5615	0.5437	0.5443	0.5468	0.5476	0.1628
	600sec	0.4985	0.4884	0.4864	0.4858	0.4816	0.1967	0.5591	0.5496	0.5499	0.5519	0.5529	0.1636
	900sec	0.4965	0.4882	0.4857	0.4852	0.4811	0.1952	0.5527	0.5469	0.5466	0.5488	0.5496	0.1618
	1200sec	0.4958	0.4890	0.4866	0.4861	0.4823	0.1965	0.5525	0.5469	0.5467	0.5490	0.5496	0.1640
	1500sec	0.4949	0.4887	0.4866	0.4857	0.4817	0.1938	0.5508	0.5467	0.5468	0.5480	0.5485	0.1606
	1800sec	0.4946	0.4883	0.4860	0.4852	0.4810	0.1941	0.5517	0.5486	0.5486	0.5510	0.5515	0.1620

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 720 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.152: The First-order Spreads Autocorrelations (900 days before maturity)

900 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.9273	0.5645	0.5714	0.6049	0.6241	0.5479	0.9693	0.5964	0.6147	0.6532	0.6728	0.5291
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.9273	0.5645	0.5714	0.6049	0.6241	0.5479	0.9693	0.5964	0.6147	0.6532	0.6728	0.5291
$\Omega^{\tilde{\mathscr{P}}D}$		0.7817	0.8719	0.9508	0.8567	0.9459	0.8845	0.9537	0.9188	0.9772	0.8989	0.9700	0.9056
$\Omega^{\tilde{\mathscr{P}}E}$		0.6972	0.6941	0.6896	0.6989	0.7014	0.4001	0.7439	0.7559	0.7573	0.7637	0.7688	0.4173
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.6938	0.6147	0.6145	0.6298	0.6359	0.4436	0.6880	0.6925	0.7036	0.7107	0.4548	0.0000
	1ms	0.6972	0.6943	0.6898	0.6992	0.7015	0.3971	0.7440	0.7560	0.7578	0.7642	0.7693	0.4111
	2ms	0.6972	0.6947	0.6901	0.6996	0.7022	0.3929	0.7441	0.7564	0.7583	0.7648	0.7699	0.4007
	5ms	0.6972	0.6955	0.6911	0.7006	0.7034	0.3889	0.7441	0.7584	0.7602	0.7666	0.7714	0.3887
	10ms	0.6972	0.6972	0.6927	0.7024	0.7061	0.3915	0.7447	0.7613	0.7630	0.7696	0.7743	0.3862
	15ms	0.6974	0.6988	0.6945	0.7041	0.7086	0.3957	0.7445	0.7634	0.7651	0.7718	0.7766	0.3899
	20ms	0.6976	0.7003	0.6960	0.7058	0.7104	0.3973	0.7450	0.7659	0.7676	0.7740	0.7786	0.3900
	25ms	0.6977	0.7021	0.6979	0.7077	0.7126	0.4026	0.7453	0.7686	0.7700	0.7760	0.7805	0.3962
	50ms	0.6984	0.7106	0.7062	0.7162	0.7218	0.4140	0.7462	0.7808	0.7822	0.7868	0.7917	0.4136
	75ms	0.6989	0.7165	0.7121	0.7219	0.7281	0.4186	0.7466	0.7885	0.7894	0.7950	0.7987	0.4244
	100ms	0.6993	0.7206	0.7162	0.7257	0.7316	0.4230	0.7472	0.7941	0.7948	0.7994	0.8039	0.4305
	150ms	0.7000	0.7261	0.7217	0.7310	0.7371	0.4312	0.7479	0.8008	0.8020	0.8070	0.8111	0.4483
	200ms	0.7004	0.7298	0.7254	0.7345	0.7403	0.4374	0.7497	0.8063	0.8069	0.8117	0.8156	0.4580
	500ms	0.7034	0.7394	0.7354	0.7437	0.7492	0.4632	0.7547	0.8178	0.8186	0.8230	0.8262	0.4953
	750ms	0.7059	0.7426	0.7387	0.7469	0.7523	0.4771	0.7580	0.8208	0.8214	0.8250	0.8283	0.5078
	1sec	0.7089	0.7449	0.7410	0.7490	0.7541	0.4887	0.7613	0.8228	0.8236	0.8274	0.8304	0.5228
	5sec	0.7260	0.7539	0.7502	0.7565	0.7610	0.5592	0.7769	0.8284	0.8293	0.8331	0.8360	0.5998
	15sec	0.7351	0.7558	0.7520	0.7581	0.7627	0.6018	0.7864	0.8275	0.8291	0.8331	0.8363	0.6415
	30sec	0.7398	0.7555	0.7525	0.7575	0.7619	0.6254	0.7919	0.8267	0.8278	0.8314	0.8341	0.6664
	60sec	0.7442	0.7551	0.7527	0.7567	0.7610	0.6432	0.7961	0.8237	0.8247	0.8287	0.8320	0.6863
	300sec	0.7543	0.7563	0.7541	0.7578	0.7616	0.6666	0.8072	0.8199	0.8209	0.8245	0.8274	0.7138
	600sec	0.7575	0.7584	0.7565	0.7603	0.7637	0.6721	0.8112	0.8203	0.8213	0.8248	0.8274	0.7207
	900sec	0.7587	0.7591	0.7573	0.7614	0.7652	0.6739	0.8129	0.8202	0.8211	0.8248	0.8277	0.7249
	1200sec	0.7587	0.7591	0.7579	0.7621	0.7651	0.6758	0.8143	0.8200	0.8216	0.8248	0.8278	0.7279
	1500sec	0.7593	0.7596	0.7586	0.7624	0.7656	0.6748	0.8149	0.8196	0.8207	0.8244	0.8273	0.7254
	1800sec	0.7606	0.7601	0.7588	0.7627	0.7656	0.6753	0.8163	0.8208	0.8216	0.8250	0.8273	0.7288
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.4165	-0.0271	-0.0317	-0.0336	-0.0330	-0.1072	-0.0235	-0.0238	-0.0236	-0.0225	-0.1090	0.0000
	1ms	0.3947	0.3265	0.3266	0.3268	0.3270	0.2335	0.4645	0.3567	0.3562	0.3569	0.3569	0.1661
	2ms	0.4555	0.3909	0.3909	0.3925	0.3938	0.2539	0.5461	0.4612	0.4613	0.4617	0.4661	0.2631
	5ms	0.5030	0.4539	0.4541	0.4565	0.4590	0.2732	0.5675	0.5002	0.5000	0.5047	0.5092	0.2942
	10ms	0.5387	0.4928	0.4946	0.4999	0.5048	0.3147	0.6159	0.5440	0.5454	0.5520	0.5585	0.3259
	15ms	0.5639	0.5186	0.5200	0.5272	0.5331	0.3339	0.6570	0.5710	0.5723	0.5840	0.5922	0.3334
	20ms	0.5902	0.5466	0.5483	0.5560	0.5620	0.3521	0.6989	0.6109	0.6145	0.6253	0.6355	0.3554
	25ms	0.6041	0.5639	0.5652	0.5728	0.5780	0.3675	0.7235	0.6435	0.6440	0.6552	0.6623	0.3629
	50ms	0.6621	0.6352	0.6357	0.6426	0.6480	0.4220	0.8155	0.7560	0.7573	0.7633	0.7688	0.4146
	75ms	0.6896	0.6711	0.6715	0.6773	0.6815	0.4464	0.8432	0.7961	0.7973	0.8012	0.8040	0.4448
	100ms	0.7055	0.6935	0.6936	0.6981	0.7017	0.4588	0.8551	0.8153	0.8161	0.8198	0.8232	0.4605
	150ms	0.7209	0.7185	0.7182	0.7207	0.7229	0.4725	0.8666	0.8350	0.8362	0.8396	0.8425	0.4836
	200ms	0.7306	0.7327	0.7318	0.7336	0.7350	0.4801	0.8719	0.8448	0.8453	0.8488	0.8513	0.4976
	500ms	0.7534	0.7591	0.7572	0.7583	0.7585	0.4953	0.8817	0.8616	0.8624	0.8648	0.8669	0.5239
	750ms	0.7609	0.7656	0.7636	0.7641	0.7630	0.4999	0.8844	0.8648	0.8655	0.8676	0.8693	0.5314
	1sec	0.7648	0.7685	0.7661	0.7664	0.7655	0.5025	0.8835	0.8651	0.8659	0.8686	0.8704	0.5351
	5sec	0.7720	0.7742	0.7715	0.7717	0.7701	0.5067	0.8722	0.8595	0.8604	0.8638	0.8664	0.5396
	15sec	0.7712	0.7737	0.7695	0.7702	0.7686	0.5059	0.8609	0.8529	0.8538	0.8572	0.8596	0.5361
	30sec	0.7717	0.7727	0.7675	0.7683	0.7663	0.5056	0.8536	0.8471	0.8480	0.8512	0.8535	0.5359
	60sec	0.7706	0.7701	0.7652	0.7657	0.7633	0.5025	0.8466	0.8406	0.8415	0.8447	0.8467	0.5308
	300sec	0.7713	0.7676	0.7618	0.7630	0.7595	0.4922	0.8357	0.8325	0.8335	0.8371	0.8395	0.5215
	600sec	0.7717	0.7673	0.7612	0.7622	0.7582	0.4873	0.8330	0.8310	0.8318	0.8349	0.8364	0.5201
	900sec	0.7710	0.7661	0.7596	0.7608	0.7572	0.4860	0.8306	0.8290	0.8295	0.8325	0.8341	0.5175
	1200sec	0.7704	0.7648	0.7584	0.7604	0.7564	0.4850	0.8295	0.8283	0.8288	0.8321	0.8341	0.5159
	1500sec	0.7706	0.7644	0.7588	0.7596	0.7561	0.4840	0.8295	0.8278	0.8283	0.8313	0.8335	0.5132
	1800sec	0.7712	0.7642	0.7584	0.7599	0.7563	0.4833	0.8294	0.8277	0.8284	0.8310	0.8331	0.5149

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 900 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.153: The Fifth-order Spreads Autocorrelations (900 days before maturity)

900 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.8133	0.3195	0.3287	0.3583	0.3775	0.3511	0.8954	0.2931	0.3102	0.3466	0.3655	0.2397
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.8133	0.3195	0.3287	0.3583	0.3775	0.3511	0.8954	0.2931	0.3102	0.3466	0.3655	0.2397
$\Omega^{\tilde{\mathscr{P}}D}$		0.6701	0.7414	0.8839	0.6820	0.8592	0.7269	0.8657	0.8086	0.9302	0.7360	0.9094	0.7654
$\Omega^{\tilde{\mathscr{P}}E}$		0.5245	0.4554	0.4553	0.4647	0.4697	0.1916	0.5728	0.5069	0.5095	0.5191	0.5260	0.1290
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5217	0.4176	0.4187	0.4298	0.4356	0.2141	0.4595	0.4630	0.4771	0.4845	0.1358	0.0000
	1ms	0.5244	0.4557	0.4556	0.4650	0.4700	0.1913	0.5728	0.5075	0.5099	0.5197	0.5263	0.1270
	2ms	0.5244	0.4559	0.4559	0.4654	0.4704	0.1916	0.5730	0.5085	0.5106	0.5206	0.5269	0.1260
	5ms	0.5242	0.4566	0.4567	0.4662	0.4715	0.1933	0.5728	0.5103	0.5120	0.5227	0.5285	0.1252
	10ms	0.5240	0.4578	0.4579	0.4674	0.4733	0.1963	0.5727	0.5124	0.5150	0.5246	0.5328	0.1290
	15ms	0.5239	0.4589	0.4590	0.4685	0.4750	0.1972	0.5725	0.5143	0.5161	0.5276	0.5349	0.1290
	20ms	0.5239	0.4603	0.4606	0.4701	0.4768	0.1977	0.5726	0.5165	0.5188	0.5297	0.5384	0.1311
	25ms	0.5238	0.4615	0.4618	0.4715	0.4782	0.1988	0.5727	0.5183	0.5213	0.5316	0.5398	0.1330
	50ms	0.5234	0.4697	0.4701	0.4802	0.4879	0.2024	0.5730	0.5340	0.5369	0.5468	0.5541	0.1427
	75ms	0.5228	0.4757	0.4762	0.4868	0.4950	0.2039	0.5727	0.5445	0.5469	0.5558	0.5633	0.1477
	100ms	0.5224	0.4801	0.4806	0.4911	0.4994	0.2058	0.5728	0.5539	0.5562	0.5650	0.5719	0.1522
	150ms	0.5220	0.4868	0.4872	0.4978	0.5065	0.2106	0.5735	0.5657	0.5685	0.5768	0.5826	0.1622
	200ms	0.5216	0.4914	0.4918	0.5025	0.5113	0.2145	0.5740	0.5739	0.5767	0.5842	0.5905	0.1671
	500ms	0.5218	0.5044	0.5051	0.5156	0.5245	0.2317	0.5779	0.5973	0.5991	0.6063	0.6130	0.1914
	750ms	0.5230	0.5092	0.5100	0.5205	0.5293	0.2408	0.5812	0.6041	0.6067	0.6140	0.6188	0.2035
	1sec	0.5253	0.5123	0.5131	0.5235	0.5321	0.2491	0.5848	0.6085	0.6109	0.6174	0.6244	0.2132
	5sec	0.5393	0.5283	0.5290	0.5381	0.5462	0.3008	0.6011	0.6237	0.6265	0.6328	0.6393	0.2809
	15sec	0.5438	0.5371	0.5373	0.5461	0.5534	0.3378	0.6081	0.6293	0.6311	0.6393	0.6439	0.3247
	30sec	0.5440	0.5411	0.5410	0.5488	0.5558	0.3610	0.6116	0.6303	0.6323	0.6385	0.6444	0.3527
	60sec	0.5447	0.5433	0.5431	0.5504	0.5573	0.3785	0.6130	0.6286	0.6307	0.6375	0.6433	0.3741
	300sec	0.5488	0.5477	0.5469	0.5536	0.5590	0.4003	0.6225	0.6300	0.6318	0.6360	0.6410	0.3971
	600sec	0.5508	0.5504	0.5497	0.5560	0.5608	0.4063	0.6238	0.6314	0.6329	0.6378	0.6429	0.4089
	900sec	0.5511	0.5504	0.5493	0.5561	0.5615	0.4085	0.6239	0.6304	0.6314	0.6372	0.6423	0.4102
	1200sec	0.5512	0.5506	0.5495	0.5567	0.5619	0.4106	0.6252	0.6322	0.6334	0.6378	0.6429	0.4110
	1500sec	0.5509	0.5504	0.5493	0.5561	0.5611	0.4076	0.6274	0.6314	0.6324	0.6378	0.6430	0.4093
	1800sec	0.5512	0.5505	0.5493	0.5563	0.5606	0.4095	0.6264	0.6311	0.6324	0.6377	0.6425	0.4107
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2438	0.0031	0.0032	0.0032	0.0029	0.0017	0.0037	0.0032	0.0028	0.0021	-0.0001	0.0000
	1ms	0.1373	0.0624	0.0623	0.0626	0.0625	0.0100	0.0940	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1459	0.1062	0.1057	0.1065	0.1064	0.0250	0.0907	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.1925	0.1685	0.1685	0.1697	0.1707	0.0598	0.1134	0.0789	0.0799	0.0829	0.0842	0.0000
	10ms	0.2477	0.2180	0.2183	0.2213	0.2241	0.0962	0.1690	0.1319	0.1321	0.1376	0.1423	0.0000
	15ms	0.2849	0.2503	0.2509	0.2551	0.2585	0.1158	0.2260	0.1734	0.1739	0.1828	0.1887	0.0227
	20ms	0.3181	0.2811	0.2819	0.2868	0.2906	0.1324	0.2851	0.2189	0.2211	0.2324	0.2387	0.0420
	25ms	0.3419	0.3017	0.3024	0.3074	0.3117	0.1419	0.3312	0.2492	0.2505	0.2625	0.2705	0.0514
	50ms	0.4253	0.3784	0.3795	0.3854	0.3904	0.1720	0.5081	0.4086	0.4110	0.4211	0.4268	0.0879
	75ms	0.4597	0.4125	0.4136	0.4203	0.4251	0.1834	0.5755	0.4749	0.4769	0.4844	0.4906	0.1037
	100ms	0.4790	0.4333	0.4345	0.4408	0.4451	0.1905	0.6082	0.5129	0.5136	0.5209	0.5258	0.1161
	150ms	0.5017	0.4591	0.4605	0.4664	0.4706	0.2022	0.6416	0.5547	0.5556	0.5626	0.5679	0.1343
	200ms	0.5155	0.4746	0.4758	0.4814	0.4854	0.2096	0.6575	0.5764	0.5778	0.5833	0.5880	0.1455
	500ms	0.5497	0.5093	0.5103	0.5151	0.5182	0.2279	0.6960	0.6193	0.6207	0.6258	0.6300	0.1777
	750ms	0.5606	0.5190	0.5199	0.5247	0.5271	0.2342	0.7053	0.6317	0.6331	0.6380	0.6412	0.1882
	1sec	0.5662	0.5233	0.5240	0.5285	0.5313	0.2376	0.7101	0.6359	0.6372	0.6429	0.6459	0.1944
	5sec	0.5785	0.5377	0.5383	0.5430	0.5451	0.2524	0.7006	0.6373	0.6399	0.6460	0.6509	0.2212
	15sec	0.5749	0.5420	0.5421	0.5463	0.5482	0.2581	0.6825	0.6352	0.6364	0.6427	0.6476	0.2331
	30sec	0.5711	0.5447	0.5438	0.5481	0.5492	0.2628	0.6714	0.6331	0.6349	0.6414	0.6462	0.2422
	60sec	0.5668	0.5460	0.5447	0.5486	0.5494	0.2640	0.6584	0.6292	0.6316	0.6383	0.6430	0.2456
	300sec	0.5619	0.5503	0.5484	0.5519	0.5516	0.2640	0.6438	0.6308	0.6326	0.6378	0.6412	0.2467
	600sec	0.5617	0.5528	0.5504	0.5538	0.5531	0.2628	0.6412	0.6329	0.6344	0.6402	0.6438	0.2469
	900sec	0.5607	0.5523	0.5495	0.5530	0.5526	0.2613	0.6382	0.6333	0.6343	0.6396	0.6426	0.2456
	1200sec	0.5604	0.5523	0.5495	0.5535	0.5530	0.2615	0.6383	0.6332	0.6343	0.6401	0.6428	0.2449
	1500sec	0.5599	0.5525	0.5497	0.5534	0.5530	0.2598	0.6378	0.6342	0.6353	0.6409	0.6435	0.2438
	1800sec	0.5598	0.5521	0.5493	0.5533	0.5525	0.2604	0.6372	0.6341	0.6354	0.6411	0.6440	0.2467

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 900 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.154: The Tenth-order Spreads Autocorrelations (900 days before maturity)

900 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.7394	0.2308	0.2385	0.2615	0.2780	0.2723	0.8313	0.1839	0.1940	0.2215	0.2381	0.1442
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.7394	0.2308	0.2385	0.2615	0.2780	0.2723	0.8313	0.1839	0.1940	0.2215	0.2381	0.1442
$\Omega^{\tilde{\mathscr{P}}D}$		0.6150	0.6748	0.8398	0.5838	0.8039	0.6447	0.8070	0.7385	0.8932	0.6262	0.8646	0.6922
$\Omega^{\tilde{\mathscr{P}}E}$		0.4984	0.3816	0.3810	0.3863	0.3896	0.1359	0.5305	0.3991	0.4018	0.4105	0.4159	0.0499
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.4970	0.3504	0.3511	0.3582	0.3621	0.1474	0.3606	0.3640	0.3759	0.3817	0.0468	0.0000
	1ms	0.4983	0.3818	0.3812	0.3866	0.3898	0.1358	0.5304	0.3995	0.4024	0.4109	0.4162	0.0493
	2ms	0.4983	0.3819	0.3813	0.3867	0.3900	0.1365	0.5305	0.4000	0.4030	0.4113	0.4166	0.0493
	5ms	0.4980	0.3821	0.3816	0.3870	0.3905	0.1384	0.5304	0.4010	0.4034	0.4124	0.4174	0.0513
	10ms	0.4976	0.3826	0.3820	0.3875	0.3915	0.1403	0.5301	0.4028	0.4052	0.4135	0.4200	0.0548
	15ms	0.4972	0.3830	0.3825	0.3879	0.3925	0.1403	0.5296	0.4039	0.4068	0.4143	0.4209	0.0568
	20ms	0.4969	0.3836	0.3832	0.3888	0.3935	0.1400	0.5294	0.4051	0.4074	0.4161	0.4226	0.0555
	25ms	0.4965	0.3841	0.3837	0.3894	0.3941	0.1402	0.5294	0.4065	0.4098	0.4174	0.4232	0.0574
	50ms	0.4948	0.3897	0.3894	0.3954	0.4009	0.1413	0.5276	0.4166	0.4196	0.4290	0.4372	0.0672
	75ms	0.4930	0.3946	0.3943	0.4006	0.4066	0.1415	0.5253	0.4256	0.4280	0.4374	0.4451	0.0703
	100ms	0.4917	0.3983	0.3980	0.4043	0.4104	0.1424	0.5228	0.4329	0.4351	0.4440	0.4519	0.0739
	150ms	0.4898	0.4037	0.4034	0.4099	0.4168	0.1448	0.5214	0.4443	0.4465	0.4557	0.4633	0.0804
	200ms	0.4883	0.4074	0.4072	0.4139	0.4210	0.1472	0.5208	0.4507	0.4531	0.4619	0.4697	0.0855
	500ms	0.4851	0.4191	0.4192	0.4263	0.4337	0.1594	0.5183	0.4744	0.4770	0.4847	0.4924	0.1025
	750ms	0.4848	0.4240	0.4244	0.4316	0.4391	0.1649	0.5201	0.4833	0.4856	0.4926	0.4993	0.1085
	1sec	0.4855	0.4269	0.4274	0.4347	0.4421	0.1709	0.5235	0.4885	0.4910	0.4983	0.5059	0.1160
	5sec	0.4890	0.4423	0.4429	0.4501	0.4573	0.2082	0.5359	0.5093	0.5121	0.5192	0.5261	0.1599
	15sec	0.4861	0.4528	0.4533	0.4603	0.4669	0.2386	0.5353	0.5193	0.5219	0.5303	0.5372	0.1962
	30sec	0.4820	0.4581	0.4585	0.4648	0.4710	0.2582	0.5332	0.5237	0.5252	0.5321	0.5394	0.2207
	60sec	0.4781	0.4619	0.4621	0.4678	0.4741	0.2742	0.5294	0.5249	0.5275	0.5351	0.5405	0.2427
	300sec	0.4739	0.4687	0.4685	0.4738	0.4791	0.2967	0.5249	0.5249	0.5274	0.5342	0.5404	0.2639
	600sec	0.4733	0.4705	0.4702	0.4750	0.4801	0.3019	0.5234	0.5263	0.5277	0.5350	0.5412	0.2720
	900sec	0.4731	0.4705	0.4697	0.4750	0.4804	0.3030	0.5236	0.5266	0.5284	0.5347	0.5403	0.2753
	1200sec	0.4728	0.4710	0.4699	0.4759	0.4809	0.3084	0.5251	0.5277	0.5287	0.5349	0.5409	0.2786
	1500sec	0.4722	0.4703	0.4694	0.4748	0.4796	0.3019	0.5245	0.5264	0.5279	0.5337	0.5397	0.2722
	1800sec	0.4719	0.4701	0.4691	0.4746	0.4791	0.3056	0.5255	0.5268	0.5281	0.5341	0.5407	0.2755
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.1950	0.0039	0.0039	0.0041	0.0040	0.0022	0.0036	0.0033	0.0030	0.0024	0.0000	0.0000
	1ms	0.0792	0.0243	0.0242	0.0244	0.0244	-0.0007	0.0368	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	2ms	0.0838	0.0441	0.0439	0.0441	0.0443	0.0043	0.0339	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1164	0.0900	0.0897	0.0902	0.0909	0.0229	0.0414	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.1645	0.1351	0.1351	0.1368	0.1381	0.0497	0.0683	0.0336	0.0349	0.0383	0.0397	-0.0001
	15ms	0.1980	0.1651	0.1651	0.1677	0.1695	0.0662	0.1025	0.0670	0.0686	0.0743	0.0773	0.0000
	20ms	0.2283	0.1914	0.1915	0.1947	0.1969	0.0794	0.1434	0.1009	0.1021	0.1086	0.1126	0.0000
	25ms	0.2507	0.2097	0.2100	0.2132	0.2155	0.0866	0.1811	0.1275	0.1292	0.1349	0.1395	0.0056
	50ms	0.3375	0.2807	0.2812	0.2852	0.2882	0.1123	0.3493	0.2541	0.2539	0.2612	0.2655	0.0258
	75ms	0.3790	0.3154	0.3159	0.3203	0.3233	0.1212	0.4248	0.3159	0.3162	0.3222	0.3273	0.0363
	100ms	0.4033	0.3361	0.3366	0.3408	0.3437	0.1267	0.4656	0.3521	0.3528	0.3587	0.3619	0.0427
	150ms	0.4316	0.3603	0.3610	0.3651	0.3680	0.1349	0.5081	0.3952	0.3953	0.4020	0.4059	0.0521
	200ms	0.4477	0.3740	0.3750	0.3789	0.3817	0.1396	0.5307	0.4161	0.4171	0.4227	0.4262	0.0602
	500ms	0.4864	0.4066	0.4077	0.4114	0.4140	0.1526	0.5828	0.4680	0.4694	0.4746	0.4788	0.0814
	750ms	0.4975	0.4169	0.4182	0.4220	0.4242	0.1576	0.5981	0.4818	0.4836	0.4886	0.4926	0.0906
	1sec	0.5032	0.4215	0.4225	0.4265	0.4290	0.1602	0.6041	0.4891	0.4911	0.4955	0.4990	0.0965
	5sec	0.5108	0.4369	0.4378	0.4421	0.4442	0.1723	0.6029	0.4984	0.5011	0.5105	0.5145	0.1205
	15sec	0.5028	0.4438	0.4444	0.4484	0.4503	0.1797	0.5814	0.5027	0.5047	0.5119	0.5163	0.1359
	30sec	0.4952	0.4478	0.4475	0.4517	0.4531	0.1846	0.5687	0.5051	0.5078	0.5145	0.5193	0.1442
	60sec	0.4879	0.4513	0.4509	0.4550	0.4561	0.1869	0.5544	0.5077	0.5092	0.5154	0.5188	0.1508
	300sec	0.4787	0.4613	0.4602	0.4640	0.4644	0.1910	0.5348	0.5123	0.5148	0.5217	0.5256	0.1577
	600sec	0.4770	0.4647	0.4629	0.4667	0.4665	0.1904	0.5328	0.5195	0.5211	0.5271	0.5310	0.1584
	900sec	0.4760	0.4657	0.4633	0.4668	0.4669	0.1894	0.5304	0.5211	0.5222	0.5284	0.5325	0.1570
	1200sec	0.4755	0.4667	0.4641	0.4680	0.4682	0.1907	0.5303	0.5226	0.5235	0.5299	0.5329	0.1589
	1500sec	0.4751	0.4668	0.4645	0.4679	0.4679	0.1881	0.5288	0.5222	0.5243	0.5299	0.5330	0.1550
	1800sec	0.4747	0.4666	0.4642	0.4677	0.4674	0.1887	0.5282	0.5237	0.5253	0.5310	0.5354	0.1569

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 900 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.155: The First-order Spreads Autocorrelations (1080 days before maturity)

1080 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}^Q}$		0.9147	0.5565	0.5633	0.5987	0.6179	0.5347	0.9604	0.5835	0.6013	0.6401	0.6607	0.5058
$\Omega^{\tilde{\mathscr{P}}^{Q^{1/2}}}$		0.9147	0.5565	0.5633	0.5987	0.6179	0.5347	0.9604	0.5835	0.6013	0.6401	0.6607	0.5058
$\Omega^{\tilde{\mathscr{P}}^D}$		0.7736	0.8552	0.9454	0.8438	0.9421	0.8788	0.9425	0.9026	0.9734	0.8853	0.9684	0.9036
$\Omega^{\tilde{\mathscr{P}}^E}$		0.6962	0.6800	0.6745	0.6871	0.6918	0.3821	0.7408	0.7397	0.7430	0.7525	0.7578	0.3834
$\Omega^{\tilde{\mathscr{P}}^R}$	Tick	0.6929	0.5924	0.5934	0.6136	0.6222	0.4316	0.6606	0.6686	0.6867	0.6956	0.4391	0.0000
	1ms	0.6962	0.6802	0.6747	0.6874	0.6920	0.3792	0.7408	0.7403	0.7437	0.7529	0.7582	0.3787
	2ms	0.6961	0.6806	0.6751	0.6878	0.6926	0.3750	0.7408	0.7413	0.7445	0.7533	0.7589	0.3682
	5ms	0.6961	0.6815	0.6760	0.6888	0.6939	0.3711	0.7409	0.7426	0.7461	0.7551	0.7608	0.3583
	10ms	0.6961	0.6832	0.6778	0.6906	0.6964	0.3739	0.7410	0.7455	0.7489	0.7579	0.7635	0.3568
	15ms	0.6962	0.6850	0.6797	0.6925	0.6988	0.3785	0.7411	0.7475	0.7513	0.7603	0.7660	0.3605
	20ms	0.6963	0.6866	0.6813	0.6943	0.7007	0.3804	0.7414	0.7502	0.7529	0.7623	0.7685	0.3612
	25ms	0.6964	0.6886	0.6834	0.6964	0.7030	0.3862	0.7414	0.7528	0.7559	0.7648	0.7707	0.3673
	50ms	0.6967	0.6976	0.6925	0.7055	0.7128	0.3990	0.7420	0.7659	0.7692	0.7769	0.7825	0.3905
	75ms	0.6969	0.7039	0.6987	0.7115	0.7192	0.4049	0.7422	0.7742	0.7768	0.7845	0.7894	0.4017
	100ms	0.6971	0.7082	0.7030	0.7155	0.7228	0.4100	0.7421	0.7795	0.7819	0.7894	0.7948	0.4102
	150ms	0.6977	0.7140	0.7089	0.7212	0.7286	0.4187	0.7428	0.7871	0.7894	0.7965	0.8011	0.4279
	200ms	0.6979	0.7180	0.7129	0.7249	0.7321	0.4255	0.7439	0.7921	0.7947	0.8011	0.8063	0.4381
	500ms	0.7003	0.7281	0.7233	0.7345	0.7413	0.4531	0.7490	0.8049	0.8070	0.8125	0.8176	0.4796
	750ms	0.7025	0.7314	0.7269	0.7377	0.7445	0.4679	0.7522	0.8082	0.8107	0.8160	0.8202	0.4983
	1sec	0.7055	0.7338	0.7292	0.7399	0.7464	0.4800	0.7556	0.8102	0.8123	0.8183	0.8222	0.5101
	5sec	0.7219	0.7431	0.7384	0.7475	0.7535	0.5530	0.7709	0.8156	0.8178	0.8242	0.8281	0.5926
	15sec	0.7307	0.7454	0.7409	0.7493	0.7555	0.5974	0.7804	0.8152	0.8171	0.8236	0.8273	0.6363
	30sec	0.7351	0.7458	0.7416	0.7488	0.7545	0.6215	0.7853	0.8143	0.8165	0.8228	0.8265	0.6642
	60sec	0.7390	0.7456	0.7422	0.7479	0.7537	0.6409	0.7895	0.8111	0.8131	0.8192	0.8237	0.6848
	300sec	0.7481	0.7482	0.7449	0.7501	0.7549	0.6671	0.7998	0.8099	0.8114	0.8175	0.8208	0.7141
	600sec	0.7512	0.7507	0.7480	0.7534	0.7576	0.6718	0.8041	0.8114	0.8133	0.8190	0.8220	0.7214
	900sec	0.7523	0.7517	0.7491	0.7547	0.7591	0.6743	0.8060	0.8113	0.8129	0.8184	0.8217	0.7264
	1200sec	0.7524	0.7516	0.7495	0.7555	0.7596	0.6766	0.8070	0.8113	0.8127	0.8185	0.8224	0.7303
	1500sec	0.7530	0.7525	0.7509	0.7564	0.7606	0.6767	0.8077	0.8115	0.8132	0.8187	0.8225	0.7278
	1800sec	0.7542	0.7530	0.7512	0.7568	0.7607	0.6762	0.8085	0.8122	0.8138	0.8195	0.8225	0.7297
$\Omega^{\tilde{\mathscr{P}}^{AS}}$	Tick	0.4024	-0.0279	-0.0330	-0.0346	-0.0336	-0.1120	-0.0241	-0.0245	-0.0242	-0.0232	-0.1160	0.0000
	1ms	0.3973	0.3244	0.3241	0.3241	0.3244	0.2324	0.4678	0.3439	0.3340	0.3420	0.3434	0.1561
	2ms	0.4517	0.3861	0.3856	0.3875	0.3887	0.2471	0.5415	0.4475	0.4468	0.4484	0.4536	0.2500
	5ms	0.4944	0.4488	0.4490	0.4523	0.4557	0.2653	0.5605	0.4999	0.4998	0.5000	0.5007	0.2838
	10ms	0.5279	0.4863	0.4886	0.4966	0.5035	0.3070	0.6041	0.5393	0.5407	0.5507	0.5594	0.3185
	15ms	0.5536	0.5102	0.5120	0.5233	0.5317	0.3266	0.6434	0.5660	0.5677	0.5840	0.5940	0.3319
	20ms	0.5803	0.5374	0.5400	0.5523	0.5606	0.3454	0.6867	0.6050	0.6074	0.6238	0.6363	0.3505
	25ms	0.5943	0.5540	0.5569	0.5693	0.5772	0.3616	0.7100	0.6321	0.6340	0.6530	0.6613	0.3597
	50ms	0.6529	0.6243	0.6269	0.6384	0.6466	0.4151	0.8019	0.7440	0.7460	0.7542	0.7605	0.4100
	75ms	0.6811	0.6596	0.6622	0.6723	0.6790	0.4386	0.8323	0.7826	0.7841	0.7912	0.7961	0.4381
	100ms	0.6971	0.6817	0.6839	0.6925	0.6986	0.4504	0.8436	0.8015	0.8036	0.8089	0.8126	0.4524
	150ms	0.7135	0.7068	0.7082	0.7152	0.7196	0.4633	0.8554	0.8208	0.8228	0.8286	0.8321	0.4726
	200ms	0.7236	0.7214	0.7220	0.7280	0.7312	0.4705	0.8609	0.8308	0.8324	0.8374	0.8413	0.4880
	500ms	0.7466	0.7482	0.7471	0.7522	0.7542	0.4851	0.8711	0.8487	0.8505	0.8547	0.8578	0.5094
	750ms	0.7535	0.7545	0.7534	0.7579	0.7589	0.4896	0.8734	0.8512	0.8527	0.8577	0.8604	0.5164
	1sec	0.7576	0.7572	0.7554	0.7597	0.7610	0.4923	0.8734	0.8512	0.8533	0.8579	0.8613	0.5211
	5sec	0.7636	0.7618	0.7588	0.7630	0.7635	0.4971	0.8603	0.8450	0.8466	0.8518	0.8552	0.5245
	15sec	0.7624	0.7615	0.7567	0.7611	0.7616	0.4961	0.8481	0.8372	0.8397	0.8451	0.8483	0.5204
	30sec	0.7627	0.7607	0.7550	0.7594	0.7596	0.4953	0.8410	0.8318	0.8342	0.8394	0.8429	0.5196
	60sec	0.7617	0.7580	0.7528	0.7565	0.7564	0.4924	0.8334	0.8260	0.8282	0.8334	0.8374	0.5161
	300sec	0.7621	0.7570	0.7505	0.7545	0.7536	0.4823	0.8236	0.8202	0.8222	0.8271	0.8305	0.5037
	600sec	0.7628	0.7574	0.7503	0.7549	0.7531	0.4779	0.8223	0.8197	0.8211	0.8259	0.8292	0.5034
	900sec	0.7625	0.7569	0.7495	0.7537	0.7521	0.4766	0.8201	0.8182	0.8195	0.8241	0.8274	0.5029
	1200sec	0.7621	0.7558	0.7484	0.7533	0.7518	0.4761	0.8189	0.8179	0.8193	0.8240	0.8266	0.4999
	1500sec	0.7626	0.7559	0.7490	0.7531	0.7516	0.4749	0.8193	0.8180	0.8191	0.8239	0.8265	0.4998
	1800sec	0.7634	0.7558	0.7487	0.7532	0.7520	0.4736	0.8196	0.8176	0.8194	0.8238	0.8267	0.4998

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 1080 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}^{AS}}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.156: The Fifth-order Spreads Autocorrelations (1080 days before maturity)

1080 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.7862	0.3082	0.3178	0.3484	0.3675	0.3353	0.8677	0.2791	0.2966	0.3343	0.3518	0.2269
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.7862	0.3082	0.3178	0.3484	0.3675	0.3353	0.8677	0.2791	0.2966	0.3343	0.3518	0.2269
$\Omega^{\tilde{\mathscr{P}}D}$		0.6556	0.7115	0.8738	0.6596	0.8528	0.7178	0.8372	0.7735	0.9217	0.7071	0.9060	0.7643
$\Omega^{\tilde{\mathscr{P}}E}$		0.5140	0.4335	0.4336	0.4459	0.4523	0.1799	0.5591	0.4734	0.4778	0.4942	0.5028	0.1133
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.5114	0.3931	0.3951	0.4097	0.4173	0.2045	0.4217	0.4281	0.4466	0.4573	0.1245	0.0000
	1ms	0.5139	0.4337	0.4339	0.4462	0.4526	0.1795	0.5589	0.4741	0.4784	0.4949	0.5035	0.1099
	2ms	0.5139	0.4340	0.4342	0.4466	0.4531	0.1797	0.5589	0.4753	0.4789	0.4956	0.5042	0.1096
	5ms	0.5136	0.4348	0.4350	0.4475	0.4543	0.1811	0.5591	0.4767	0.4806	0.4972	0.5064	0.1093
	10ms	0.5134	0.4361	0.4364	0.4489	0.4562	0.1836	0.5591	0.4785	0.4829	0.4989	0.5092	0.1119
	15ms	0.5132	0.4374	0.4378	0.4503	0.4581	0.1842	0.5589	0.4807	0.4858	0.5015	0.5114	0.1134
	20ms	0.5131	0.4389	0.4395	0.4520	0.4600	0.1846	0.5584	0.4830	0.4885	0.5043	0.5137	0.1160
	25ms	0.5129	0.4403	0.4409	0.4535	0.4614	0.1856	0.5585	0.4853	0.4908	0.5073	0.5166	0.1167
	50ms	0.5121	0.4491	0.4498	0.4628	0.4717	0.1897	0.5589	0.5019	0.5077	0.5216	0.5315	0.1279
	75ms	0.5111	0.4553	0.4560	0.4695	0.4787	0.1918	0.5581	0.5129	0.5178	0.5323	0.5419	0.1351
	100ms	0.5104	0.4598	0.4604	0.4740	0.4833	0.1943	0.5572	0.5219	0.5268	0.5394	0.5491	0.1415
	150ms	0.5097	0.4665	0.4673	0.4810	0.4906	0.1992	0.5570	0.5354	0.5397	0.5507	0.5609	0.1523
	200ms	0.5091	0.4712	0.4719	0.4858	0.4957	0.2035	0.5567	0.5435	0.5480	0.5600	0.5682	0.1585
	500ms	0.5085	0.4845	0.4857	0.4993	0.5092	0.2220	0.5599	0.5672	0.5707	0.5827	0.5906	0.1832
	750ms	0.5093	0.4896	0.4908	0.5042	0.5141	0.2319	0.5624	0.5748	0.5790	0.5895	0.5977	0.1961
	1sec	0.5114	0.4927	0.4940	0.5073	0.5170	0.2407	0.5656	0.5794	0.5827	0.5936	0.6016	0.2061
	5sec	0.5243	0.5081	0.5092	0.5215	0.5308	0.2937	0.5832	0.5929	0.5966	0.6086	0.6164	0.2762
	15sec	0.5283	0.5167	0.5173	0.5291	0.5377	0.3315	0.5896	0.5986	0.6027	0.6130	0.6207	0.3213
	30sec	0.5278	0.5206	0.5208	0.5316	0.5396	0.3549	0.5906	0.5989	0.6030	0.6141	0.6223	0.3480
	60sec	0.5277	0.5229	0.5230	0.5330	0.5409	0.3729	0.5916	0.5987	0.6023	0.6139	0.6214	0.3709
	300sec	0.5315	0.5288	0.5279	0.5371	0.5440	0.3968	0.5983	0.6028	0.6071	0.6168	0.6238	0.3967
	600sec	0.5341	0.5326	0.5317	0.5405	0.5466	0.4019	0.6011	0.6056	0.6080	0.6173	0.6240	0.4059
	900sec	0.5345	0.5331	0.5318	0.5410	0.5476	0.4042	0.6033	0.6071	0.6093	0.6185	0.6257	0.4089
	1200sec	0.5348	0.5335	0.5322	0.5414	0.5484	0.4075	0.6025	0.6075	0.6098	0.6194	0.6266	0.4110
	1500sec	0.5347	0.5340	0.5326	0.5415	0.5481	0.4048	0.6048	0.6087	0.6108	0.6198	0.6260	0.4093
	1800sec	0.5351	0.5341	0.5327	0.5419	0.5476	0.4060	0.6055	0.6074	0.6105	0.6197	0.6255	0.4115
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.2310	0.0028	0.0027	0.0026	0.0024	0.0012	0.0033	0.0026	0.0023	0.0016	-0.0001	0.0000
	1ms	0.1393	0.0613	0.0610	0.0611	0.0611	0.0106	0.0949	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1430	0.1033	0.1027	0.1034	0.1034	0.0245	0.0876	0.0000	0.0000	0.0000	0.0000	-0.0001
	5ms	0.1836	0.1630	0.1629	0.1644	0.1656	0.0568	0.1047	0.0756	0.0762	0.0808	0.0827	0.0000
	10ms	0.2358	0.2095	0.2101	0.2141	0.2177	0.0916	0.1569	0.1249	0.1251	0.1350	0.1410	0.0000
	15ms	0.2718	0.2396	0.2404	0.2466	0.2511	0.1105	0.2089	0.1634	0.1652	0.1785	0.1857	0.0202
	20ms	0.3043	0.2689	0.2702	0.2776	0.2827	0.1271	0.2659	0.2081	0.2113	0.2276	0.2366	0.0379
	25ms	0.3275	0.2882	0.2897	0.2977	0.3034	0.1365	0.3115	0.2382	0.2409	0.2591	0.2687	0.0487
	50ms	0.4104	0.3628	0.3652	0.3746	0.3812	0.1662	0.4841	0.3882	0.3910	0.4044	0.4128	0.0850
	75ms	0.4453	0.3959	0.3987	0.4090	0.4154	0.1777	0.5513	0.4499	0.4537	0.4664	0.4730	0.1017
	100ms	0.4643	0.4155	0.4186	0.4285	0.4347	0.1846	0.5840	0.4835	0.4870	0.4990	0.5055	0.1129
	150ms	0.4868	0.4404	0.4436	0.4535	0.4597	0.1957	0.6157	0.5251	0.5281	0.5387	0.5450	0.1304
	200ms	0.5003	0.4554	0.4585	0.4682	0.4744	0.2027	0.6326	0.5464	0.5496	0.5591	0.5657	0.1406
	500ms	0.5338	0.4896	0.4926	0.5017	0.5071	0.2206	0.6707	0.5925	0.5959	0.6039	0.6094	0.1720
	750ms	0.5445	0.4992	0.5021	0.5114	0.5164	0.2271	0.6792	0.6022	0.6058	0.6154	0.6200	0.1825
	1sec	0.5500	0.5033	0.5060	0.5150	0.5203	0.2309	0.6831	0.6054	0.6091	0.6178	0.6235	0.1901
	5sec	0.5601	0.5157	0.5179	0.5267	0.5316	0.2456	0.6731	0.6043	0.6086	0.6191	0.6262	0.2151
	15sec	0.5557	0.5200	0.5210	0.5292	0.5339	0.2511	0.6553	0.6020	0.6063	0.6147	0.6211	0.2266
	30sec	0.5513	0.5223	0.5221	0.5302	0.5342	0.2554	0.6422	0.5991	0.6022	0.6117	0.6198	0.2351
	60sec	0.5465	0.5234	0.5229	0.5306	0.5342	0.2567	0.6287	0.5980	0.6013	0.6109	0.6175	0.2381
	300sec	0.5422	0.5294	0.5275	0.5347	0.5372	0.2573	0.6148	0.6000	0.6034	0.6150	0.6198	0.2388
	600sec	0.5429	0.5331	0.5305	0.5372	0.5392	0.2562	0.6152	0.6059	0.6083	0.6173	0.6223	0.2391
	900sec	0.5423	0.5332	0.5303	0.5367	0.5387	0.2548	0.6145	0.6071	0.6098	0.6189	0.6236	0.2368
	1200sec	0.5422	0.5336	0.5304	0.5374	0.5392	0.2554	0.6126	0.6085	0.6108	0.6198	0.6239	0.2375
	1500sec	0.5422	0.5343	0.5310	0.5380	0.5399	0.2539	0.6133	0.6096	0.6124	0.6200	0.6245	0.2364
	1800sec	0.5422	0.5340	0.5308	0.5379	0.5394	0.2540	0.6125	0.6088	0.6112	0.6201	0.6253	0.2376

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 1080 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.157: The Tenth-order Spreads Autocorrelations (1080 days before maturity)

1080 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.7070	0.2206	0.2286	0.2527	0.2689	0.2579	0.7930	0.1741	0.1846	0.2113	0.2271	0.1291
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.7070	0.2206	0.2286	0.2527	0.2689	0.2579	0.7930	0.1741	0.1846	0.2113	0.2271	0.1291
$\Omega^{\tilde{\mathscr{P}}D}$		0.5984	0.6403	0.8278	0.5583	0.7971	0.6365	0.7703	0.6943	0.8827	0.5909	0.8612	0.6914
$\Omega^{\tilde{\mathscr{P}}E}$		0.4783	0.3566	0.3565	0.3643	0.3690	0.1260	0.5082	0.3649	0.3679	0.3806	0.3877	0.0410
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.4770	0.3246	0.3262	0.3358	0.3412	0.1389	0.3220	0.3278	0.3423	0.3511	0.0375	0.0000
	1ms	0.4783	0.3569	0.3568	0.3646	0.3693	0.1259	0.5081	0.3651	0.3682	0.3812	0.3882	0.0405
	2ms	0.4782	0.3570	0.3569	0.3648	0.3695	0.1264	0.5081	0.3655	0.3688	0.3819	0.3895	0.0404
	5ms	0.4779	0.3573	0.3573	0.3652	0.3701	0.1279	0.5079	0.3659	0.3695	0.3832	0.3914	0.0421
	10ms	0.4774	0.3580	0.3579	0.3659	0.3713	0.1293	0.5078	0.3664	0.3703	0.3851	0.3940	0.0443
	15ms	0.4769	0.3586	0.3586	0.3666	0.3725	0.1291	0.5074	0.3682	0.3727	0.3864	0.3961	0.0458
	20ms	0.4765	0.3594	0.3595	0.3676	0.3736	0.1286	0.5074	0.3704	0.3743	0.3881	0.3981	0.0465
	25ms	0.4761	0.3601	0.3603	0.3684	0.3744	0.1286	0.5064	0.3718	0.3762	0.3894	0.3987	0.0475
	50ms	0.4741	0.3663	0.3664	0.3750	0.3817	0.1298	0.5044	0.3832	0.3875	0.3993	0.4087	0.0562
	75ms	0.4721	0.3712	0.3714	0.3801	0.3873	0.1302	0.5018	0.3906	0.3950	0.4080	0.4174	0.0605
	100ms	0.4704	0.3748	0.3749	0.3837	0.3910	0.1313	0.4996	0.3970	0.4007	0.4132	0.4239	0.0638
	150ms	0.4682	0.3799	0.3802	0.3892	0.3972	0.1338	0.4976	0.4058	0.4109	0.4243	0.4343	0.0705
	200ms	0.4665	0.3836	0.3840	0.3933	0.4014	0.1364	0.4970	0.4153	0.4188	0.4316	0.4421	0.0750
	500ms	0.4628	0.3955	0.3964	0.4060	0.4144	0.1496	0.4945	0.4374	0.4419	0.4552	0.4634	0.0931
	750ms	0.4622	0.4004	0.4017	0.4112	0.4197	0.1557	0.4949	0.4469	0.4512	0.4628	0.4722	0.1008
	1sec	0.4628	0.4032	0.4045	0.4143	0.4226	0.1621	0.4968	0.4519	0.4559	0.4687	0.4778	0.1091
	5sec	0.4660	0.4176	0.4191	0.4290	0.4374	0.2001	0.5082	0.4691	0.4741	0.4866	0.4962	0.1547
	15sec	0.4629	0.4274	0.4289	0.4387	0.4467	0.2299	0.5061	0.4773	0.4815	0.4947	0.5035	0.1890
	30sec	0.4579	0.4321	0.4335	0.4426	0.4500	0.2496	0.5021	0.4820	0.4867	0.4992	0.5089	0.2129
	60sec	0.4537	0.4356	0.4368	0.4453	0.4528	0.2652	0.4970	0.4819	0.4869	0.4986	0.5083	0.2356
	300sec	0.4499	0.4437	0.4440	0.4517	0.4586	0.2892	0.4913	0.4868	0.4908	0.5020	0.5107	0.2572
	600sec	0.4503	0.4468	0.4466	0.4538	0.4603	0.2942	0.4923	0.4905	0.4936	0.5040	0.5122	0.2662
	900sec	0.4506	0.4475	0.4468	0.4545	0.4613	0.2950	0.4935	0.4920	0.4952	0.5061	0.5145	0.2675
	1200sec	0.4504	0.4482	0.4473	0.4551	0.4619	0.3013	0.4933	0.4929	0.4953	0.5069	0.5161	0.2735
	1500sec	0.4503	0.4482	0.4471	0.4545	0.4611	0.2955	0.4940	0.4928	0.4955	0.5062	0.5151	0.2682
	1800sec	0.4499	0.4480	0.4470	0.4545	0.4607	0.2981	0.4934	0.4918	0.4944	0.5055	0.5150	0.2716
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.1830	0.0036	0.0036	0.0037	0.0035	0.0020	0.0034	0.0029	0.0025	0.0019	0.0000	0.0000
	1ms	0.0795	0.0239	0.0238	0.0239	0.0238	-0.0003	0.0364	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	2ms	0.0810	0.0426	0.0424	0.0425	0.0427	0.0041	0.0312	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	5ms	0.1097	0.0861	0.0858	0.0864	0.0871	0.0217	0.0371	0.0000	0.0000	0.0000	0.0000	-0.0001
	10ms	0.1545	0.1280	0.1282	0.1304	0.1323	0.0468	0.0593	0.0288	0.0302	0.0348	0.0374	-0.0001
	15ms	0.1862	0.1555	0.1557	0.1595	0.1621	0.0622	0.0907	0.0588	0.0600	0.0682	0.0730	0.0000
	20ms	0.2150	0.1802	0.1805	0.1853	0.1883	0.0749	0.1282	0.0902	0.0918	0.1020	0.1079	0.0000
	25ms	0.2364	0.1971	0.1978	0.2030	0.2062	0.0819	0.1618	0.1151	0.1177	0.1288	0.1337	0.0009
	50ms	0.3206	0.2646	0.2661	0.2725	0.2766	0.1067	0.3215	0.2352	0.2370	0.2471	0.2539	0.0226
	75ms	0.3613	0.2974	0.2991	0.3063	0.3105	0.1155	0.3938	0.2919	0.2936	0.3040	0.3107	0.0331
	100ms	0.3842	0.3165	0.3184	0.3255	0.3297	0.1209	0.4343	0.3222	0.3248	0.3346	0.3407	0.0395
	150ms	0.4112	0.3392	0.3414	0.3486	0.3530	0.1286	0.4762	0.3616	0.3644	0.3732	0.3791	0.0491
	200ms	0.4269	0.3522	0.3548	0.3620	0.3664	0.1330	0.4985	0.3833	0.3858	0.3947	0.4006	0.0568
	500ms	0.4649	0.3843	0.3872	0.3946	0.3992	0.1460	0.5513	0.4334	0.4374	0.4472	0.4536	0.0773
	750ms	0.4758	0.3943	0.3973	0.4052	0.4096	0.1511	0.5650	0.4485	0.4523	0.4625	0.4683	0.0861
	1sec	0.4814	0.3987	0.4015	0.4096	0.4142	0.1540	0.5723	0.4531	0.4571	0.4669	0.4737	0.0920
	5sec	0.4867	0.4119	0.4144	0.4227	0.4271	0.1661	0.5674	0.4600	0.4651	0.4759	0.4820	0.1160
	15sec	0.4780	0.4182	0.4200	0.4279	0.4321	0.1726	0.5450	0.4620	0.4667	0.4781	0.4855	0.1301
	30sec	0.4696	0.4214	0.4224	0.4303	0.4339	0.1773	0.5299	0.4621	0.4662	0.4775	0.4847	0.1384
	60sec	0.4621	0.4247	0.4252	0.4330	0.4364	0.1796	0.5156	0.4661	0.4692	0.4810	0.4872	0.1432
	300sec	0.4539	0.4359	0.4353	0.4423	0.4451	0.1842	0.4974	0.4747	0.4784	0.4895	0.4956	0.1509
	600sec	0.4533	0.4407	0.4389	0.4457	0.4481	0.1840	0.4960	0.4813	0.4844	0.4952	0.5025	0.1509
	900sec	0.4530	0.4423	0.4400	0.4463	0.4487	0.1830	0.4978	0.4852	0.4874	0.4995	0.5051	0.1492
	1200sec	0.4526	0.4433	0.4408	0.4474	0.4497	0.1845	0.4965	0.4867	0.4896	0.5015	0.5070	0.1524
	1500sec	0.4527	0.4440	0.4415	0.4477	0.4499	0.1825	0.4956	0.4877	0.4899	0.5015	0.5073	0.1485
	1800sec	0.4523	0.4440	0.4413	0.4476	0.4497	0.1824	0.4938	0.4887	0.4904	0.5010	0.5084	0.1496

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 1080 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.158: The First-order Spreads Autocorrelations (1,800 days before maturity)

1800 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}^Q}$		0.8397	0.5227	0.5314	0.5916	0.6158	0.5352	0.9081	0.5309	0.5453	0.6253	0.6509	0.5154
$\Omega^{\tilde{\mathscr{P}}^{Q^{1/2}}}$		0.8397	0.5227	0.5314	0.5916	0.6158	0.5352	0.9081	0.5309	0.5453	0.6253	0.6509	0.5154
$\Omega^{\tilde{\mathscr{P}}^D}$		0.7205	0.7800	0.9011	0.8147	0.9327	0.8661	0.8734	0.8281	0.9519	0.8524	0.9658	0.9002
$\Omega^{\tilde{\mathscr{P}}^E}$		0.6601	0.6150	0.5840	0.6211	0.6545	0.3552	0.6989	0.6454	0.6454	0.6974	0.7295	0.3333
$\Omega^{\tilde{\mathscr{P}}^R}$	Tick	0.6567	0.4932	0.4829	0.5526	0.5878	0.4126	0.5073	0.5125	0.6153	0.6564	0.4139	0.0000
	1ms	0.6601	0.6151	0.5841	0.6214	0.6547	0.3525	0.6989	0.6456	0.6457	0.6978	0.7298	0.3304
	2ms	0.6600	0.6154	0.5845	0.6217	0.6552	0.3486	0.6989	0.6459	0.6460	0.6983	0.7304	0.3221
	5ms	0.6598	0.6163	0.5855	0.6227	0.6567	0.3454	0.6985	0.6473	0.6479	0.6997	0.7325	0.3110
	10ms	0.6597	0.6180	0.5874	0.6245	0.6591	0.3488	0.6985	0.6500	0.6509	0.7027	0.7352	0.3121
	15ms	0.6596	0.6198	0.5895	0.6266	0.6616	0.3540	0.6987	0.6530	0.6543	0.7056	0.7377	0.3179
	20ms	0.6596	0.6213	0.5915	0.6283	0.6633	0.3565	0.6984	0.6552	0.6568	0.7075	0.7408	0.3216
	25ms	0.6595	0.6232	0.5939	0.6302	0.6656	0.3622	0.6986	0.6576	0.6597	0.7104	0.7430	0.3302
	50ms	0.6594	0.6315	0.6033	0.6383	0.6745	0.3755	0.6985	0.6689	0.6708	0.7235	0.7530	0.3537
	75ms	0.6594	0.6371	0.6091	0.6435	0.6800	0.3822	0.6984	0.6764	0.6789	0.7317	0.7611	0.3688
	100ms	0.6594	0.6410	0.6136	0.6473	0.6836	0.3879	0.6986	0.6812	0.6834	0.7363	0.7663	0.3787
	150ms	0.6596	0.6464	0.6198	0.6522	0.6889	0.3976	0.6987	0.6875	0.6914	0.7443	0.7731	0.3980
	200ms	0.6599	0.6502	0.6236	0.6559	0.6923	0.4050	0.6988	0.6928	0.6961	0.7492	0.7779	0.4082
	500ms	0.6625	0.6603	0.6349	0.6653	0.7011	0.4339	0.7025	0.7050	0.7080	0.7604	0.7910	0.4512
	750ms	0.6642	0.6636	0.6388	0.6684	0.7042	0.4493	0.7045	0.7083	0.7121	0.7638	0.7943	0.4721
	1sec	0.6662	0.6660	0.6413	0.6702	0.7057	0.4614	0.7070	0.7121	0.7158	0.7655	0.7959	0.4856
	5sec	0.6794	0.6762	0.6536	0.6785	0.7129	0.5349	0.7200	0.7222	0.7259	0.7715	0.8001	0.5702
	15sec	0.6871	0.6803	0.6589	0.6820	0.7157	0.5815	0.7272	0.7252	0.7281	0.7716	0.8003	0.6176
	30sec	0.6905	0.6825	0.6618	0.6834	0.7158	0.6074	0.7307	0.7249	0.7280	0.7726	0.8000	0.6468
	60sec	0.6941	0.6844	0.6648	0.6835	0.7160	0.6284	0.7319	0.7248	0.7280	0.7710	0.7983	0.6689
	300sec	0.7030	0.6941	0.6745	0.6889	0.7192	0.6588	0.7408	0.7333	0.7352	0.7737	0.7988	0.7035
	600sec	0.7060	0.7002	0.6809	0.6939	0.7231	0.6648	0.7430	0.7389	0.7393	0.7765	0.8000	0.7125
	900sec	0.7073	0.7027	0.6832	0.6974	0.7261	0.6664	0.7446	0.7425	0.7428	0.7778	0.8000	0.7166
	1200sec	0.7073	0.7034	0.6856	0.6991	0.7271	0.6701	0.7443	0.7413	0.7421	0.7783	0.8012	0.7207
	1500sec	0.7080	0.7054	0.6891	0.7016	0.7289	0.6705	0.7450	0.7438	0.7445	0.7802	0.8017	0.7186
	1800sec	0.7085	0.7061	0.6902	0.7033	0.7300	0.6702	0.7460	0.7439	0.7447	0.7810	0.8023	0.7194
$\Omega^{\tilde{\mathscr{P}}^{AS}}$	Tick	0.3222	-0.0293	-0.0425	-0.0484	-0.0407	-0.1178	-0.0251	-0.0263	-0.0263	-0.0242	-0.1236	0.0000
	1ms	0.3813	0.3065	0.3060	0.3089	0.3132	0.2258	0.4392	0.3329	0.3328	0.3331	0.3332	0.1250
	2ms	0.4451	0.3646	0.3631	0.3692	0.3771	0.2371	0.5184	0.4111	0.4101	0.4169	0.4286	0.2308
	5ms	0.4682	0.4256	0.4223	0.4357	0.4480	0.2568	0.5218	0.4891	0.4855	0.4986	0.4998	0.2696
	10ms	0.4829	0.4650	0.4622	0.4815	0.4982	0.2988	0.5413	0.5129	0.5084	0.5355	0.5552	0.3072
	15ms	0.5002	0.4840	0.4799	0.5032	0.5244	0.3182	0.5678	0.5341	0.5304	0.5601	0.5878	0.3227
	20ms	0.5244	0.5089	0.5050	0.5289	0.5515	0.3365	0.6068	0.5691	0.5658	0.5958	0.6247	0.3395
	25ms	0.5365	0.5215	0.5173	0.5425	0.5661	0.3525	0.6252	0.5875	0.5847	0.6179	0.6479	0.3505
	50ms	0.5905	0.5802	0.5743	0.6011	0.6275	0.4007	0.7111	0.6762	0.6743	0.7045	0.7316	0.3952
	75ms	0.6157	0.6052	0.5998	0.6270	0.6549	0.4222	0.7369	0.7031	0.7038	0.7371	0.7622	0.4199
	100ms	0.6292	0.6206	0.6151	0.6422	0.6721	0.4334	0.7492	0.7168	0.7181	0.7526	0.7796	0.4344
	150ms	0.6449	0.6405	0.6336	0.6600	0.6903	0.4443	0.7611	0.7307	0.7328	0.7701	0.7969	0.4534
	200ms	0.6552	0.6520	0.6443	0.6705	0.7003	0.4508	0.7699	0.7392	0.7416	0.7788	0.8065	0.4650
	500ms	0.6771	0.6758	0.6661	0.6919	0.7209	0.4652	0.7840	0.7556	0.7584	0.7962	0.8226	0.4884
	750ms	0.6829	0.6810	0.6713	0.6962	0.7256	0.4701	0.7852	0.7571	0.7593	0.7985	0.8253	0.4936
	1sec	0.6863	0.6833	0.6729	0.6975	0.7270	0.4729	0.7836	0.7573	0.7597	0.7988	0.8260	0.4967
	5sec	0.6948	0.6897	0.6763	0.6989	0.7267	0.4779	0.7737	0.7472	0.7515	0.7909	0.8189	0.4997
	15sec	0.6953	0.6914	0.6755	0.6967	0.7243	0.4779	0.7606	0.7413	0.7451	0.7845	0.8125	0.4969
	30sec	0.6963	0.6932	0.6750	0.6962	0.7231	0.4768	0.7528	0.7372	0.7408	0.7806	0.8095	0.4958
	60sec	0.6971	0.6939	0.6741	0.6953	0.7209	0.4730	0.7463	0.7346	0.7376	0.7772	0.8044	0.4911
	300sec	0.7026	0.7004	0.6753	0.6946	0.7180	0.4627	0.7438	0.7391	0.7391	0.7769	0.8010	0.4776
	600sec	0.7063	0.7045	0.6776	0.6959	0.7178	0.4593	0.7451	0.7426	0.7422	0.7764	0.8010	0.4768
	900sec	0.7077	0.7057	0.6765	0.6941	0.7169	0.4574	0.7460	0.7448	0.7437	0.7760	0.8014	0.4737
	1200sec	0.7083	0.7056	0.6759	0.6940	0.7170	0.4583	0.7455	0.7437	0.7420	0.7745	0.8004	0.4734
	1500sec	0.7093	0.7070	0.6765	0.6938	0.7175	0.4574	0.7460	0.7456	0.7430	0.7752	0.8012	0.4726
	1800sec	0.7099	0.7073	0.6766	0.6936	0.7185	0.4567	0.7466	0.7458	0.7433	0.7772	0.8019	0.4737

Notes: This table reports both the mean and median of a series of liquidity spreads first-order autocorrelations for the 1,800 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}^{AS}}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.159: The Fifth-order Spreads Autocorrelations (1,800 days before maturity)

1800 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.6576	0.2660	0.2794	0.3334	0.3593	0.3283	0.7354	0.2302	0.2453	0.3122	0.3392	0.2249
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.6576	0.2660	0.2794	0.3334	0.3593	0.3283	0.7354	0.2302	0.2453	0.3122	0.3392	0.2249
$\Omega^{\tilde{\mathscr{P}}D}$		0.5709	0.5876	0.8022	0.6104	0.8368	0.6955	0.6955	0.6243	0.8799	0.6423	0.8997	0.7558
$\Omega^{\tilde{\mathscr{P}}E}$		0.4438	0.3510	0.3393	0.3716	0.4058	0.1636	0.4676	0.3291	0.3244	0.3904	0.4398	0.0899
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.4418	0.3015	0.2973	0.3392	0.3728	0.1892	0.2527	0.2515	0.3371	0.3889	0.1013	0.0000
	1ms	0.4437	0.3512	0.3395	0.3719	0.4060	0.1631	0.4674	0.3295	0.3246	0.3906	0.4403	0.0876
	2ms	0.4436	0.3515	0.3398	0.3723	0.4065	0.1631	0.4674	0.3299	0.3251	0.3911	0.4412	0.0863
	5ms	0.4433	0.3523	0.3407	0.3731	0.4078	0.1642	0.4672	0.3310	0.3264	0.3934	0.4429	0.0853
	10ms	0.4429	0.3538	0.3422	0.3746	0.4098	0.1661	0.4667	0.3328	0.3286	0.3956	0.4457	0.0888
	15ms	0.4425	0.3552	0.3438	0.3762	0.4117	0.1667	0.4665	0.3348	0.3307	0.3984	0.4486	0.0898
	20ms	0.4422	0.3569	0.3457	0.3780	0.4136	0.1673	0.4662	0.3375	0.3339	0.4012	0.4508	0.0934
	25ms	0.4419	0.3583	0.3473	0.3796	0.4152	0.1683	0.4661	0.3397	0.3355	0.4037	0.4528	0.0958
	50ms	0.4407	0.3664	0.3557	0.3878	0.4246	0.1726	0.4641	0.3522	0.3497	0.4181	0.4689	0.1090
	75ms	0.4394	0.3716	0.3610	0.3931	0.4306	0.1752	0.4623	0.3592	0.3580	0.4270	0.4798	0.1177
	100ms	0.4385	0.3752	0.3648	0.3970	0.4348	0.1779	0.4610	0.3640	0.3633	0.4346	0.4860	0.1239
	150ms	0.4374	0.3805	0.3705	0.4027	0.4411	0.1834	0.4599	0.3702	0.3694	0.4440	0.4976	0.1348
	200ms	0.4367	0.3844	0.3745	0.4068	0.4457	0.1879	0.4598	0.3744	0.3743	0.4491	0.5065	0.1421
	500ms	0.4358	0.3953	0.3861	0.4185	0.4580	0.2068	0.4590	0.3881	0.3891	0.4665	0.5263	0.1674
	750ms	0.4358	0.3993	0.3904	0.4226	0.4624	0.2171	0.4581	0.3929	0.3946	0.4733	0.5339	0.1811
	1sec	0.4369	0.4019	0.3931	0.4251	0.4649	0.2254	0.4589	0.3953	0.3961	0.4761	0.5375	0.1913
	5sec	0.4450	0.4141	0.4059	0.4373	0.4766	0.2770	0.4657	0.4081	0.4097	0.4871	0.5470	0.2554
	15sec	0.4469	0.4211	0.4134	0.4438	0.4829	0.3146	0.4654	0.4178	0.4200	0.4902	0.5516	0.3022
	30sec	0.4454	0.4247	0.4167	0.4467	0.4848	0.3384	0.4620	0.4189	0.4216	0.4971	0.5544	0.3302
	60sec	0.4447	0.4280	0.4201	0.4482	0.4864	0.3565	0.4578	0.4254	0.4272	0.4972	0.5542	0.3530
	300sec	0.4491	0.4390	0.4299	0.4550	0.4919	0.3823	0.4592	0.4406	0.4404	0.5042	0.5611	0.3833
	600sec	0.4525	0.4461	0.4364	0.4603	0.4959	0.3878	0.4626	0.4507	0.4499	0.5116	0.5634	0.3928
	900sec	0.4542	0.4492	0.4388	0.4625	0.4982	0.3896	0.4663	0.4574	0.4546	0.5152	0.5681	0.3938
	1200sec	0.4550	0.4509	0.4412	0.4640	0.4992	0.3931	0.4665	0.4593	0.4573	0.5160	0.5691	0.3985
	1500sec	0.4558	0.4530	0.4439	0.4651	0.4999	0.3917	0.4675	0.4614	0.4602	0.5164	0.5701	0.3976
	1800sec	0.4565	0.4540	0.4454	0.4667	0.5005	0.3922	0.4676	0.4629	0.4614	0.5185	0.5703	0.3969
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.1693	0.0013	0.0012	0.0012	0.0011	0.0012	0.0021	0.0000	0.0000	0.0000	-0.0001	0.0000
	1ms	0.1337	0.0538	0.0537	0.0548	0.0560	0.0107	0.0834	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	2ms	0.1287	0.0901	0.0892	0.0922	0.0952	0.0228	0.0687	-0.0001	-0.0001	0.0000	0.0000	-0.0001
	5ms	0.1512	0.1399	0.1388	0.1461	0.1539	0.0522	0.0645	0.0406	0.0387	0.0544	0.0691	-0.0001
	10ms	0.1877	0.1780	0.1768	0.1897	0.2027	0.0836	0.0859	0.0823	0.0803	0.1040	0.1256	0.0000
	15ms	0.2150	0.2018	0.2004	0.2168	0.2330	0.1009	0.1165	0.1138	0.1116	0.1390	0.1672	0.0091
	20ms	0.2419	0.2264	0.2251	0.2436	0.2625	0.1160	0.1556	0.1483	0.1462	0.1799	0.2138	0.0278
	25ms	0.2602	0.2416	0.2402	0.2604	0.2813	0.1251	0.1859	0.1721	0.1684	0.2047	0.2429	0.0390
	50ms	0.3292	0.3020	0.3004	0.3247	0.3500	0.1531	0.3178	0.2858	0.2842	0.3247	0.3655	0.0731
	75ms	0.3591	0.3256	0.3247	0.3514	0.3791	0.1644	0.3739	0.3266	0.3255	0.3749	0.4156	0.0898
	100ms	0.3745	0.3387	0.3380	0.3659	0.3956	0.1711	0.3970	0.3458	0.3454	0.3999	0.4429	0.0997
	150ms	0.3938	0.3572	0.3568	0.3857	0.4171	0.1815	0.4287	0.3720	0.3725	0.4292	0.4780	0.1154
	200ms	0.4053	0.3681	0.3676	0.3977	0.4299	0.1879	0.4493	0.3852	0.3878	0.4472	0.4958	0.1256
	500ms	0.4339	0.3951	0.3944	0.4258	0.4601	0.2052	0.4862	0.4161	0.4203	0.4824	0.5353	0.1551
	750ms	0.4428	0.4026	0.4020	0.4337	0.4688	0.2120	0.4963	0.4230	0.4285	0.4902	0.5429	0.1669
	1sec	0.4472	0.4056	0.4048	0.4368	0.4722	0.2159	0.4976	0.4236	0.4286	0.4931	0.5477	0.1738
	5sec	0.4544	0.4148	0.4130	0.4444	0.4797	0.2302	0.4892	0.4201	0.4241	0.4924	0.5481	0.1994
	15sec	0.4507	0.4194	0.4165	0.4456	0.4812	0.2362	0.4700	0.4186	0.4234	0.4887	0.5452	0.2117
	30sec	0.4476	0.4227	0.4180	0.4467	0.4812	0.2404	0.4615	0.4188	0.4221	0.4889	0.5438	0.2188
	60sec	0.4454	0.4258	0.4202	0.4477	0.4814	0.2410	0.4518	0.4227	0.4249	0.4884	0.5439	0.2196
	300sec	0.4482	0.4386	0.4287	0.4537	0.4850	0.2420	0.4531	0.4394	0.4384	0.4990	0.5515	0.2210
	600sec	0.4520	0.4457	0.4339	0.4571	0.4878	0.2415	0.4588	0.4500	0.4477	0.5048	0.5567	0.2216
	900sec	0.4538	0.4486	0.4350	0.4569	0.4876	0.2402	0.4624	0.4553	0.4506	0.5050	0.5595	0.2206
	1200sec	0.4551	0.4503	0.4359	0.4576	0.4883	0.2418	0.4635	0.4576	0.4519	0.5054	0.5604	0.2221
	1500sec	0.4563	0.4524	0.4369	0.4582	0.4897	0.2411	0.4656	0.4600	0.4536	0.5086	0.5612	0.2211
	1800sec	0.4569	0.4532	0.4374	0.4583	0.4899	0.2410	0.4644	0.4607	0.4546	0.5079	0.5620	0.2225

Notes: This table reports both the mean and median of a series of liquidity spreads fifth-order autocorrelations for the 1,800 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

Table C.160: The Tenth-order Spreads Autocorrelations (1,800 days before maturity)

1800 days		Mean						Median					
		VWA	Level 1	Level 2	Level 3	Level 4	Level 5	VWA	Level 1	Level 2	Level 3	Level 4	Level 5
$\Omega^{\tilde{\mathscr{P}}Q}$		0.5633	0.1824	0.1939	0.2377	0.2603	0.2491	0.6181	0.1358	0.1460	0.1917	0.2142	0.1236
$\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$		0.5633	0.1824	0.1939	0.2377	0.2603	0.2491	0.6181	0.1358	0.1460	0.1917	0.2142	0.1236
$\Omega^{\tilde{\mathscr{P}}D}$		0.5049	0.5045	0.7462	0.5047	0.7795	0.6117	0.5998	0.5214	0.8329	0.5157	0.8526	0.6816
$\Omega^{\tilde{\mathscr{P}}E}$		0.3831	0.2708	0.2643	0.2902	0.3194	0.1122	0.3884	0.2332	0.2288	0.2779	0.3210	0.0317
$\Omega^{\tilde{\mathscr{P}}R}$	Tick	0.3821	0.2370	0.2346	0.2658	0.2947	0.1259	0.1792	0.1766	0.2348	0.2797	0.0276	0.0000
	1ms	0.3831	0.2710	0.2645	0.2904	0.3197	0.1120	0.3883	0.2335	0.2290	0.2782	0.3213	0.0312
	2ms	0.3829	0.2712	0.2646	0.2906	0.3199	0.1123	0.3883	0.2340	0.2290	0.2786	0.3219	0.0311
	5ms	0.3825	0.2717	0.2652	0.2911	0.3207	0.1133	0.3877	0.2347	0.2299	0.2798	0.3240	0.0319
	10ms	0.3819	0.2726	0.2660	0.2920	0.3220	0.1143	0.3870	0.2359	0.2306	0.2814	0.3269	0.0333
	15ms	0.3813	0.2735	0.2670	0.2930	0.3233	0.1140	0.3856	0.2363	0.2312	0.2822	0.3289	0.0349
	20ms	0.3808	0.2744	0.2681	0.2941	0.3244	0.1135	0.3852	0.2371	0.2328	0.2839	0.3299	0.0356
	25ms	0.3804	0.2753	0.2691	0.2950	0.3253	0.1136	0.3843	0.2390	0.2345	0.2849	0.3309	0.0365
	50ms	0.3783	0.2810	0.2748	0.3010	0.3322	0.1148	0.3817	0.2449	0.2420	0.2947	0.3404	0.0437
	75ms	0.3762	0.2849	0.2789	0.3050	0.3368	0.1154	0.3781	0.2500	0.2462	0.3005	0.3484	0.0481
	100ms	0.3746	0.2874	0.2816	0.3080	0.3401	0.1167	0.3759	0.2517	0.2476	0.3048	0.3535	0.0513
	150ms	0.3725	0.2911	0.2856	0.3124	0.3453	0.1195	0.3737	0.2548	0.2509	0.3083	0.3613	0.0572
	200ms	0.3710	0.2938	0.2884	0.3155	0.3490	0.1224	0.3706	0.2567	0.2540	0.3130	0.3671	0.0617
	500ms	0.3675	0.3026	0.2978	0.3258	0.3603	0.1354	0.3644	0.2644	0.2628	0.3260	0.3855	0.0795
	750ms	0.3665	0.3061	0.3017	0.3299	0.3649	0.1420	0.3631	0.2685	0.2663	0.3303	0.3934	0.0880
	1sec	0.3664	0.3081	0.3038	0.3323	0.3674	0.1477	0.3622	0.2703	0.2694	0.3329	0.3966	0.0945
	5sec	0.3673	0.3184	0.3149	0.3444	0.3796	0.1840	0.3585	0.2769	0.2776	0.3466	0.4081	0.1383
	15sec	0.3633	0.3252	0.3221	0.3519	0.3875	0.2126	0.3507	0.2843	0.2844	0.3508	0.4173	0.1713
	30sec	0.3581	0.3283	0.3252	0.3549	0.3902	0.2316	0.3415	0.2868	0.2886	0.3546	0.4187	0.1956
	60sec	0.3538	0.3311	0.3280	0.3571	0.3925	0.2467	0.3344	0.2930	0.2931	0.3584	0.4209	0.2155
	300sec	0.3520	0.3420	0.3376	0.3643	0.3994	0.2720	0.3326	0.3129	0.3122	0.3696	0.4281	0.2400
	600sec	0.3539	0.3476	0.3426	0.3675	0.4025	0.2767	0.3361	0.3237	0.3214	0.3779	0.4318	0.2485
	900sec	0.3558	0.3506	0.3448	0.3696	0.4045	0.2775	0.3370	0.3285	0.3260	0.3790	0.4358	0.2507
	1200sec	0.3565	0.3525	0.3470	0.3715	0.4055	0.2829	0.3397	0.3314	0.3292	0.3812	0.4366	0.2551
	1500sec	0.3572	0.3541	0.3490	0.3719	0.4059	0.2789	0.3411	0.3342	0.3317	0.3825	0.4374	0.2525
	1800sec	0.3577	0.3550	0.3498	0.3729	0.4067	0.2804	0.3398	0.3338	0.3325	0.3843	0.4400	0.2533
$\Omega^{\tilde{\mathscr{P}}AS}$	Tick	0.1293	0.0018	0.0018	0.0023	0.0025	0.0016	0.0023	0.0001	0.0000	0.0000	-0.0001	0.0000
	1ms	0.0722	0.0203	0.0202	0.0207	0.0213	0.0005	0.0263	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	2ms	0.0683	0.0355	0.0354	0.0367	0.0383	0.0042	0.0186	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001
	5ms	0.0854	0.0710	0.0705	0.0745	0.0794	0.0199	0.0174	-0.0001	-0.0001	-0.0001	0.0000	-0.0001
	10ms	0.1162	0.1035	0.1030	0.1110	0.1195	0.0421	0.0259	0.0000	0.0000	0.0141	0.0260	-0.0001
	15ms	0.1395	0.1242	0.1234	0.1345	0.1455	0.0554	0.0390	0.0220	0.0212	0.0383	0.0541	-0.0001
	20ms	0.1616	0.1437	0.1429	0.1559	0.1691	0.0662	0.0569	0.0433	0.0420	0.0639	0.0840	0.0000
	25ms	0.1776	0.1562	0.1554	0.1701	0.1849	0.0726	0.0726	0.0603	0.0592	0.0825	0.1080	0.0000
	50ms	0.2418	0.2068	0.2064	0.2251	0.2445	0.0949	0.1665	0.1423	0.1414	0.1744	0.2075	0.0151
	75ms	0.2734	0.2294	0.2293	0.2508	0.2727	0.1031	0.2175	0.1782	0.1779	0.2166	0.2518	0.0239
	100ms	0.2901	0.2416	0.2419	0.2644	0.2884	0.1081	0.2432	0.1959	0.1954	0.2387	0.2772	0.0292
	150ms	0.3107	0.2573	0.2580	0.2821	0.3081	0.1152	0.2768	0.2172	0.2191	0.2672	0.3103	0.0375
	200ms	0.3228	0.2661	0.2670	0.2923	0.3192	0.1194	0.2966	0.2281	0.2301	0.2830	0.3281	0.0430
	500ms	0.3527	0.2900	0.2914	0.3190	0.3490	0.1322	0.3413	0.2596	0.2635	0.3194	0.3708	0.0640
	750ms	0.3612	0.2976	0.2991	0.3278	0.3582	0.1374	0.3544	0.2685	0.2732	0.3290	0.3836	0.0716
	1sec	0.3654	0.3006	0.3020	0.3311	0.3621	0.1399	0.3597	0.2698	0.2734	0.3339	0.3892	0.0770
	5sec	0.3699	0.3103	0.3112	0.3411	0.3727	0.1521	0.3538	0.2709	0.2750	0.3374	0.3955	0.1014
	15sec	0.3627	0.3153	0.3159	0.3443	0.3765	0.1585	0.3366	0.2752	0.2797	0.3370	0.3937	0.1160
	30sec	0.3559	0.3178	0.3173	0.3457	0.3777	0.1627	0.3267	0.2768	0.2795	0.3384	0.3965	0.1226
	60sec	0.3508	0.3212	0.3199	0.3481	0.3798	0.1645	0.3195	0.2830	0.2849	0.3418	0.3992	0.1269
	300sec	0.3493	0.3358	0.3316	0.3576	0.3882	0.1693	0.3231	0.3083	0.3067	0.3592	0.4123	0.1325
	600sec	0.3520	0.3427	0.3370	0.3617	0.3915	0.1694	0.3305	0.3192	0.3177	0.3686	0.4208	0.1331
	900sec	0.3539	0.3463	0.3390	0.3622	0.3923	0.1686	0.3324	0.3247	0.3208	0.3681	0.4233	0.1326
	1200sec	0.3549	0.3483	0.3403	0.3636	0.3936	0.1703	0.3345	0.3277	0.3222	0.3705	0.4241	0.1343
	1500sec	0.3561	0.3503	0.3414	0.3640	0.3947	0.1691	0.3372	0.3302	0.3247	0.3737	0.4259	0.1333
	1800sec	0.3564	0.3512	0.3418	0.3643	0.3947	0.1690	0.3352	0.3308	0.3245	0.3735	0.4276	0.1342

Notes: This table reports both the mean and median of a series of liquidity spreads tenth-order autocorrelations for the 1,800 days before maturity group, including the first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{P}}Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{P}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{P}}D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{P}}E}$), realized spreads ($\Omega^{\tilde{\mathscr{P}}R}$), and adverse selection ($\Omega^{\tilde{\mathscr{P}}AS}$). All the spreads autocorrelations are calculated by the volume weighted average (VWA) spreads and the spreads for each order book level. Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec.

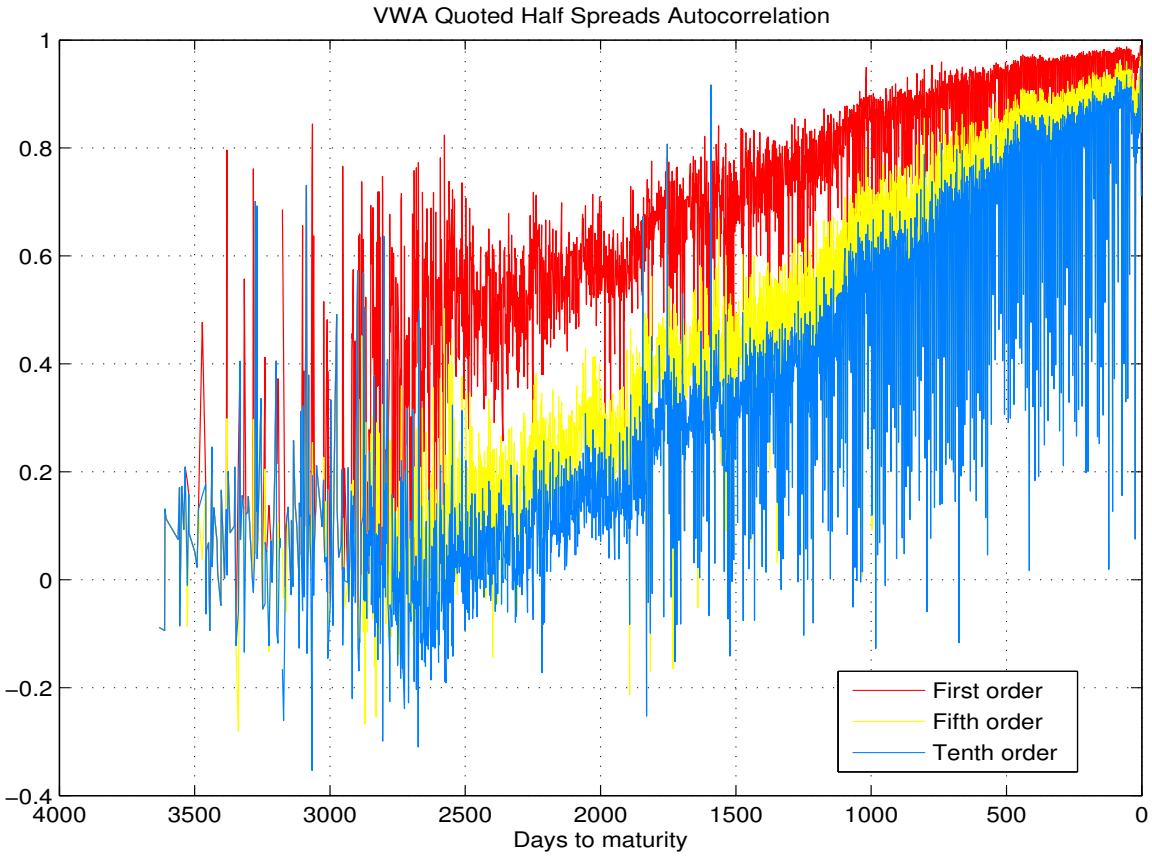


Figure C.153: The Volume-weighted Average Quoted Half-spreads Autocorrelation

Notes: This plot represents the daily autocorrelations of volume weighted average (VWA) quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$) sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order quoted half-spreads autocorrelations are marked with red, yellow, and blue lines. The volume weighted average spreads, $\tilde{\mathscr{S}}_k^v$, are are measured with the volume weighted average bid, ask, and mid-quote (p_{bk}^v, p_{ak}^v at tick-by-tick interval, where k is the intraday time index.The autocorrelations of the volume weighted average quoted half-spreads can be expressed as $\Omega_{\eta k}^{\tilde{\mathscr{S}},v} = \rho(\tilde{\mathscr{S}}_k^v, \tilde{\mathscr{S}}_{k-\eta}^v)$, where η indicates the first-order, fifth-order, and tenth-order. Because the spreads autocorrelations are taken the average value over 40 Eurodollar contracts sorted by the days to maturity, there are 2,434 daily average spreads autocorrelations in total and the time spans of two days and 3,631 days to maturity.

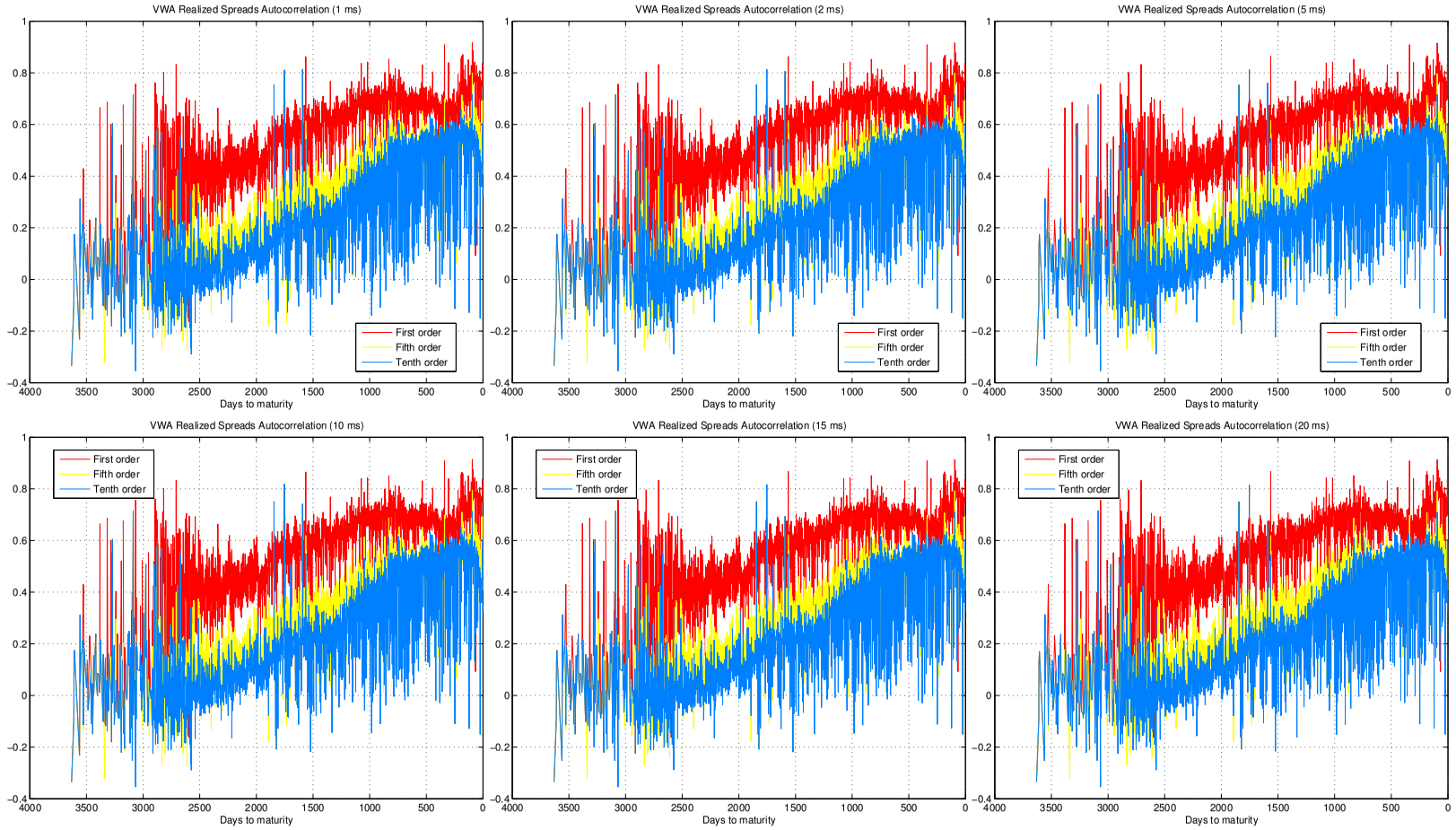


Figure C.154: The Volume-weighted Average Realized Spreads Autocorrelation

Notes: This plot represents the daily autocorrelations of volume-weighted average (VWA) realized spreads ($\tilde{\mathscr{S}}^R$) sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order realized spreads autocorrelations are marked with red, yellow, and blue lines. The volume weighted average spreads, $\tilde{\mathscr{S}}^v_k$, are are measured with the volume weighted average bid, ask, and mid-quote (p^v_{bk}, p^v_{ak}, and p^v_{mk}) with trade prices (p_k), where k is the intraday time index. The trade directions are calculated by the volume weighted average trade classification algorithm. Hence, the autocorrelations of the volume weighted average spreads can be expressed as $\Omega^{\tilde{\mathscr{S}},v}_{\eta k} = \rho(\tilde{\mathscr{S}}^v_k, \tilde{\mathscr{S}}^v_{k-\eta})$, where η indicates the first-order, fifth-order, and tenth-order. Because the spreads autocorrelations are taken the average value over 40 Eurodollar contracts sorted by the days to maturity, there are 2,434 daily average spreads autocorrelations in total and the time spans of two days and 3,631 days to maturity. This plot reports realized spread autocorrelations at six time intervals, including 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, and 20 ms.

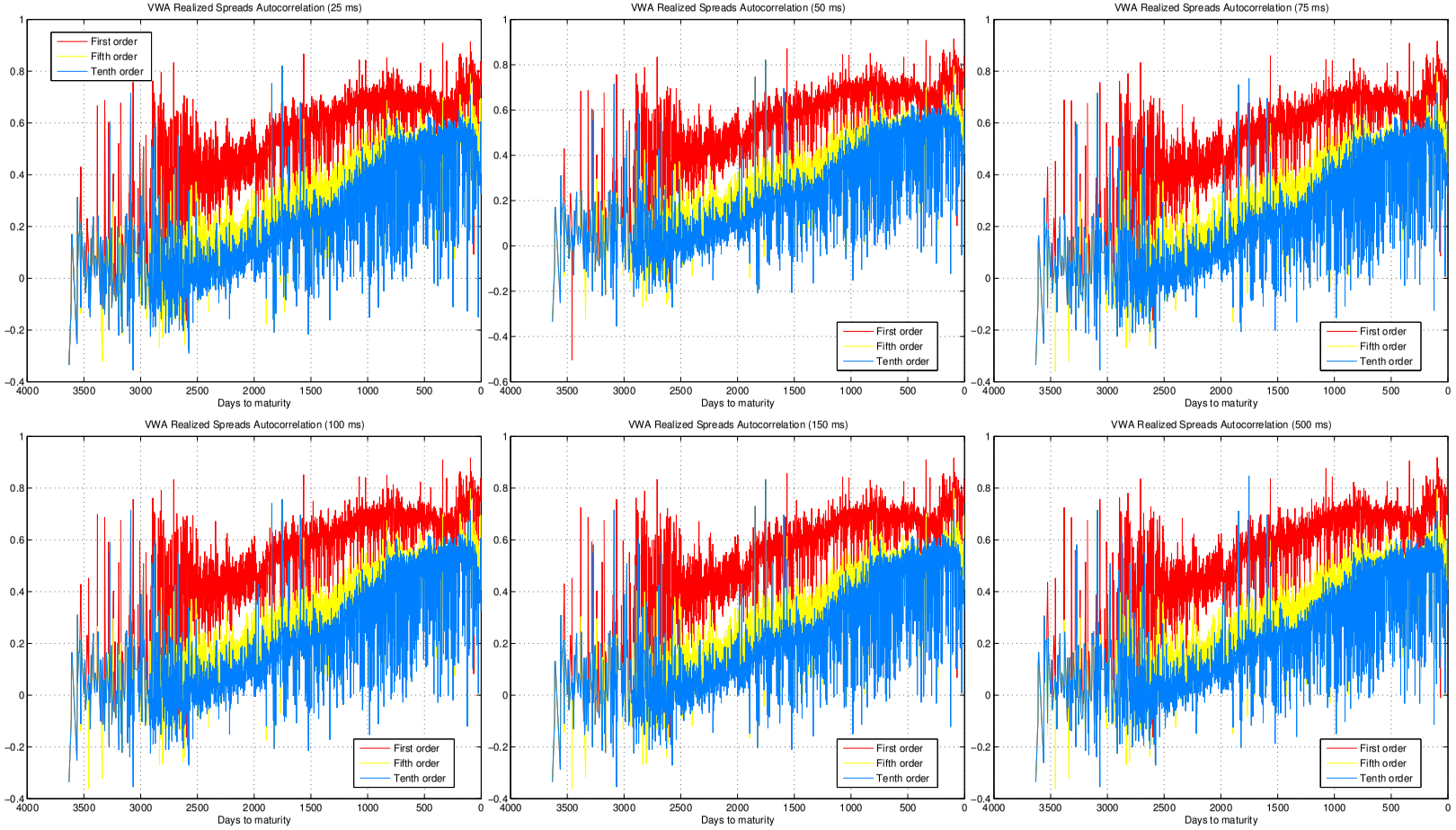


Figure C.155: The Volume-weighted Average Realized Spreads Autocorrelation

Notes: This plot represents the daily autocorrelations of volume-weighted average (VWA) realized spreads ($\tilde{\mathscr{S}}^R$) sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order realized spreads autocorrelations are marked with red, yellow, and blue lines. The volume weighted average spreads, $\tilde{\mathscr{S}}_k^v$, are are measured with the volume weighted average bid, ask, and mid-quote (p_{bk}^v, p_{ak}^v, and p_{mk}^v) with trade prices (p_k), where k is the intraday time index. The trade directions are calculated by the volume weighted average trade classification algorithm. Hence, the autocorrelations of the volume weighted average spreads can be expressed as $\Omega_{\eta k}^{\tilde{\mathscr{S}},v} = \rho(\tilde{\mathscr{S}}_k^v, \tilde{\mathscr{S}}_{k-\eta}^v)$, where η indicates the first-order, fifth-order, and tenth-order. Because the spreads autocorrelations are taken the average value over 40 Eurodollar contracts sorted by the days to maturity, there are 2,434 daily average spreads autocorrelations in total and the time spans of two days and 3,631 days to maturity. This plot reports realized spread autocorrelations at six time intervals, including 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, and 500 ms.

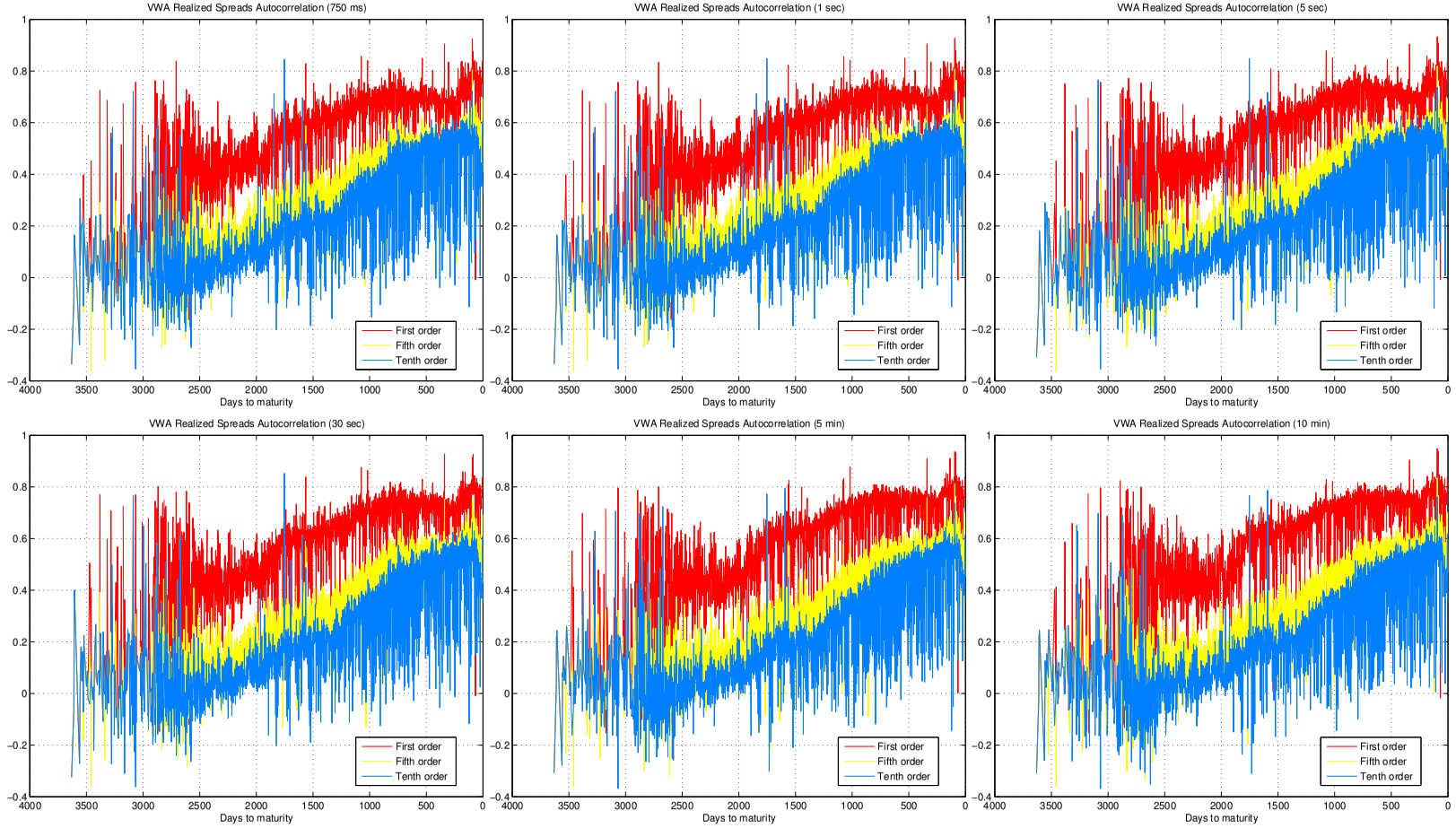


Figure C.156: The Volume-weighted Average Realized Spreads Autocorrelation

Notes: This plot represents the daily autocorrelations of volume-weighted average (VWA) realized spreads ($\tilde{\mathscr{S}}^{R}$) sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order realized spreads autocorrelations are marked with red, yellow, and blue lines. The volume weighted average spreads, $\tilde{\mathscr{S}}^{v}_{k}$, are are measured with the volume weighted average bid, ask, and mid-quote (p^{v}_{bk}, p^{v}_{ak}, and p^{v}_{mk}) with trade prices (p_k), where k is the intraday time index. The trade directions are calculated by the volume weighted average trade classification algorithm. Hence, the autocorrelations of the volume weighted average spreads can be expressed as $\Omega^{\tilde{\mathscr{S}},v}_{\eta k} = \rho(\tilde{\mathscr{S}}^{v}_{k}, \tilde{\mathscr{S}}^{v}_{k-\eta})$, where η indicates the first-order, fifth-order, and tenth-order. Because the spreads autocorrelations are taken the average value over 40 Eurodollar contracts sorted by the days to maturity, there are 2,434 daily average spreads autocorrelations in total and the time spans of two days and 3,631 days to maturity. This plot reports realized spread autocorrelations at six time intervals, including 750 ms, 1 sec, 5 sec, 30 sec, 300 sec, and 600 sec.

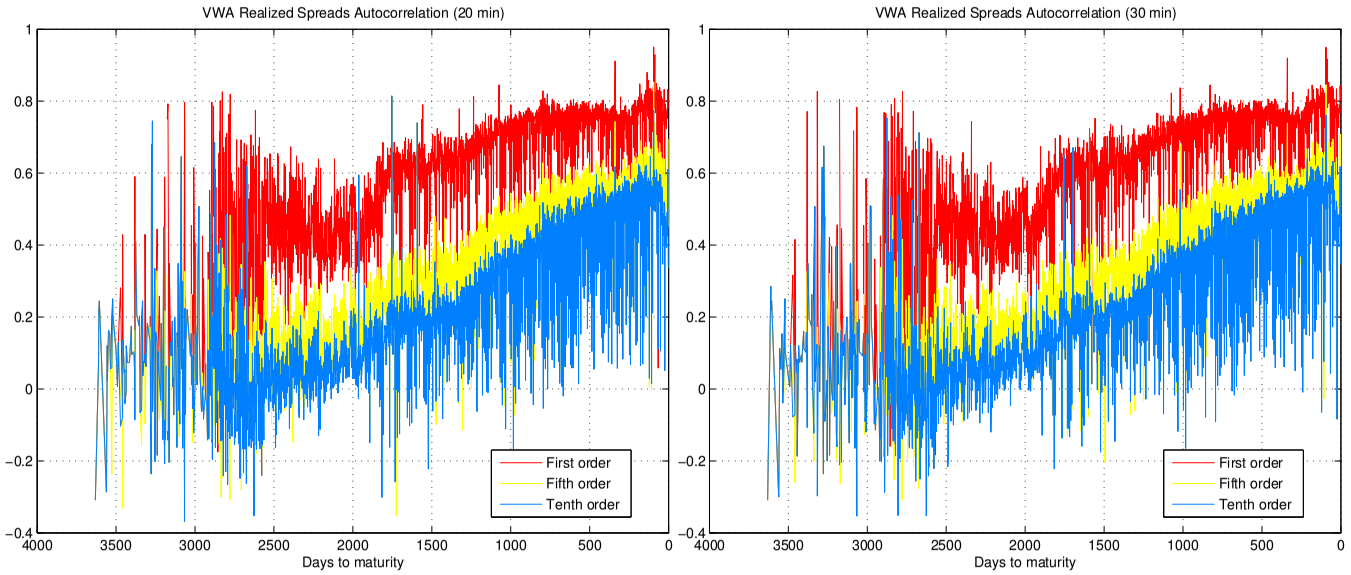


Figure C.157: The Volume-weighted Average Realized Spreads Autocorrelation

Notes: This plot represents the daily autocorrelations of volume-weighted average (VWA) realized spreads ($\tilde{\mathscr{S}}^R$) sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order realized spreads autocorrelations are marked with red, yellow, and blue lines. The volume weighted average spreads, $\tilde{\mathscr{S}}_k^v$, are are measured with the volume weighted average bid, ask, and mid-quote (p_{bk}^v, p_{ak}^v, and p_{mk}^v) with trade prices (p_k), where k is the intraday time index. The trade directions are calculated by the volume weighted average trade classification algorithm. Hence, the autocorrelations of the volume weighted average spreads can be expressed as $\Omega_{\eta k}^{\tilde{\mathscr{S}},v} = \rho(\tilde{\mathscr{S}}_k^v, \tilde{\mathscr{S}}_{k-\eta}^v)$, where η indicates the first-order, fifth-order, and tenth-order. Because the spreads autocorrelations are taken the average value over 40 Eurodollar contracts sorted by the days to maturity, there are 2,434 daily average spreads autocorrelations in total and the time spans of two days and 3,631 days to maturity. This plot reports realized spread autocorrelations at two time intervals, including 1,200 sec and 1,800 sec.

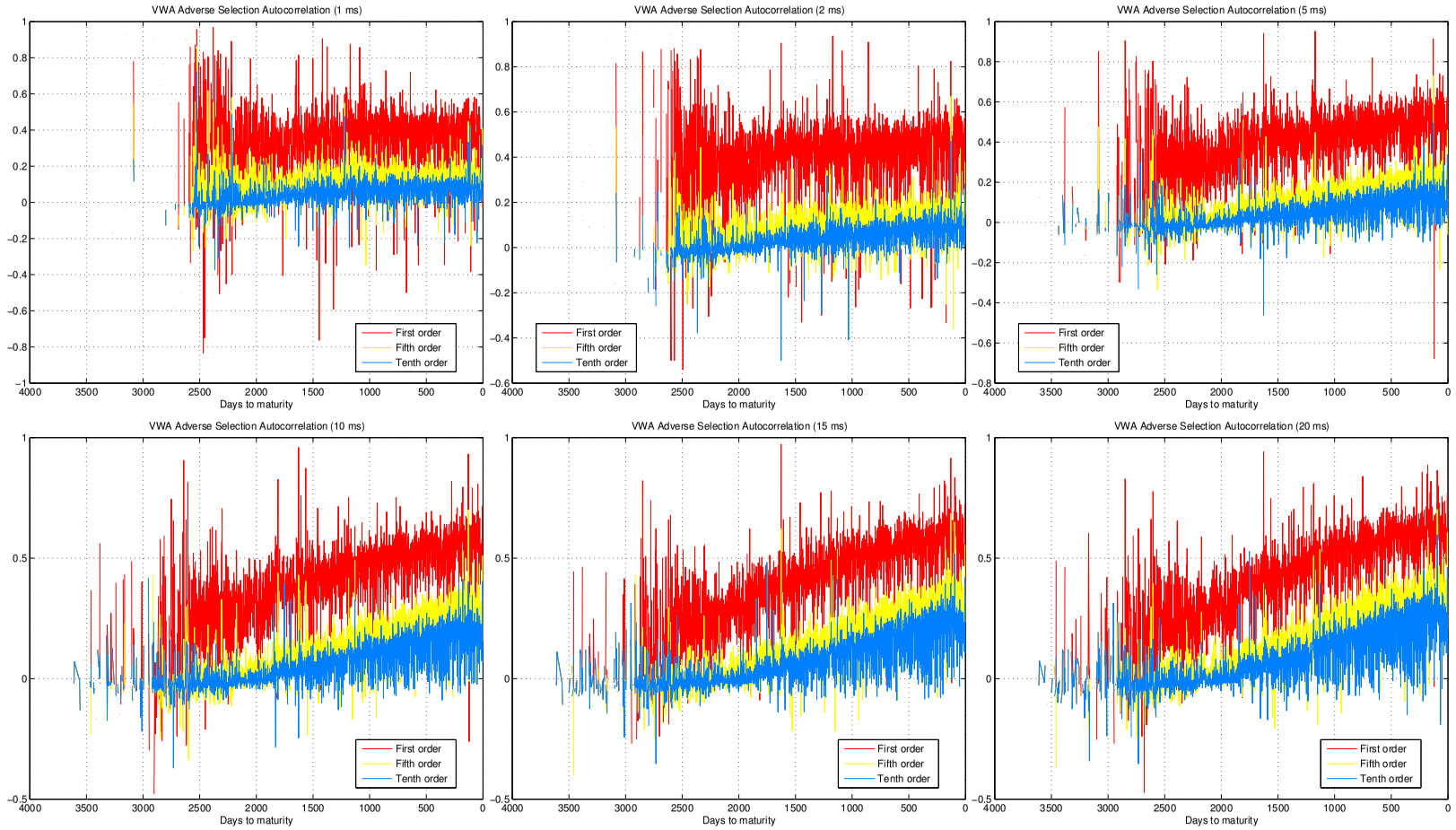


Figure C.158: The Volume-weighted Average Adverse Selection Spreads Autocorrelation

Notes: This plot represents the daily autocorrelations of volume weighted average (VWA) adverse selection spreads ($\tilde{\mathscr{S}}^{AS}$) sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order spreads autocorrelations are marked with red, yellow, and blue lines. The volume weighted average spreads, $\tilde{\mathscr{S}}^{v}_{k}$, are are measured with the volume weighted average bid, ask, and mid-quote (p^{v}_{bk}, p^{v}_{ak}, and p^{v}_{mk}) with trade prices (p_k), where k is the intraday time index . The trade directions are calculated by the volume weighted average trade classification algorithm . Hence, the autocorrelations of the volume weighted average spreads can be expressed as $\Omega^{\tilde{\mathscr{S}},v}_{\eta k} = \rho(\tilde{\mathscr{S}}^{v}_{k}, \tilde{\mathscr{S}}^{v}_{k-\eta})$, where η indicates the first-order, fifth-order, and tenth-order. Because the spreads autocorrelations are taken the average value over 40 Eurodollar contracts sorted by the days to maturity, there are 2,434 daily average spreads autocorrelations in total and the time spans of two days and 3,631 days to maturity. This plot only reports realized spread and adverse selection autocorrelations at six time intervals, including 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, and 20 ms.

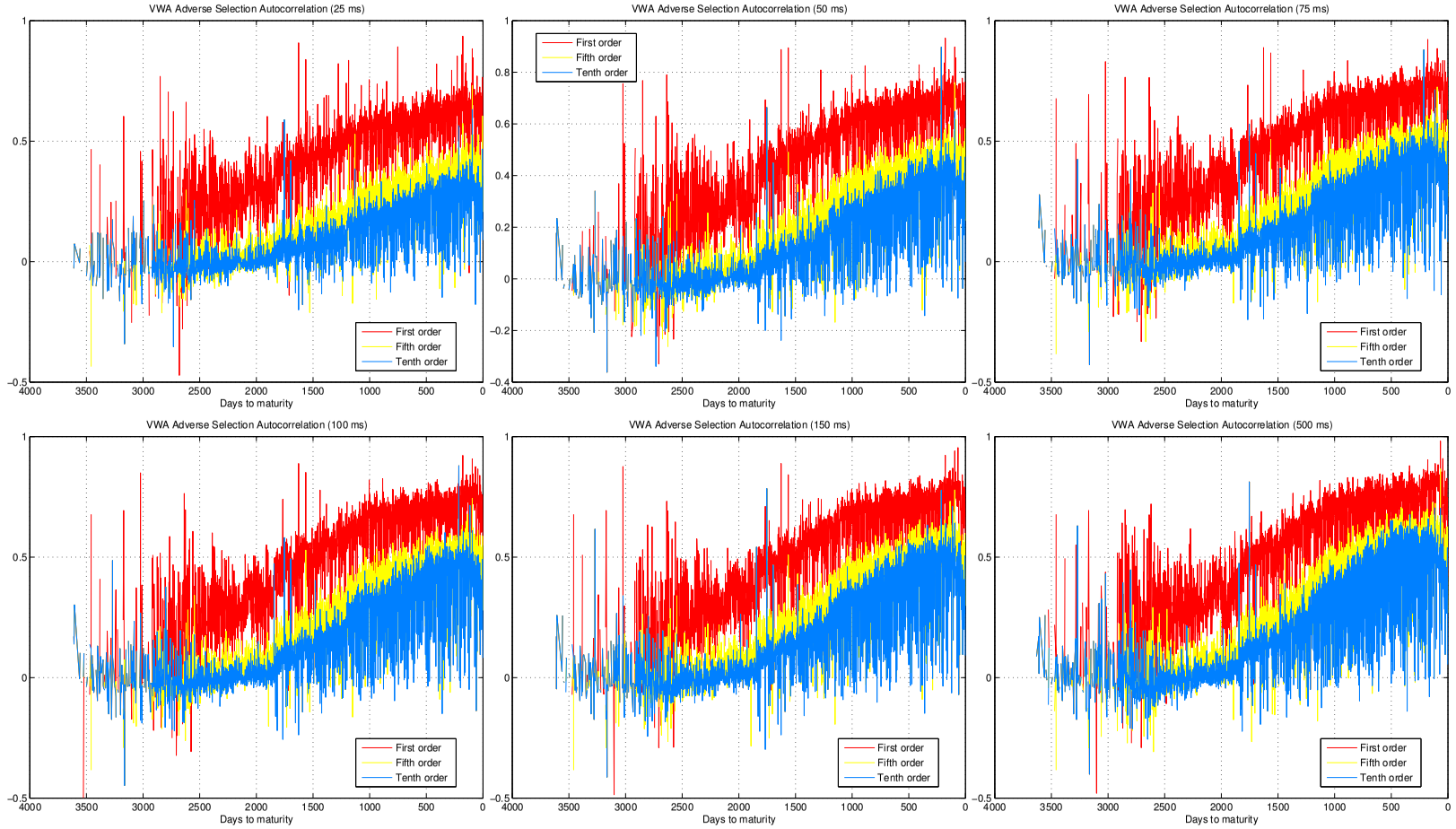


Figure C.159: The Volume-weighted Average Adverse Selection Spreads Autocorrelation

Notes: This plot represents the daily autocorrelations of volume weighted average (VWA) adverse selection spreads ($\tilde{\mathscr{S}}^{AS}$) sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order spreads autocorrelations are marked with red, yellow, and blue lines. The volume weighted average spreads, $\tilde{\mathscr{S}}_k^v$, are are measured with the volume weighted average bid, ask, and mid-quote (p_{bk}^v, p_{ak}^v, and p_{mk}^v) with trade prices (p_k), where k is the intraday time index . The trade directions are calculated by the volume weighted average trade classification algorithm . Hence, the autocorrelations of the volume weighted average spreads can be expressed as $\Omega_{\eta k}^{\tilde{\mathscr{S}},v} = \rho(\tilde{\mathscr{S}}_k^v, \tilde{\mathscr{S}}_{k-\eta}^v)$, where η indicates the first-order, fifth-order, and tenth-order. Because the spreads autocorrelations are taken the average value over 40 Eurodollar contracts sorted by the days to maturity, there are 2,434 daily average spreads autocorrelations in total and the time spans of two days and 3,631 days to maturity. This plot only reports realized spread and adverse selection autocorrelations at six time intervals, including 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, and 500 ms.

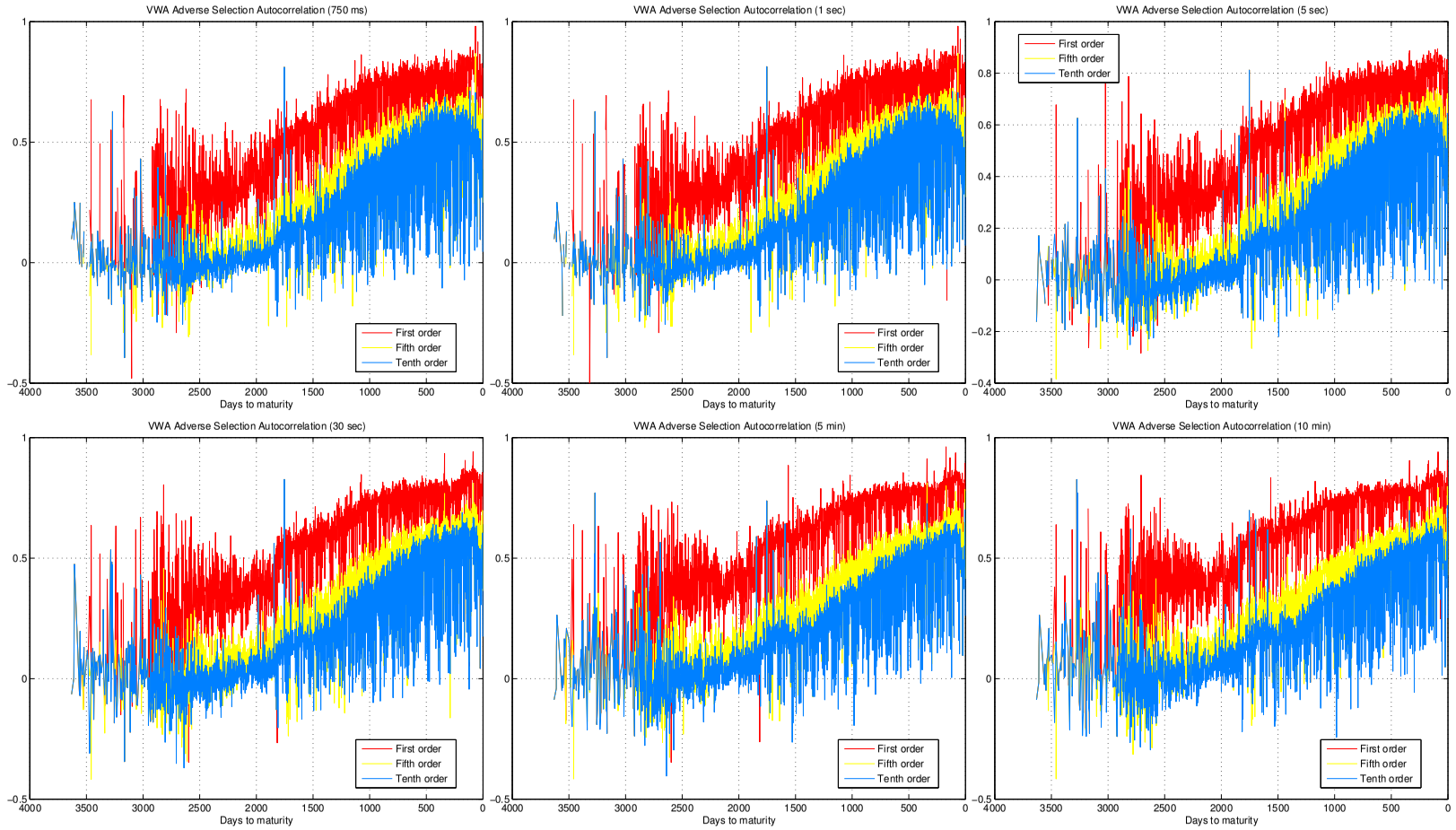


Figure C.160: The Volume-weighted Average Adverse Selection Spreads Autocorrelation

Notes: This plot represents the daily autocorrelations of volume weighted average (VWA) adverse selection spreads ($\tilde{\mathscr{S}}^{AS}$) sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order spreads autocorrelations are marked with red, yellow, and blue lines. The volume weighted average spreads, $\tilde{\mathscr{S}}^{v}_{k}$, are are measured with the volume weighted average bid, ask, and mid-quote (p^{v}_{bk}, p^{v}_{ak}, and p^{v}_{mk}) with trade prices (p_k), where k is the intraday time index . The trade directions are calculated by the volume weighted average trade classification algorithm . Hence, the autocorrelations of the volume weighted average spreads can be expressed as $\Omega^{\tilde{\mathscr{S}},v}_{\eta k} = \rho(\tilde{\mathscr{S}}^{v}_{k}, \tilde{\mathscr{S}}^{v}_{k-\eta})$, where η indicates the first-order, fifth-order, and tenth-order. Because the spreads autocorrelations are taken the average value over 40 Eurodollar contracts sorted by the days to maturity, there are 2,434 daily average spreads autocorrelations in total and the time spans of two days and 3,631 days to maturity. This plot only reports realized spread and adverse selection autocorrelations at six time intervals, including 750 ms, 1 sec, 5 sec, 30 sec, 300 sec, and 600 sec.

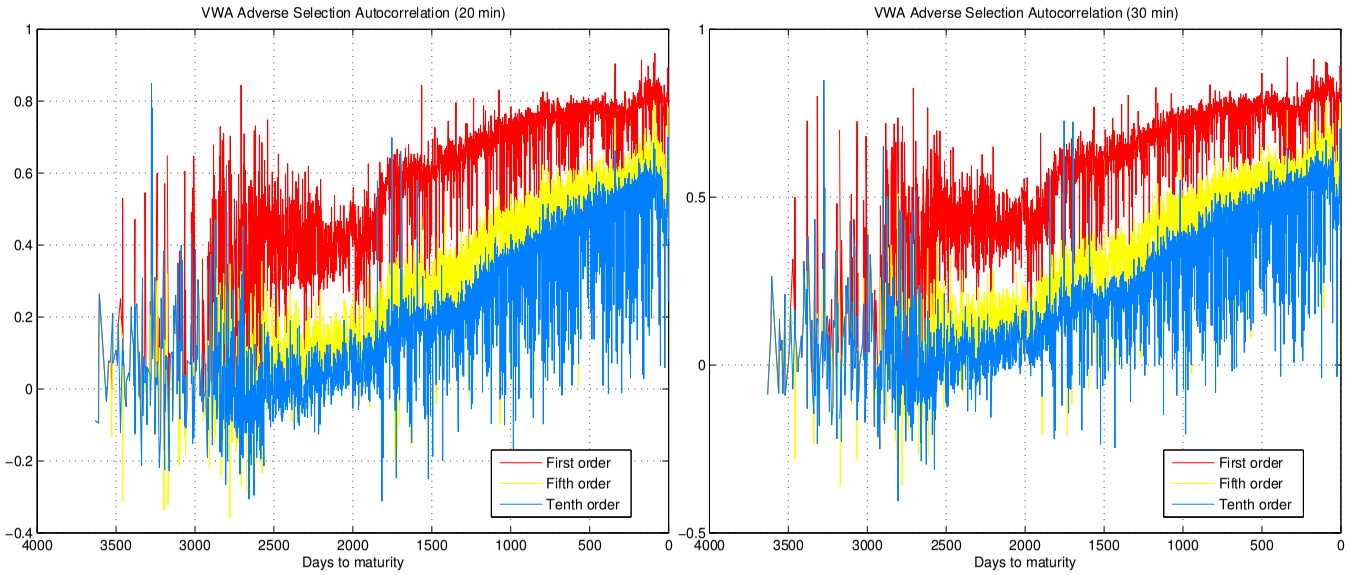
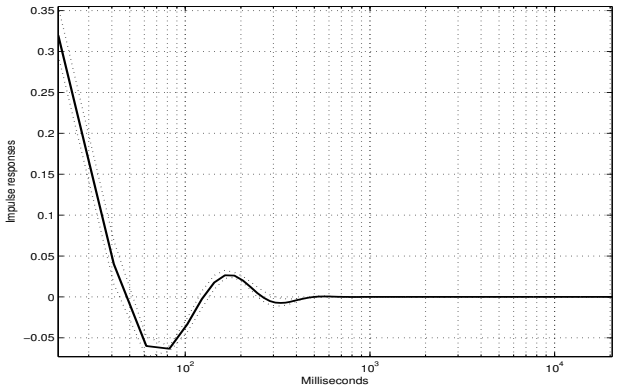
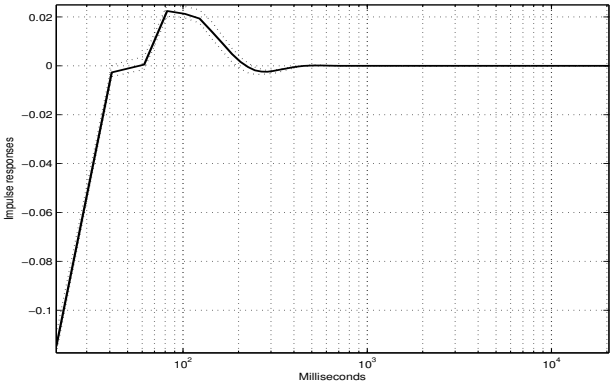


Figure C.161: The Volume-weighted Average Adverse Selection Spreads Autocorrelation

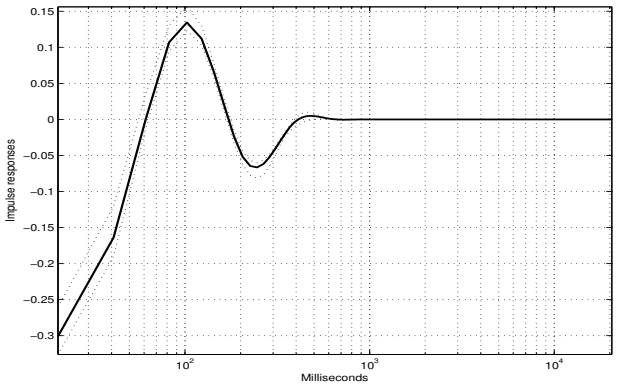
Notes: This plot represents the daily autocorrelations of volume weighted average (VWA) adverse selection spreads ($\tilde{\mathscr{S}}^{AS}$) sorted by the days to maturity across 40 Eurodollar contracts. The first-order, fifth-order, and tenth-order spreads autocorrelations are marked with red, yellow, and blue lines. The volume weighted average spreads, $\tilde{\mathscr{S}}_k^v$, are are measured with the volume weighted average bid, ask, and mid-quote (p_{bk}^v, p_{ak}^v, and p_{mk}^v) with trade prices (p_k), where k is the intraday time index . The trade directions are calculated by the volume weighted average trade classification algorithm . Hence, the autocorrelations of the volume weighted average spreads can be expressed as $\Omega_{\eta k}^{\tilde{\mathscr{S}},v} = \rho(\tilde{\mathscr{S}}_k^v, \tilde{\mathscr{S}}_{k-\eta}^v)$, where η indicates the first-order, fifth-order, and tenth-order. Because the spreads autocorrelations are taken the average value over 40 Eurodollar contracts sorted by the days to maturity, there are 2,434 daily average spreads autocorrelations in total and the time spans of two days and 3,631 days to maturity. This plot only reports realized spread and adverse selection autocorrelations at two time intervals, including 1,200 sec and 1,800 sec.



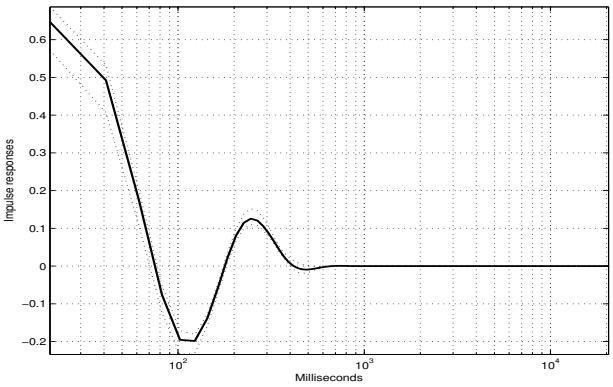
(a) Response of Trade Direction to Trade Direction



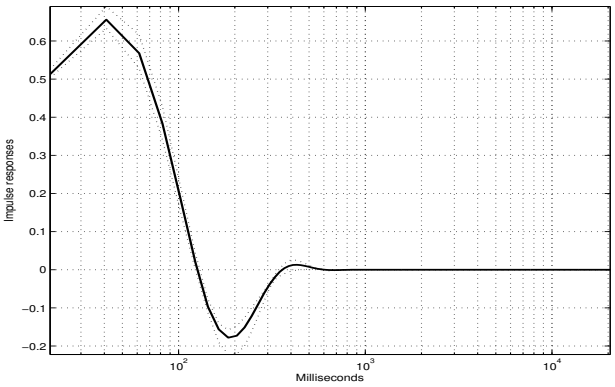
(b) Response of Trade Direction to Trade Return



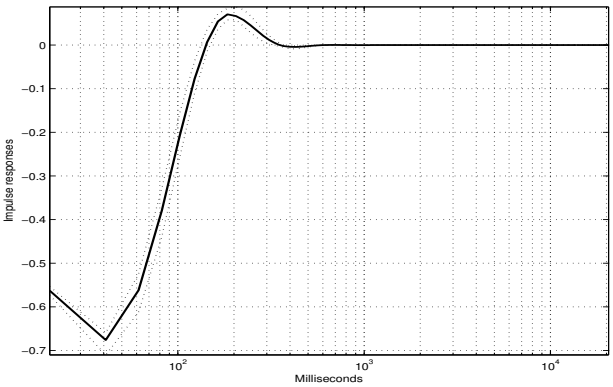
(c) Response of Trade Direction to Trade Volume



(d) Response of Trade Direction to Square Root Trade Volume



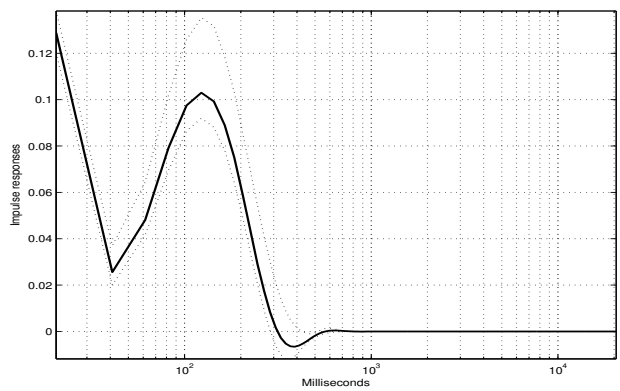
(e) Response of Trade Direction to Asks Market Concentration



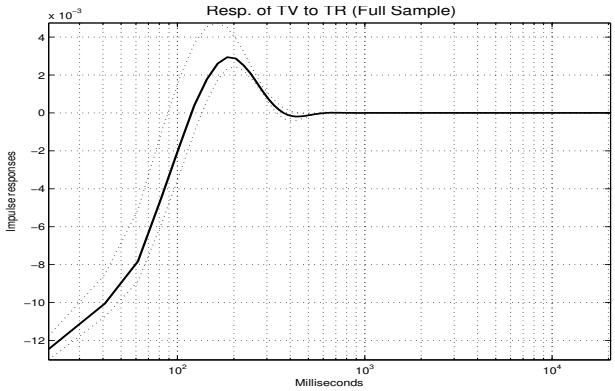
(f) Response of Trade Direction to Bids Market Concentration

Figure C.162: Response of Trade Direction Indicator (Full Sample)

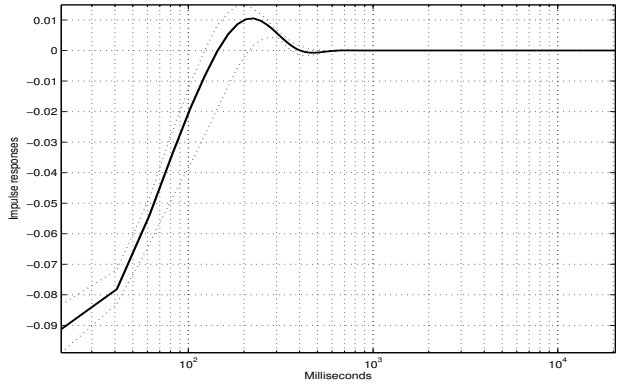
Notes: This figure portrays the impulse response of trade direction indicator to the shocks in the trade direction, trade return, signed trade volume, signed square root of trade volume, and signed asks and bids market concentration for the full sample dataset across the 10-year life cycle of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data, and there are approximately 178 million observations in total. The black line represents the impulse response of trade return to the shocks in each variables, and the dotted line are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.



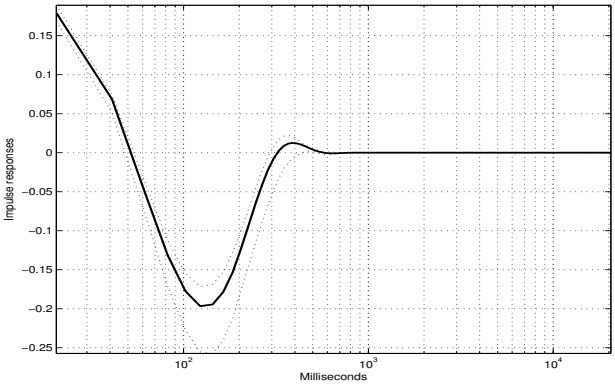
(a) Response of Trade Volume to Trade Volume



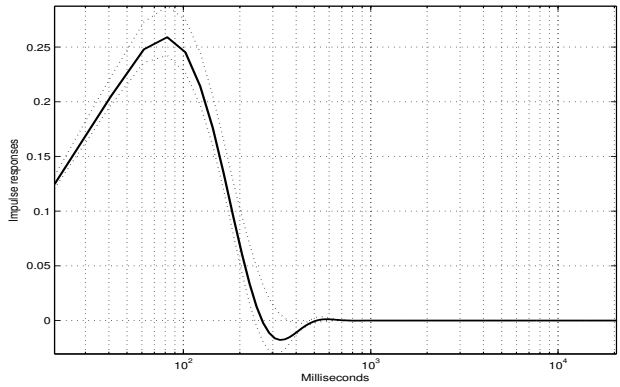
(b) Response of Trade Volume to Trade Return



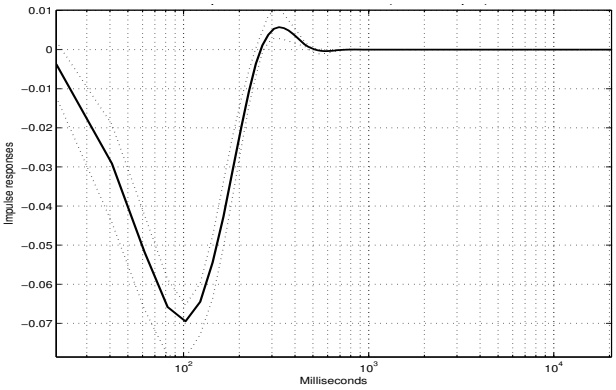
(c) Response of Trade Volume to Trade Direction



(d) Response of Trade Volume to Square Root Trade Volume



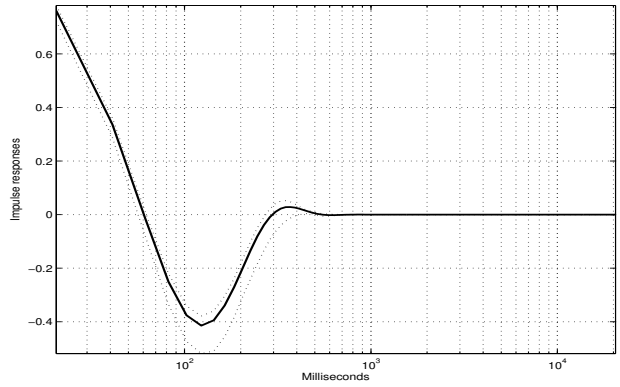
(e) Response of Trade Volume to Asks Market Concentration



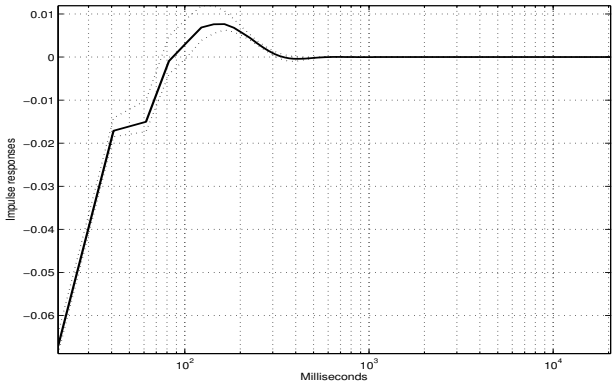
(f) Response of Trade Volume to Bids Market Concentration

Figure C.163: Response of Trade Volume (Full Sample)

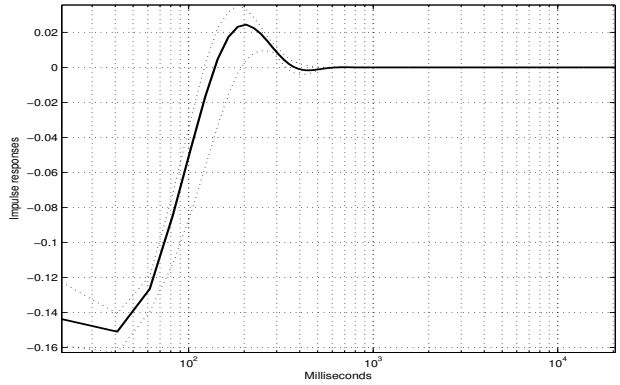
Notes: This figure portrays the impulse response of trade volume to the shocks in the trade volume, trade return, signed trade direction, signed square root of trade volume, and signed asks and bids market concentration for the full sample dataset across the 10-year life cycle of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data, and there are approximately 178 million observations in total. The black line represents the impulse response of trade return to the shocks in each variables, and the dotted line are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.



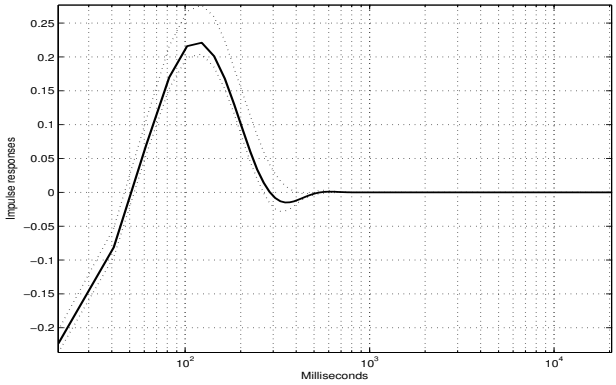
(a) Response of Square Root Trade Volume to Square Root Trade Volume



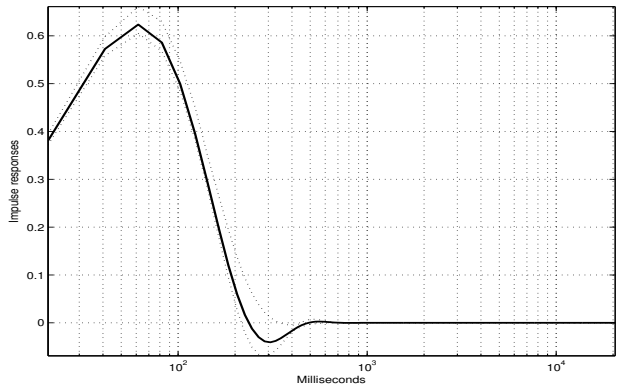
(b) Response of Square Root Trade Volume to Trade Return



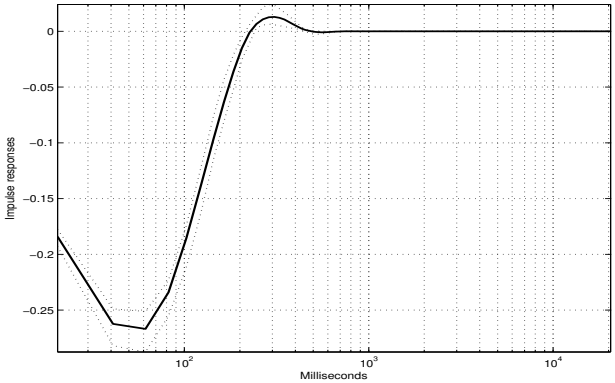
(c) Response of Square Root Trade Volume to Trade Direction



(d) Response of Square Root Trade Volume to Trade Volume



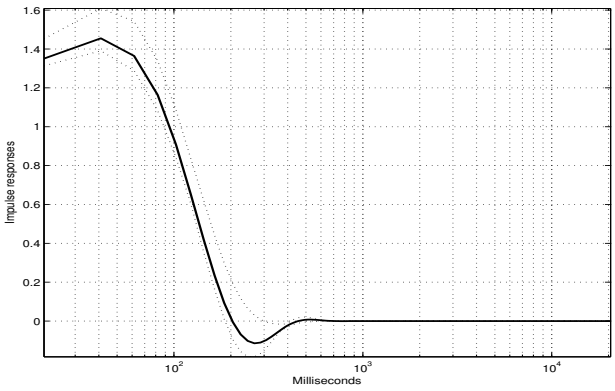
(e) Response of Square Root Trade Volume to Asks Market Concentration



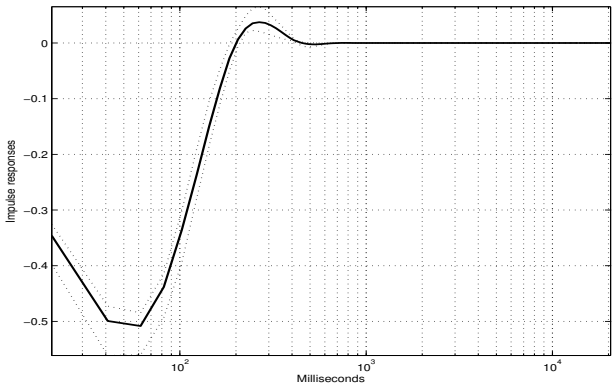
(f) Response of Square Root Trade Volume to Bids Market Concentration

Figure C.164: Response of Square Root of Trade Volume (Full Sample)

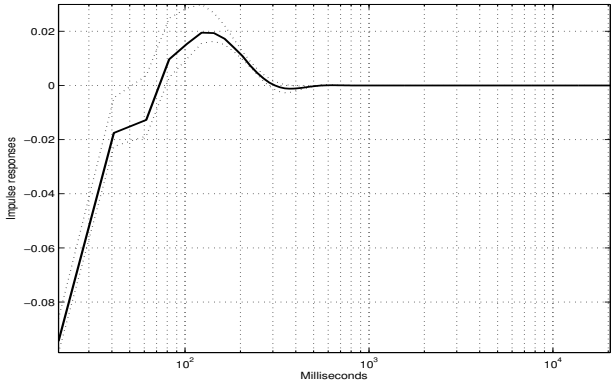
Notes: This figure portrays the impulse response of square root of trade volume to the shocks in the square root of trade volume, trade return, signed trade direction, signed trade volume, and signed asks and bids market concentration for the full sample dataset across the 10-year life cycle of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data, and there are approximately 178 million observations in total. The black line represents the impulse response of trade return to the shocks in each variables, and the dotted line are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.



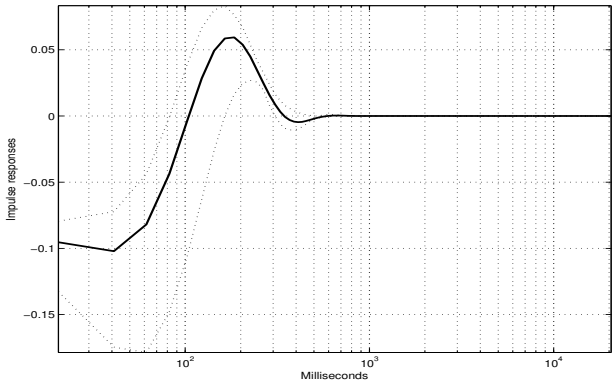
(a) Response of Asks Market Concentration to Asks Market Concentration



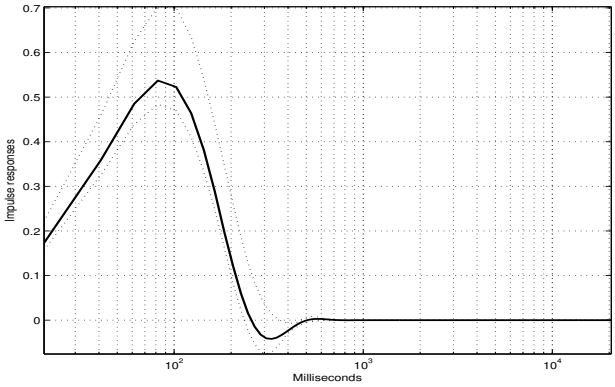
(b) Response of Asks Market Concentration to Bids Market Concentration



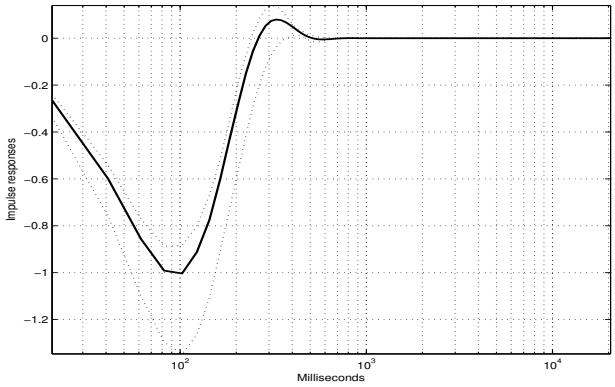
(c) Response of Asks Market Concentration to Trade Return



(d) Response of Asks Market Concentration to Trade Direction



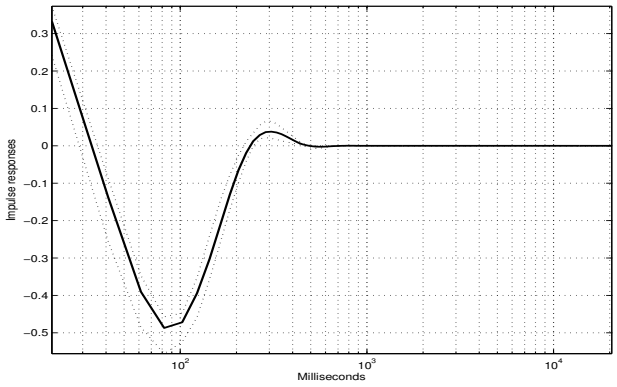
(e) Response of Asks Market Concentration to Trade Volume



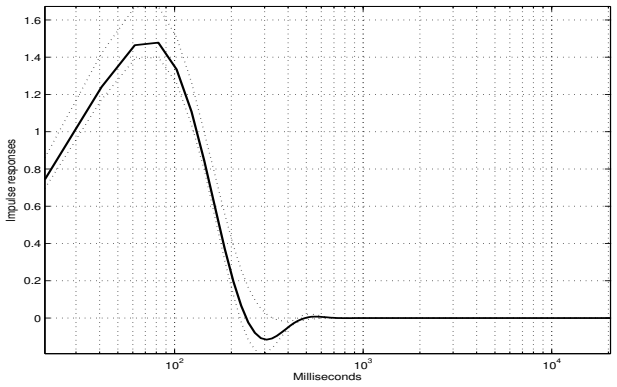
(f) Response of Asks Market Concentration to Square Root Trade Volume

Figure C.165: Response of Ask-side Market Concentration (Full Sample)

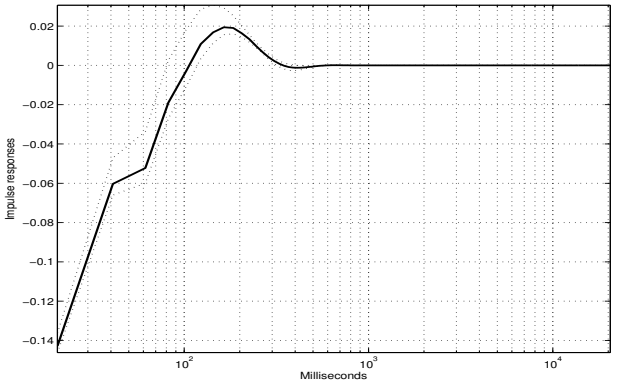
Notes: This figure portrays the impulse response of asks market concentration to the shocks in the asks market concentration, trade return, signed trade direction, signed trade volume, signed square root of trade volume, and signed bids market concentration for the full sample dataset across the 10-year life cycle of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data, and there are approximately 178 million observations in total. The black line represents the impulse response of trade return to the shocks in each variables, and the dotted line are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.



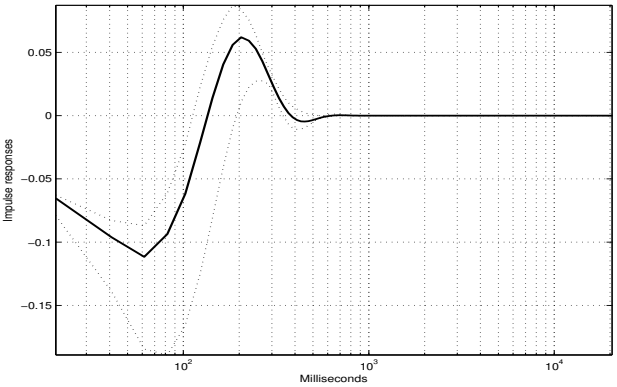
(a) Response of Bids Market Concentration to Bids Market Concentration



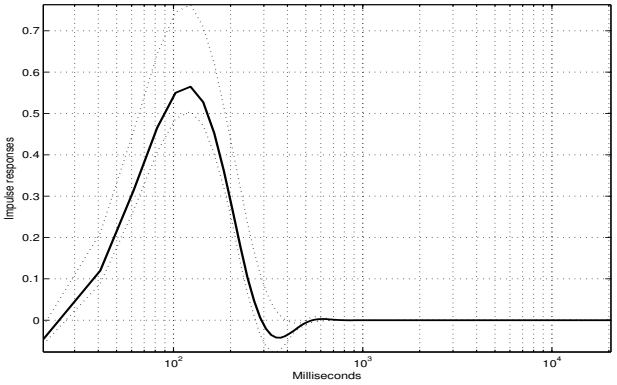
(b) Response of Bids Market Concentration to Asks Market Concentration



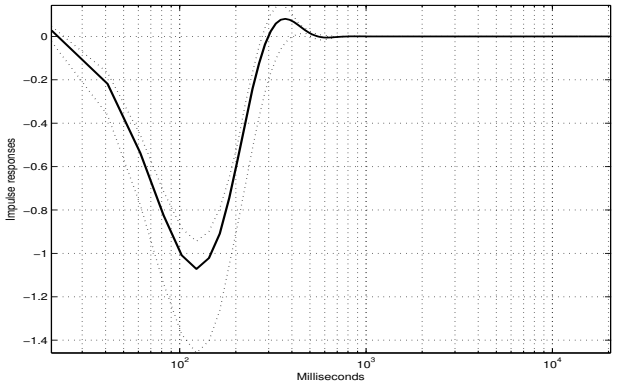
(c) Response of Bids Market Concentration to Trade Return



(d) Response of Bids Market Concentration to Trade Direction



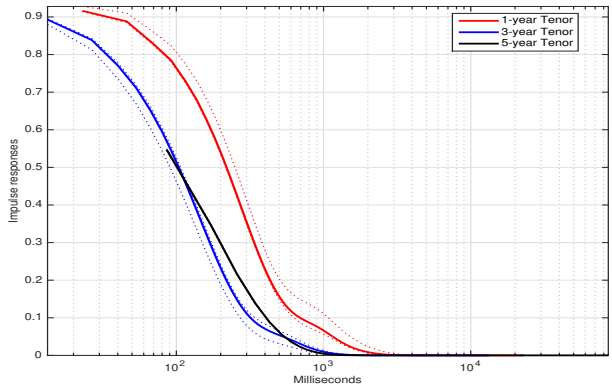
(e) Response of Bids Market Concentration to Trade Volume



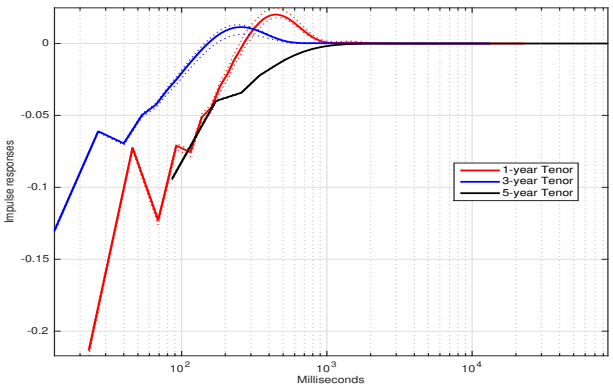
(f) Response of Bids Market Concentration to Square Root Trade Volume

Figure C.166: Response of Bid-side Market Concentration (Full Sample)

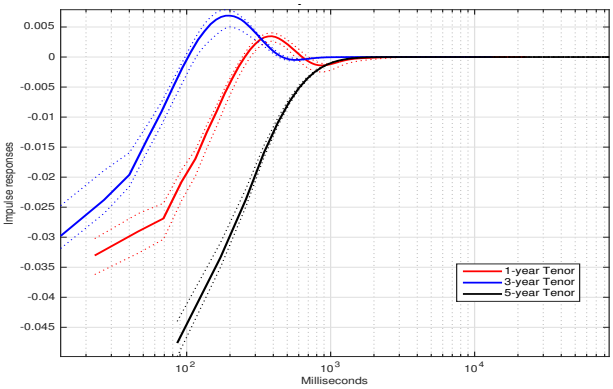
Notes: This figure portrays the impulse response of bids market concentration to the shocks in the bids market concentration, trade return, signed trade direction, signed trade volume, signed square root of trade volume, and signed asks market concentration for the full sample dataset across the 10-year life cycle of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data, and there are approximately 178 million observations in total. The black line represents the impulse response of trade return to the shocks in each variables, and the dotted line are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.



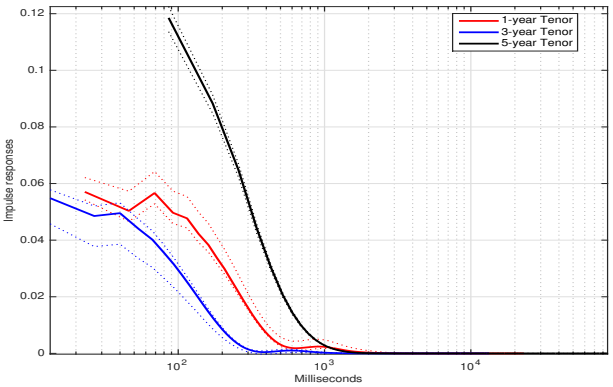
(a) Response of Trade Direction to Trade Direction



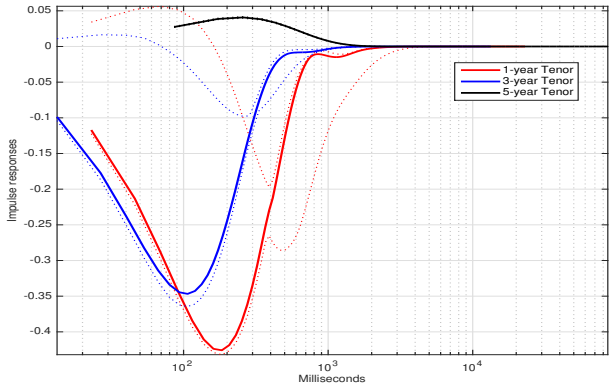
(b) Response of Trade Direction to Trade Return



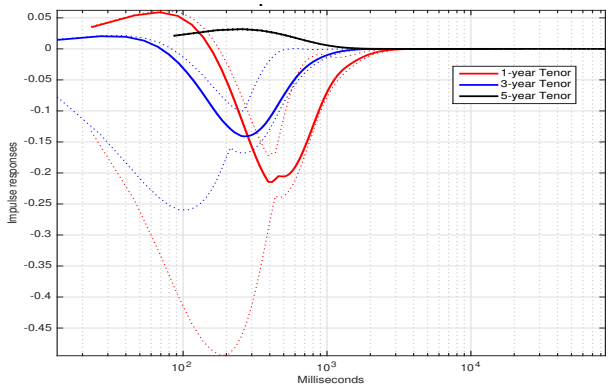
(c) Response of Trade Direction to Trade Volume



(d) Response of Trade Direction to Square Root Trade Volume



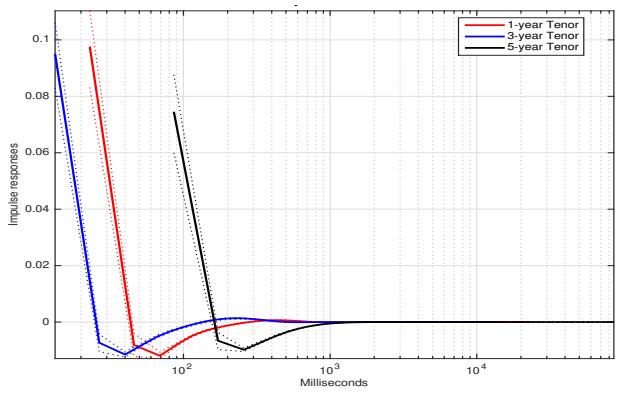
(e) Response of Trade Direction to Asks Market Concentration



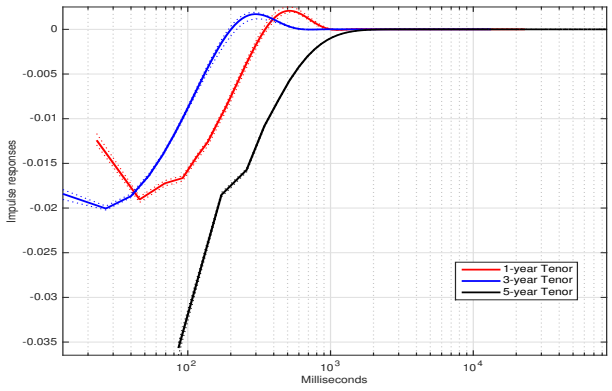
(f) Response of Trade Direction to Bids Market Concentration

Figure C.167: Response of Trade Direction Indicator (first-year, third-year and fifth-year tenor)

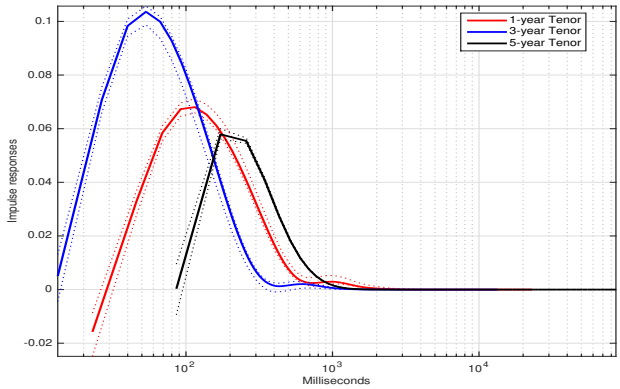
Notes: This figure portrays the impulse response of trade direction to the shocks in the trade direction, trade return, signed trade volume, signed square root of trade volume, and signed asks and bids market concentration for the three subsamples with one-year tenor, three-year tenor, and five-year tenor of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data. The red line represents the response of trade return of one-year tenor subsample with around 43.5 million observations, the blue line is the three-year tenor impulse response of trade return with 42.5 million observations, and the black line is the five-year tenor impulse response of trade return with 10.4 million observations. The dotted lines with corresponding colours are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.



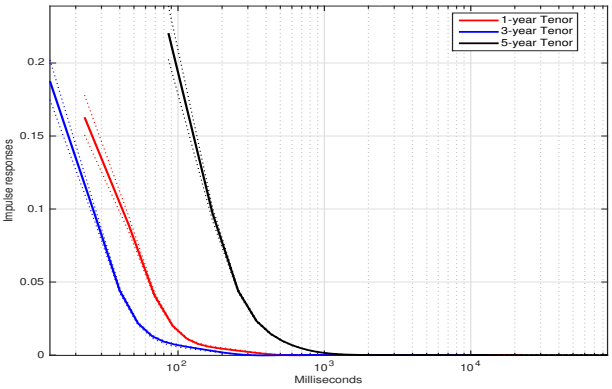
(a) Response of Trade Volume to Trade Volume



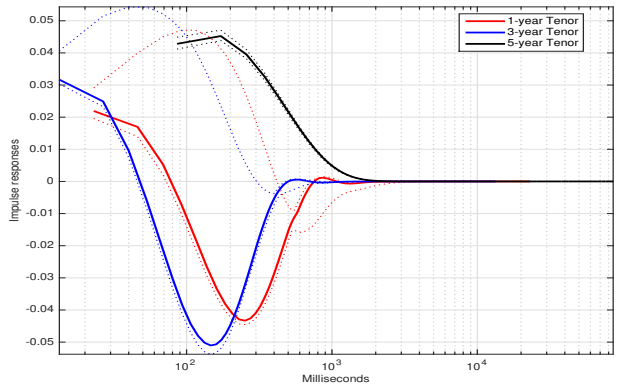
(b) Response of Trade Volume to Trade Return



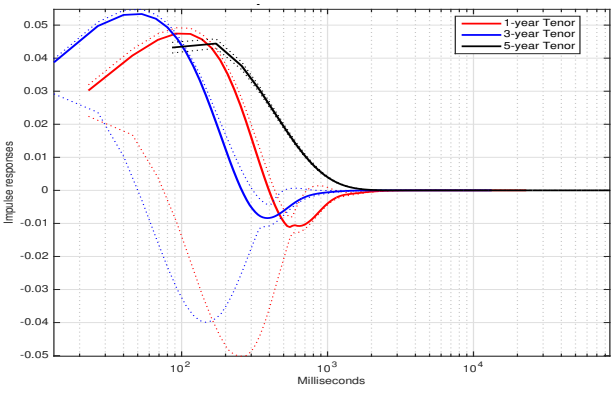
(c) Response of Trade Volume to Trade Direction



(d) Response of Trade Volume to Square Root Trade Volume



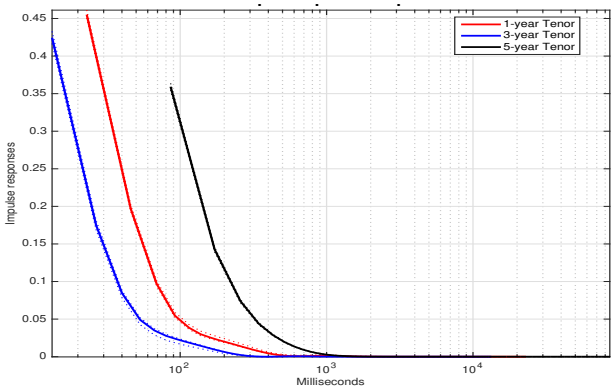
(e) Response of Trade Volume to Asks Market Concentration



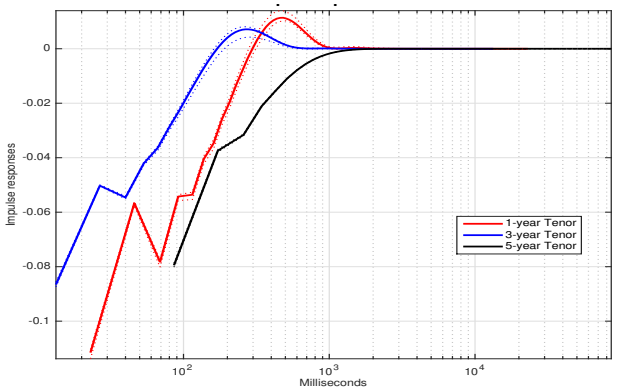
(f) Response of Trade Volume to Bids Market Concentration

Figure C.168: Response of Trade Volume (first-year, third-year and fifth-year tenor)

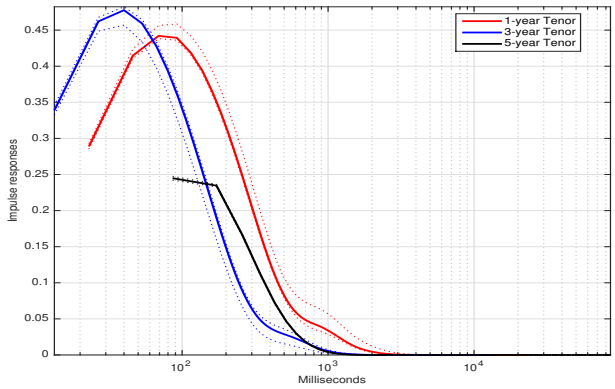
Notes: This figure portrays the impulse response of trade volume to the shocks in the trade volume, trade returns, signed trade direction, signed square root of trade volume, and signed asks and bids market concentration for the three subsamples with one-year tenor, three-year tenor, and five-year tenor of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data. The red line represents the response of trade return of one-year tenor subsample with around 43.5 million observations, the blue line is the three-year tenor impulse response of trade return with 42.5 million observations, and the black line is the five-year tenor impulse response of trade return with 10.4 million observations. The dotted lines with corresponding colours are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.



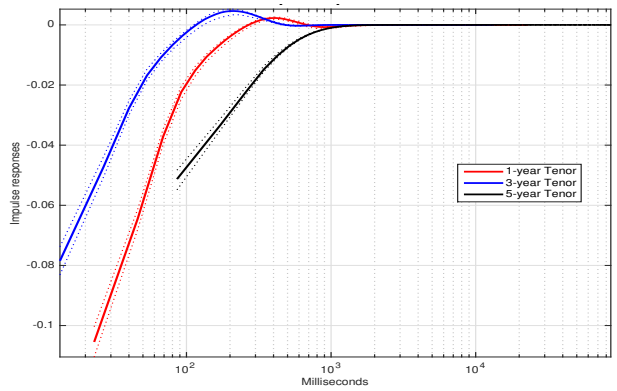
(a) Response of Square Root Trade Volume to Square Root Trade Volume



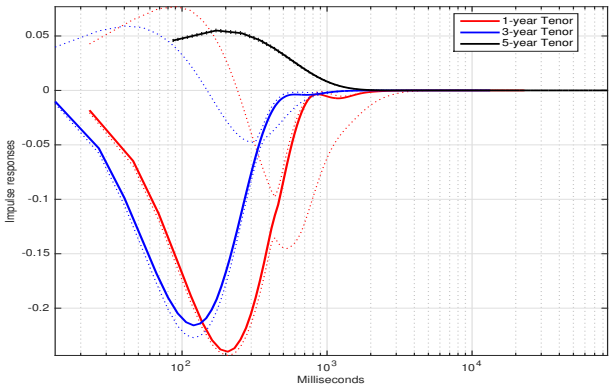
(b) Response of Square Root Trade Volume to Trade Return



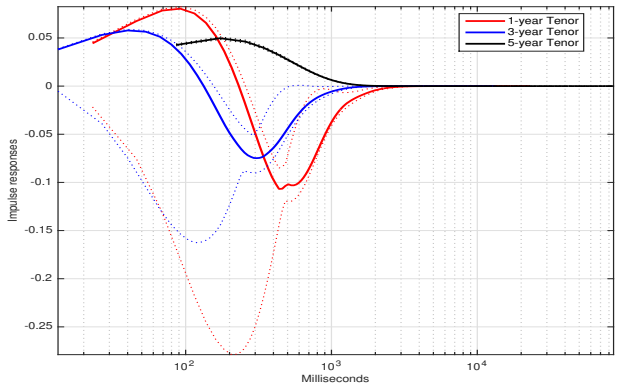
(c) Response of Square Root Trade Volume to Trade Direction



(d) Response of Square Root Trade Volume to Trade Volume



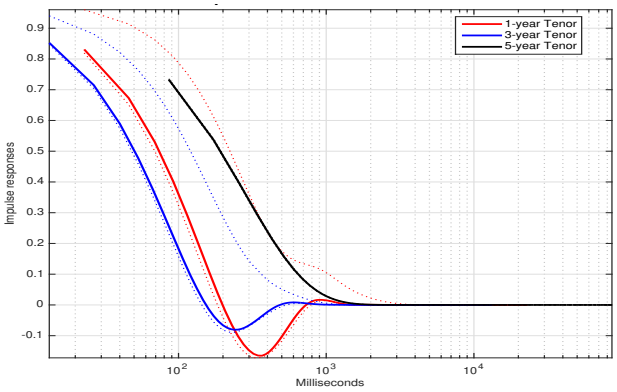
(e) Response of Square Root Trade Volume to Asks Market Concentration



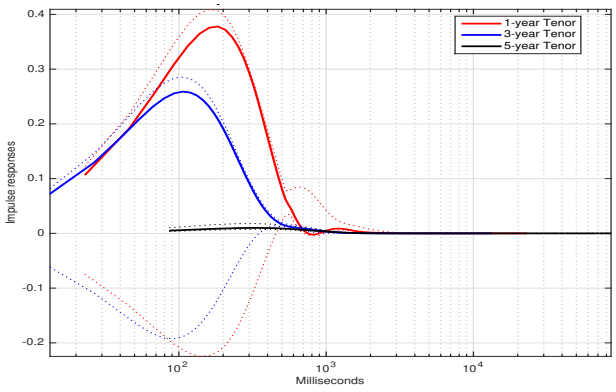
(f) Response of Square Root Trade Volume to Bids Market Concentration

Figure C.169: Response of Square Root of Trade Volume (first-year, third-year and fifth-year tenor)

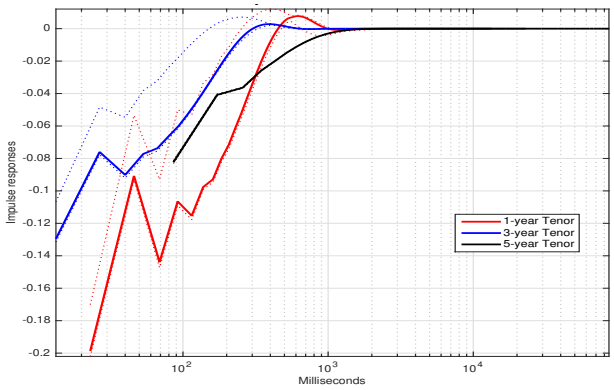
Notes: This figure portrays the impulse response of square root of trade volume to the shocks in the square root of trade volume, trade returns, signed trade direction, signed trade volume, and signed asks and bids market concentration for the three subsamples with one-year tenor, three-year tenor, and five-year tenor of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data. The red line represents the response of trade return of one-year tenor subsample with around 43.5 million observations, the blue line is the three-year tenor impulse response of trade return with 42.5 million observations, and the black line is the five-year tenor impulse response of trade return with 10.4 million observations. The dotted lines with corresponding colours are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.



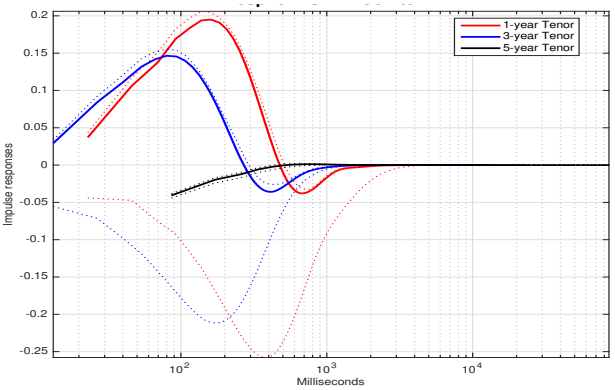
(a) Response of Asks Market Concentration to Asks Market Concentration



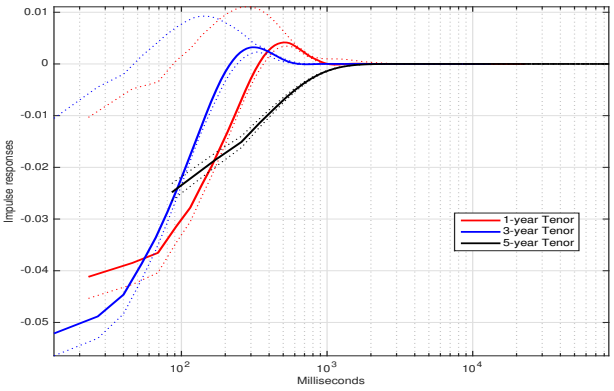
(b) Response of Asks Market Concentration to Bids Market Concentration



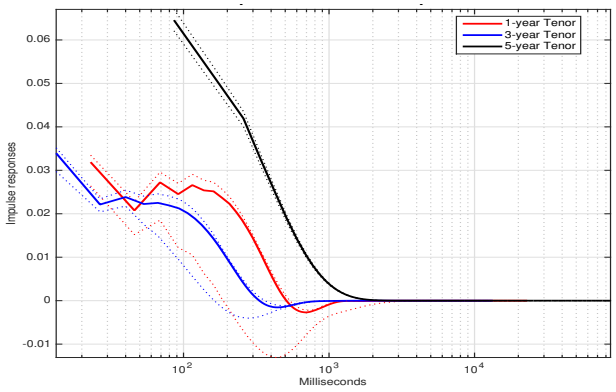
(c) Response of Asks Market Concentration to Trade Return



(d) Response of Asks Market Concentration to Trade Direction



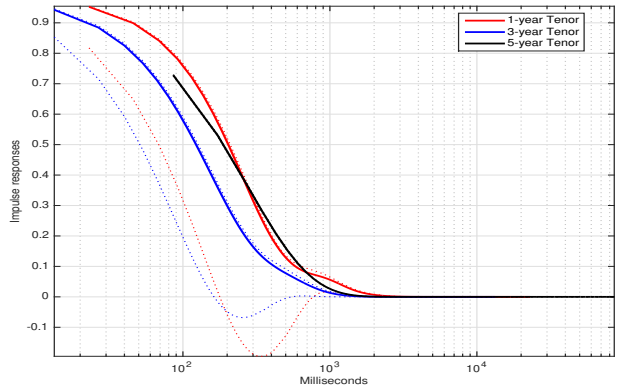
(e) Response of Asks Market Concentration to Trade Volume



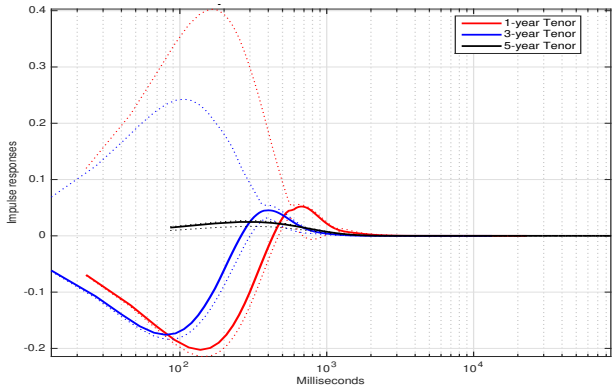
(f) Response of Asks Market Concentration to Square Root Trade Volume

Figure C.170: Response of Ask-side Market Concentration (first-year, third-year and fifth-year tenor)

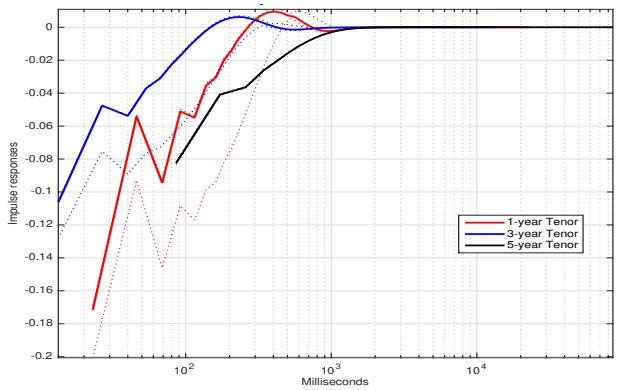
Notes: This figure portrays the impulse response of asks market concentration to the shocks in the asks market concentration, trade return, signed trade direction, signed trade volume, signed square root of trade volume, and signed bids market concentration for the three subsamples with one-year tenor, three-year tenor, and five-year tenor of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data. The red line represents the response of trade return of one-year tenor subsample with around 43.5 million observations, the blue line is the three-year tenor impulse response of trade return with 42.5 million observations, and the black line is the five-year tenor impulse response of trade return with 10.4 million observations. The dotted lines with corresponding colours are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.



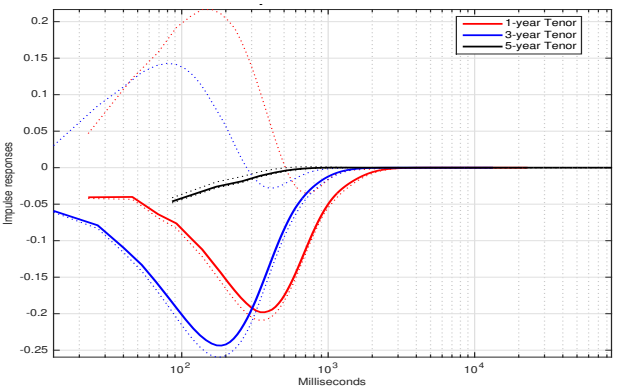
(a) Response of Bids Market Concentration to Bids Market Concentration



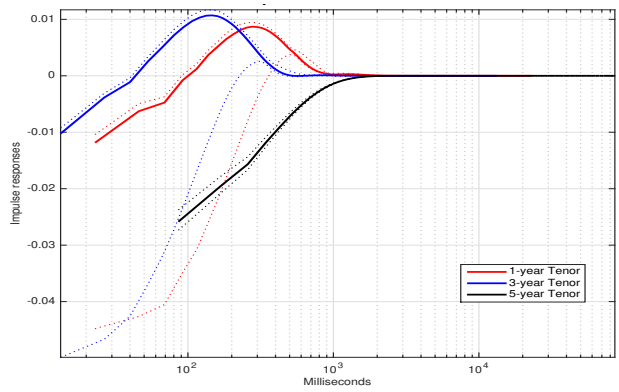
(b) Response of Bids Market Concentration to Asks Market Concentration



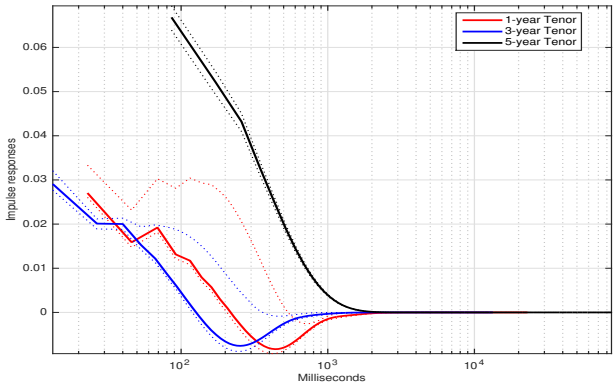
(c) Response of Bids Market Concentration to Trade Return



(d) Response of Bids Market Concentration to Trade Direction



(e) Response of Bids Market Concentration to Trade Volume



(f) Response of Bids Market Concentration to Square Root Trade Volume

Figure C.171: Response of Bid-side Market Concentration (first-year, third-year and fifth-year tenor)

Notes: This figure portrays the impulse response of bids market concentration to the shocks in the bids market concentration, trade return, signed trade direction, signed trade volume, signed square root of trade volume, and signed asks market concentration for the three subsamples with one-year tenor, three-year tenor, and five-year tenor of 40 Eurodollar contracts. The impulse response functions are conducted with the first-order vector autoregression with 1,000 steps on the tick-by-tick basis data. The red line represents the response of trade return of one-year tenor subsample with around 43.5 million observations, the blue line is the three-year tenor impulse response of trade return with 42.5 million observations, and the black line is the five-year tenor impulse response of trade return with 10.4 million observations. The dotted lines with corresponding colours are the 95% lower and upper confidence bounds of the impulse response functions via i.i.d bootstrap with 99 resampling bootstrap procedure.

Appendix C.7. Multivariate Liner Regression Results (Full Sample, One-year, Three-year and Five-year Tenor)

Table C.161: Market Activities and Price Error Regression Results (Full Sample)

	Quote Number	**Trade Number**	**Quote to Trade Ratio**	**Price Error**				
				Lag 1	Lag 2	Lag 3	Lag 4	Lag 5
$\tilde{T}$	0.3325	-0.201	0.5335	0.0521	0.153	0.222	0.1866	0.1404
	(36.3560)***	(19.7654)***	(77.3668)***	(3.3934)***	(4.4226)***	(6.0192)***	(5.3620)***	(3.9589)***
p^{-1}	-1185.8672	-1902.9925	717.1506	282.5966	537.3701	682.714	687.5614	970.8938
	(90.6315)***	(130.8153)***	(72.6969)***	(12.7476)***	(10.7035)***	(12.7503)***	(13.6181)***	(18.8755)***
$\mathcal{V}$	5.9531	9.0805	-3.1274	-13.2088	-18.0061	-18.1933	-17.4127	-17.916
	(60.9065)***	(83.5615)***	(42.4394)***	(79.6925)***	(47.9917)***	(45.4849)***	(46.1308)***	(46.5949)***
c	268.7962	423.8644	-155.0736	-54.2246	-109.5598	-141.6728	-142.6035	-204.0798
	(95.5385)***	(135.5066)***	(73.1065)***	(11.3727)***	(10.1453)***	(12.3007)***	(13.1311)***	(18.4456)***
R^2	0.23	0.53	0.5	0.17	0.07	0.06	0.07	0.07
N	32,712	32,712	32,712	32,010	31,662	31,647	31,640	31,618

Panel B: Quotes Price Autocorrelations (Ω^P)

	First-order			**Fifth-order**			**Tenth-order**		
	Ask	Bid	Mid	Ask	Bid	Mid	Ask	Bid	Mid
$\tilde{T}$	-0.0164	-0.0259	-0.0222	-0.0477	-0.0593	-0.0554	-0.0652	-0.0765	-0.0731
	(14.3592)***	(22.9711)***	(19.5692)***	(23.3097)***	(29.0766)***	(27.0251)***	(27.2263)***	(31.7678)***	(30.3956)***
p^{-1}	-96.7397	-77.6805	-88.1775	-215.9269	-191.4097	-203.4041	-273.1835	-251.3519	-260.6771
	(60.3607)***	(48.9412)***	(55.1700)***	(75.0909)***	(66.6989)***	(70.5627)***	(81.1365)***	(74.2052)***	(77.0752)***
$\mathcal{V}$	0.5731	0.6255	0.594	1.3944	1.4646	1.4236	1.7527	1.8215	1.7807
	(47.0533)***	(51.8587)***	(48.9060)***	(63.8070)***	(67.1553)***	(64.9812)***	(68.4944)***	(70.7595)***	(69.2783)***
c	22.1081	18.01	20.2778	48.1611	42.8845	45.4791	60.6848	55.9907	58.008
	(64.1805)***	(52.7932)***	(59.0293)***	(77.9253)***	(69.5274)***	(73.4056)***	(83.8578)***	(76.9076)***	(79.7998)***
R^2	0.22	0.21	0.22	0.33	0.32	0.32	0.37	0.36	0.36
N	31,984	31,984	31,985	31,984	31,984	31,985	31,984	31,984	31,985

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of market activities indicators and price discovery factors for the 10-year full sample period. I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables includes the number of quotes and trades (n^q and n), the quotes to trades ratio qtr, the pricing errors ($\mathcal{E}$) measured by the lag one to lag five vector autoregression models, and the first-order, fifth-order, and tenth-order autocorrelations of the volume weighted average bid, ask, and mid-quote price at tick-by-tick level. It is worth noting that trades number, quotes number, pricing errors, the inverse of price, the days to maturity and the quotes to trades ratio take the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 32,712 observations in the 10-year full sample across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.162: Mid-quote Return Autocorrelation Regression Results (Full Sample)

		Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
First-Order	$\tilde{T}$	0.0104	0.0966	0.0712	0.0386	0.0466	0.05	0.0506	0.0537	0.0423	0.0323	0.0255	0.0179	0.0131
		(9.4819)***	(29.5718)***	(27.5931)***	(16.9435)***	(21.1392)***	(23.0538)***	(23.4102)***	(24.9227)***	(19.5684)***	(15.0949)***	(12.0491)***	(8.5469)***	(6.2904)***
	p^{-1}	-60.9464	-232.6077	-242.3101	-242.8654	-291.4904	-314.7678	-323.578	-333.4561	-336.543	-332.1315	-328.8721	-320.997	-316.5608
		(39.5259)***	(40.9402)***	(57.3161)***	(68.6082)***	(88.3671)***	(98.3245)***	(102.0379)***	(106.0093)***	(107.5410)***	(107.9227)***	(108.3731)***	(107.1895)***	(106.3755)***
	$\mathcal{V}$	0.0078	-0.2734	-0.0469	0.0034	-0.1518	-0.1581	-0.1571	-0.1586	-0.0358	0.0697	0.173	0.2575	0.3123
		-0.664	(7.1185)***	-1.5708	-0.1304	(6.2105)***	(6.6285)***	(6.6418)***	(6.7308)***	-1.5217	(3.0123)***	(7.5675)***	(11.4015)***	(13.9013)***
	c	13.1824	50.4625	52.848	53.2308	63.8157	68.8849	70.8269	72.9721	73.7643	72.8874	72.2291	70.5734	69.644
		(39.7769)***	(41.2114)***	(58.0330)***	(69.8536)***	(89.9171)***	(100.0333)***	(103.8394)***	(107.8620)***	(109.6121)***	(110.1493)***	(110.7007)***	(109.6137)***	(108.8568)***
	R^2	0.07	0.1	0.15	0.21	0.31	0.35	0.37	0.38	0.39	0.39	0.4	0.39	0.39
	N	31,985	20,714	24,018	27,013	28,667	29,378	29,599	29,918	30,473	30,747	30,911	31,093	31,200
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0033	-0.0005	-0.0039	-0.0172	-0.024	-0.0286	-0.0321	-0.0349	-0.0336	-0.0321	-0.0311	-0.0304	-0.0296
		-1.611	-0.2214	(1.9460)*	(8.7433)***	(12.9306)***	(15.8608)***	(18.4446)***	(21.9077)***	(22.3821)***	(22.2085)***	(22.2864)***	(22.1833)***	(21.9255)***
	p^{-1}	-305.3751	-302.2267	-298.0985	-276.0508	-250.8824	-235.099	-216.0017	-170.0584	-149.9194	-138.995	-129.7113	-124.8209	-120.9904
		(105.1075)***	(104.8296)***	(103.9788)***	(99.6389)***	(95.8712)***	(92.8227)***	(88.1764)***	(75.9240)***	(70.9669)***	(68.2633)***	(66.0302)***	(64.6759)***	(63.6880)***
	$\mathcal{V}$	0.4544	0.4978	0.5196	0.6561	0.711	0.7375	0.7715	0.7754	0.7421	0.721	0.6963	0.6882	0.6743
		(20.6500)***	(22.7832)***	(23.9004)***	(31.1752)***	(35.7565)***	(38.3135)***	(41.4438)***	(45.5511)***	(46.2268)***	(46.5940)***	(46.6371)***	(46.9201)***	(46.7055)***
	c	67.2846	66.6269	65.7525	61.0433	55.6171	52.2183	48.0918	38.1349	33.756	31.3755	29.353	28.2869	27.4507
		(107.7296)***	(107.5069)***	(106.6942)***	(102.5097)***	(98.8836)***	(95.9239)***	(91.3413)***	(79.2147)***	(74.3448)***	(71.6937)***	(69.5215)***	(68.1935)***	(67.2299)***
	R^2	0.39	0.39	0.39	0.39	0.38	0.38	0.36	0.32	0.3	0.29	0.28	0.27	0.26
	N	31,425	31,513	31,573	31,861	31,942	31,963	31,970	31,984	31,984	31,985	31,985	31,985	31,985
Fifth-Order		*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
	$\tilde{T}$	0.0024	0.0272	0.0166	0.008	0.0089	0.0134	0.0164	0.0201	0.0228	0.0219	0.0208	0.0188	0.0179
		(4.1489)***	(15.2176)***	(10.3342)***	(4.8889)***	(5.1100)***	(7.4588)***	(8.9626)***	(10.9063)***	(11.7274)***	(10.8872)***	(10.1901)***	(9.1248)***	(8.6220)***
	p^{-1}	-10.5963	-102.5109	-121.6363	-159.1505	-202.1069	-234.9154	-261.0451	-280.9918	-332.6872	-352.637	-363.1662	-373.9205	-381.057
		(13.0856)***	(33.0319)***	(46.2558)***	(62.5452)***	(77.4965)***	(88.9687)***	(97.0543)***	(104.5072)***	(118.1332)***	(122.0321)***	(124.2888)***	(126.7784)***	(128.8217)***
	$\mathcal{V}$	0.0497	-0.0522	-0.0413	-0.1022	-0.1566	-0.158	-0.1687	-0.169	-0.087	-0.0075	0.0466	0.1155	0.1586
		(8.0819)***	(2.4859)**	(2.2263)**	(5.4879)***	(8.1025)***	(8.0330)***	(8.4064)***	(8.3906)***	(4.1142)***	-0.3433	(2.1162)**	(5.1928)***	(7.1038)***
	c	2.2889	22.301	26.5575	34.8374	44.2478	51.404	57.1128	61.4588	72.7827	77.1684	79.4872	81.8643	83.4384
		(13.1511)***	(33.3435)***	(46.8847)***	(63.5987)***	(78.8572)***	(90.5048)***	(98.7219)***	(106.2780)***	(120.1828)***	(124.1974)***	(126.5223)***	(129.1022)***	(131.2057)***
	R^2	0.01	0.07	0.13	0.22	0.3	0.35	0.38	0.41	0.46	0.47	0.48	0.49	0.5
	N	31,985	20,714	24,018	27,013	28,667	29,378	29,599	29,918	30,473	30,747	30,911	31,093	31,200
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0145	0.0119	0.0094	-0.006	-0.0203	-0.0324	-0.0432	-0.0615	-0.0657	-0.0663	-0.0667	-0.0663	-0.0659
		(6.9356)***	(5.6799)***	(4.4592)***	(2.8364)***	(9.6572)***	(15.4497)***	(20.4410)***	(27.5340)***	(28.8129)***	(28.9650)***	(29.2382)***	(29.1913)***	(29.0695)***
	p^{-1}	-394.9355	-398.5265	-399.106	-397.7944	-388.116	-376.4994	-363.0524	-326.3348	-303.9824	-289.4676	-278.3106	-270.8641	-265.0916
		(132.7010)***	(133.9516)***	(134.2180)***	(134.1773)***	(131.3900)***	(127.6804)***	(122.0783)***	(103.9307)***	(94.7886)***	(89.9365)***	(86.7396)***	(84.7982)***	(83.1730)***
	$\mathcal{V}$	0.2854	0.3291	0.3563	0.5676	0.765	0.9133	1.0695	1.3718	1.4378	1.4476	1.4464	1.4473	1.4509
		(12.6601)***	(14.5984)***	(15.8003)***	(25.2045)***	(34.0823)***	(40.7567)***	(47.3228)***	(57.4878)***	(58.9968)***	(59.1805)***	(59.3173)***	(59.6180)***	(59.8974)***
	c	86.515	87.3243	87.473	87.3036	85.2975	82.8541	80.0089	72.1812	67.3664	64.2245	61.8077	60.1908	58.9366
		(135.2254)***	(136.5404)***	(136.8485)***	(137.0060)***	(134.3493)***	(130.7297)***	(125.1724)***	(106.9563)***	(97.7356)***	(92.8409)***	(89.6256)***	(87.6734)***	(86.0347)***
	R^2	0.51	0.51	0.52	0.52	0.52	0.52	0.51	0.46	0.43	0.41	0.4	0.39	0.38
	N	31,425	31,513	31,573	31,861	31,942	31,963	31,970	31,984	31,984	31,985	31,985	31,985	31,985
Tenth-Order		*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
	$\tilde{T}$	0.0003	0.0117	0.0067	0.0021	-0.0002	0.001	0.0018	0.0031	0.0039	0.0036	0.0033	0.003	0.0035
		-0.6605	(10.0609)***	(6.2214)***	(1.7188)*	-0.1463	-0.6467	-1.1487	(1.9654)**	(2.3202)**	(2.0167)**	(1.8201)*	-1.6281	(1.8722)*
	p^{-1}	-4.5821	-57.7874	-69.7938	-97.9511	-132.467	-158.8271	-182.3128	-200.5072	-258.4201	-284.4581	-298.684	-315.688	-326.6039
		(6.9551)***	(28.5843)***	(39.6218)***	(52.3233)***	(64.0138)***	(72.7248)***	(80.0130)***	(86.9970)***	(105.3830)***	(111.5137)***	(114.5458)***	(118.3105)***	(120.9249)***
	$\mathcal{V}$	0.0289	-0.0084	-0.001	-0.0596	-0.1159	-0.1281	-0.1371	-0.1433	-0.0828	-0.0227	0.0191	0.0706	0.105
		(5.7768)***	-0.6149	-0.0808	(4.3510)***	(7.5570)***	(7.8742)***	(8.0631)***	(8.3002)***	(4.4975)***	-1.1814	-0.9724	(3.5067)***	(5.1499)***
	c	0.9941	12.5825	15.2399	21.444	29.0282	34.7965	39.9381	43.9159	56.6038	62.3142	65.4345	69.1642	71.5531
		(7.0206)***	(28.8790)***	(40.1645)***	(53.2117)***	(65.1981)***	(74.0701)***	(81.4913)***	(88.5938)***	(107.3417)***	(113.6119)***	(116.7125)***	(120.5645)***	(123.2284)***
	R^2	0	0.05	0.1	0.18	0.24	0.28	0.32	0.35	0.43	0.45	0.46	0.47	0.48
	N	31,985	20,714	24,018	27,013	28,667	29,378	29,599	29,918	30,473	30,747	30,911	31,093	31,200
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0056	0.005	0.0044	-0.0034	-0.0164	-0.0273	-0.0395	-0.0644	-0.071	-0.0735	-0.0748	-0.0755	-0.0758
		(2.8385)***	(2.5437)**	(2.1880)**	(1.6684)*	(8.0566)***	(13.3829)***	(19.1083)***	(28.4338)***	(29.9042)***	(30.3292)***	(30.5512)***	(30.5842)***	(30.6280)***
	p^{-1}	-355.0225	-363.2612	-368.0596	-381.1751	-382.0506	-381.9292	-379.7781	-365.3808	-352.317	-343.8019	-336.1658	-331.2099	-325.6157
		(127.4931)***	(129.4844)***	(130.6162)***	(133.4453)***	(133.7099)***	(133.1905)***	(130.6358)***	(114.7144)***	(105.4957)***	(100.8735)***	(97.6104)***	(95.4315)***	(93.5426)***
	$\mathcal{V}$	0.1946	0.2189	0.2379	0.3956	0.6036	0.7747	0.9897	1.4336	1.5704	1.6275	1.6578	1.6792	1.6925
		(9.2276)***	(10.2956)***	(11.1347)***	(18.2313)***	(27.8020)***	(35.5499)***	(44.7963)***	(59.2256)***	(61.8755)***	(62.8344)***	(63.3408)***	(63.6633)***	(63.9763)***
	c	77.7679	79.5791	80.6363	83.5683	83.8524	83.9048	83.5288	80.6179	77.8493	76.0304	74.3884	73.3224	72.1135
		(129.9123)***	(131.9571)***	(133.1230)***	(136.1155)***	(136.5389)***	(136.1374)***	(133.6810)***	(117.7621)***	(108.4571)***	(103.7906)***	(100.4962)***	(98.2941)***	(96.3879)***
	R^2	0.5	0.51	0.51	0.52	0.53	0.54	0.54	0.5	0.47	0.46	0.45	0.44	0.43
	N	31,425	31,513	31,573	31,861	31,942	31,963	31,970	31,984	31,984	31,985	31,985	31,985	31,985

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of the volume weighted average mid-quote return autocorrelations for the 10-year full sample period. I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the first-order, fifth-order, and tenth-order mid-quote return autocorrelations at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It is worth noting that the inverse of price and the days to maturity take the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 32,712 observations in the 10-year full sample across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.163: Market Liquidity Spreads Regression Results (Full Sample)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-211.9320	-105.9663	-0.5663	-0.9794	1.5573	-0.9794	-0.9794	-0.9792	-0.9786	-0.9741	-0.9735	-0.9685	-0.9616	-0.9622
	(1.9228)*	(1.9228)*	(17.2464)***	(1.7775)*	(2.7619)***	(1.7775)*	(1.7776)*	(1.7781)*	(1.7790)*	(1.7788)*	(1.7793)*	(1.7793)*	(1.7813)*	(1.7824)*
p^{-1}	1230169.7168	615086.1707	-2722.8899	5729.5949	-3163.1306	5729.7173	5729.7588	5728.3854	5725.1157	5704.3903	5701.5666	5677.9080	5649.5888	5651.1091
	(7.8016)***	(7.8016)***	(57.9677)***	(7.2693)***	(3.9211)***	(7.2693)***	(7.2694)***	(7.2712)***	(7.2752)***	(7.2819)***	(7.2843)***	(7.2919)***	(7.3156)***	(7.3176)***
$\mathcal{V}$	-1915.1894	-957.6014	11.2629	-11.1686	13.5014	-11.1685	-11.1680	-11.1674	-11.1672	-11.0959	-11.0939	-11.0212	-11.0222	-11.0592
	-1.6260	-1.6260	(32.0983)***	(1.8969)*	(2.2405)**	(1.8968)*	(1.8968)*	(1.8976)*	(1.8997)*	(1.8962)*	(1.8974)*	(1.8948)*	(1.9106)*	(1.9171)*
c	-266350.3074	-133175.4372	611.8475	-1241.1363	680.9026	-1241.1629	-1241.1719	-1240.8743	-1240.1660	-1235.6844	-1235.0732	-1229.9556	-1223.8299	-1224.1568
	(7.8557)***	(7.8557)***	(60.5775)***	(7.3232)***	(3.9254)***	(7.3232)***	(7.3233)***	(7.3251)***	(7.3291)***	(7.3359)***	(7.3384)***	(7.3460)***	(7.3700)***	(7.3720)***
R^2	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	32,712	32,712	32,712	32,712	32,702	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	-0.9572	-0.9581	-0.9599	-0.9958	-1.0017	-0.9931	-0.9917	-0.0001	-0.9628	-0.9156	-0.9360	-1.0064	-0.8537	-0.8969
	(1.7816)*	(1.7838)*	(1.7866)*	(1.7809)*	(1.7809)*	(1.7799)*	(1.7724)*	(1.7667)*	(1.7478)*	(1.7068)*	-1.6419	-1.6031	-1.6075	-1.6338
p^{-1}	5630.3297	5633.6245	5641.9627	5809.3906	5835.5185	5801.5316	5802.4967	0.5795	5688.4750	5463.5210	5585.1707	6017.6799	5246.9450	5244.6553
	(7.3254)***	(7.3321)***	(7.3409)***	(7.2627)***	(7.2523)***	(7.2688)***	(7.2490)***	(7.2399)***	(7.2185)***	(7.1192)***	(6.8484)***	(6.7001)***	(6.9062)***	(6.6785)***
$\mathcal{V}$	-11.0255	-11.0960	-11.1849	-11.6318	-11.6774	-11.7276	-12.0551	-0.0013	-12.6558	-12.1239	-14.2472	-16.2108	-13.9630	-12.8151
	(1.9203)*	(1.9332)*	(1.9481)*	(1.9466)*	(1.9428)*	(1.9670)**	(2.0161)**	(2.1130)**	(2.1499)**	(2.1148)**	(2.3386)**	(2.4162)**	(2.4603)**	(2.1845)**
c	-1219.6643	-1220.3748	-1222.1762	-1258.4078	-1264.0647	-1256.7119	-1256.9225	-0.1255	-1232.2386	-1183.5648	-1209.8068	-1303.4774	-1136.6627	-1135.9805
	(7.3799)***	(7.3866)***	(7.3954)***	(7.3164)***	(7.3059)***	(7.3226)***	(7.3027)***	(7.2934)***	(7.2720)***	(7.1724)***	(6.8989)***	(6.7495)***	(6.9579)***	(6.7274)***
R^2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*-0.8836*	*-0.8715*	*0.0500*	*0.0000*	*0.0001*	*-0.0002*	*-0.0007*	*-0.0053*	*-0.0058*	*-0.0109*	*-0.0178*	*-0.0172*	*-0.0221*	*-0.0213*
	-1.5887	-1.5820	-1.0788	-0.6456	-1.0267	-0.2991	-0.3701	-0.7950	-0.8215	-0.8443	-0.8210	-0.6513	-0.7417	-0.6871
p^{-1}	5182.5685	5111.4379	-93.5282	-0.1290	-0.1600	1.2131	4.4807	25.2161	28.0396	51.7118	80.0112	78.5272	99.2805	95.9813
	(6.5135)***	(6.4865)***	-1.4100	(2.1067)**	(2.1483)**	-1.5718	-1.5872	(2.6487)***	(2.7608)***	(2.8053)***	(2.5867)***	(2.0817)**	(2.3244)**	(2.1660)**
$\mathcal{V}$	-12.9023	-12.7597	1.6724	-0.0001	-0.0006	-0.0012	-0.0014	-0.0727	-0.0747	-0.1475	-0.1464	-0.1095	-0.1431	-0.0727
	(2.1708)**	(2.1676)**	(3.3750)***	-0.2770	-1.0760	-0.2071	-0.0676	-1.0225	-0.9842	-1.0711	-0.6338	-0.3887	-0.4486	-0.2195
c	-1122.5316	-1107.1207	19.9425	0.0280	0.0347	-0.2628	-0.9707	-5.4545	-6.0657	-11.1861	-17.3075	-16.9885	-21.4754	-20.7640
	(6.5612)***	(6.5339)***	-1.3982	(2.1253)**	(2.1660)**	-1.5837	-1.5991	(2.6645)***	(2.7774)***	(2.8222)***	(2.6022)***	(2.0944)**	(2.3383)**	(2.1792)**
R^2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	32,712	32,712	32,702	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	-0.0195	0.0164	0.0223	0.0137	0.0123	0.0000	-0.0166	-0.0638	-0.0433	0.0271	-0.1257	-0.0825	-0.0958	-0.1079
	-0.6404	-0.2385	-0.3493	-0.1857	-0.1390	-0.0776	-0.1185	-0.4569	-0.1976	-0.0976	-0.5825	-0.3931	-0.4208	-0.4633
p^{-1}	87.6535	-79.7659	-105.9023	-71.9072	-72.8809	-0.0065	41.1496	266.0893	144.4709	-288.0449	482.6944	484.9758	547.1047	618.1970
	(2.0128)**	-0.8094	-1.1570	-0.6823	-0.5739	-0.3873	-0.2056	-1.3328	-0.4607	-0.7253	-1.5641	-1.6156	(1.6804)*	(1.8552)*
$\mathcal{V}$	0.0161	0.4631	0.5088	0.5589	0.8865	0.0001	1.4869	0.9550	3.0783	5.0419	2.7940	1.6462	1.7329	1.5904
	-0.0496	-0.6291	-0.7441	-0.7099	-0.9345	-1.1609	-0.9946	-0.6404	-1.3141	(1.6996)*	-1.2120	-0.7341	-0.7125	-0.6389
c	-18.9648	17.2650	22.9237	15.5691	15.7816	0.0014	-8.9041	-57.5749	-31.3397	62.3323	-104.4834	-105.1638	-118.6218	-134.0244
	(2.0253)**	-0.8148	-1.1647	-0.6870	-0.5780	-0.3896	-0.2069	-1.3412	-0.4648	-0.7300	-1.5745	-1.6292	(1.6945)*	(1.8705)*
R^2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712	32,712

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of the volume weighted average market liquidity spreads for the 10-year full sample period. I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average bid-ask spreads ($\tilde{\mathcal{F}}^{Q}$), quoted half-spreads ($\tilde{\mathcal{F}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathcal{F}}^{D}$), effective half-spreads ($\tilde{\mathcal{F}}^{E}$), realized spreads ($\tilde{\mathcal{F}}^{R}$), and adverse selection ($\tilde{\mathcal{F}}^{AS}$). Both realized spreads and adverse selection are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It is worth noting that worths note that all liquidity spreads are reported in basis point (*bps*), except for the quoted depth. The days to maturity, the inverse of price and quoted depth are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 32,712 observations in the 10-year full sample across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.164: The First-order Spreads Autocorrelations Regression Results (Full Sample)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0515	-0.0515	-0.0392	-0.0128	-0.009	-0.0129	-0.0129	-0.0131	-0.0132	-0.0133	-0.0133	-0.0135	-0.0136	-0.0134
	(33.7990)***	(33.7990)***	(17.1950)***	(7.8203)***	(5.3919)***	(7.8387)***	(7.8655)***	(7.9687)***	(8.0492)***	(8.1316)***	(8.1369)***	(8.2369)***	(8.2818)***	(8.1922)***
p^{-1}	-169.4757	-169.4757	-152.4162	-145.4133	-153.538	-145.3761	-145.3118	-145.0406	-144.8502	-144.7604	-144.8702	-144.802	-145.0363	-145.1706
	(79.1092)***	(79.1092)***	(47.5797)***	(62.9616)***	(65.5375)***	(62.9492)***	(62.9224)***	(62.7987)***	(62.7398)***	(62.7356)***	(62.7987)***	(62.7065)***	(62.7721)***	(62.8800)***
$\mathcal{V}$	0.5065	0.5065	-0.1026	0.4596	0.4371	0.4593	0.4588	0.4573	0.4535	0.4509	0.4496	0.4485	0.4377	0.4269
	(31.1081)***	(31.1081)***	(4.2123)***	(26.1866)***	(24.3078)***	(26.1680)***	(26.1433)***	(26.0511)***	(25.8472)***	(25.7113)***	(25.6455)***	(25.5571)***	(24.9262)***	(24.3299)***
c	38.0824	38.0824	34.2083	32.4065	34.1522	32.3986	32.3849	32.3268	32.2863	32.2678	32.2919	32.2782	32.3309	32.3603
	(82.7078)***	(82.7078)***	(49.6848)***	(65.2839)***	(67.8376)***	(65.2718)***	(65.2451)***	(65.1217)***	(65.0645)***	(65.0632)***	(65.1279)***	(65.0353)***	(65.1042)***	(65.2150)***
R^2	0.38	0.38	0.2	0.21	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
N	31,985.00	31,985.00	31,985.00	31,985.00	31,802.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	-0.0136	-0.0135	-0.0133	-0.0125	-0.0128	-0.0131	-0.0122	-0.0107	-0.0102	-0.0099	-0.009	-0.0081	-0.0082	-0.0071
	(8.2883)***	(8.2286)***	(8.0907)***	(7.6206)***	(7.7590)***	(7.9559)***	(7.4830)***	(6.5985)***	(6.3073)***	(6.1097)***	(5.5953)***	(5.0819)***	(5.0976)***	(4.4241)***
p^{-1}	-144.7362	-144.7084	-144.8271	-146.8081	-147.7845	-148.9043	-157.4641	-162.3931	-164.6528	-167.6112	-173.5556	-174.861	-173.8912	-175.7307
	(62.7056)***	(62.7338)***	(62.8050)***	(63.4887)***	(63.9158)***	(64.5001)***	(68.7357)***	(71.1198)***	(72.2919)***	(73.6669)***	(76.4992)***	(77.7079)***	(77.2773)***	(78.2711)***
$\mathcal{V}$	0.418	0.409	0.3991	0.3869	0.3825	0.3834	0.3875	0.3678	0.3383	0.3211	0.2581	0.2147	0.1956	0.1841
	(23.8287)***	(23.3299)***	(22.7710)***	(22.0152)***	(21.7648)***	(21.8527)***	(22.2558)***	(21.1966)***	(19.5429)***	(18.5723)***	(14.9676)***	(12.5568)***	(11.4361)***	(10.7917)***
c	32.2675	32.262	32.2875	32.7184	32.9348	33.1829	35.0562	36.1307	36.6261	37.2738	38.5776	38.8631	38.6544	39.0499
	(65.0423)***	(65.0729)***	(65.1450)***	(65.8324)***	(66.2729)***	(66.8759)***	(71.1980)***	(73.6209)***	(74.8192)***	(76.2211)***	(79.1143)***	(80.3547)***	(79.9237)***	(80.9236)***
R^2	0.21	0.21	0.21	0.21	0.21	0.22	0.24	0.25	0.25	0.26	0.28	0.28	0.28	0.29
N	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*-0.0069*	*-0.0074*	*-0.0187*	*0.1073*	*0.0835*	*0.0504*	*0.0581*	*0.0599*	*0.0612*	*0.0623*	*0.0508*	*0.0414*	*0.0357*	*0.0291*
	(4.3386)***	(4.6363)***	(8.7904)***	(33.4558)***	(28.6066)***	(19.3547)***	(24.0868)***	(25.5852)***	(26.2323)***	(27.0183)***	(21.8404)***	(17.9245)***	(15.5685)***	(12.8513)***
p^{-1}	-177.0086	-177.3155	-192.0053	-288.2416	-235.1765	-226.5929	-286.4782	-312.0369	-322.9712	-332.5754	-334.1278	-329.2222	-325.5912	-317.0583
	(78.9418)***	(79.0194)***	(64.5724)***	(53.6671)***	(50.5417)***	(57.1168)***	(80.2000)***	(91.1308)***	(94.9165)***	(99.3470)***	(99.6550)***	(99.3344)***	(99.2885)***	(98.2091)***
$\mathcal{V}$	0.1868	0.1893	-0.0522	-0.2185	-0.1894	-0.2318	-0.3131	-0.296	-0.2856	-0.2659	-0.1788	-0.0831	0.0016	0.0559
	(10.9590)***	(11.0993)***	(2.2848)**	(5.7811)***	(5.6071)***	(7.8983)***	(11.7353)***	(11.5427)***	(11.2041)***	(10.5744)***	(7.0915)***	(3.3287)***	-0.0639	(2.2922)**
c	39.328	39.3984	42.3293	62.549	51.2016	49.5729	62.609	68.1876	70.5863	72.6844	73.1406	72.1466	71.3978	69.5889
	(81.6049)***	(81.6899)***	(66.2451)***	(54.0455)***	(51.0949)***	(58.0626)***	(81.4790)***	(92.5920)***	(96.4557)***	(100.9633)***	(101.4517)***	(101.2465)***	(101.2684)***	(100.2628)***
R^2	0.29	0.29	0.25	0.14	0.12	0.16	0.26	0.31	0.33	0.34	0.35	0.35	0.35	0.35
N	31,985	31,985	31,802	23,229	25,723	28,103	29,510	30,052	30,202	30,449	30,842	31,045	31,154	31,295

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0251	0.0168	0.0127	0.009	-0.0032	-0.0065	-0.0085	-0.0104	-0.0133	-0.0127	-0.0125	-0.0119	-0.0117	-0.0117
	(11.1523)***	(7.6846)***	(5.8957)***	(4.2252)***	-1.568	(3.3955)***	(4.6192)***	(5.8339)***	(8.0147)***	(7.8880)***	(7.7881)***	(7.5383)***	(7.4484)***	(7.5238)***
p^{-1}	-312.5148	-304.0512	-301.2548	-297.4775	-276.4836	-257.0502	-246.6178	-233.987	-211.1595	-202.736	-198.8161	-195.3303	-194.5295	-193.9391
	(97.5937)***	(97.9407)***	(98.6211)***	(98.4276)***	(97.4948)***	(95.5937)***	(95.1645)***	(93.2945)***	(90.1783)***	(89.2608)***	(88.3251)***	(87.7903)***	(88.2765)***	(88.3273)***
$\mathcal{V}$	0.0971	0.1899	0.2251	0.2448	0.2834	0.2564	0.2313	0.2237	0.2007	0.1805	0.1811	0.1693	0.1691	0.1727
	(4.0120)***	(8.0782)***	(9.7217)***	(10.6782)***	(13.1578)***	(12.5510)***	(11.7430)***	(11.7360)***	(11.2757)***	(10.4588)***	(10.5879)***	(10.0146)***	(10.0977)***	(10.3497)***
c	68.6292	66.8487	66.268	65.4694	60.9735	56.7612	54.5027	51.7627	46.8111	44.9753	44.1197	43.358	43.1828	43.0548
	(99.6917)***	(100.1711)***	(100.9218)***	(100.7753)***	(100.0333)***	(98.2115)***	(97.8520)***	(96.0246)***	(93.0126)***	(92.1311)***	(91.1943)***	(90.6668)***	(91.1743)***	(91.2332)***
R^2	0.35	0.35	0.36	0.36	0.37	0.37	0.37	0.37	0.36	0.35	0.35	0.35	0.35	0.35
N	31,370	31,556	31,620	31,666	31,888	31,950	31,967	31,973	31,984	31,984	31,985	31,985	31,985	31,985

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the first-order autocorrelation of the volume weighted average spreads for the 10-year full sample period. I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{S}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{S}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{S}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{S}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{S}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{S}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 32,712 observations in the 10-year full sample across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.165: The Fifth-order Spreads Autocorrelations Regression Results (Full Sample)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0923	-0.0923	-0.0711	-0.0245	-0.0207	-0.0245	-0.0246	-0.0248	-0.025	-0.0252	-0.0254	-0.0254	-0.0255	-0.0256
	(48.4644)***	(48.4644)***	(28.1592)***	(14.1773)***	(11.8523)***	(14.1964)***	(14.2337)***	(14.3617)***	(14.4930)***	(14.6272)***	(14.7423)***	(14.7735)***	(14.8480)***	(14.9107)***
p^{-1}	-269.4931	-269.4931	-216.8292	-215.9964	-221.8694	-215.9212	-215.7947	-215.4409	-215.1216	-214.86	-214.4819	-214.3481	-213.9952	-213.6947
	(100.6223)***	(100.6223)***	(61.0255)***	(88.9447)***	(90.8470)***	(88.9262)***	(88.9023)***	(88.7889)***	(88.7000)***	(88.6834)***	(88.5584)***	(88.5580)***	(88.5238)***	(88.4932)***
$\mathcal{V}$	0.7496	0.7496	0.21	0.6286	0.5936	0.6281	0.627	0.6244	0.6219	0.6182	0.614	0.611	0.592	0.5741
	(36.8289)***	(36.8289)***	(7.7752)***	(34.0600)***	(31.6644)***	(34.0397)***	(33.9902)***	(33.8593)***	(33.7409)***	(33.5761)***	(33.3558)***	(33.2149)***	(32.2260)***	(31.2831)***
c	59.9602	59.9602	48.2837	47.648	48.9053	47.6318	47.6046	47.5287	47.4603	47.4046	47.3235	47.2946	47.2191	47.1546
	(104.1625)***	(104.1625)***	(63.2261)***	(91.2893)***	(93.1853)***	(91.2711)***	(91.2478)***	(91.1357)***	(91.0483)***	(91.0351)***	(90.9113)***	(90.9122)***	(90.8815)***	(90.8536)***
R^2	0.52	0.52	0.29	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
N	31,985.00	31,985.00	31,985.00	31,985.00	31,802.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	-0.0256	-0.0255	-0.0251	-0.0245	-0.0241	-0.024	-0.0212	-0.0191	-0.0199	-0.0212	-0.0218	-0.0226	-0.0222	-0.0225
	(14.9420)***	(14.9020)***	(14.6769)***	(14.2754)***	(14.0277)***	(13.9465)***	(12.2602)***	(10.9896)***	(11.3959)***	(12.2439)***	(12.5816)***	(13.0392)***	(12.8468)***	(12.9840)***
p^{-1}	-213.3151	-213.2868	-213.4446	-214.8715	-216.5148	-218.4988	-232.1645	-239.7267	-240.2279	-239.3297	-241.3624	-240.3462	-237.7271	-236.8203
	(88.4141)***	(88.5070)***	(88.6094)***	(88.9057)***	(89.5087)***	(90.2458)***	(95.2957)***	(97.8634)***	(97.9947)***	(98.0607)***	(99.0315)***	(98.6965)***	(97.7041)***	(97.3261)***
$\mathcal{V}$	0.5608	0.5427	0.5273	0.4855	0.4651	0.4564	0.417	0.3769	0.3424	0.3165	0.2571	0.2376	0.2135	0.2078
	(30.5851)***	(29.6324)***	(28.8060)***	(26.4309)***	(25.2990)***	(24.8055)***	(22.5244)***	(20.2474)***	(18.3792)***	(17.0660)***	(13.8823)***	(12.8362)***	(11.5435)***	(11.2350)***
c	47.0726	47.0665	47.0992	47.4095	47.7673	48.2011	51.1751	52.8169	52.9328	52.7479	53.2034	52.9911	52.4212	52.2262
	(90.7757)***	(90.8715)***	(90.9725)***	(91.2679)***	(91.8778)***	(92.6268)***	(97.7324)***	(100.3181)***	(100.4630)***	(100.5554)***	(101.5652)***	(101.2441)***	(100.2405)***	(99.8621)***
R^2	0.36	0.36	0.36	0.36	0.36	0.37	0.39	0.4	0.4	0.4	0.41	0.41	0.41	0.41
N	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*-0.0222*	*-0.0221*	*-0.0237*	*0.0368*	*0.0185*	*0.0101*	*0.0105*	*0.0136*	*0.0165*	*0.0189*	*0.0508*	*0.0414*	*0.0357*	*0.0291*
	(12.8509)***	(12.8301)***	(14.8048)***	(20.1835)***	(11.2876)***	(6.1840)***	(6.1188)***	(7.7396)***	(9.1393)***	(10.3776)***	(21.8404)***	(17.9245)***	(15.5685)***	(12.8513)***
p^{-1}	-236.0217	-235.3795	-142.8174	-113.5361	-107.6198	-140.3909	-183.6184	-214.8665	-239.0193	-257.1438	-334.1278	-329.2222	-325.5912	-317.0583
	(96.9481)***	(96.9723)***	(63.8920)***	(37.2229)***	(41.0981)***	(56.6807)***	(72.4856)***	(83.4701)***	(90.6261)***	(97.2680)***	(99.6550)***	(99.3344)***	(99.2885)***	(98.2091)***
$\mathcal{V}$	0.2074	0.2047	-0.0398	-0.085	-0.0845	-0.166	-0.2185	-0.2241	-0.2388	-0.2359	-0.1788	-0.0831	0.0016	0.0559
	(11.2086)***	(11.0978)***	(2.3208)**	(3.9580)***	(4.4420)***	(9.0561)***	(11.5508)***	(11.6267)***	(12.0866)***	(11.8805)***	(7.0915)***	(3.3287)***	-0.0639	(2.2922)**
c	52.0514	51.9118	31.4786	24.6543	23.4804	30.7143	40.1833	47.0067	52.2832	56.2392	73.1406	72.1466	71.3978	69.5889
	(99.4768)***	(99.5056)***	(65.5330)***	(37.5108)***	(41.6364)***	(57.6197)***	(73.7405)***	(84.9044)***	(92.1749)***	(98.9214)***	(101.4517)***	(101.2465)***	(101.2684)***	(100.2628)***
R^2	0.41	0.41	0.27	0.08	0.1	0.19	0.27	0.32	0.35	0.38	0.35	0.35	0.35	0.35
N	31,985	31,985	31,802	23,229	25,723	28,103	29,510	30,052	30,202	30,449	30,842	31,045	31,154	31,295

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0251	0.0168	0.0127	0.009	-0.0032	-0.0065	-0.0085	-0.0104	-0.0133	-0.0127	-0.0125	-0.0119	-0.0117	-0.0117
	(11.1523)***	(7.6846)***	(5.8957)***	(4.2252)***	-1.568	(3.3955)***	(4.6192)***	(5.8339)***	(8.0147)***	(7.8880)***	(7.7881)***	(7.5383)***	(7.4484)***	(7.5238)***
p^{-1}	-312.5148	-304.0512	-301.2548	-297.4775	-276.4836	-257.0502	-246.6178	-233.987	-211.1595	-202.736	-198.8161	-195.3303	-194.5295	-193.9391
	(97.5937)***	(97.9407)***	(98.6211)***	(98.4276)***	(97.4948)***	(95.5937)***	(95.1645)***	(93.2945)***	(90.1783)***	(89.2608)***	(88.3251)***	(87.7903)***	(88.2765)***	(88.3273)***
$\mathcal{V}$	0.0971	0.1899	0.2251	0.2448	0.2834	0.2564	0.2313	0.2237	0.2007	0.1805	0.1811	0.1693	0.1691	0.1727
	(4.0120)***	(8.0782)***	(9.7217)***	(10.6782)***	(13.1578)***	(12.5510)***	(11.7430)***	(11.7360)***	(11.2757)***	(10.4588)***	(10.5879)***	(10.0146)***	(10.0977)***	(10.3497)***
c	68.6292	66.8487	66.268	65.4694	60.9735	56.7612	54.5027	51.7627	46.8111	44.9753	44.1197	43.358	43.1828	43.0548
	(99.6917)***	(100.1711)***	(100.9218)***	(100.7753)***	(100.0333)***	(98.2115)***	(97.8520)***	(96.0246)***	(93.0126)***	(92.1311)***	(91.1943)***	(90.6668)***	(91.1743)***	(91.2332)***
R^2	0.35	0.35	0.36	0.36	0.37	0.37	0.37	0.37	0.36	0.35	0.35	0.35	0.35	0.35
N	31,370	31,556	31,620	31,666	31,888	31,950	31,967	31,973	31,984	31,984	31,985	31,985	31,985	31,985

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the fifth-order autocorrelation of the volume weighted average spreads for the 10-year full sample period. I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average fifth-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{S}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{S}}Q^{1/2}}$), quoted depth ($\Omega^{\tilde{\mathscr{S}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{S}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{S}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{S}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 32,712 observations in the 10-year full sample across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.166: The Tenth-order Spreads Autocorrelations Regression Results (Full Sample)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.108	-0.108	-0.0829	-0.0392	-0.0373	-0.0393	-0.0394	-0.0396	-0.0398	-0.04	-0.0402	-0.0403	-0.0407	-0.0411
	(56.2731)***	(56.2731)***	(33.1898)***	(24.3017)***	(22.7788)***	(24.3248)***	(24.3789)***	(24.5328)***	(24.6934)***	(24.8757)***	(24.9959)***	(25.0922)***	(25.3984)***	(25.7290)***
p^{-1}	-280.5928	-280.5928	-223.5275	-232.2848	-235.5491	-232.2118	-232.0774	-231.6066	-231.0633	-230.5201	-230.0328	-229.7404	-228.2599	-226.8216
	(103.9769)***	(103.9769)***	(63.6004)***	(102.2508)***	(103.0657)***	(102.2410)***	(102.2200)***	(102.1308)***	(102.0115)***	(101.8719)***	(101.7061)***	(101.6644)***	(101.2897)***	(100.9400)***
$\mathcal{V}$	0.7136	0.7136	0.3227	0.6646	0.6337	0.6643	0.6635	0.6603	0.6576	0.6539	0.651	0.6481	0.6308	0.6126
	(34.7949)***	(34.7949)***	(12.0820)***	(38.4934)***	(36.1193)***	(38.4872)***	(38.4518)***	(38.3148)***	(38.2008)***	(38.0240)***	(37.8719)***	(37.7374)***	(36.8294)***	(35.8724)***
c	62.3956	62.3956	49.7458	51.2359	51.9365	51.2202	51.1913	51.0899	50.9724	50.8554	50.7501	50.687	50.3662	50.055
	(107.5762)***	(107.5762)***	(65.8547)***	(104.9356)***	(105.7509)***	(104.9261)***	(104.9062)***	(104.8196)***	(104.7021)***	(104.5646)***	(104.3989)***	(104.3590)***	(103.9865)***	(103.6401)***
R^2	0.56	0.56	0.32	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
N	31,985.00	31,985.00	31,985.00	31,985.00	31,802.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00	31,985.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	-0.0413	-0.0414	-0.0413	-0.0406	-0.0401	-0.04	-0.0352	-0.0324	-0.0334	-0.0359	-0.0374	-0.0373	-0.0375	-0.0378
	(25.9047)***	(26.0796)***	(26.0389)***	(25.6933)***	(25.3913)***	(25.2382)***	(21.7575)***	(19.8565)***	(20.5158)***	(22.1364)***	(23.3468)***	(23.3402)***	(23.5718)***	(23.8307)***
p^{-1}	-225.7409	-224.4271	-223.7738	-223.2083	-223.9566	-224.7867	-236.0804	-241.5701	-240.8296	-237.2188	-234.2102	-232.3772	-229.9199	-227.578
	(100.6783)***	(100.3950)***	(100.3641)***	(100.4450)***	(100.7534)***	(100.8623)***	(103.6759)***	(105.1911)***	(105.0801)***	(104.0481)***	(103.8213)***	(103.4336)***	(102.7730)***	(102.0008)***
$\mathcal{V}$	0.5983	0.5767	0.5601	0.5081	0.4832	0.4642	0.3861	0.3267	0.2896	0.2624	0.2254	0.2101	0.1972	0.1836
	(35.1115)***	(33.9435)***	(33.0554)***	(30.0861)***	(28.6053)***	(27.4042)***	(22.3098)***	(18.7213)***	(16.6266)***	(15.1468)***	(13.1476)***	(12.3028)***	(11.6002)***	(10.8254)***
c	49.8204	49.535	49.3915	49.2653	49.4268	49.6086	52.0489	53.2305	53.0742	52.3012	51.656	51.258	50.7257	50.2188
	(103.3796)***	(103.0981)***	(103.0678)***	(103.1480)***	(103.4572)***	(103.5660)***	(106.3486)***	(107.8445)***	(107.7446)***	(106.7331)***	(106.5378)***	(106.1529)***	(105.4951)***	(104.7229)***
R^2	0.45	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47
N	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985	31,985

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*-0.0374*	*-0.0373*	*-0.0283*	*0.0125*	*0.002*	*-0.0017*	*-0.0036*	*-0.0034*	*-0.003*	*-0.0021*	*-0.0029*	*-0.0047*	*-0.0057*	*-0.0067*
	(23.5581)***	(23.5289)***	(20.9581)***	(10.6335)***	(1.8958)*	-1.5039	(2.7124)***	(2.4133)**	(2.0234)**	-1.373	(1.7904)*	(2.7726)***	(3.3135)***	(3.8537)***
p^{-1}	-227.5365	-226.7941	-110.4619	-64.3633	-60.7774	-85.7227	-118.1659	-142.2204	-164.1736	-181.1648	-234.5561	-256.6319	-269.0991	-283.3093
	(101.9325)***	(101.6797)***	(58.5308)***	(32.6138)***	(36.0301)***	(48.9319)***	(60.8190)***	(68.9680)***	(76.2269)***	(83.0291)***	(100.8916)***	(106.5832)***	(109.6971)***	(113.4198)***
$\mathcal{V}$	0.1875	0.1873	0.0127	0.0451	0.0378	-0.0366	-0.1055	-0.1203	-0.1302	-0.1368	-0.0854	-0.0319	0.0014	0.042
	(11.0544)***	(11.0483)***	-0.8782	(3.2481)***	(3.0893)***	(2.8229)***	(7.2723)***	(7.7891)***	(8.0673)***	(8.3467)***	(4.8869)***	(1.7611)*	-0.0781	(2.2259)**
c	50.2072	50.0454	24.4068	14.0169	13.302	18.7919	25.919	31.1896	35.9979	39.7147	51.4232	56.2754	59.0148	62.1374
	(104.6477)***	(104.3924)***	(60.1813)***	(32.9611)***	(36.6167)***	(49.8427)***	(62.0141)***	(70.3242)***	(77.7163)***	(84.6380)***	(102.8683)***	(108.7053)***	(111.8939)***	(115.7094)***
R^2	0.46	0.46	0.26	0.06	0.08	0.16	0.23	0.27	0.31	0.34	0.42	0.44	0.45	0.47
N	31,985	31,985	31,802	23,229	25,723	28,103	29,510	30,052	30,202	30,449	30,842	31,045	31,154	31,295

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	-0.0069	-0.0065	-0.0071	-0.0079	-0.0162	-0.0225	-0.0278	-0.033	-0.0398	-0.0407	-0.041	-0.0418	-0.0417	-0.0413
	(3.8824)***	(3.5957)***	(3.9110)***	(4.3449)***	(9.0710)***	(12.9448)***	(16.3189)***	(19.9426)***	(25.3358)***	(26.0519)***	(26.3807)***	(26.9524)***	(26.8973)***	(26.6444)***
p^{-1}	-291.9221	-313.9942	-319.7832	-321.8926	-316.5136	-302.284	-291.0326	-277.9487	-254.5497	-246.3607	-242.1064	-237.7756	-236.1923	-235.2965
	(115.7305)***	(122.0969)***	(124.1743)***	(124.8736)***	(125.6897)***	(123.8361)***	(121.6036)***	(119.4109)***	(115.0679)***	(112.1277)***	(110.6500)***	(108.9085)***	(108.2880)***	(107.9578)***
$\mathcal{V}$	0.0674	0.1315	0.1355	0.1369	0.1134	0.1002	0.0989	0.1019	0.133	0.152	0.1627	0.1651	0.1685	0.1727
	(3.5368)***	(6.7496)***	(6.9433)***	(7.0004)***	(5.9302)***	(5.4036)***	(5.4377)***	(5.7584)***	(7.9099)***	(9.1031)***	(9.7847)***	(9.9500)***	(10.1641)***	(10.4262)***
c	64.0261	68.8609	70.1351	70.6046	69.4928	66.4254	63.9998	61.1754	56.1116	54.3317	53.4064	52.4678	52.1224	51.9244
	(118.0693)***	(124.5628)***	(126.6943)***	(127.4223)***	(128.3921)***	(126.6093)***	(124.4183)***	(122.2806)***	(118.0147)***	(115.0526)***	(113.5638)***	(111.8122)***	(111.1836)***	(110.8440)***
R^2	0.48	0.5	0.51	0.51	0.52	0.53	0.53	0.53	0.53	0.51	0.51	0.5	0.5	0.5
N	31,370	31,556	31,620	31,666	31,888	31,950	31,967	31,973	31,984	31,984	31,985	31,985	31,985	31,985

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the tenth-order autocorrelation of the volume weighted average spreads for the 10-year full sample period. I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average tenth-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{S}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{S}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{S}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{S}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{S}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{S}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 32,712 observations in the 10-year full sample across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.167: Market Activities and Price Error Regression Results (One-year Tenor)

	Quote Number	**Trade Number**	**Quote to Trade Ratio**	**Price Error** Lag 1	Lag 2	Lag 3	Lag 4	Lag 5
$\tilde{T}$	0.5795***	0.2102***	0.3693***	0.1631***	0.2403***	0.2127***	0.1953***	0.0219
	-32.6508	-11.4487	-24.2941	-7.0358	-3.1891	-2.989	-2.6991	-0.3401
p^{-1}	-1,086.3862***	-804.2304***	-282.2495***	-290.9200***	-621.8214**	-464.3027*	-294.8253	-220.9855
	-17.6588	-12.6386	-5.3559	-3.6242	-2.3868	-1.8875	-1.1783	-0.9903
$\mathcal{V}$	3.9018***	4.6490***	-0.7470***	-6.2933***	-9.5957***	-9.4300***	-10.4448***	-9.9510***
	-12.4576	-14.3505	-2.7843	-15.3921	-7.2249	-7.5197	-8.1864	-8.7454
c	245.8502***	182.7714***	63.0990***	69.8467***	142.0621**	107.8041**	71.044	55.732
	-18.3852	-13.2144	-5.5087	-4.0032	-2.5087	-2.0162	-1.3063	-1.149
R^2	0.24	0.08	0.12	0.11	0.03	0.03	0.03	0.03
N	4,683	4,683	4,683	4,671	4,642	4,637	4,634	4,639

Panel B: Quotes Price Autocorrelations (Ω^P)

	First-order			**Fifth-order**			**Tenth-order**		
	Ask	Bid	Mid	Ask	Bid	Mid	Ask	Bid	Mid
$\tilde{T}$	-0.0006	-0.0015**	-0.001	-0.0029*	-0.0043**	-0.0037**	-0.0038*	-0.0051**	-0.0045**
	-0.8538	-2.2017	-1.3894	-1.7072	-2.367	-2.1589	-1.6504	-2.1594	-1.9931
p^{-1}	-6.6196**	-7.9486***	-5.6670**	-22.3813***	-23.8985***	-19.5836***	-35.7499***	-36.6271***	-31.6960***
	-2.4037	-3.2694	-2.1481	-3.6588	-3.6317	-3.1928	-4.2483	-4.2495	-3.8375
$\mathcal{V}$	0.0896***	0.0897***	0.0806***	0.2719***	0.2841***	0.2570***	0.4131***	0.4173***	0.3860***
	-6.3678	-7.2217	-5.9797	-8.7055	-8.4539	-8.2043	-9.6125	-9.4793	-9.1515
c	2.4308***	2.7245***	2.2270***	5.8447***	6.1810***	5.2431***	8.7362***	8.9337***	7.8631***
	-4.0614	-5.1565	-3.8844	-4.3966	-4.322	-3.9333	-4.777	-4.7693	-4.3806
R^2	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
N	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of market activities indicators and price discovery factors for the one year to maturity group ($\tilde{T}$ smaller than one year). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables includes the number of quotes and trades (n^q and n), the quotes to trades ratio qtr, the pricing errors ($\mathcal{E}$) measured by the lag one to lag five vector autoregression models, and the first-order, fifth-order, and tenth-order autocorrelations of the volume weighted average bid, ask, and mid-quote price at tick-by-tick level. It is worth noting that trades number, quotes number, pricing errors, the inverse of price, the days to maturity and the quotes to trades ratio take the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 4,683 daily observations in the one year group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.168: Mid-quote Return Autocorrelation Regression Results (One-year Tenor)

		Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
First-Order	$\tilde{T}$	0.0100***	0.0639***	0.0737***	0.0583***	0.0462***	0.0517***	0.0525***	0.0530***	0.0515***	0.0478***	0.0474***	0.0478***	0.0479***
		-7.9822	-9.5828	-14.0415	-12.6958	-10.495	-11.8706	-12.4328	-12.8253	-14.0438	-14.2098	-14.9795	-16.134	-17.1243
	p^{-1}	-33.6756***	-501.6925***	-458.3244***	-349.1816***	-407.9417***	-438.2173***	-439.8330***	-459.2851***	-428.8833***	-391.4338***	-348.9412***	-313.9803***	-298.3088***
		-7.4507	-19.3897	-23.7405	-21.3098	-26.0235	-28.2861	-29.2726	-31.0004	-32.5716	-32.3975	-30.6163	-29.3872	-29.5987
	$\mathcal{V}$	0.1215***	0.0632	0.3193***	0.0309	-0.2957***	-0.3038***	-0.2982***	-0.2753***	-0.2093***	-0.0912	-0.0784	-0.0376	0.0226
		-5.2653	-0.5379	-3.3701	-0.3708	-3.695	-3.8346	-3.8818	-3.6337	-3.1084	-1.4768	-1.3449	-0.689	-0.4379
	c	7.2334***	109.1369***	99.8073***	76.2533***	89.1458***	95.7233***	96.0964***	100.3345***	93.7892***	85.6886***	76.4673***	68.8790***	65.4793***
		-7.364	-19.4183	-23.7956	-21.4135	-26.1671	-28.4311	-29.4288	-31.162	-32.775	-32.6337	-30.872	-29.6641	-29.8951
	R^2	0.03	0.15	0.18	0.17	0.25	0.28	0.29	0.31	0.33	0.31	0.29	0.28	0.27
	N	4,463	4,015	4,260	4,365	4,395	4,409	4,411	4,420	4,425	4,428	4,429	4,433	4,435
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0459***	0.0428***	0.0405***	0.0322***	0.0238***	0.0212***	0.0188***	0.0088***	0.0063***	0.0047***	0.0036***	0.0031***	0.0029***
		-18.1352	-17.43	-16.8498	-15.2352	-12.519	-12.5524	-11.7176	-7.1222	-6.1117	-4.6308	-3.6511	-3.3658	-3.334
	p^{-1}	-250.9311***	-237.7056***	-227.0045***	-188.5593***	-140.7690***	-105.1427***	-77.9319***	-30.8001***	-19.7992***	-15.5657***	-12.9486***	-11.7857***	-9.9066***
		-27.4371	-26.7627	-26.0979	-24.6231	-20.4048	-17.16	-13.4298	-6.8494	-5.2843	-4.2692	-3.6556	-3.4828	-3.1677
	$\mathcal{V}$	0.0719	0.1185***	0.1378***	0.2744***	0.2989***	0.2907***	0.2854***	0.2134***	0.1718***	0.1561***	0.1437***	0.1337***	0.1218***
		-1.5394	-2.6111	-3.1012	-7.0151	-8.4844	-9.2913	-9.6318	-9.2914	-8.9782	-8.3851	-7.9455	-7.7368	-7.6241
	c	55.2089***	52.3543***	50.0431***	41.7410***	31.4046***	23.6825***	17.7878***	7.6134***	5.2436***	4.3353***	3.7744***	3.5257***	3.1203***
		-27.7769	-27.1227	-26.4732	-25.0813	-20.9464	-17.7851	-14.1048	-7.7906	-6.4397	-5.4714	-4.9032	-4.7942	-4.591
	R^2	0.24	0.23	0.21	0.17	0.12	0.09	0.07	0.03	0.03	0.02	0.02	0.02	0.02
	N	4,442	4,446	4,447	4,457	4,462	4,462	4,462	4,463	4,463	4,463	4,463	4,463	4,463
Fifth-Order		*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
	$\tilde{T}$	0.0023***	0.0168***	0.0240***	0.0357***	0.0385***	0.0436***	0.0480***	0.0515***	0.0694***	0.0736***	0.0771***	0.0803***	0.0816***
		-3.7807	-4.4121	-6.1569	-8.17	-8.0932	-8.9934	-9.7942	-10.592	-14.524	-15.4006	-16.2723	-17.3757	-17.9959
	p^{-1}	1.4658	-177.8457***	-195.5737***	-275.5375***	-362.7880***	-412.3468***	-452.9555***	-482.2039***	-549.1136***	-567.9776***	-568.4309***	-560.5052***	-556.4609***
		-0.6633	-12.056	-13.6559	-17.6662	-21.4449	-23.9055	-25.9805	-27.6533	-31.973	-33.0848	-33.2814	-33.6501	-34.0477
	$\mathcal{V}$	0.0071	-0.049	-0.1218*	-0.2284***	-0.3669***	-0.4208***	-0.4442***	-0.4682***	-0.4561***	-0.3582***	-0.2955***	-0.2138**	-0.1347
		-0.627	-0.7309	-1.7334	-2.8768	-4.2481	-4.7706	-4.983	-5.2499	-5.1938	-4.0817	-3.3844	-2.5112	-1.6128
	c	-0.3352	38.7366***	42.6055***	60.0173***	79.0536***	89.8504***	98.7003***	105.0701***	119.6220***	123.7389***	123.8390***	122.1232***	121.2496***
		-0.6979	-12.0889	-13.6928	-17.7069	-21.502	-23.9688	-26.0497	-27.7258	-32.0495	-33.166	-33.3633	-33.7361	-34.1368
	R^2	0	0.07	0.09	0.14	0.2	0.23	0.26	0.28	0.34	0.35	0.34	0.34	0.34
	N	4,463	4,015	4,260	4,365	4,395	4,409	4,411	4,420	4,425	4,428	4,429	4,433	4,435
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0829***	0.0819***	0.0786***	0.0691***	0.0611***	0.0574***	0.0515***	0.0334***	0.0244***	0.0197***	0.0158***	0.0139***	0.0128***
		-19.4031	-19.8398	-19.4324	-18.902	-17.6946	-17.8434	-17.0182	-13.3412	-11.0152	-8.9892	-7.5711	-6.9191	-6.6069
	p^{-1}	-528.3286***	-514.7028***	-503.7107***	-452.7788***	-375.2542***	-307.6935***	-237.3171***	-102.5109***	-67.1834***	-53.1843***	-43.5129***	-37.8726***	-32.7682***
		-34.1946	-34.4625	-34.4193	-34.1766	-29.9582	-26.3734	-21.6435	-11.2927	-8.3729	-6.7076	-5.7639	-5.2062	-4.6705
	$\mathcal{V}$	0.0054	0.051	0.0626	0.3272***	0.5026***	0.5695***	0.6257***	0.5826***	0.5093***	0.4737***	0.4338***	0.4068***	0.3793***
		-0.069	-0.6683	-0.8379	-4.8354	-7.8561	-9.5583	-11.173	-12.5668	-12.428	-11.6987	-11.2532	-10.9501	-10.5849
	c	115.1581***	112.2124***	109.8472***	98.8506***	82.0550***	67.4043***	52.1538***	22.9953***	15.3862***	12.3784***	10.3042***	9.0937***	7.9946***
		-34.2956	-34.5717	-34.5382	-34.3331	-30.143	-26.5844	-21.8864	-11.6562	-8.8234	-7.1836	-6.2806	-5.7521	-5.2432
	R^2	0.34	0.34	0.33	0.3	0.23	0.19	0.14	0.08	0.07	0.06	0.05	0.04	0.04
	N	4,442	4,446	4,447	4,457	4,462	4,462	4,462	4,463	4,463	4,463	4,463	4,463	4,463
Tenth-Order		*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
	$\tilde{T}$	0.0007	0.0069***	0.0135***	0.0201***	0.0257***	0.0323***	0.0361***	0.0385***	0.0595***	0.0674***	0.0731***	0.0799***	0.0835***
		-1.4515	-2.6492	-4.8476	-5.8178	-6.2843	-7.4138	-7.9812	-8.501	-12.9154	-14.4023	-15.523	-16.9347	-17.6932
	p^{-1}	3.6332**	-87.4900***	-120.9905***	-190.1088***	-264.3984***	-313.2257***	-350.5975***	-382.5207***	-461.0094***	-497.1894***	-512.8065***	-528.2180***	-538.8430***
		-2.0511	-8.7077	-11.825	-15.44	-18.167	-20.2162	-21.8236	-23.5316	-27.864	-29.5793	-30.2333	-31.06	-31.6925
	$\mathcal{V}$	-0.0035	-0.0414	-0.0188	-0.1279**	-0.2884***	-0.3360***	-0.3899***	-0.4060***	-0.4642***	-0.4098***	-0.3425***	-0.2556***	-0.1779**
		-0.3895	-0.9057	-0.375	-2.0404	-3.8814	-4.2413	-4.7468	-4.8836	-5.4865	-4.7689	-3.9491	-2.9405	-2.0476
	c	-0.7948**	19.0664***	26.3407***	41.4007***	57.6006***	68.2294***	76.3777***	83.3352***	100.3975***	108.2680***	111.6567***	114.9983***	117.3035***
		-2.0648	-8.7361	-11.8494	-15.4722	-18.2112	-20.2631	-21.8765	-23.5893	-27.922	-29.6385	-30.2905	-31.1149	-31.7465
	R^2	0	0.04	0.06	0.1	0.15	0.18	0.2	0.23	0.29	0.31	0.31	0.32	0.32
	N	4,463	4,015	4,260	4,365	4,395	4,409	4,411	4,420	4,425	4,428	4,429	4,433	4,435
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0886***	0.0881***	0.0856***	0.0810***	0.0739***	0.0724***	0.0686***	0.0511***	0.0407***	0.0330***	0.0271***	0.0237***	0.0215***
		-19.0544	-19.2887	-18.9327	-18.9608	-17.8783	-18.4122	-18.4767	-16.1735	-13.7793	-11.6412	-9.8595	-8.8993	-8.2172
	p^{-1}	-547.8078***	-546.7061***	-546.0028***	-529.3269***	-475.5742***	-413.2384***	-339.7663***	-158.6162***	-105.2247***	-80.2213***	-66.8167***	-60.1571***	-53.1499***
		-32.5902	-33.0963	-33.3729	-34.2128	-31.7404	-28.9789	-25.2371	-13.8447	-9.8386	-7.8128	-6.7033	-6.2211	-5.6148
	$\mathcal{V}$	-0.0288	0.0069	0.0263	0.2736***	0.5123***	0.6249***	0.7589***	0.8245***	0.7571***	0.6941***	0.6460***	0.6183***	0.5879***
		-0.3347	-0.0821	-0.315	-3.4625	-6.6954	-8.5807	-11.0367	-14.0911	-13.8625	-13.2371	-12.6915	-12.5211	-12.1619
	c	119.2607***	119.0365***	118.9041***	115.3354***	103.7049***	90.1800***	74.2494***	35.0323***	23.5142***	18.1376***	15.2665***	13.8450***	12.3406***
		-32.6472	-33.1585	-33.4415	-34.3019	-31.8482	-29.0994	-25.3771	-14.0701	-10.1167	-8.128	-7.0476	-6.5882	-5.9988
	R^2	0.32	0.32	0.32	0.31	0.26	0.22	0.18	0.11	0.09	0.08	0.07	0.06	0.06
	N	4,442	4,446	4,447	4,457	4,462	4,462	4,462	4,463	4,463	4,463	4,463	4,463	4,463

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of the volume weighted average mid-quote return autocorrelations for the one year to maturity group ($\tilde{T}$ smaller than one year). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the first-order, fifth-order, and tenth-order mid-quote return autocorrelations at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It is worth noting that the inverse of price and the days to maturity take the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 4,683 daily observations in the one year group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.169: Market Liquidity Spreads Regression Results (One-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	15.6391***	7.8196***	0.1662**	0.0128***	0.2308***	0.0127***	0.0127***	0.0127***	0.0126***	0.0125***	0.0124***	0.0123***	0.0119***	0.0115***
	-29.1719	-29.1720	-2.2787	-12.3817	-3.8557	-12.3681	-12.3487	-12.2908	-12.2071	-12.1299	-12.0551	-11.9876	-11.4486	-10.8886
p^{-1}	37,796.4477***	18,897.9597***	-4,562.8382***	9.2489***	-1,957.8305***	9.3041***	9.3841***	9.6309***	10.0187***	10.3483***	10.6709***	11.0027***	12.4774***	13.5045***
	-20.3394	-20.3391	-18.0464	-2.5895	-9.4370	-2.6054	-2.6282	-2.6988	-2.8098	-2.9044	-2.9956	-3.0879	-3.4602	-3.6769
$\mathcal{V}$	125.0493***	62.5242***	12.9687***	0.2275***	-2.1411**	0.2276***	0.2276***	0.2276***	0.2277***	0.2277***	0.2276***	0.2267***	0.2222***	0.2165***
	-13.2178	-13.2177	-10.0750	-12.5127	-2.0272	-12.5173	-12.5208	-12.5261	-12.5425	-12.5507	-12.5523	-12.4991	-12.1042	-11.5783
c	-8,126.0156***	-4,062.9505***	1,007.9271***	-1.9150**	426.5335***	-1.9270**	-1.9443**	-1.9979**	-2.0821***	-2.1537***	-2.2239***	-2.2961***	-2.6166***	-2.8394***
	-20.1180	-20.1177	-18.3403	-2.4667	-9.4587	-2.4825	-2.5053	-2.5757	-2.6865	-2.7810	-2.8722	-2.9647	-3.3383	-3.5567
R^2	0.39	0.39	0.07	0.12	0.04	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11
N	4,683	4,683	4,683	4,683	4,682	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	0.0112***	0.0105***	0.0100***	0.0082***	0.0073***	0.0069***	0.0051***	0.0000***	0.0039***	0.0047***	0.0067***	0.0081***	0.0085***	0.0082***
	-10.5626	-9.9018	-9.3745	-7.5612	-6.6773	-6.2910	-4.5980	-3.6034	-3.1962	-4.1222	-5.8921	-6.6224	-6.4186	-5.6722
p^{-1}	13.9606***	14.3748***	14.3704***	13.9880***	11.9456***	11.3151***	5.1801	-0.0003	-8.2750**	0.0888	4.2232	4.5464	-3.9610	-7.1955
	-3.8134	-3.9037	-3.8864	-3.7309	-3.1569	-2.9830	-1.3481	-0.7540	-1.9797	-0.0226	-1.0748	-1.0690	-0.8660	-1.4440
$\mathcal{V}$	0.2118***	0.2035***	0.1998***	0.1778***	0.1777***	0.1663***	0.0977***	0.0000***	0.0322	-0.1044***	-0.2836***	-0.3796***	-0.3801***	-0.3685***
	-11.3650	-10.8524	-10.6123	-9.3171	-9.2263	-8.6140	-4.9931	-2.6893	-1.5138	-5.2088	-14.1787	-17.5337	-16.3232	-14.5244
c	-2.9377***	-3.0261***	-3.0238***	-2.9357***	-2.4896***	-2.3517***	-1.0161	0.0001	1.9067**	0.0858	-0.8199	-0.8948	0.9536	1.6574
	-3.6918	-3.7807	-3.7624	-3.6024	-3.0270	-2.8523	-1.2165	-0.8737	-2.0987	-0.1002	-0.9600	-0.9679	-0.9591	-1.5302
R^2	0.11	0.10	0.09	0.07	0.07	0.06	0.02	0.01	0.00	0.01	0.07	0.10	0.10	0.08
N	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*0.0087****	*0.0089****	*-0.0121*	*0.0000****	*0.0000****	*0.0001****	*0.0002****	*0.0003****	*0.0004****	*0.0004****	*0.0008****	*0.0012****	*0.0016****	*0.0022****
	-5.7596	-5.4817	-1.2993	-8.4156	-9.8412	-11.0467	-11.2533	-10.5605	-10.1986	-9.9537	-10.4236	-10.3556	-12.3992	-13.5819
p^{-1}	-6.6734	-7.6611	98.1004***	-0.0524***	-0.1264***	-0.3631***	-0.7469***	-1.1006***	-1.4336***	-1.7635***	-3.2008***	-4.2206***	-4.6862***	-5.1362***
	-1.2725	-1.3665	-3.0464	-9.5190	-10.7924	-11.7050	-12.4201	-11.9240	-11.6538	-11.7826	-11.5088	-10.4081	-10.4800	-9.0294
$\mathcal{V}$	-0.4002***	-0.4387***	0.0680	0.0000	0.0000	-0.0001	-0.0001	0.0000	0.0001	0.0009	0.0053***	0.0109***	0.0157***	0.0241***
	-14.9886	-15.3695	-0.4149	-0.6489	-0.7614	-0.6737	-0.4166	-0.0105	-0.1173	-1.2179	-3.7204	-5.2618	-6.9165	-8.3328
c	1.5425	1.7575	-21.3579***	0.0114***	0.0274***	0.0788***	0.1621***	0.2390***	0.3114***	0.3833***	0.6956***	0.9168***	1.0172***	1.1134***
	-1.3532	-1.4423	-3.0513	-9.5012	-10.7719	-11.6835	-12.4045	-11.9142	-11.6477	-11.7807	-11.5066	-10.4019	-10.4655	-9.0052
R^2	0.09	0.09	0.00	0.05	0.06	0.07	0.07	0.07	0.06	0.06	0.05	0.04	0.06	0.06
N	4,683	4,683	4,682	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0027***	0.0046***	0.0055***	0.0059***	0.0077***	0.0000***	0.0089***	0.0081***	0.0061***	0.0046***	0.0043***	0.0046***	0.0040***	0.0039**
	-14.5555	-17.7166	-18.6609	-19.0812	-18.4576	-15.8887	-14.8953	-12.0822	-6.8471	-4.1887	-3.4028	-3.4070	-2.7822	-2.5204
p^{-1}	-5.1337***	-4.7660***	-2.7313***	-2.0514*	4.0919***	0.0012***	17.5400***	9.1969***	5.0757*	4.8080	13.3420***	16.5697***	16.0906***	17.0915***
	-7.8450	-5.3275	-2.6919	-1.9286	-2.8462	-6.7758	-8.4786	-3.9763	-1.6518	-1.2567	-3.0557	-3.5409	-3.1982	-3.1943
$\mathcal{V}$	0.0278***	0.0499***	0.0500***	0.0612***	0.1298***	0.0000***	0.1954***	0.3320***	0.5111***	0.6070***	0.6073***	0.5959***	0.6273***	0.6658***
	-8.3521	-10.9549	-9.6753	-11.2952	-17.7406	-18.2474	-18.5488	-28.1954	-32.6731	-31.1662	-27.3202	-25.0133	-24.4900	-24.4410
c	1.1115***	1.0266***	0.5821***	0.4335*	-0.9039***	-0.0003***	-3.8252***	-2.0087***	-1.1059*	-1.0432	-2.8973***	-3.5996***	-3.4941***	-3.7120***
	-7.8145	-5.2794	-2.6397	-1.8751	-2.8927	-6.8092	-8.5069	-3.9955	-1.6558	-1.2544	-3.0528	-3.5389	-3.1951	-3.1917
R^2	0.07	0.10	0.11	0.12	0.21	0.23	0.25	0.31	0.32	0.29	0.26	0.23	0.22	0.22
N	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683	4,683

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of the volume weighted average market liquidity spreads for one year to maturity group ($\tilde{T}$ smaller than one year). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). Both realized spreads and adverse selection are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It is worth noting that worths note that all liquidity spreads are reported in basis point (*bps*), except for the quoted depth. The days to maturity, the inverse of price and quoted depth are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 4,683 daily observations in the one year group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.170: The First-order Spreads Autocorrelations Regression Results (One-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0026**	-0.0026**	-0.0036	-0.0387***	-0.0355***	-0.0387***	-0.0386***	-0.0385***	-0.0382***	-0.0379***	-0.0376***	-0.0374***	-0.0364***	-0.0357***
	-2.3592	-2.3592	-0.7756	-12.7641	-11.4946	-12.7585	-12.7423	-12.7017	-12.6049	-12.5124	-12.4345	-12.3541	-12.067	-11.8491
p^{-1}	-70.1854***	-70.1854***	82.4984***	-154.8487***	-163.4009***	-154.8589***	-154.8614***	-155.0458***	-155.5137***	-156.0623***	-156.6370***	-157.1838***	-159.4817***	-161.0923***
	-17.4719	-17.4719	-4.9539	-14.0884	-13.4941	-14.0894	-14.0903	-14.108	-14.1498	-14.212	-14.2741	-14.3306	-14.5756	-14.7561
$\mathcal{V}$	-0.0001	-0.0001	-1.1886***	-0.0339	-0.2187***	-0.0342	-0.0345	-0.0357	-0.0379	-0.0405	-0.0425	-0.045	-0.0555	-0.0625
	-0.0052	-0.0052	-13.9757	-0.6036	-3.2506	-0.6088	-0.6151	-0.6364	-0.6745	-0.7228	-0.7586	-0.8026	-0.994	-1.1205
c	16.2395***	16.2395***	-17.0454***	34.5804***	36.4297***	34.5826***	34.5829***	34.6225***	34.7231***	34.8412***	34.9652***	35.0832***	35.5799***	35.9277***
	-18.6018	-18.6018	-4.7098	-14.4769	-13.8442	-14.4779	-14.4787	-14.4962	-14.5375	-14.5996	-14.6616	-14.7179	-14.9627	-15.1432
R^2	0.11	0.11	0.05	0.12	0.15	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13
N	4,463.00	4,463.00	4,463.00	4,463.00	4,396.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	-0.0351***	-0.0342***	-0.0338***	-0.0318***	-0.0304***	-0.0292***	-0.0221***	-0.0170***	-0.0142***	-0.0125***	-0.0069***	-0.0063**	-0.0063**	-0.0068***
	-11.6547	-11.3783	-11.2192	-10.6223	-10.2376	-9.9423	-7.7809	-6.1118	-5.1725	-4.5744	-2.6382	-2.4665	-2.4504	-2.6763
p^{-1}	-162.1048***	-163.8731***	-164.8734***	-171.0510***	-171.9932***	-172.0878***	-177.4168***	-178.3222***	-175.0463***	-179.6011***	-182.9279***	-177.3756***	-176.9699***	-179.0573***
	-14.8654	-15.0264	-15.117	-15.7854	-15.982	-16.16	-17.2174	-17.7175	-17.5774	-18.1382	-19.314	-19.1542	-19.0417	-19.4791
$\mathcal{V}$	-0.0712	-0.0841	-0.0932*	-0.1062*	-0.1173**	-0.1156**	-0.1158**	-0.1646***	-0.2385***	-0.2031***	-0.2368***	-0.2429***	-0.2460***	-0.2578***
	-1.2777	-1.5107	-1.673	-1.9193	-2.1347	-2.126	-2.201	-3.2015	-4.6888	-4.0165	-4.8966	-5.1367	-5.184	-5.4923
c	36.1459***	36.5278***	36.7440***	38.0819***	38.2833***	38.3006***	39.4382***	39.6206***	38.9029***	39.8878***	40.5964***	39.3904***	39.3030***	39.7607***
	-15.2522	-15.4121	-15.5021	-16.1711	-16.3689	-16.5496	-17.6108	-18.1138	-17.9752	-18.536	-19.7229	-19.5728	-19.4591	-19.9032
R^2	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.16	0.16	0.18	0.18	0.18	0.19
N	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*-0.0075****	*-0.0076****	*-0.0027*	*0.0563****	*0.0325****	*0.0210****	*0.0292****	*0.0372****	*0.0397****	*0.0387****	*0.0329****	*0.0270****	*0.0258****	*0.0246****
	-2.9782	-3.0383	-0.489	-8.4331	-5.0466	-3.6091	-5.5326	-7.3347	-7.9681	-7.969	-7.0858	-5.9831	-5.7775	-5.6324
p^{-1}	-181.7420***	-179.5413***	-256.0091***	-457.0928***	-407.0610***	-328.8414***	-437.2204***	-481.2872***	-491.7714***	-511.1578***	-482.0244***	-452.7990***	-408.8984***	-369.4389***
	-19.783	-19.7373	-11.8264	-18.7385	-17.4799	-15.7617	-23.0343	-26.3723	-27.4109	-29.1325	-28.7342	-27.7543	-25.313	-23.337
$\mathcal{V}$	-0.2483***	-0.2555***	-0.8068***	-0.3122***	-0.1568	-0.4646***	-0.6309***	-0.6073***	-0.5909***	-0.5207***	-0.5161***	-0.4159***	-0.4444***	-0.4713***
	-5.2921	-5.5	-6.7066	-2.5932	-1.3333	-4.3629	-6.5008	-6.5087	-6.4425	-5.8057	-6.0198	-4.9888	-5.384	-5.8257
c	40.3484***	39.8725***	56.1943***	99.5414***	88.8506***	71.9688***	95.5500***	105.1190***	107.4112***	111.6428***	105.3929***	99.0864***	89.5592***	80.9982***
	-20.2095	-20.1692	-11.9458	-18.7813	-17.5577	-15.8727	-23.163	-26.5043	-27.5486	-29.2783	-28.909	-27.9467	-25.5111	-23.5434
R^2	0.19	0.19	0.12	0.16	0.12	0.13	0.23	0.28	0.29	0.31	0.3	0.28	0.25	0.23
N	4,463	4,463	4,396	4,263	4,355	4,404	4,422	4,427	4,430	4,438	4,444	4,446	4,448	4,448

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0248***	0.0226***	0.0199***	0.0169***	0.0070**	0.0029	0.0011	-0.0003	-0.0035	-0.0019	-0.0024	-0.0037	-0.0043*	-0.0044*
	-5.8017	-5.7019	-5.1652	-4.5018	-2.0468	-0.8972	-0.3571	-0.1049	-1.2901	-0.773	-0.97	-1.5299	-1.8453	-1.897
p^{-1}	-348.8619***	-311.5884***	-303.5307***	-293.8216***	-276.4831***	-256.7422***	-237.9894***	-231.0073***	-218.8738***	-204.1628***	-201.2437***	-199.8293***	-200.3313***	-197.1414***
	-22.5234	-21.662	-21.7346	-21.6111	-22.2517	-21.9255	-21.2681	-21.3097	-22.5465	-22.6264	-22.4914	-22.6516	-23.4748	-23.2258
$\mathcal{V}$	-0.4760***	-0.4253***	-0.3868***	-0.3534***	-0.2825***	-0.3374***	-0.3992***	-0.3573***	-0.3327***	-0.3434***	-0.3331***	-0.3456***	-0.3422***	-0.3421***
	-6.0136	-5.7868	-5.4219	-5.0895	-4.4521	-5.6418	-6.986	-6.4532	-6.7112	-7.4529	-7.2902	-7.6717	-7.8528	-7.8927
c	76.5310***	68.4537***	66.7203***	64.6271***	60.9115***	56.6395***	52.5723***	51.0568***	48.4306***	45.2238***	44.5889***	44.2874***	44.3994***	43.7066***
	-22.7357	-21.898	-21.9836	-21.8725	-22.5572	-22.2568	-21.6182	-21.6718	-22.956	-23.0621	-22.9305	-23.1	-23.9399	-23.6936
R^2	0.22	0.21	0.21	0.2	0.2	0.21	0.22	0.22	0.24	0.24	0.24	0.25	0.26	0.26
N	4,448	4,455	4,456	4,457	4,460	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the first-order autocorrelation of the volume weighted average spreads for the one year to maturity group ($\tilde{T}$ smaller than one year). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{F}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{F}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{F}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{F}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{F}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{F}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 4,683 daily observations in the one year group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.171: The Fifth-order Spreads Autocorrelations Regression Results (One-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0086***	-0.0086***	-0.0162***	-0.0103***	-0.0064*	-0.0102***	-0.0102***	-0.0100***	-0.0097***	-0.0093***	-0.0090***	-0.0088***	-0.0079**	-0.0072**
	-3.7853	-3.7853	-2.811	-3.0247	-1.8629	-3.0163	-3.0049	-2.958	-2.8558	-2.7479	-2.6675	-2.599	-2.3362	-2.1318
p^{-1}	-180.8162***	-180.8162***	85.8289***	-271.3746***	-287.6653***	-271.3525***	-271.3340***	-271.4316***	-271.7056***	-272.2478***	-272.5384***	-273.0097***	-275.1695***	-277.4387***
	-21.8466	-21.8466	-4.1184	-22.0823	-21.2302	-22.0814	-22.0859	-22.1037	-22.1326	-22.1943	-22.2197	-22.2463	-22.3986	-22.5382
$\mathcal{V}$	-0.0356	-0.0356	-1.2692***	0.0168	-0.1904**	0.0163	0.0156	0.0138	0.0108	0.0068	0.0028	-0.0016	-0.023	-0.0439
	-0.8417	-0.8417	-11.9254	-0.2673	-2.528	-0.2603	-0.2492	-0.2198	-0.1727	-0.1085	-0.0441	-0.0253	-0.3669	-0.6978
c	40.2625***	40.2625***	-17.7889***	59.6224***	63.1526***	59.6174***	59.6132***	59.6337***	59.6917***	59.8080***	59.8702***	59.9718***	60.4387***	60.9300***
	-22.384	-22.384	-3.9277	-22.3241	-21.4478	-22.3233	-22.3277	-22.3454	-22.3738	-22.435	-22.4601	-22.4863	-22.6374	-22.7758
R^2	0.18	0.18	0.04	0.17	0.2	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.18
N	4,463.00	4,463.00	4,463.00	4,463.00	4,396.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	-0.0066*	-0.0059*	-0.0055	-0.0039	-0.0025	-0.0015	0.0053	0.0085**	0.0103***	0.0102***	0.0116***	0.0100***	0.0100***	0.0084***
	-1.9363	-1.7308	-1.6117	-1.1476	-0.7212	-0.4264	-1.5716	-2.488	-3.0261	-2.9813	-3.4886	-3.0633	-3.0639	-2.5857
p^{-1}	-279.9623***	-283.9655***	-287.5862***	-300.8798***	-306.8804***	-309.6727***	-328.5280***	-329.1138***	-328.0930***	-330.4876***	-325.6433***	-312.4826***	-309.7126***	-309.6949***
	-22.6994	-22.9707	-23.2004	-24.1395	-24.5978	-24.9229	-26.6489	-26.6991	-26.5129	-26.6918	-27.0535	-26.3571	-26.1887	-26.3205
$\mathcal{V}$	-0.0572	-0.069	-0.0746	-0.1043	-0.1287**	-0.1449**	-0.1774***	-0.2636***	-0.3429***	-0.3072***	-0.3714***	-0.3861***	-0.3973***	-0.3994***
	-0.9089	-1.0929	-1.1782	-1.6388	-2.0199	-2.2837	-2.817	-4.188	-5.4265	-4.8587	-6.0412	-6.3773	-6.5792	-6.6462
c	61.4764***	62.3444***	63.1300***	66.0167***	67.3172***	67.9221***	72.0024***	72.1252***	71.9008***	72.4240***	71.3747***	68.5241***	67.9226***	67.9271***
	-22.9358	-23.2058	-23.4344	-24.3713	-24.8281	-25.1535	-26.8748	-26.9234	-26.7353	-26.9152	-27.2845	-26.5954	-26.4277	-26.5641
R^2	0.18	0.19	0.19	0.21	0.22	0.22	0.25	0.26	0.27	0.27	0.28	0.28	0.28	0.28
N	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*0.0073***	*0.0072***	*-0.0048*	*0.0098***	*0.0087***	*0.0174****	*0.0224****	*0.0263****	*0.0296****	*0.0336****	*0.0329****	*0.0270****	*0.0258****	*0.0246****
	-2.2565	-2.2454	-0.9995	-2.4865	-2.1574	-3.9123	-4.6657	-5.3618	-5.8912	-6.6784	-7.0858	-5.9831	-5.7775	-5.6324
p^{-1}	-310.5715***	-311.1289***	-304.9693***	-181.7282***	-192.1295***	-268.2439***	-359.2329***	-405.3913***	-435.9862***	-467.3092***	-482.0244***	-452.7990***	-408.8984***	-369.4389***
	-26.4712	-26.6855	-16.1562	-12.635	-13.1938	-16.8823	-20.8511	-22.9423	-24.1455	-25.7755	-28.7342	-27.7543	-25.313	-23.337
$\mathcal{V}$	-0.4101***	-0.4075***	-0.3804***	-0.1935***	-0.2312***	-0.3643***	-0.4805***	-0.5388***	-0.5942***	-0.5967***	-0.5161***	-0.4159***	-0.4444***	-0.4713***
	-6.844	-6.844	-3.6264	-2.7267	-3.1436	-4.4915	-5.4546	-5.964	-6.4375	-6.4384	-6.0198	-4.9888	-5.384	-5.8257
c	68.1238***	68.2467***	66.6598***	39.6239***	41.9158***	58.4918***	78.3281***	88.3915***	95.0680***	101.8856***	105.3929***	99.0864***	89.5592***	80.9982***
	-26.7178	-26.9344	-16.2507	-12.6794	-13.2459	-16.9389	-20.9199	-23.0178	-24.2264	-25.8587	-28.909	-27.9467	-25.5111	-23.5434
R^2	0.28	0.29	0.14	0.09	0.09	0.14	0.2	0.23	0.25	0.27	0.3	0.28	0.25	0.23
N	4,463	4,463	4,396	4,263	4,355	4,404	4,422	4,427	4,430	4,438	4,444	4,446	4,448	4,448

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0248***	0.0226***	0.0199***	0.0169***	0.0070**	0.0029	0.0011	-0.0003	-0.0035	-0.0019	-0.0024	-0.0037	-0.0043*	-0.0044*
	-5.8017	-5.7019	-5.1652	-4.5018	-2.0468	-0.8972	-0.3571	-0.1049	-1.2901	-0.773	-0.97	-1.5299	-1.8453	-1.897
p^{-1}	-348.8619***	-311.5884***	-303.5307***	-293.8216***	-276.4831***	-256.7422***	-237.9894***	-231.0073***	-218.8738***	-204.1628***	-201.2437***	-199.8293***	-200.3313***	-197.1414***
	-22.5234	-21.662	-21.7346	-21.6111	-22.2517	-21.9255	-21.2681	-21.3097	-22.5465	-22.6264	-22.4914	-22.6516	-23.4748	-23.2258
$\mathcal{V}$	-0.4760***	-0.4253***	-0.3868***	-0.3534***	-0.2825***	-0.3374***	-0.3992***	-0.3573***	-0.3327***	-0.3434***	-0.3331***	-0.3456***	-0.3422***	-0.3421***
	-6.0136	-5.7868	-5.4219	-5.0895	-4.4521	-5.6418	-6.986	-6.4532	-6.7112	-7.4529	-7.2902	-7.6717	-7.8528	-7.8927
c	76.5310***	68.4537***	66.7203***	64.6271***	60.9115***	56.6395***	52.5723***	51.0568***	48.4306***	45.2238***	44.5889***	44.2874***	44.3994***	43.7066***
	-22.7357	-21.898	-21.9836	-21.8725	-22.5572	-22.2568	-21.6182	-21.6718	-22.956	-23.0621	-22.9305	-23.1	-23.9399	-23.6936
R^2	0.22	0.21	0.21	0.2	0.2	0.21	0.22	0.22	0.24	0.24	0.24	0.25	0.26	0.26
N	4,448	4,455	4,456	4,457	4,460	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the fifth-order autocorrelation of the volume weighted average spreads for the one year to maturity group ($\tilde{T}$ smaller than one year). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average fifth-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{S}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{S}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{S}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{S}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{S}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{S}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 4,683 daily observations in the one year group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.172: The Tenth-order Spreads Autocorrelations Regression Results (One-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0127***	-0.0127***	-0.0218***	0.0393***	0.0420***	0.0393***	0.0393***	0.0394***	0.0397***	0.0398***	0.0399***	0.0400***	0.0400***	0.0400***
	-4.3747	-4.3747	-3.5767	-12.5901	-13.183	-12.5987	-12.6134	-12.6679	-12.7591	-12.8086	-12.8337	-12.8474	-12.8375	-12.8027
p^{-1}	-245.5184***	-245.5184***	83.9840***	-320.3390***	-346.2569***	-320.3124***	-320.3030***	-320.2291***	-320.1772***	-320.4137***	-320.2453***	-320.2532***	-320.4698***	-321.2804***
	-23.3134	-23.3134	-3.7931	-28.3284	-27.6767	-28.3289	-28.3508	-28.3886	-28.4046	-28.4299	-28.4072	-28.405	-28.3624	-28.3591
$\mathcal{V}$	-0.0454	-0.0454	-1.1765***	0.2266***	0.1456**	0.2264***	0.2258***	0.2238***	0.2207***	0.2177***	0.2129***	0.2073***	0.1845***	0.1595***
	-0.8441	-0.8441	-10.4046	-3.9246	-2.0942	-3.92	-3.9131	-3.8847	-3.8336	-3.7829	-3.6978	-3.6008	-3.1978	-2.7561
c	54.3033***	54.3033***	-17.4099***	69.9972***	75.6216***	69.9913***	69.9892***	69.9726***	69.9599***	70.0104***	69.9733***	69.9749***	70.0219***	70.1985***
	-23.7268	-23.7268	-3.6181	-28.4829	-27.8155	-28.4834	-28.5053	-28.5432	-28.5587	-28.5837	-28.5607	-28.5584	-28.5155	-28.512
R^2	0.2	0.2	0.03	0.22	0.25	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.23
N	4,463.00	4,463.00	4,463.00	4,463.00	4,396.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00	4,463.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	0.0401***	0.0403***	0.0402***	0.0405***	0.0413***	0.0416***	0.0442***	0.0430***	0.0428***	0.0396***	0.0361***	0.0328***	0.0314***	0.0295***
	-12.7996	-12.8528	-12.8051	-12.8032	-12.9856	-13.0064	-13.5308	-13.003	-12.8967	-11.8384	-11.0221	-10.1136	-9.7937	-9.2619
p^{-1}	-323.7429***	-325.8808***	-329.8516***	-342.8132***	-348.8294***	-350.8375***	-370.8722***	-379.3139***	-378.9506***	-380.5537***	-364.7289***	-346.9049***	-340.6824***	-338.5118***
	-28.5286	-28.7048	-28.9886	-29.8704	-30.2443	-30.2526	-31.3408	-31.6572	-31.497	-31.3585	-30.7528	-29.5148	-29.2867	-29.3445
$\mathcal{V}$	0.1486**	0.1307**	0.1300**	0.0865	0.0534	0.0203	-0.0834	-0.1609***	-0.2378***	-0.2112***	-0.2854***	-0.3147***	-0.3269***	-0.3339***
	-2.5638	-2.2538	-2.2378	-1.4754	-0.9068	-0.3423	-1.3799	-2.63	-3.8695	-3.4079	-4.712	-5.2426	-5.5026	-5.6686
c	70.7336***	71.1976***	72.0607***	74.8787***	76.1849***	76.6220***	80.9746***	82.8207***	82.7462***	83.1096***	79.6900***	75.8315***	74.4853***	74.0233***
	-28.6812	-28.857	-29.1406	-30.0215	-30.3942	-30.4019	-31.4866	-31.8056	-31.6465	-31.5125	-30.9178	-29.6872	-29.4634	-29.5265
R^2	0.23	0.24	0.24	0.26	0.27	0.27	0.3	0.31	0.32	0.31	0.32	0.31	0.3	0.31
N	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*0.0280****	*0.0273****	*-0.0013*	*0.0095****	*0.0109****	*0.0159****	*0.0215****	*0.0270****	*0.0300****	*0.0328****	*0.0526****	*0.0591****	*0.0643****	*0.0714****
	-8.833	-8.6545	-0.2988	-3.6825	-3.9881	-4.8321	-5.5123	-6.4739	-6.9161	-7.4727	-11.699	-12.9443	-13.9659	-15.4652
p^{-1}	-337.6398***	-337.2637***	-246.7233***	-80.8927***	-96.7773***	-169.2116***	-249.4263***	-293.4931***	-327.2816***	-358.5334***	-438.4039***	-471.6659***	-489.3488***	-499.1320***
	-29.3539	-29.4678	-15.0003	-8.5444	-9.8196	-14.3485	-17.756	-19.5414	-20.9646	-22.645	-27.0267	-28.6184	-29.3806	-29.8857
$\mathcal{V}$	-0.3479***	-0.3470***	-0.124	-0.0054	-0.0031	-0.1482**	-0.2876***	-0.3443***	-0.3911***	-0.4042***	-0.4258***	-0.3811***	-0.2914***	-0.2449***
	-5.9219	-5.9365	-1.3568	-0.1164	-0.0615	-2.4614	-4.0044	-4.4838	-4.901	-4.995	-5.1368	-4.5245	-3.4234	-2.8698
c	73.8411***	73.7633***	53.9089***	17.6262***	21.0875***	36.8661***	54.3506***	63.9492***	71.3198***	78.1286***	95.4923***	102.7327***	106.5701***	108.6861***
	-29.5393	-29.6557	-15.0826	-8.5688	-9.8463	-14.3844	-17.8032	-19.5922	-21.0216	-22.7062	-27.0881	-28.6821	-29.4421	-29.9442
R^2	0.31	0.31	0.11	0.03	0.04	0.09	0.15	0.17	0.19	0.21	0.28	0.29	0.29	0.3
N	4,463	4,463	4,396	4,263	4,355	4,404	4,422	4,427	4,430	4,438	4,444	4,446	4,448	4,448

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0746***	0.0787***	0.0792***	0.0762***	0.0642***	0.0550***	0.0515***	0.0464***	0.0345***	0.0301***	0.0283***	0.0255***	0.0229***	0.0227***
	-16.1494	-17.1803	-17.5693	-17.0258	-15.0271	-13.2008	-12.7053	-11.8006	-9.6667	-8.7292	-8.3599	-7.6431	-6.9367	-6.9066
p^{-1}	-509.5637***	-520.7832***	-511.6858***	-505.9623***	-492.6207***	-475.1195***	-454.2505***	-437.7608***	-394.6860***	-367.4387***	-358.6655***	-353.4852***	-350.5344***	-349.6021***
	-30.4837	-31.3812	-31.3284	-31.1947	-31.8314	-31.4845	-30.9377	-30.6979	-30.5299	-29.4319	-29.2268	-29.2783	-29.2746	-29.3839
$\mathcal{V}$	-0.1810**	-0.0597	-0.1045	-0.1282	-0.1745**	-0.2090***	-0.2745***	-0.2547***	-0.2906***	-0.3140***	-0.3223***	-0.3296***	-0.3450***	-0.3412***
	-2.1186	-0.7043	-1.2523	-1.5472	-2.2074	-2.7117	-3.6607	-3.4969	-4.4016	-4.9254	-5.1425	-5.345	-5.6412	-5.6155
c	110.9497***	113.3958***	111.4276***	110.2041***	107.3828***	103.6236***	99.1036***	95.5396***	86.2268***	80.3213***	78.4206***	77.3073***	76.6783***	76.4764***
	-30.5412	-31.4413	-31.392	-31.2645	-31.9278	-31.5968	-31.058	-30.8281	-30.6907	-29.6043	-29.4044	-29.4637	-29.4662	-29.5769
R^2	0.3	0.3	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.3	0.3	0.3	0.3	0.31
N	4,448	4,455	4,456	4,457	4,460	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the tenth-order autocorrelation of the volume weighted average spreads for the one year to maturity group ($\tilde{T}$ smaller than one year). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average tenth-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{S}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{S}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{S}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{S}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{S}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{S}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 4,683 daily observations in the one year group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.173: Market Activities and Price Error Regression Results (Three-year Tenor)

	Quote Number	**Trade Number**	**Quote to Trade Ratio**	**Price Error** Lag 1	Lag 2	Lag 3	Lag 4	Lag 5
$\tilde{T}$	0.5335***	0.1374***	0.3961***	0.0202	0.0594	0.0880**	0.0665*	-0.0402
	-43.3116	-10.9701	-46.698	-1.58	-1.5002	-2.2266	-1.6857	-1.1625
p^{-1}	-818.0621***	-1,481.2194***	663.1669***	-598.8344***	-838.9086***	-783.3206***	-690.7769***	-424.2153***
	-30.4332	-54.1829	-35.8303	-21.445	-9.7138	-9.0932	-8.0364	-5.6316
$\mathcal{V}$	4.4874***	6.9939***	-2.5066***	-7.1945***	-10.1482***	-10.1285***	-10.6290***	-10.7201***
	-27.224	-41.7216	-22.0862	-41.9805	-19.1293	-19.1376	-20.1132	-23.1443
c	187.6611***	330.2485***	-142.5894***	137.5431***	190.1980***	177.8455***	157.8129***	100.2863***
	-32.2366	-55.7824	-35.5737	-22.7442	-10.1692	-9.533	-8.4776	-6.1474
R^2	0.15	0.17	0.27	0.27	0.07	0.07	0.07	0.08
N	15,009	15,009	15,009	14,941	14,830	14,799	14,813	14,808

Panel B: Quotes Price Autocorrelations (Ω^P)

	First-order Ask	Bid	Mid	**Fifth-order** Ask	Bid	Mid	**Tenth-order** Ask	Bid	Mid
$\tilde{T}$	-0.0029***	-0.0032***	-0.0024***	-0.0091***	-0.0095***	-0.0091***	-0.0123***	-0.0132***	-0.0130***
	-4.6226	-5.0472	-4.1844	-6.4455	-6.5961	-6.5313	-6.642	-6.995	-7.0478
p^{-1}	-24.7031***	-22.4116***	-22.8794***	-63.8045***	-56.8451***	-59.1752***	-88.3637***	-78.6095***	-82.1678***
	-17.6317	-16.1604	-17.9459	-20.4918	-17.8975	-19.2463	-21.806	-18.9712	-20.3332
$\mathcal{V}$	0.1740***	0.1444***	0.1410***	0.5043***	0.4433***	0.4516***	0.7197***	0.6383***	0.6579***
	-19.9739	-16.7435	-17.7929	-26.0519	-22.4497	-23.6275	-28.5666	-24.7773	-26.1865
c	6.3702***	5.8748***	5.9738***	14.8711***	13.3619***	13.8689***	20.2023***	18.0889***	18.8643***
	-20.9976	-19.5637	-21.6396	-22.0571	-19.4288	-20.8318	-23.0239	-20.1609	-21.5586
R^2	0.04	0.03	0.03	0.05	0.04	0.05	0.06	0.05	0.06
N	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of market activities indicators and price discovery factors for the three year to maturity group ($\tilde{T}$ smaller than three year). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y} = \boldsymbol{c} + \tilde{\boldsymbol{T}} + \boldsymbol{p^{-1}} + \boldsymbol{\mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables includes the number of quotes and trades (n^q and n), the quotes to trades ratio qtr, the pricing errors ($\mathcal{E}$) measured by the lag one to lag five vector autoregression models, and the first-order, fifth-order, and tenth-order autocorrelations of the volume weighted average bid, ask, and mid-quote price at tick-by-tick level. It is worth noting that trades number, quotes number, pricing errors, the inverse of price, the days to maturity and the quotes to trades ratio take the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 15,009 daily observations in the three years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.174: Mid-quote Return Autocorrelation Regression Results (Three-year Tenor)

		Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
First-Order	$\tilde{T}$	0.0188***	0.1064***	0.0837***	0.0598***	0.0679***	0.0758***	0.0781***	0.0817***	0.0777***	0.0710***	0.0659***	0.0610***	0.0580***
		-20.8223	-29.2664	-29.3966	-23.8552	-28.6346	-32.6967	-34.4466	-36.369	-36.1462	-34.6863	-33.5668	-32.4032	-31.6402
	p^{-1}	-25.9091***	-388.8722***	-343.2449***	-313.7965***	-370.5322***	-391.7489***	-390.2503***	-401.6722***	-387.2119***	-363.2549***	-343.7504***	-314.8871***	-299.3174***
		-13.0694	-43.4847	-52.2432	-56.3883	-71.2143	-77.2229	-78.7123	-81.496	-82.1071	-80.9529	-79.7792	-76.3101	-74.4868
	$\mathcal{V}$	-0.1340***	0.0579	0.1498***	0.0986***	-0.0924***	-0.1304***	-0.1714***	-0.1715***	-0.0918***	-0.0054	0.0648**	0.1079***	0.1347***
		-10.8763	-1.156	-3.8583	-2.8738	-2.8568	-4.1299	-5.5555	-5.5894	-3.1275	-0.1946	-2.4168	-4.2009	-5.3847
	c	5.5156***	84.3946***	74.7357***	68.5446***	80.8953***	85.4921***	85.1827***	87.6598***	84.5923***	79.4431***	75.2411***	69.0045***	65.6428***
		-12.849	-43.5762	-52.5263	-56.881	-71.8025	-77.8298	-79.348	-82.1373	-82.8399	-81.7624	-80.6449	-77.2292	-75.4418
	R^2	0.05	0.19	0.23	0.25	0.37	0.41	0.42	0.43	0.43	0.41	0.39	0.37	0.35
	N	14,482	12,436	13,430	14,014	14,172	14,241	14,260	14,300	14,346	14,354	14,369	14,380	14,385
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0497***	0.0457***	0.0427***	0.0301***	0.0214***	0.0164***	0.0124***	0.0045***	0.0020**	0.001	0.0006	0.0004	0.0001
		-29.1497	-27.214	-25.7631	-19.2396	-15.1136	-12.6619	-10.3538	-4.7002	-2.3689	-1.2745	-0.8686	-0.5414	-0.1364
	p^{-1}	-255.4320***	-242.0843***	-232.0742***	-194.8093***	-165.1548***	-141.4492***	-116.8220***	-64.2870***	-46.1502***	-40.6113***	-36.1346***	-34.8615***	-32.1098***
		-68.2298	-65.6362	-63.8624	-56.6535	-53.1599	-49.6852	-44.249	-30.5177	-25.1949	-23.6402	-22.6239	-22.7451	-21.6991
	$\mathcal{V}$	0.1800***	0.1969***	0.2046***	0.2770***	0.3320***	0.3262***	0.3220***	0.2525***	0.2130***	0.2012***	0.1840***	0.1796***	0.1698***
		-7.7254	-8.5794	-9.0521	-12.957	-17.1896	-18.4302	-19.6178	-19.2793	-18.7083	-18.8422	-18.5263	-18.8445	-18.4609
	c	56.1626***	53.2876***	51.1313***	43.1084***	36.7172***	31.5988***	26.2732***	14.9143***	10.9923***	9.7971***	8.8286***	8.5549***	7.9596***
		-69.2822	-66.7235	-64.9803	-57.8969	-54.5808	-51.2595	-45.9588	-32.697	-27.7145	-26.3378	-25.5277	-25.7771	-24.8412
	R^2	0.3	0.28	0.27	0.21	0.18	0.16	0.13	0.06	0.05	0.04	0.04	0.04	0.04
	N	14,402	14,411	14,418	14,460	14,475	14,478	14,480	14,482	14,482	14,482	14,482	14,482	14,482
Fifth-Order		*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
	$\tilde{T}$	0.0042***	0.0326***	0.0285***	0.0326***	0.0411***	0.0502***	0.0571***	0.0637***	0.0830***	0.0896***	0.0926***	0.0946***	0.0955***
		-9.6063	-15.7917	-14.266	-14.8492	-17.2391	-20.558	-23.1681	-26.1085	-33.7816	-35.9136	-36.9624	-37.6627	-38.1777
	p^{-1}	-3.6902***	-139.7355***	-159.5487***	-216.1785***	-279.8141***	-324.6092***	-355.7569***	-382.2142***	-442.1195***	-459.5626***	-465.5444***	-469.5809***	-469.7367***
		-3.8524	-27.5175	-34.6026	-44.362	-53.4681	-60.6943	-65.9478	-71.3877	-82.0347	-84.0429	-84.684	-85.2788	-85.6549
	$\mathcal{V}$	0.003	-0.0355	-0.0334	-0.0904***	-0.1507***	-0.1509***	-0.1696***	-0.1795***	-0.1274***	-0.0633*	-0.0193	0.044	0.0819**
		-0.5087	-1.2476	-1.2246	-3.009	-4.6317	-4.5336	-5.0498	-5.3848	-3.799	-1.8596	-0.5641	-1.2835	-2.4007
	c	0.7777***	30.3703***	34.7421***	47.1128***	60.9822***	70.7210***	77.5007***	83.2477***	96.2669***	100.0654***	101.3717***	102.2649***	102.3089***
		-3.7494	-27.6159	-34.7932	-44.6467	-53.815	-61.0685	-66.3495	-71.8066	-82.4919	-84.5117	-85.1593	-85.7696	-86.1566
	R^2	0.01	0.09	0.13	0.19	0.26	0.31	0.34	0.38	0.43	0.43	0.43	0.43	0.43
	N	14,482	12,436	13,430	14,014	14,172	14,241	14,260	14,300	14,346	14,354	14,369	14,380	14,385
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0952***	0.0934***	0.0907***	0.0747***	0.0590***	0.0479***	0.0367***	0.0174***	0.0094***	0.0065***	0.0040**	0.0027*	0.0017
		-38.7254	-38.4036	-37.5282	-32.2479	-26.3986	-22.2741	-17.6981	-9.3259	-5.347	-3.8829	-2.4939	-1.7058	-1.1176
	p^{-1}	-460.9389***	-454.5084***	-449.8805***	-421.8094***	-382.8223***	-348.3959***	-301.9745***	-180.6852***	-132.0329***	-114.6846***	-102.0770***	-96.4731***	-89.8637***
		-85.4411	-85.1621	-84.7764	-82.8543	-77.9398	-73.7124	-66.211	-44.1117	-34.3447	-31.0589	-28.792	-27.8434	-26.5783
	$\mathcal{V}$	0.1869***	0.2090***	0.2308***	0.4169***	0.5855***	0.6789***	0.7411***	0.7011***	0.6235***	0.5953***	0.5594***	0.5479***	0.5275***
		-5.5668	-6.2935	-6.9926	-13.1679	-19.1725	-23.1033	-26.1367	-27.5325	-26.0868	-25.9352	-25.3786	-25.4347	-25.0935
	c	100.4333***	99.0576***	98.0732***	92.0832***	83.7067***	76.2957***	66.2801***	40.0662***	29.5539***	25.8087***	23.0893***	21.8834***	20.4559***
		-85.9757	-85.7172	-85.3502	-83.5324	-78.7045	-74.5495	-67.1151	-45.1738	-35.5034	-32.2794	-30.0768	-29.1682	-27.9409
	R^2	0.41	0.41	0.41	0.38	0.33	0.3	0.25	0.12	0.08	0.07	0.06	0.06	0.06
	N	14,402	14,411	14,418	14,460	14,475	14,478	14,480	14,482	14,482	14,482	14,482	14,482	14,482
Tenth-Order		*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
	$\tilde{T}$	0.0014***	0.0155***	0.0145***	0.0181***	0.0238***	0.0304***	0.0352***	0.0397***	0.0588***	0.0675***	0.0728***	0.0790***	0.0832***
		-3.8679	-11.1542	-10.3685	-10.7335	-11.9673	-14.1904	-15.7781	-17.699	-25.5054	-28.4819	-30.1893	-32.1364	-33.5284
	p^{-1}	-0.7069	-73.5213***	-88.0697***	-135.3984***	-190.2951***	-229.3557***	-261.5976***	-287.9772***	-363.0818***	-394.2451***	-410.4533***	-427.2363***	-438.3799***
		-0.906	-21.519	-27.3079	-36.2381	-43.526	-48.8792	-53.6203	-58.5152	-71.8724	-75.8543	-77.6382	-79.2812	-80.6014
	$\mathcal{V}$	0.0089*	-0.0069	-0.0106	-0.0719***	-0.1269***	-0.1339***	-0.1420***	-0.1438***	-0.0978***	-0.0362	0.0088	0.0626*	0.1075***
		-1.8341	-0.361	-0.5555	-3.1205	-4.6681	-4.5839	-4.6751	-4.6911	-3.1102	-1.1179	-0.2681	-1.8676	-3.176
	c	0.1455	15.9846***	19.1743***	29.5066***	41.4825***	49.9848***	57.0101***	62.7514***	79.0807***	85.8556***	89.3768***	93.0220***	95.4391***
		-0.8614	-21.603	-27.454	-36.4691	-43.8189	-49.1966	-53.9674	-58.8857	-72.2944	-76.2886	-78.075	-79.7194	-81.0393
	R^2	0	0.06	0.08	0.14	0.2	0.23	0.26	0.29	0.37	0.39	0.39	0.39	0.4
	N	14,482	12,436	13,430	14,014	14,172	14,241	14,260	14,300	14,346	14,354	14,369	14,380	14,385
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0922***	0.0936***	0.0933***	0.0856***	0.0720***	0.0615***	0.0501***	0.0270***	0.0176***	0.0126***	0.0086***	0.0064***	0.0045**
		-36.3887	-36.906	-36.7391	-33.923	-29.0748	-25.2983	-21.1198	-12.1616	-8.115	-6.0024	-4.1777	-3.1755	-2.2775
	p^{-1}	-460.5091***	-464.3553***	-466.4225***	-471.5178***	-454.4381***	-429.9834***	-390.5192***	-254.6419***	-190.4397***	-164.2577***	-147.9185***	-137.6891***	-128.1264***
		-82.8047	-83.4184	-83.6683	-85.034	-83.5709	-80.5671	-74.9431	-52.1654	-40.0708	-35.6302	-32.6414	-30.9212	-29.1953
	$\mathcal{V}$	0.2022***	0.2206***	0.2416***	0.4351***	0.6522***	0.7882***	0.9140***	0.9679***	0.8865***	0.8550***	0.8192***	0.7983***	0.7728***
		-5.8438	-6.3694	-6.9663	-12.6183	-19.2918	-23.7565	-28.2144	-31.8935	-30.0038	-29.8324	-29.0791	-28.8366	-28.3261
	c	100.2451***	101.0893***	101.5495***	102.7322***	99.1107***	93.8661***	85.3680***	56.0231***	42.1488***	36.5011***	32.9823***	30.7783***	28.7160***
		-83.2444	-83.8672	-84.127	-85.5613	-84.1741	-81.2254	-75.6591	-53.0026	-40.9575	-36.5659	-33.6128	-31.9212	-30.2187
	R^2	0.4	0.4	0.4	0.39	0.37	0.34	0.3	0.16	0.11	0.09	0.08	0.07	0.07
	N	14,402	14,411	14,418	14,460	14,475	14,478	14,480	14,482	14,482	14,482	14,482	14,482	14,482

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of the volume weighted average mid-quote return autocorrelations for the three years to maturity group ($\tilde{T}$ smaller than three years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the first-order, fifth-order, and tenth-order mid-quote return autocorrelations at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It is worth noting that the inverse of price and the days to maturity take the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 15,009 daily observations in the three years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.175: Market Liquidity Spreads Regression Results (Three-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
									Realized Spread					
$\tilde{T}$	-10.9107**	-5.4553**	0.1741***	-0.0387***	-0.3777***	-0.0387***	-0.0387***	-0.0389***	-0.0391***	-0.0392***	-0.0394***	-0.0396***	-0.0403***	-0.0409***
	-2.3907	-2.3907	-4.0363	-3.0846	-14.0269	-3.0860	-3.0895	-3.0996	-3.1157	-3.1308	-3.1454	-3.1590	-3.2197	-3.2710
p^{-1}	187,930.4732***	93,965.5251***	-3,248.9443***	467.8073***	-400.4554***	467.8614***	467.9602***	468.2561***	468.6763***	469.1441***	469.4759***	469.7853***	470.5478***	470.3880***
	-18.8714	-18.8714	-34.5120	-17.1019	-6.8160	-17.1040	-17.1077	-17.1186	-17.1348	-17.1525	-17.1669	-17.1792	-17.2240	-17.2553
$\mathcal{V}$	590.5155***	295.2569***	12.2569***	1.9322***	-1.6165***	1.9322***	1.9322***	1.9321***	1.9321***	1.9314***	1.9310***	1.9302***	1.9248***	1.9149***
	-9.6703	-9.6702	-21.2329	-11.5193	-4.4871	-11.5196	-11.5195	-11.5192	-11.5196	-11.5156	-11.5151	-11.5105	-11.4899	-11.4552
c	-40,688.6506***	-20,344.3880***	722.1660***	-101.5179***	90.4146***	-101.5296***	-101.5509***	-101.6149***	-101.7056***	-101.8068***	-101.8785***	-101.9454***	-102.1094***	-102.0729***
	-18.8666	-18.8666	-35.4224	-17.1370	-7.1061	-17.1391	-17.1427	-17.1536	-17.1698	-17.1874	-17.2018	-17.2141	-17.2588	-17.2898
R^2	0.07	0.07	0.08	0.07	0.04	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
N	15,009	15,009	15,009	15,009	15,003	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009

	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
							Realized Spread							
$\tilde{T}$	-0.0413***	-0.0419***	-0.0424***	-0.0438***	-0.0442***	-0.0445***	-0.0441***	-0.0000***	-0.0401***	-0.0373***	-0.0305***	-0.0275***	-0.0251***	-0.0253***
	-3.3139	-3.3851	-3.4406	-3.6188	-3.6905	-3.7429	-3.9124	-3.9486	-3.9771	-3.8511	-3.5908	-3.3417	-3.0637	-3.1319
p^{-1}	469.7173***	468.2502***	466.9131***	458.8519***	453.5002***	449.9140***	420.3376***	0.0386***	352.0744***	322.0597***	237.9224***	213.6889***	232.3512***	212.6520***
	-17.2837	-17.3294	-17.3623	-17.3728	-17.3357	-17.3266	-17.0943	-16.6066	-16.0191	-15.2197	-12.8167	-11.9162	-13.0228	-12.0638
$\mathcal{V}$	1.9020***	1.8767***	1.8558***	1.7878***	1.7587***	1.7357***	1.5637***	0.0001***	1.3038***	1.1674***	0.7927***	0.6044***	0.0140	0.1933*
	-11.4133	-11.3264	-11.2542	-11.0388	-10.9638	-10.9007	-10.3703	-9.7806	-9.6741	-8.9969	-6.9636	-5.4963	-0.1277	-1.7882
c	-101.9255***	-101.6037***	-101.3108***	-99.5517***	-98.3863***	-97.6053***	-91.1756***	-0.0084***	-76.3443***	-69.8255***	-51.5401***	-46.2753***	-50.3148***	-46.0387***
	-17.3180	-17.3631	-17.3956	-17.4044	-17.3665	-17.3569	-17.1216	-16.6306	-16.0396	-15.2370	-12.8204	-11.9156	-13.0217	-12.0601
R^2	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.05	0.05	0.03	0.03	0.02	0.02
N	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009

	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
	Realized Spread							*Adverse Selection*						
$\tilde{T}$	*-0.0244****	*-0.0246****	*0.0221****	*0.0000****	*0.0001****	*0.0002****	*0.0004****	*0.0006****	*0.0008****	*0.0009****	*0.0016****	*0.0022****	*0.0026****	*0.0033****
	-3.1305	-3.2552	-3.3445	-14.2615	-18.5915	-23.9830	-27.8041	-19.4042	-21.3467	-21.4831	-17.9562	-16.2332	-13.9987	-11.2304
p^{-1}	206.9608***	206.0528***	30.4947**	-0.0568***	-0.1456***	-0.4306***	-0.8682***	-1.3364***	-1.6710***	-1.9754***	-2.7228***	-2.5667***	-1.8995***	-0.4372
	-12.1505	-12.5032	-2.1179	-17.8668	-21.0682	-25.7422	-28.5655	-20.6634	-21.6605	-21.0476	-13.6604	-8.7132	-4.6765	-0.6920
$\mathcal{V}$	0.0880	0.0653	-0.0318	0.0000	0.0000	0.0000	0.0001	0.0008**	0.0012**	0.0021***	0.0074***	0.0173***	0.0301***	0.0555***
	-0.8423	-0.6461	-0.3605	-0.1483	-0.1680	-0.0505	-0.5195	-2.1221	-2.5624	-3.5841	-6.0223	-9.5715	-12.0996	-14.3245
c	-44.7991***	-44.6007***	-6.7982**	0.0123***	0.0315***	0.0930***	0.1876***	0.2889***	0.3612***	0.4269***	0.5877***	0.5520***	0.4054***	0.0846
	-12.1447	-12.4968	-2.1802	-17.8500	-21.0302	-25.6863	-28.5015	-20.6249	-21.6170	-21.0046	-13.6141	-8.6535	-4.6085	-0.6184
R^2	0.02	0.02	0.00	0.03	0.05	0.07	0.09	0.04	0.05	0.05	0.03	0.02	0.03	0.04
N	15,009	15,009	15,003	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009

	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
							Adverse Selection							
$\tilde{T}$	0.0037***	0.0051***	0.0056***	0.0059***	0.0054***	0.0000	0.0014	-0.0013	-0.0081	-0.0112	-0.0136*	-0.0134	-0.0142*	-0.0141*
	-9.9386	-7.3362	-6.5369	-6.0843	-2.9713	-1.2614	-0.4007	-0.3115	-1.2446	-1.4988	-1.6844	-1.6362	-1.7005	-1.6577
p^{-1}	0.8998	8.9579***	14.3113***	17.9099***	47.4871***	0.0082***	115.7488***	145.7558***	229.9052***	254.1258***	235.4553***	255.1473***	260.8646***	261.7939***
	-1.0972	-5.8659	-7.6922	-8.5061	-11.9345	-13.9797	-15.3221	-15.7216	-16.1576	-15.5863	-13.3529	-14.3200	-14.2932	-14.1249
$\mathcal{V}$	0.0763***	0.1444***	0.1734***	0.1964***	0.3685***	0.0001***	0.6283***	0.7648***	1.1392***	1.3274***	1.9178***	1.7385***	1.8435***	1.8663***
	-15.1678	-15.4169	-15.2029	-15.2149	-15.1027	-14.9854	-13.5636	-13.4523	-13.0566	-13.2771	-17.7364	-15.9122	-16.4728	-16.4210
c	-0.2083	-1.9667***	-3.1324***	-3.9161***	-10.3460***	-0.0018***	-25.1770***	-31.6941***	-49.9822***	-55.2442***	-51.2029***	-55.4774***	-56.7227***	-56.9257***
	-1.1729	-5.9466	-7.7745	-8.5883	-12.0065	-14.0479	-15.3893	-15.7857	-16.2202	-15.6457	-13.4083	-14.3775	-14.3511	-14.1824
R^2	0.04	0.05	0.06	0.06	0.07	0.08	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08
N	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009	15,009

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of the volume weighted average market liquidity spreads for three years to maturity group ($\tilde{T}$ smaller than three years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y} = \boldsymbol{c} + \tilde{\boldsymbol{T}} + \boldsymbol{p^{-1}} + \boldsymbol{\mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average bid-ask spreads ($\tilde{\mathscr{S}}^Q$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^D$), effective half-spreads ($\tilde{\mathscr{S}}^E$), realized spreads ($\tilde{\mathscr{S}}^R$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). Both realized spreads and adverse selection are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It is worth noting that worths note that all liquidity spreads are reported in basis point (*bps*), except for the quoted depth. The days to maturity, the inverse of price and quoted depth are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 15,009 daily observations in the three years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.176: The First-order Spreads Autocorrelations Regression Results (Three-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0086***	-0.0086***	-0.0170***	0.0072***	0.0113***	0.0072***	0.0072***	0.0071***	0.0072***	0.0073***	0.0073***	0.0074***	0.0076***	0.0077***
	-8.0061	-8.0061	-6.0768	-4.1485	-6.3858	-4.1454	-4.1441	-4.1181	-4.1844	-4.2096	-4.2616	-4.311	-4.4209	-4.5057
p^{-1}	-138.7087***	-138.7087***	-2.5013	-114.6853***	-125.9893***	-114.6416***	-114.5959***	-114.6033***	-114.9550***	-115.1711***	-115.4995***	-115.8443***	-118.1239***	-119.7985***
	-58.8389	-58.8389	-0.4068	-30.25	-32.4273	-30.2416	-30.2333	-30.2379	-30.3419	-30.4209	-30.5336	-30.639	-31.2398	-31.7715
$\mathcal{V}$	0.2686***	0.2686***	-0.8489***	0.2082***	0.1754***	0.2077***	0.2070***	0.2060***	0.2040***	0.2023***	0.2003***	0.1994***	0.1925***	0.1870***
	-18.3263	-18.3263	-22.2101	-8.8315	-7.1442	-8.8118	-8.7852	-8.7435	-8.6601	-8.5953	-8.5188	-8.4833	-8.1911	-7.9778
c	31.1579***	31.1579***	1.4889	25.6161***	28.0522***	25.6066***	25.5967***	25.5986***	25.6747***	25.7218***	25.7931***	25.8679***	26.3641***	26.7288***
	-61.0389	-61.0389	-1.1184	-31.2038	-33.3469	-31.1956	-31.1873	-31.1924	-31.2967	-31.3767	-31.4905	-31.5965	-32.2004	-32.7373
R^2	0.27	0.27	0.06	0.07	0.09	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08
N	14,482.00	14,482.00	14,482.00	14,482.00	14,353.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	0.0078***	0.0082***	0.0086***	0.0096***	0.0102***	0.0109***	0.0160***	0.0195***	0.0210***	0.0220***	0.0252***	0.0260***	0.0267***	0.0270***
	-4.5295	-4.7819	-4.9937	-5.6039	-5.9344	-6.3892	-9.7747	-12.197	-13.4446	-14.416	-17.2351	-18.2912	-18.9636	-19.199
p^{-1}	-120.3835***	-121.6900***	-122.6942***	-128.4034***	-131.1480***	-132.7955***	-145.2430***	-153.7575***	-157.5811***	-162.8137***	-172.6836***	-175.9392***	-176.1676***	-179.2196***
	-31.9574	-32.3719	-32.6076	-33.9935	-34.7941	-35.5549	-40.3748	-43.8873	-45.8998	-48.4774	-53.7369	-56.3685	-56.9935	-58.0251
$\mathcal{V}$	0.1792***	0.1688***	0.1599***	0.1437***	0.1376***	0.1422***	0.1641***	0.1448***	0.1228***	0.1181***	0.0532***	0.027	0.0081	0.0018
	-7.6512	-7.2247	-6.8364	-6.1188	-5.8726	-6.1244	-7.3394	-6.6487	-5.7539	-5.6583	-2.6629	-1.3923	-0.4197	-0.0943
c	26.8568***	27.1402***	27.3577***	28.5983***	29.1954***	29.5528***	32.2475***	34.0914***	34.9209***	36.0587***	38.2034***	38.9130***	38.9612***	39.6246***
	-32.9257	-33.3429	-33.5777	-34.9653	-35.7714	-36.5419	-41.3988	-44.9391	-46.9753	-49.5833	-54.9036	-57.5766	-58.2115	-59.2478
R^2	0.08	0.09	0.09	0.1	0.1	0.11	0.13	0.15	0.17	0.18	0.23	0.25	0.26	0.27
N	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*0.0272****	*0.0268****	*0.0251****	*0.1082****	*0.0783****	*0.0601****	*0.0750****	*0.0822****	*0.0854****	*0.0874****	*0.0826****	*0.0758****	*0.0715****	*0.0671****
	-19.3667	-19.2989	-8.8707	-29.5813	-22.2243	-18.9515	-26.3995	-30.1478	-31.6658	-33.0371	-31.3667	-29.3313	-28.1817	-26.9627
p^{-1}	-180.3806***	-180.6855***	-296.4132***	-402.3463***	-355.0590***	-321.6826***	-389.4830***	-409.0089***	-412.8258***	-421.8577***	-410.0689***	-385.3260***	-366.5491***	-340.7572***
	-58.5676	-59.1849	-47.5652	-46.608	-44.8058	-45.9171	-62.267	-68.2758	-69.6515	-72.6087	-70.9029	-67.9043	-65.7497	-62.2859
$\mathcal{V}$	-0.0028	-0.0019	0.0331	-0.0514	-0.0152	-0.1591***	-0.3007***	-0.3293***	-0.3600***	-0.3395***	-0.2834***	-0.2224***	-0.1790***	-0.1776***
	-0.1449	-0.098	-0.8418	-1.0118	-0.3145	-3.665	-7.7282	-8.8364	-9.7674	-9.3909	-7.8784	-6.3031	-5.1608	-5.2198
c	39.8775***	39.9470***	64.8081***	87.3675***	77.3107***	70.2083***	84.9305***	89.1682***	90.0091***	91.9770***	89.4922***	84.1676***	80.1165***	74.5414***
	-59.7962	-60.4295	-48.0323	-46.7275	-45.0514	-46.2803	-62.7048	-68.7412	-70.1333	-73.1098	-71.4608	-68.4999	-66.3676	-62.9239
R^2	0.27	0.27	0.21	0.21	0.18	0.2	0.33	0.37	0.38	0.39	0.38	0.35	0.33	0.31
N	14,482	14,482	14,353	13,322	13,915	14,208	14,310	14,347	14,357	14,388	14,412	14,416	14,420	14,424

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0647***	0.0573***	0.0533***	0.0498***	0.0383***	0.0345***	0.0323***	0.0295***	0.0255***	0.0251***	0.0253***	0.0253***	0.0255***	0.0253***
	-26.3664	-24.6437	-23.5407	-22.3871	-18.9121	-18.3746	-18.3599	-17.635	-16.9756	-17.6916	-18.1881	-18.4012	-18.9947	-19.1587
p^{-1}	-327.4768***	-294.8301***	-285.1464***	-277.4337***	-253.6997***	-243.7673***	-232.8787***	-223.7805***	-204.1235***	-197.7809***	-193.8173***	-192.9281***	-191.9660***	-190.1321***
	-60.7427	-57.6876	-57.2693	-56.8	-56.9559	-59.1874	-60.182	-60.8389	-61.9652	-63.5559	-63.5112	-63.8934	-65.1613	-65.5502
$\mathcal{V}$	-0.1587***	-0.1242***	-0.1038***	-0.0847***	-0.0509*	-0.0366	-0.0616**	-0.0420*	-0.0577***	-0.0561***	-0.0616***	-0.0650***	-0.0703***	-0.0687***
	-4.7333	-3.9073	-3.3524	-2.7889	-1.837	-1.4297	-2.5586	-1.8352	-2.8171	-2.9005	-3.2449	-3.4638	-3.8362	-3.8115
c	71.6721***	64.6261***	62.5463***	60.8906***	55.7939***	53.6517***	51.2951***	49.3279***	45.0727***	43.6942***	42.8299***	42.6359***	42.4262***	42.0284***
	-61.3957	-58.3975	-58.0138	-57.5725	-57.8472	-60.1609	-61.2195	-61.9341	-63.1896	-64.8445	-64.8159	-65.2098	-66.5084	-66.9173
R^2	0.3	0.28	0.27	0.27	0.27	0.28	0.29	0.3	0.31	0.32	0.32	0.32	0.33	0.33
N	14,427	14,441	14,443	14,447	14,467	14,479	14,480	14,482	14,482	14,482	14,482	14,482	14,482	14,482

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the first-order autocorrelation of the volume weighted average spreads for the three years to maturity group ($\tilde{T}$ smaller than three years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{S}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{S}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{S}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{S}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{S}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{S}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 15,009 daily observations in the three years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.177: The Fifth-order Spreads Autocorrelations Regression Results (Three-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0250***	-0.0250***	-0.0363***	0.0187***	0.0236***	0.0186***	0.0186***	0.0185***	0.0185***	0.0185***	0.0184***	0.0184***	0.0184***	0.0183***
	-13.6519	-13.6519	-10.7045	-9.4264	-11.7279	-9.4226	-9.4075	-9.3532	-9.334	-9.3435	-9.3096	-9.3195	-9.3197	-9.2685
p^{-1}	-285.0048***	-285.0048***	-44.6548***	-239.2888***	-252.4015***	-239.2242***	-239.1332***	-238.9580***	-238.9482***	-239.0528***	-239.1571***	-239.6065***	-241.5181***	-243.0476***
	-70.8644	-70.8644	-5.9923	-55.0452	-56.9668	-55.0378	-55.029	-55.001	-54.9966	-55.0577	-55.0708	-55.172	-55.6212	-56.039
$\mathcal{V}$	0.5343***	0.5343***	-0.7030***	0.4536***	0.4123***	0.4529***	0.4519***	0.4499***	0.4475***	0.4443***	0.4410***	0.4393***	0.4258***	0.4124***
	-21.3697	-21.3697	-15.174	-16.7834	-14.727	-16.7616	-16.7286	-16.6569	-16.567	-16.4608	-16.3352	-16.2719	-15.7753	-15.2945
c	62.9726***	62.9726***	10.6580***	52.4848***	55.3107***	52.4708***	52.4512***	52.4136***	52.4117***	52.4345***	52.4577***	52.5554***	52.9721***	53.3060***
	-72.3111	-72.3111	-6.6051	-55.7581	-57.6569	-55.7507	-55.7422	-55.7148	-55.7105	-55.7723	-55.7859	-55.8875	-56.3398	-56.7614
R^2	0.36	0.36	0.06	0.2	0.22	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.21
N	14,482.00	14,482.00	14,482.00	14,482.00	14,353.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	0.0183***	0.0185***	0.0189***	0.0200***	0.0212***	0.0223***	0.0294***	0.0320***	0.0319***	0.0304***	0.0308***	0.0303***	0.0314***	0.0311***
	-9.2478	-9.3709	-9.5841	-10.077	-10.6757	-11.2711	-14.8092	-16.1013	-16.0513	-15.5227	-16.1869	-16.0958	-16.8069	-16.7077
p^{-1}	-243.9262***	-245.6991***	-246.8381***	-253.9296***	-259.0311***	-262.5425***	-283.2305***	-295.6643***	-301.6547***	-305.8470***	-310.1318***	-307.0864***	-308.6645***	-307.9597***
	-56.2437	-56.7525	-57.0135	-58.3573	-59.4311	-60.2698	-64.907	-67.6617	-69.0712	-70.9882	-74.1505	-74.2176	-75.1545	-75.2778
$\mathcal{V}$	0.3981***	0.3804***	0.3655***	0.3239***	0.3069***	0.3001***	0.2803***	0.2448***	0.2217***	0.2106***	0.1210***	0.0826***	0.0638**	0.0436*
	-14.7657	-14.132	-13.5806	-11.9744	-11.3268	-11.0816	-10.333	-9.0097	-8.1669	-7.8618	-4.6547	-3.2124	-2.4997	-1.7138
c	53.4981***	53.8836***	54.1297***	55.6706***	56.7764***	57.5368***	62.0145***	64.7138***	66.0205***	66.9433***	67.8852***	67.2305***	67.5695***	67.4197***
	-56.968	-57.4798	-57.7403	-59.086	-60.1599	-60.9991	-65.633	-68.394	-69.8141	-71.7574	-74.9584	-75.0395	-75.9794	-76.1092
R^2	0.22	0.22	0.22	0.24	0.25	0.25	0.28	0.3	0.32	0.33	0.37	0.37	0.38	0.38
N	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*0.0313****	*0.0307****	*0.0112****	*0.0387****	*0.0264****	*0.0300****	*0.0385****	*0.0460****	*0.0523****	*0.0582****	*0.0826****	*0.0758****	*0.0715****	*0.0671****
	-16.8065	-16.5542	-4.718	-17.8565	-12.6273	-13.4165	-15.9939	-18.6076	-20.8445	-23.3195	-31.3667	-29.3313	-28.1817	-26.9627
p^{-1}	-308.9688***	-308.9819***	-235.9760***	-150.1522***	-148.9625***	-204.1689***	-270.7710***	-313.6272***	-344.8693***	-369.5757***	-410.0689***	-385.3260***	-366.5491***	-340.7572***
	-75.5972	-75.7289	-44.9983	-29.3633	-31.7214	-41.3457	-51.0798	-57.756	-62.5271	-67.3729	-70.9029	-67.9043	-65.7497	-62.2859
$\mathcal{V}$	0.0394	0.0386	0.036	-0.0923***	-0.0879***	-0.1593***	-0.2204***	-0.2245***	-0.2459***	-0.2505***	-0.2834***	-0.2224***	-0.1790***	-0.1776***
	-1.5503	-1.5233	-1.0854	-3.07	-3.0666	-5.2034	-6.6845	-6.6476	-7.17	-7.3384	-7.8784	-6.3031	-5.1608	-5.2198
c	67.6388***	67.6452***	51.5571***	32.6118***	32.4345***	44.4844***	58.9966***	68.3224***	75.1230***	80.4922***	89.4922***	84.1676***	80.1165***	74.5414***
	-76.4301	-76.5672	-45.4077	-29.445	-31.8946	-41.6015	-51.3974	-58.1057	-62.9015	-67.7656	-71.4608	-68.4999	-66.3676	-62.9239
R^2	0.39	0.39	0.19	0.1	0.11	0.18	0.25	0.3	0.33	0.36	0.38	0.35	0.33	0.31
N	14,482	14,482	14,353	13,322	13,915	14,208	14,310	14,347	14,357	14,388	14,412	14,416	14,420	14,424

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0647***	0.0573***	0.0533***	0.0498***	0.0383***	0.0345***	0.0323***	0.0295***	0.0255***	0.0251***	0.0253***	0.0253***	0.0255***	0.0253***
	-26.3664	-24.6437	-23.5407	-22.3871	-18.9121	-18.3746	-18.3599	-17.635	-16.9756	-17.6916	-18.1881	-18.4012	-18.9947	-19.1587
p^{-1}	-327.4768***	-294.8301***	-285.1464***	-277.4337***	-253.6997***	-243.7673***	-232.8787***	-223.7805***	-204.1235***	-197.7809***	-193.8173***	-192.9281***	-191.9660***	-190.1321***
	-60.7427	-57.6876	-57.2693	-56.8	-56.9559	-59.1874	-60.182	-60.8389	-61.9652	-63.5559	-63.5112	-63.8934	-65.1613	-65.5502
$\mathcal{V}$	-0.1587***	-0.1242***	-0.1038***	-0.0847***	-0.0509*	-0.0366	-0.0616**	-0.0420*	-0.0577***	-0.0561***	-0.0616***	-0.0650***	-0.0703***	-0.0687***
	-4.7333	-3.9073	-3.3524	-2.7889	-1.837	-1.4297	-2.5586	-1.8352	-2.8171	-2.9005	-3.2449	-3.4638	-3.8362	-3.8115
c	71.6721***	64.6261***	62.5463***	60.8906***	55.7939***	53.6517***	51.2951***	49.3279***	45.0727***	43.6942***	42.8299***	42.6359***	42.4262***	42.0284***
	-61.3957	-58.3975	-58.0138	-57.5725	-57.8472	-60.1609	-61.2195	-61.9341	-63.1896	-64.8445	-64.8159	-65.2098	-66.5084	-66.9173
R^2	0.3	0.28	0.27	0.27	0.27	0.28	0.29	0.3	0.31	0.32	0.32	0.32	0.33	0.33
N	14,427	14,441	14,443	14,447	14,467	14,479	14,480	14,482	14,482	14,482	14,482	14,482	14,482	14,482

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the fifth-order autocorrelation of the volume weighted average spreads for the three years to maturity group ($\tilde{T}$ smaller than three years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average fifth-order autocorrelations of bid-ask spreads ($\Omega^{\mathscr{F}^Q}$), quoted half-spreads ($\Omega^{\mathscr{F}^{Q^{1/2}}}$), quoted depth ($\Omega^{\mathscr{F}^D}$), effective half-spreads ($\Omega^{\mathscr{F}^E}$), realized spreads ($\Omega^{\mathscr{F}^R}$), and adverse selection ($\Omega^{\mathscr{F}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 15,009 daily observations in the three years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.178: The Tenth-order Spreads Autocorrelations Regression Results (Three-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0359***	-0.0359***	-0.0459***	0.0216***	0.0251***	0.0216***	0.0215***	0.0214***	0.0213***	0.0212***	0.0211***	0.0210***	0.0205***	0.0200***
	-16.9272	-16.9272	-13.0696	-11.4413	-13.0802	-11.436	-11.4101	-11.3461	-11.2961	-11.2711	-11.2216	-11.166	-10.9143	-10.6775
p^{-1}	-335.1840***	-335.1840***	-58.1879***	-288.1040***	-299.5252***	-288.0437***	-287.9315***	-287.6026***	-287.2386***	-286.9642***	-286.7266***	-286.5296***	-286.6217***	-286.7787***
	-71.9284	-71.9284	-7.5402	-69.4049	-70.8331	-69.4064	-69.4049	-69.3891	-69.3387	-69.3256	-69.2696	-69.2638	-69.3519	-69.6226
$\mathcal{V}$	0.6167***	0.6167***	-0.5389***	0.6398***	0.6179***	0.6394***	0.6386***	0.6360***	0.6328***	0.6294***	0.6260***	0.6222***	0.6086***	0.5925***
	-21.2859	-21.2859	-11.2328	-24.7913	-23.1239	-24.7811	-24.7596	-24.6831	-24.5718	-24.4578	-24.3253	-24.1948	-23.6882	-23.1394
c	73.8825***	73.8825***	13.5936***	63.0489***	65.5148***	63.0358***	63.0117***	62.9408***	62.8619***	62.8023***	62.7510***	62.7087***	62.7309***	62.7674***
	-73.221	-73.221	-8.1351	-70.1448	-71.5574	-70.1465	-70.1455	-70.1307	-70.0805	-70.0679	-70.012	-70.0071	-70.0984	-70.3744
R^2	0.38	0.38	0.06	0.28	0.29	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.29
N	14,482.00	14,482.00	14,482.00	14,482.00	14,353.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00	14,482.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	0.0196***	0.0193***	0.0192***	0.0197***	0.0208***	0.0218***	0.0289***	0.0306***	0.0290***	0.0256***	0.0226***	0.0214***	0.0224***	0.0215***
	-10.4942	-10.3355	-10.333	-10.6638	-11.2323	-11.7541	-15.0141	-15.6613	-14.8462	-13.2232	-11.9739	-11.4054	-12.1549	-11.7466
p^{-1}	-286.9689***	-287.5207***	-287.8965***	-292.3016***	-295.9806***	-297.8607***	-317.7271***	-329.6214***	-334.1469***	-334.3367***	-329.8912***	-322.0042***	-323.3740***	-319.5738***
	-69.8287	-70.2685	-70.5351	-71.8914	-72.7859	-72.9525	-75.0599	-76.906	-77.9648	-78.5506	-79.658	-78.1746	-79.9983	-79.4274
$\mathcal{V}$	0.5788***	0.5571***	0.5415***	0.4857***	0.4608***	0.4383***	0.3624***	0.3041***	0.2713***	0.2529***	0.1894***	0.1481***	0.1378***	0.1104***
	-22.6539	-21.8989	-21.3407	-19.2166	-18.2286	-17.2659	-13.7712	-11.4144	-10.1821	-9.5584	-7.3558	-5.7841	-5.4843	-4.4122
c	62.8106***	62.9326***	63.0143***	63.9712***	64.7675***	65.1730***	69.4663***	72.0486***	73.0415***	73.1004***	72.1519***	70.4448***	70.7383***	69.9178***
	-70.5845	-71.0304	-71.2994	-72.662	-73.5561	-73.7177	-75.7889	-77.6332	-78.7061	-79.3162	-80.4606	-78.9824	-80.8179	-80.2535
R^2	0.29	0.29	0.3	0.31	0.32	0.32	0.34	0.36	0.37	0.38	0.4	0.4	0.41	0.41
N	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482	14,482

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*0.0216****	*0.0209****	*0.0004*	*0.0174****	*0.0103****	*0.0141****	*0.0194****	*0.0243****	*0.0281****	*0.0321****	*0.0482****	*0.0546****	*0.0587****	*0.0631****
	-11.8116	-11.4584	-0.1893	-12.177	-7.4653	-8.6873	-10.119	-11.7274	-13.0711	-14.8017	-21.5599	-23.8157	-25.2627	-26.718
p^{-1}	-318.9947***	-318.5295***	-181.7773***	-71.9345***	-74.5479***	-121.1219***	-175.6470***	-212.5319***	-243.0694***	-268.3873***	-339.4770***	-367.7154***	-382.0896***	-397.5786***
	-79.3992	-79.3848	-39.7083	-21.3932	-23.9588	-33.7584	-41.6202	-46.7213	-51.387	-56.2596	-69.1212	-73.0586	-74.8476	-76.6025
$\mathcal{V}$	0.1035***	0.0978***	0.1094***	0.0187	0.0222	-0.0473**	-0.1098***	-0.1144***	-0.1181***	-0.1195***	-0.0754**	-0.0129	0.0238	0.0723**
	-4.1451	-3.9193	-3.7812	-0.9437	-1.1671	-2.1269	-4.1811	-4.0433	-4.0157	-4.0274	-2.4672	-0.4122	-0.7491	-2.2406
c	69.7916***	69.6944***	39.7643***	15.6386***	16.2532***	26.4094***	38.3034***	46.3399***	52.9970***	58.5088***	73.9762***	80.1239***	83.2501***	86.6200***
	-80.2256	-80.2164	-40.1188	-21.4733	-24.1215	-33.9921	-41.9149	-47.0455	-51.7427	-56.6409	-69.5614	-73.5187	-75.3131	-77.0748
R^2	0.41	0.41	0.16	0.05	0.06	0.12	0.18	0.21	0.25	0.28	0.35	0.37	0.37	0.38
N	14,482	14,482	14,353	13,322	13,915	14,208	14,310	14,347	14,357	14,388	14,412	14,416	14,420	14,424

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0660***	0.0726***	0.0733***	0.0729***	0.0602***	0.0501***	0.0425***	0.0341***	0.0229***	0.0198***	0.0204***	0.0190***	0.0186***	0.0181***
	-27.6914	-29.9484	-30.2977	-30.0598	-25.4801	-22.0223	-19.2337	-16.0055	-11.7223	-10.3164	-10.8411	-10.204	-9.9937	-9.7748
p^{-1}	-407.3823***	-426.1153***	-427.8471***	-428.5376***	-421.0075***	-408.3297***	-397.6586***	-382.3368***	-349.6857***	-333.1608***	-331.6913***	-325.9459***	-323.5429***	-322.2513***
	-77.7817	-79.9457	-80.4414	-80.4771	-81.0456	-81.6886	-81.9453	-81.6531	-81.396	-78.8979	-80.2813	-79.5418	-79.3067	-79.1968
$\mathcal{V}$	0.1098***	0.1811***	0.1739***	0.1738***	0.1307***	0.1083***	0.1043***	0.0969***	0.0866***	0.0821***	0.0889***	0.0740***	0.0702***	0.0730***
	-3.3695	-5.4624	-5.2567	-5.2486	-4.046	-3.4846	-3.4584	-3.3295	-3.2436	-3.1274	-3.4602	-2.904	-2.7667	-2.8877
c	88.7504***	92.8226***	93.2071***	93.3660***	91.8111***	89.1042***	86.8180***	83.5245***	76.4733***	72.8925***	72.5682***	71.3258***	70.8056***	70.5265***
	-78.2565	-80.4262	-80.9311	-80.9745	-81.6228	-82.3239	-82.6229	-82.3792	-82.2076	-79.7208	-81.1156	-80.3848	-80.1535	-80.0465
R^2	0.38	0.39	0.39	0.39	0.4	0.41	0.42	0.42	0.43	0.41	0.42	0.42	0.42	0.42
N	14,427	14,441	14,443	14,447	14,467	14,479	14,480	14,482	14,482	14,482	14,482	14,482	14,482	14,482

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the tenth-order autocorrelation of the volume weighted average spreads for the three years to maturity group ($\tilde{T}$ smaller than three years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average tenth-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{S}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{S}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{S}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{S}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{S}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{S}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 15,009 daily observations in the three years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.179: Market Activities and Price Error Regression Results (Five-year Tenor)

	Quote Number	**Trade Number**	**Quote to Trade Ratio**	**Price Error**				
				Lag 1	Lag 2	Lag 3	Lag 4	Lag 5
$\tilde{T}$	0.4753***	0.0612***	0.4141***	-0.0755***	-0.0653**	-0.0202	-0.0447	-0.1188***
	-47.565	-5.8719	-58.2109	-7.069	-2.1177	-0.6409	-1.418	-4.0543
p^{-1}	-997.7689***	-1,710.7027***	712.9527***	-277.2218***	-194.2322***	-120.0658**	7.0559	290.7979***
	-63.1095	-103.7591	-63.3435	-16.3819	-3.968	-2.3977	-0.1409	-6.2542
$\mathcal{V}$	4.5808***	7.0803***	-2.4996***	-9.1756***	-12.5837***	-12.6024***	-12.7826***	-13.0311***
	-39.6625	-58.7867	-30.4009	-74.1543	-35.1406	-34.4199	-34.9098	-38.28
c	227.0882***	380.6006***	-153.5165***	68.1750***	50.6914***	34.2060***	6.6388	-54.7892***
	-66.6174	-107.0654	-63.2593	-18.6843	-4.8028	-3.168	-0.6149	-5.4649
R^2	0.15	0.36	0.4	0.3	0.07	0.07	0.06	0.07
N	25,481	25,481	25,481	25,324	25,168	25,127	25,136	25,130

Panel B: Quotes Price Autocorrelations (Ω^P)

	First-order			**Fifth-order**			**Tenth-order**		
	Ask	Bid	Mid	Ask	Bid	Mid	Ask	Bid	Mid
$\tilde{T}$	0	-0.0045***	-0.0019**	-0.0035**	-0.0104***	-0.0069***	-0.0058***	-0.0137***	-0.0101***
	-0.0411	-5.8985	-2.3451	-2.1227	-6.6744	-4.3869	-2.9032	-6.9497	-5.1542
p^{-1}	-62.0347***	-40.4297***	-52.2515***	-137.9625***	-110.3620***	-124.0965***	-184.7755***	-159.6808***	-170.9599***
	-45.7225	-33.8809	-42.1973	-54.3238	-45.5123	-50.3705	-59.1874	-52.0068	-55.6721
$\mathcal{V}$	0.2408***	0.2425***	0.2319***	0.6605***	0.6700***	0.6537***	0.9167***	0.9346***	0.9134***
	-23.8453	-27.2947	-25.1542	-34.9367	-37.1156	-35.6428	-39.4433	-40.8889	-39.9531
c	14.4761***	9.7977***	12.3585***	30.9724***	25.0011***	27.9757***	41.1407***	35.7196***	38.1603***
	-49.5018	-38.0934	-46.3046	-56.5817	-47.8345	-52.6831	-61.1405	-53.9742	-57.6538
R^2	0.11	0.08	0.1	0.15	0.13	0.14	0.18	0.16	0.17
N	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of market activities indicators and price discovery factors for the five year to maturity group ($\tilde{T}$ smaller than five year). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables includes the number of quotes and trades (n^q and n), the quotes to trades ratio qtr, the pricing errors ($\mathcal{E}$) measured by the lag one to lag five vector autoregression models, and the first-order, fifth-order, and tenth-order autocorrelations of the volume weighted average bid, ask, and mid-quote price at tick-by-tick level. It is worth noting that trades number, quotes number, pricing errors, the inverse of price, the days to maturity and the quotes to trades ratio take the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 25,481 daily observations in the five years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.180: Mid-quote Return Autocorrelation Regression Results (Five-year Tenor)

		Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
First-Order	$\tilde{T}$	0.0177***	0.0995***	0.0780***	0.0543***	0.0667***	0.0739***	0.0761***	0.0807***	0.0766***	0.0696***	0.0637***	0.0581***	0.0546***
		-17.6605	-30.3201	-30.4434	-24.1439	-30.7713	-34.7861	-36.2337	-38.6248	-37.4097	-34.863	-32.5051	-30.3041	-28.9783
	p^{-1}	-49.7724***	-266.0504***	-270.2643***	-256.0831***	-305.4372***	-327.3429***	-335.1348***	-344.0070***	-342.9567***	-336.0328***	-331.1711***	-321.3967***	-312.5031***
		-31.7929	-42.5903	-59.359	-67.9271	-87.2669	-96.565	-100.2914	-103.8047	-106.0989	-106.8677	-107.4514	-106.7533	-105.6771
	$\mathcal{V}$	-0.1054***	-0.2173***	-0.0089	-0.0432	-0.2410***	-0.2823***	-0.2990***	-0.3153***	-0.2457***	-0.1531***	-0.0543**	0.0238	0.0562**
		-9.0446	-5.3407	-0.2834	-1.5949	-9.4065	-11.3212	-12.1464	-12.8809	-10.2785	-6.5813	-2.3774	-1.068	-2.5635
	c	10.7138***	57.7228***	58.8937***	56.0222***	66.7433***	71.4942***	73.2059***	75.1246***	74.9776***	73.5366***	72.5245***	70.4440***	68.5376***
		-31.7511	-42.8076	-59.9406	-68.8898	-88.4363	-97.8244	-101.617	-105.1511	-107.5998	-108.4905	-109.162	-108.5475	-107.5222
	R^2	0.06	0.12	0.18	0.23	0.34	0.38	0.4	0.41	0.42	0.41	0.41	0.4	0.4
	N	24,798	18,852	21,056	22,739	23,601	23,938	24,031	24,176	24,375	24,445	24,506	24,551	24,580
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0459***	0.0422***	0.0391***	0.0263***	0.0171***	0.0123***	0.0082***	0.0021*	0.001	0.0004	-0.0001	-0.0003	-0.0004
		-25.2842	-23.4036	-21.8448	-15.5772	-10.8813	-8.1861	-5.7302	-1.6944	-0.9	-0.3364	-0.0623	-0.2734	-0.4195
	p^{-1}	-293.2003***	-286.9159***	-281.0889***	-245.9979***	-222.5289***	-205.6810***	-184.4329***	-132.3837***	-109.0043***	-96.7271***	-88.4322***	-83.1982***	-79.5269***
		-103.1712	-101.6685	-100.6579	-93.4912	-90.5411	-87.8127	-82.4229	-67.19	-61.2849	-57.4155	-55.0738	-53.4671	-52.2689
	$\mathcal{V}$	0.1670***	0.1964***	0.2181***	0.2954***	0.3749***	0.3965***	0.4149***	0.3793***	0.3360***	0.3132***	0.2915***	0.2821***	0.2743***
		-7.9088	-9.3584	-10.4942	-15.0784	-20.4916	-22.7379	-24.9086	-25.8596	-25.3725	-24.9703	-24.3846	-24.3563	-24.2135
	c	64.4061***	63.0657***	61.8194***	54.2705***	49.2261***	45.5978***	41.0068***	29.7416***	24.6712***	22.0083***	20.2093***	19.0735***	18.2771***
		-105.1415	-103.6776	-102.7058	-95.6915	-92.9238	-90.3192	-85.0233	-70.0337	-64.3536	-60.6095	-58.3927	-56.8691	-55.7326
	R^2	0.38	0.37	0.37	0.34	0.32	0.31	0.28	0.21	0.18	0.16	0.15	0.15	0.14
	N	24,646	24,668	24,696	24,767	24,790	24,794	24,796	24,798	24,798	24,798	24,798	24,798	24,798
Fifth-Order		*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
	$\tilde{T}$	0.0047***	0.0296***	0.0218***	0.0197***	0.0259***	0.0338***	0.0399***	0.0457***	0.0586***	0.0628***	0.0641***	0.0653***	0.0660***
		-9.805	-16.3502	-13.0545	-11.1552	-13.5914	-17.259	-19.9783	-22.877	-28.2179	-29.5136	-29.8928	-30.261	-30.5741
	p^{-1}	-7.7807***	-109.1241***	-127.1225***	-167.9762***	-216.1596***	-251.3303***	-278.9421***	-300.5119***	-354.1871***	-375.0149***	-386.1740***	-396.2719***	-402.0085***
		-10.4328	-31.6541	-42.736	-56.6789	-70.3295	-80.471	-87.9068	-94.8298	-108.0799	-111.9339	-114.4389	-116.9224	-118.7248
	$\mathcal{V}$	0.0195***	-0.0655***	-0.0640***	-0.1481***	-0.2201***	-0.2380***	-0.2583***	-0.2661***	-0.2284***	-0.1622***	-0.1157***	-0.0627**	-0.0307
		-3.5157	-2.9154	-3.1319	-6.9552	-9.7853	-10.3571	-11.0518	-11.3691	-9.4222	-6.541	-4.6268	-2.4949	-1.2208
	c	1.6643***	23.7277***	27.7236***	36.6954***	47.2151***	54.8668***	60.8817***	65.5691***	77.2687***	81.8167***	84.2589***	86.4762***	87.7366***
		-10.3536	-31.8853	-43.1893	-57.4007	-71.2425	-81.4823	-88.9961	-95.9764	-109.3767	-113.2865	-115.8334	-118.3688	-120.207
	R^2	0.01	0.07	0.12	0.2	0.28	0.33	0.36	0.39	0.44	0.45	0.45	0.46	0.47
	N	24,798	18,852	21,056	22,739	23,601	23,938	24,031	24,176	24,375	24,445	24,506	24,551	24,580
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0671***	0.0661***	0.0644***	0.0516***	0.0374***	0.0267***	0.0169***	0.0046**	0.0019	0.001	-0.0004	-0.0006	-0.0008
		-31.2798	-30.9221	-30.183	-24.5252	-18.0553	-13.1167	-8.3428	-2.2706	-0.9648	-0.5296	-0.1924	-0.3314	-0.4526
	p^{-1}	-415.0421***	-416.9614***	-417.2166***	-409.6259***	-394.3306***	-378.3537***	-357.6492***	-288.6877***	-250.9060***	-229.3088***	-213.8132***	-203.5928***	-195.8996***
		-123.5885	-124.6884	-125.1707	-124.7624	-121.9864	-119.0344	-112.9898	-91.4463	-80.9039	-75.2337	-71.5653	-69.3002	-67.7187
	$\mathcal{V}$	0.0850***	0.1163***	0.1459***	0.3371***	0.5278***	0.6590***	0.7822***	0.8942***	0.8570***	0.8189***	0.7864***	0.7658***	0.7565***
		-3.4051	-4.6753	-5.8847	-13.7905	-21.9312	-27.8482	-33.1956	-38.047	-37.1219	-36.0898	-35.3553	-35.0128	-35.1263
	c	90.6040***	91.0405***	91.1134***	89.5631***	86.3332***	82.9330***	78.5034***	63.6313***	55.4539***	50.7742***	47.4202***	45.2042***	43.5361***
		-125.1659	-126.3061	-126.8204	-126.5599	-123.9085	-121.0526	-115.0649	-93.515	-82.9588	-77.2872	-73.6383	-71.3877	-69.8227
	R^2	0.48	0.48	0.48	0.48	0.46	0.45	0.43	0.33	0.28	0.25	0.23	0.22	0.21
	N	24,646	24,668	24,696	24,767	24,790	24,794	24,796	24,798	24,798	24,798	24,798	24,798	24,798
Tenth-Order		*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*	*200ms*
	$\tilde{T}$	0.0014***	0.0138***	0.0106***	0.0098***	0.0117***	0.0159***	0.0193***	0.0224***	0.0316***	0.0358***	0.0378***	0.0410***	0.0435***
		-3.6817	-11.4756	-9.2896	-7.4059	-7.5826	-9.6114	-11.1118	-12.7339	-16.9046	-18.3482	-19.0065	-20.1054	-21.1304
	p^{-1}	-3.1502***	-58.0904***	-70.9689***	-103.2965***	-143.2891***	-172.9278***	-198.7314***	-218.7554***	-282.1293***	-310.7466***	-326.8933***	-345.2041***	-356.8732***
		-5.2654	-25.4628	-34.9924	-46.6346	-57.5241	-65.3558	-72.0365	-78.3354	-95.4766	-101.1711	-104.3459	-107.8997	-110.4496
	$\mathcal{V}$	0.0172***	-0.0233	-0.0218	-0.0922***	-0.1574***	-0.1782***	-0.1934***	-0.2028***	-0.1586***	-0.1049***	-0.0649***	-0.021	0.0107
		-3.8663	-1.5654	-1.5626	-5.7923	-8.6333	-9.1552	-9.5159	-9.8347	-7.2562	-4.6149	-2.7944	-0.8865	-0.4449
	c	0.6767***	12.6376***	15.4748***	22.5661***	31.3196***	37.7848***	43.4171***	47.7832***	61.6131***	67.8597***	71.3849***	75.3803***	77.9215***
		-5.2472	-25.6621	-35.3579	-47.2293	-58.3106	-66.2361	-73	-79.37	-96.7232	-102.4909	-105.7069	-109.3046	-111.8795
	R^2	0	0.05	0.08	0.15	0.22	0.25	0.29	0.32	0.4	0.41	0.42	0.43	0.44
	N	24,798	18,852	21,056	22,739	23,601	23,938	24,031	24,176	24,375	24,445	24,506	24,551	24,580
		500ms	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
	$\tilde{T}$	0.0509***	0.0525***	0.0530***	0.0488***	0.0369***	0.0272***	0.0172***	0.003	0.0014	0.0005	-0.0006	-0.0009	-0.0015
		-24.1074	-24.7144	-24.907	-22.7005	-17.3014	-12.8252	-8.0857	-1.3804	-0.6117	-0.2423	-0.2562	-0.3835	-0.6616
	p^{-1}	-387.4534***	-395.3377***	-401.0846***	-414.8200***	-413.9507***	-409.5228***	-398.9838***	-350.9950***	-317.9203***	-297.4379***	-282.8050***	-271.8211***	-261.8904***
		-117.2579	-119.1287	-120.6733	-123.747	-124.5376	-123.7306	-120.4826	-102.0121	-91.0053	-85.3205	-81.2865	-78.4627	-76.092
	$\mathcal{V}$	0.0956***	0.1082***	0.1326***	0.2956***	0.5128***	0.6719***	0.8539***	1.1179***	1.1208***	1.1000***	1.0805***	1.0596***	1.0456***
		-3.8921	-4.3856	-5.3618	-11.8435	-20.7237	-27.2701	-34.6375	-43.6444	-43.0975	-42.3871	-41.7165	-41.0873	-40.8087
	c	84.5764***	86.2990***	87.5553***	90.6016***	90.4986***	89.6065***	87.3933***	77.1156***	69.9690***	65.5391***	62.3753***	59.9970***	57.8469***
		-118.7477	-120.6462	-122.2147	-125.3954	-126.3183	-125.6062	-122.4389	-103.9838	-92.9237	-87.2229	-83.1796	-80.3493	-77.978
	R^2	0.46	0.47	0.47	0.48	0.48	0.48	0.46	0.38	0.33	0.3	0.28	0.27	0.26
	N	24,646	24,668	24,696	24,767	24,790	24,794	24,796	24,798	24,798	24,798	24,798	24,798	24,798

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of the volume weighted average mid-quote return autocorrelations for the five years to maturity group ($\tilde{T}$ smaller than five years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the first-order, fifth-order, and tenth-order mid-quote return autocorrelations at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It is worth noting that the inverse of price and the days to maturity take the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 25,481 daily observations in the five years across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.181: Market Liquidity Spreads Regression Results (Five-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread* *Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-43.1972***	-21.5986***	-0.1366***	-0.1171***	1.7691***	-0.1171***	-0.1172***	-0.1173***	-0.1176***	-0.1177***	-0.1178***	-0.1179***	-0.1175***	-0.1174***
	-9.7766	-9.7766	-3.7596	-9.0539	-2.5963	-9.0554	-9.0552	-9.0632	-9.0816	-9.0733	-9.0686	-9.0599	-8.8378	-8.7519
p^{-1}	199,340.8111***	99,670.6257***	-2,913.5542***	588.8861***	-3,915.0133***	588.9304***	588.9960***	589.2354***	589.6668***	589.7904***	590.0227***	590.1021***	589.0318***	588.7642***
	-28.5141	-28.5141	-50.6878	-28.7733	-3.6311	-28.7755	-28.7705	-28.7722	-28.7870	-28.7359	-28.7000	-28.6515	-28.0048	-27.7331
$\mathcal{V}$	989.9338***	494.9659***	9.6420***	2.9450***	17.8194**	2.9450***	2.9453***	2.9458***	2.9460***	2.9486***	2.9504***	2.9520***	2.9666***	2.9649***
	-19.3840	-19.3840	-22.9626	-19.6979	-2.2623	-19.6981	-19.6943	-19.6910	-19.6881	-19.6658	-19.6456	-19.6204	-19.3078	-19.1179
c	-43,024.7181***	-21,512.4067***	651.0054***	-127.5242***	843.1608***	-127.5338***	-127.5480***	-127.5996***	-127.6925***	-127.7193***	-127.7698***	-127.7871***	-127.5600***	-127.5039***
	-28.5436	-28.5436	-52.5283	-28.8987	-3.6269	-28.9010	-28.8959	-28.8976	-28.9123	-28.8610	-28.8250	-28.7763	-28.1279	-27.8553
R^2	0.09	0.09	0.14	0.09	0.00	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08
N	25,481	25,481	25,481	25,481	25,472	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481

	Realized Spread *100ms*	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	-0.1171***	-0.1185***	-0.1195***	-0.1199***	-0.1197***	-0.1193***	-0.1149***	-0.0000***	-0.1101***	-0.1029***	-0.0877***	-0.0804***	-0.0770***	-0.0766***
	-8.6454	-8.9884	-9.2073	-9.3835	-9.4469	-9.4034	-9.1472	-10.0112	-9.8413	-9.3791	-8.5463	-7.8697	-7.5269	-7.6314
p^{-1}	588.1844***	591.0895***	593.0814***	593.2079***	592.7280***	592.2687***	583.9874***	0.0581***	566.2446***	545.0027***	491.0737***	468.3458***	467.6170***	448.4121***
	-27.4384	-28.3271	-28.8809	-29.3480	-29.5614	-29.5097	-29.3857	-32.0755	-32.0033	-31.4052	-30.2432	-28.9677	-28.8981	-28.2332
$\mathcal{V}$	2.9606***	2.9102***	2.8727***	2.7956***	2.7568***	2.7275***	2.5281***	0.0002***	2.0781***	1.9181***	1.3829***	1.1250***	0.6866***	0.7898***
	-18.9062	-19.0918	-19.1498	-18.9333	-18.8214	-18.6031	-17.4140	-16.8517	-16.0782	-15.1305	-11.6583	-9.5251	-5.8084	-6.8076
c	-127.3808***	-128.0047***	-128.4326***	-128.4608***	-128.3583***	-128.2615***	-126.4866***	-0.0126***	-122.6433***	-118.0570***	-106.3824***	-101.4638***	-101.2981***	-97.1281***
	-27.5599	-28.4513	-29.0068	-29.4761	-29.6907	-29.6394	-29.5192	-32.2192	-32.1487	-31.5517	-30.3863	-29.1063	-29.0341	-28.3633
R^2	0.08	0.09	0.09	0.09	0.09	0.09	0.08	0.09	0.09	0.09	0.07	0.06	0.06	0.06
N	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481

	Realized Spread *1500sec*	*1800sec*	*Adverse Selection* *Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*-0.0756****	*-0.0745****	*0.0593*	*0.0000****	*0.0000****	*0.0002****	*0.0005****	*0.0006****	*0.0007****	*0.0008****	*0.0004*	*0.0003*	*0.0000*	*0.0014*
	-7.5971	-7.5162	-1.0578	-11.0041	-3.5657	-5.9858	-8.9886	-4.0738	-3.3931	-2.7950	-0.3242	-0.2063	-0.0085	-1.3529
p^{-1}	443.5739***	440.6850***	-123.6902	-0.0474***	-0.1081***	-0.3398***	-0.7772***	-0.9037***	-1.1344***	-1.2114***	-0.1419	0.1319	0.6990	-2.2012
	-28.1737	-28.0807	-1.3948	-16.3941	-4.9072	-6.6485	-9.6297	-3.9882	-3.3732	-2.6113	-0.0788	-0.0554	-0.2366	-1.3202
$\mathcal{V}$	0.6883***	0.6230***	2.0170***	0.0000	-0.0003*	-0.0009**	-0.0010*	-0.0035**	-0.0053**	-0.0069**	-0.0216	-0.0199	-0.0156	0.0348***
	-5.9847	-5.4342	-3.1135	-0.0181	-1.7125	-2.3091	-1.7563	-2.1323	-2.1744	-2.0493	-1.6424	-1.1446	-0.7217	-2.8572
c	-96.0751***	-95.4490***	26.4337	0.0103***	0.0234***	0.0733***	0.1675***	0.1950***	0.2450***	0.2619***	0.0349	-0.0225	-0.1429	0.4800
	-28.3019	-28.2085	-1.3825	-16.4367	-4.9228	-6.6513	-9.6250	-3.9907	-3.3790	-2.6179	-0.0898	-0.0438	-0.2243	-1.3352
R^2	0.05	0.05	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	25,481	25,481	25,472	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481

	Adverse Selection *200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0024***	0.0028***	0.0026***	0.0022**	-0.0022	0.0000	-0.0071	-0.0142***	-0.0294***	-0.0367***	-0.0401***	-0.0405***	-0.0415***	-0.0426***
	-3.9787	-3.4218	-2.9577	-2.2149	-1.2529	-0.6867	-1.5937	-3.2416	-4.5643	-5.1666	-5.1547	-5.0823	-5.0446	-5.0898
p^{-1}	-4.1901***	-4.3035***	-3.8246***	-3.3587**	4.9149*	0.0008	22.6501***	43.8715***	97.8387***	120.5689***	121.2958***	140.5009***	145.3518***	148.2483***
	-4.4196	-3.3782	-2.7531	-2.1731	-1.7467	-1.3711	-3.2281	-6.3097	-9.5955	-10.7273	-9.8451	-11.1407	-11.1629	-11.2034
$\mathcal{V}$	0.0722***	0.1493***	0.1882***	0.2174***	0.4169***	0.0001***	0.8667***	1.0267***	1.5621***	1.8199***	2.2582***	2.1550***	2.2560***	2.3214***
	-10.4312	-16.0462	-18.5411	-19.2576	-20.2813	-16.8667	-16.9093	-20.2144	-20.9725	-22.1659	-25.0906	-23.3918	-23.7179	-24.0152
c	0.9073***	0.9326***	0.8303***	0.7321**	-1.0411*	-0.0002	-4.8828***	-9.4647***	-21.1476***	-26.0667***	-26.2319***	-30.4020***	-31.4577***	-32.0854***
	-4.4383	-3.3952	-2.7722	-2.1969	-1.7160	-1.3652	-3.2275	-6.3133	-9.6194	-10.7565	-9.8749	-11.1806	-11.2050	-11.2459
R^2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.05
N	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481	25,481

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on a set of the volume weighted average market liquidity spreads for five years to maturity group ($\tilde{T}$ smaller than five years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average bid-ask spreads ($\tilde{\mathscr{S}}^{Q}$), quoted half-spreads ($\tilde{\mathscr{S}}^{Q^{1/2}}$), quoted depth ($\tilde{\mathscr{S}}^{D}$), effective half-spreads ($\tilde{\mathscr{S}}^{E}$), realized spreads ($\tilde{\mathscr{S}}^{R}$), and adverse selection ($\tilde{\mathscr{S}}^{AS}$). Both realized spreads and adverse selection are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It is worth noting that worths note that all liquidity spreads are reported in basis point (*bps*), except for the quoted depth. The days to maturity, the inverse of price and quoted depth are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 25,481 daily observations in the five years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.182: The First-order Spreads Autocorrelations Regression Results (Five-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0227***	-0.0227***	-0.0140***	0.0108***	0.0153***	0.0108***	0.0108***	0.0106***	0.0105***	0.0104***	0.0103***	0.0102***	0.0100***	0.0100***
	-17.2836	-17.2836	-5.8963	-7.1898	-9.9211	-7.1724	-7.1414	-7.0096	-6.9653	-6.8965	-6.8398	-6.7795	-6.6627	-6.6577
p^{-1}	-164.4533***	-164.4533***	-99.6677***	-135.8192***	-143.5111***	-135.7621***	-135.6935***	-135.4835***	-135.5306***	-135.4678***	-135.6821***	-135.8252***	-136.4543***	-136.8991***
	-80.1444	-80.1444	-26.8269	-57.7013	-59.7703	-57.6832	-57.6562	-57.5568	-57.6092	-57.6168	-57.7029	-57.7673	-58.0184	-58.3094
$\mathcal{V}$	0.2941***	0.2941***	-0.5044***	0.2602***	0.2300***	0.2597***	0.2592***	0.2579***	0.2562***	0.2535***	0.2530***	0.2525***	0.2431***	0.2360***
	-19.2531	-19.2531	-18.2379	-14.8485	-12.7094	-14.8224	-14.7927	-14.7169	-14.6263	-14.4804	-14.4518	-14.4276	-13.8831	-13.5033
c	36.8366***	36.8366***	22.6011***	30.1933***	31.8407***	30.1811***	30.1664***	30.1218***	30.1326***	30.1198***	30.1671***	30.1989***	30.3380***	30.4359***
	-83.2881	-83.2881	-28.224	-59.5125	-61.5336	-59.4947	-59.468	-59.3696	-59.4242	-59.4345	-59.5226	-59.5889	-59.8464	-60.1445
R^2	0.35	0.35	0.11	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
N	24,798.00	24,798.00	24,798.00	24,798.00	24,617.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	0.0098***	0.0099***	0.0102***	0.0113***	0.0113***	0.0112***	0.0136***	0.0160***	0.0171***	0.0181***	0.0213***	0.0225***	0.0227***	0.0232***
	-6.5394	-6.617	-6.8297	-7.5031	-7.5296	-7.5303	-9.3176	-11.1758	-12.0507	-13.0389	-15.9835	-17.2822	-17.5218	-18.0668
p^{-1}	-136.8449***	-137.1373***	-137.4822***	-139.4155***	-140.2663***	-141.5287***	-150.7604***	-156.5021***	-159.2731***	-161.9809***	-166.8372***	-168.2430***	-167.5362***	-169.1037***
	-58.3321	-58.552	-58.7514	-59.5127	-59.9974	-60.8228	-66.3983	-70.0785	-72.1417	-74.6951	-80.1984	-82.7013	-83.0391	-84.2789
$\mathcal{V}$	0.2282***	0.2176***	0.2084***	0.1917***	0.1832***	0.1852***	0.1952***	0.1768***	0.1513***	0.1350***	0.0684***	0.0248	0.0161	0.0026
	-13.0665	-12.4784	-11.9618	-10.9916	-10.5263	-10.6895	-11.5454	-10.6371	-9.2026	-8.3642	-4.4146	-1.6401	-1.0739	-0.1774
c	30.4260***	30.4903***	30.5647***	30.9837***	31.1717***	31.4493***	33.4601***	34.7060***	35.3092***	35.8981***	36.9516***	37.2572***	37.1043***	37.4436***
	-60.1723	-60.3977	-60.5988	-61.3628	-61.8603	-62.7055	-68.3707	-72.1011	-74.2002	-76.8019	-82.4098	-84.9685	-85.3239	-86.5797
R^2	0.17	0.17	0.17	0.17	0.18	0.18	0.21	0.22	0.24	0.25	0.28	0.3	0.3	0.31
N	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*0.0233****	*0.0229****	*0.0011*	*0.1147****	*0.0923****	*0.0657****	*0.0795****	*0.0846****	*0.0877****	*0.0901****	*0.0850****	*0.0779****	*0.0725****	*0.0676****
	-18.1626	-17.8597	-0.5028	-35.6758	-31.1	-24.5364	-32.5138	-35.7886	-37.4508	-39.1368	-36.9781	-34.3552	-32.4064	-30.833
p^{-1}	-169.0175***	-170.8297***	-227.8104***	-320.9050***	-256.9644***	-237.3746***	-301.7638***	-325.5077***	-335.1413***	-343.5196***	-342.3002***	-334.9370***	-329.7162***	-319.4359***
	-84.5847	-85.4679	-64.3285	-55.2073	-50.4123	-53.7825	-76.935	-86.6094	-90.0855	-94.2971	-94.5293	-93.9676	-93.8148	-92.7874
$\mathcal{V}$	0.0007	0.0115	-0.0369	-0.1941***	-0.2080***	-0.3177***	-0.4343***	-0.4484***	-0.4556***	-0.4505***	-0.4140***	-0.3278***	-0.2476***	-0.2033***
	-0.0455	-0.7697	-1.3813	-4.8683	-5.7449	-9.9104	-15.0378	-16.1722	-16.5915	-16.7154	-15.4469	-12.4069	-9.496	-7.9604
c	37.4256***	37.8228***	50.0126***	69.6175***	55.8977***	51.8389***	65.8230***	70.9895***	73.0953***	74.9200***	74.7393***	73.1975***	72.1005***	69.9017***
	-86.8964	-87.7942	-65.5298	-55.4917	-50.8263	-54.4571	-77.8316	-87.6118	-91.1361	-95.397	-95.7469	-95.2663	-95.1699	-94.1954
R^2	0.31	0.31	0.25	0.17	0.14	0.17	0.29	0.34	0.35	0.37	0.37	0.36	0.36	0.35
N	24,798	24,798	24,617	20,725	22,157	23,260	23,964	24,194	24,248	24,366	24,512	24,562	24,599	24,631

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0647***	0.0571***	0.0528***	0.0493***	0.0364***	0.0309***	0.0284***	0.0255***	0.0212***	0.0217***	0.0215***	0.0215***	0.0214***	0.0213***
	-29.9414	-27.5716	-26.0101	-24.6406	-19.8966	-18.0593	-17.53	-16.4636	-15.1833	-16.4355	-16.6419	-16.8547	-17.1326	-17.1128
p^{-1}	-311.6335***	-297.6820***	-292.6957***	-288.1331***	-258.6638***	-244.1310***	-236.2962***	-226.0912***	-205.1287***	-197.6167***	-192.8266***	-189.9455***	-188.2078***	-188.4121***
	-91.9193	-91.889	-92.1614	-92.2593	-90.5594	-91.5912	-93.3841	-93.5983	-94.0875	-96.1097	-95.6353	-95.6654	-96.4761	-97.0875
$\mathcal{V}$	-0.1792***	-0.0962***	-0.0667***	-0.0424*	-0.0360*	-0.0201	-0.0288	-0.0195	-0.0195	-0.0347**	-0.0321**	-0.0408***	-0.0410***	-0.0310**
	-7.1223	-3.9942	-2.8236	-1.8235	-1.691	-1.0119	-1.531	-1.0855	-1.2042	-2.266	-2.1358	-2.7587	-2.8241	-2.1429
c	68.2270***	65.2483***	64.1917***	63.2211***	56.8851***	53.7504***	52.0590***	49.8522***	45.3129***	43.6764***	42.6336***	42.0068***	41.6290***	41.6740***
	-93.3599	-93.4405	-93.7716	-93.9172	-92.3991	-93.5589	-95.4518	-95.7505	-96.4273	-98.5514	-98.1015	-98.1561	-99.0035	-99.6306
R^2	0.34	0.34	0.34	0.34	0.34	0.35	0.36	0.37	0.37	0.38	0.38	0.38	0.38	0.39
N	24,651	24,705	24,715	24,737	24,776	24,794	24,796	24,798	24,798	24,798	24,798	24,798	24,798	24,798

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the first-order autocorrelation of the volume weighted average spreads for the five years to maturity group ($\tilde{T}$ smaller than five years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average first-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathcal{F}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathcal{F}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathcal{F}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathcal{F}}^E}$), realized spreads ($\Omega^{\tilde{\mathcal{F}}^R}$), and adverse selection ($\Omega^{\tilde{\mathcal{F}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 25,481 daily observations in the five years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.183: The Fifth-order Spreads Autocorrelations Regression Results (Five-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0227***	-0.0227***	-0.0140***	0.0108***	0.0153***	0.0108***	0.0108***	0.0106***	0.0105***	0.0104***	0.0103***	0.0102***	0.0100***	0.0100***
	-17.2836	-17.2836	-5.8963	-7.1898	-9.9211	-7.1724	-7.1414	-7.0096	-6.9653	-6.8965	-6.8398	-6.7795	-6.6627	-6.6577
p^{-1}	-164.4533***	-164.4533***	-99.6677***	-135.8192***	-143.5111***	-135.7621***	-135.6935***	-135.4835***	-135.5306***	-135.4678***	-135.6821***	-135.8252***	-136.4543***	-136.8991***
	-80.1444	-80.1444	-26.8269	-57.7013	-59.7703	-57.6832	-57.6562	-57.5568	-57.6092	-57.6168	-57.7029	-57.7673	-58.0184	-58.3094
$\mathcal{V}$	0.2941***	0.2941***	-0.5044***	0.2602***	0.2300***	0.2597***	0.2592***	0.2579***	0.2562***	0.2535***	0.2530***	0.2525***	0.2431***	0.2360***
	-19.2531	-19.2531	-18.2379	-14.8485	-12.7094	-14.8224	-14.7927	-14.7169	-14.6263	-14.4804	-14.4518	-14.4276	-13.8831	-13.5033
c	36.8366***	36.8366***	22.6011***	30.1933***	31.8407***	30.1811***	30.1664***	30.1218***	30.1326***	30.1198***	30.1671***	30.1989***	30.3380***	30.4359***
	-83.2881	-83.2881	-28.224	-59.5125	-61.5336	-59.4947	-59.468	-59.3696	-59.4242	-59.4345	-59.5226	-59.5889	-59.8464	-60.1445
R^2	0.35	0.35	0.11	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
N	24,798.00	24,798.00	24,798.00	24,798.00	24,617.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	0.0098***	0.0099***	0.0102***	0.0113***	0.0113***	0.0112***	0.0136***	0.0160***	0.0171***	0.0181***	0.0213***	0.0225***	0.0227***	0.0232***
	-6.5394	-6.617	-6.8297	-7.5031	-7.5296	-7.5303	-9.3176	-11.1758	-12.0507	-13.0389	-15.9835	-17.2822	-17.5218	-18.0668
p^{-1}	-136.8449***	-137.1373***	-137.4822***	-139.4155***	-140.2663***	-141.5287***	-150.7604***	-156.5021***	-159.2731***	-161.9809***	-166.8372***	-168.2430***	-167.5362***	-169.1037***
	-58.3321	-58.552	-58.7514	-59.5127	-59.9974	-60.8228	-66.3983	-70.0785	-72.1417	-74.6951	-80.1984	-82.7013	-83.0391	-84.2789
$\mathcal{V}$	0.2282***	0.2176***	0.2084***	0.1917***	0.1832***	0.1852***	0.1952***	0.1768***	0.1513***	0.1350***	0.0684***	0.0248	0.0161	0.0026
	-13.0665	-12.4784	-11.9618	-10.9916	-10.5263	-10.6895	-11.5454	-10.6371	-9.2026	-8.3642	-4.4146	-1.6401	-1.0739	-0.1774
c	30.4260***	30.4903***	30.5647***	30.9837***	31.1717***	31.4493***	33.4601***	34.7060***	35.3092***	35.8981***	36.9516***	37.2572***	37.1043***	37.4436***
	-60.1723	-60.3977	-60.5988	-61.3628	-61.8603	-62.7055	-68.3707	-72.1011	-74.2002	-76.8019	-82.4098	-84.9685	-85.3239	-86.5797
R^2	0.17	0.17	0.17	0.17	0.18	0.18	0.21	0.22	0.24	0.25	0.28	0.3	0.3	0.31
N	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*0.0233****	*0.0229****	*0.0011*	*0.1147****	*0.0923****	*0.0657****	*0.0795****	*0.0846****	*0.0877****	*0.0901****	*0.0850****	*0.0779****	*0.0725****	*0.0676****
	-18.1626	-17.8597	-0.5028	-35.6758	-31.1	-24.5364	-32.5138	-35.7886	-37.4508	-39.1368	-36.9781	-34.3552	-32.4064	-30.833
p^{-1}	-169.0175***	-170.8297***	-227.8104***	-320.9050***	-256.9644***	-237.3746***	-301.7638***	-325.5077***	-335.1413***	-343.5196***	-342.3002***	-334.9370***	-329.7162***	-319.4359***
	-84.5847	-85.4679	-64.3285	-55.2073	-50.4123	-53.7825	-76.935	-86.6094	-90.0855	-94.2971	-94.5293	-93.9676	-93.8148	-92.7874
$\mathcal{V}$	0.0007	0.0115	-0.0369	-0.1941***	-0.2080***	-0.3177***	-0.4343***	-0.4484***	-0.4556***	-0.4505***	-0.4140***	-0.3278***	-0.2476***	-0.2033***
	-0.0455	-0.7697	-1.3813	-4.8683	-5.7449	-9.9104	-15.0378	-16.1722	-16.5915	-16.7154	-15.4469	-12.4069	-9.496	-7.9604
c	37.4256***	37.8228***	50.0126***	69.6175***	55.8977***	51.8389***	65.8230***	70.9895***	73.0953***	74.9200***	74.7393***	73.1975***	72.1005***	69.9017***
	-86.8964	-87.7942	-65.5298	-55.4917	-50.8263	-54.4571	-77.8316	-87.6118	-91.1361	-95.397	-95.7469	-95.2663	-95.1699	-94.1954
R^2	0.31	0.31	0.25	0.17	0.14	0.17	0.29	0.34	0.35	0.37	0.37	0.36	0.36	0.35
N	24,798	24,798	24,617	20,725	22,157	23,260	23,964	24,194	24,248	24,366	24,512	24,562	24,599	24,631

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0647***	0.0571***	0.0528***	0.0493***	0.0364***	0.0309***	0.0284***	0.0255***	0.0212***	0.0217***	0.0215***	0.0215***	0.0214***	0.0213***
	-29.9414	-27.5716	-26.0101	-24.6406	-19.8966	-18.0593	-17.53	-16.4636	-15.1833	-16.4355	-16.6419	-16.8547	-17.1326	-17.1128
p^{-1}	-311.6335***	-297.6820***	-292.6957***	-288.1331***	-258.6638***	-244.1310***	-236.2962***	-226.0912***	-205.1287***	-197.6167***	-192.8266***	-189.9455***	-188.2078***	-188.4121***
	-91.9193	-91.889	-92.1614	-92.2593	-90.5594	-91.5912	-93.3841	-93.5983	-94.0875	-96.1097	-95.6353	-95.6654	-96.4761	-97.0875
$\mathcal{V}$	-0.1792***	-0.0962***	-0.0667***	-0.0424*	-0.0360*	-0.0201	-0.0288	-0.0195	-0.0195	-0.0347**	-0.0321**	-0.0408***	-0.0410***	-0.0310**
	-7.1223	-3.9942	-2.8236	-1.8235	-1.691	-1.0119	-1.531	-1.0855	-1.2042	-2.266	-2.1358	-2.7587	-2.8241	-2.1429
c	68.2270***	65.2483***	64.1917***	63.2211***	56.8851***	53.7504***	52.0590***	49.8522***	45.3129***	43.6764***	42.6336***	42.0068***	41.6290***	41.6740***
	-93.3599	-93.4405	-93.7716	-93.9172	-92.3991	-93.5589	-95.4518	-95.7505	-96.4273	-98.5514	-98.1015	-98.1561	-99.0035	-99.6306
R^2	0.34	0.34	0.34	0.34	0.34	0.35	0.36	0.37	0.37	0.38	0.38	0.38	0.38	0.39
N	24,651	24,705	24,715	24,737	24,776	24,794	24,796	24,798	24,798	24,798	24,798	24,798	24,798	24,798

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the fifth-order autocorrelation of the volume weighted average spreads for the five years to maturity group ($\tilde{T}$ smaller than five years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average fifth-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{S}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{S}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{S}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{S}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{S}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{S}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 25,481 daily observations in the five years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.

Table C.184: The Tenth-order Spreads Autocorrelations Regression Results (Five-year Tenor)

	Bid-Ask Spread	*Quote Half Spread*	*Quoted Depth*	*Effective Spread*	*Realized Spread*									
					Tick	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*
$\tilde{T}$	-0.0686***	-0.0686***	-0.0427***	-0.0077***	-0.0045***	-0.0077***	-0.0078***	-0.0080***	-0.0084***	-0.0087***	-0.0089***	-0.0091***	-0.0098***	-0.0104***
	-35.4823	-35.4823	-15.3845	-4.6831	-2.721	-4.7074	-4.7616	-4.9325	-5.1279	-5.3252	-5.4947	-5.6065	-6.0707	-6.4295
p^{-1}	-297.7730***	-297.7730***	-181.1843***	-252.3309***	-256.8050***	-252.2543***	-252.1093***	-251.6568***	-251.1555***	-250.6754***	-250.2149***	-249.8977***	-248.4882***	-247.4639***
	-98.759	-98.759	-41.8812	-99.0012	-99.9772	-98.9976	-98.9833	-98.9264	-98.8303	-98.7484	-98.5778	-98.5453	-98.2283	-98.156
$\mathcal{V}$	0.5296***	0.5296***	-0.1267***	0.5584***	0.5225***	0.5580***	0.5570***	0.5541***	0.5519***	0.5487***	0.5462***	0.5433***	0.5269***	0.5097***
	-23.5948	-23.5948	-3.9328	-29.4279	-26.9894	-29.4156	-29.3744	-29.2594	-29.1702	-29.0363	-28.9039	-28.7796	-27.9781	-27.1552
c	65.9219***	65.9219***	40.3209***	55.4263***	56.3835***	55.4098***	55.3787***	55.2816***	55.1739***	55.0709***	54.9720***	54.9037***	54.6005***	54.3801***
	-101.4364	-101.4364	-43.2416	-100.8923	-101.8541	-100.8894	-100.8762	-100.8224	-100.7287	-100.6498	-100.48	-100.4496	-100.1383	-100.0732
R^2	0.5	0.5	0.18	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
N	24,798.00	24,798.00	24,798.00	24,798.00	24,617.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00	24,798.00

	Realized Spread													
	100ms	*150ms*	*200ms*	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*
$\tilde{T}$	-0.0108***	-0.0111***	-0.0112***	-0.0108***	-0.0103***	-0.0098***	-0.0041**	-0.0018	-0.0034**	-0.0066***	-0.0079***	-0.0075***	-0.0070***	-0.0077***
	-6.7023	-6.9243	-6.9886	-6.7691	-6.4437	-6.1644	-2.4966	-1.1077	-2.0455	-3.9902	-4.8682	-4.6915	-4.4003	-4.8701
p^{-1}	-246.5528***	-245.5311***	-244.7125***	-244.2772***	-245.4927***	-246.5048***	-259.8286***	-267.2210***	-266.6059***	-263.0288***	-257.7972***	-254.5981***	-251.2754***	-248.1493***
	-98.0124	-98.0737	-98.0439	-98.2836	-98.8025	-98.9323	-101.7874	-103.3646	-103.2356	-102.4471	-102.34	-101.7496	-101.3984	-100.7102
$\mathcal{V}$	0.4953***	0.4715***	0.4530***	0.3979***	0.3711***	0.3497***	0.2710***	0.2137***	0.1767***	0.1548***	0.1083***	0.0852***	0.0649***	0.0525***
	-26.4501	-25.2973	-24.3771	-21.5024	-20.0639	-18.8529	-14.2595	-11.1025	-9.1898	-8.0977	-5.7731	-4.5717	-3.5157	-2.8627
c	54.1838***	53.9630***	53.7851***	53.6892***	53.9523***	54.1722***	57.0490***	58.6480***	58.5222***	57.7605***	56.6302***	55.9342***	55.2096***	54.5341***
	-99.934	-100.0034	-99.9767	-100.2206	-100.7422	-100.87	-103.6878	-105.2512	-105.1363	-104.3757	-104.3009	-103.7117	-103.3637	-102.6836
R^2	0.4	0.41	0.41	0.41	0.42	0.42	0.43	0.44	0.44	0.45	0.45	0.45	0.45	0.45
N	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798	24,798

	Realized Spread		*Adverse Selection*											
	1500sec	*1800sec*	*Tick*	*1ms*	*2ms*	*5ms*	*10ms*	*15ms*	*20ms*	*25ms*	*50ms*	*75ms*	*100ms*	*150ms*
$\tilde{T}$	*-0.0072****	*-0.0074****	*-0.0161****	*0.0161****	*0.0069****	*0.0063****	*0.0079****	*0.0108****	*0.0135****	*0.0160****	*0.0225****	*0.0244****	*0.0253****	*0.0265****
	-4.5926	-4.6847	-10.3696	-13.09	-6.0616	-4.9448	-5.3667	-6.7725	-8.0949	-9.4303	-12.5023	-13.092	-13.3759	-13.7558
p^{-1}	-247.0894***	-245.7561***	-129.0729***	-64.6733***	-61.5118***	-91.1975***	-129.7975***	-157.4713***	-181.9671***	-200.3770***	-259.2297***	-284.0576***	-298.5785***	-314.1818***
	-100.3791	-100.0896	-53.6068	-29.16	-31.646	-43.4711	-54.7425	-62.1255	-68.7832	-74.8283	-91.5116	-96.9446	-100.2856	-103.7043
$\mathcal{V}$	0.0469**	0.0448**	0.0137	0.0283*	0.0134	-0.0708***	-0.1430***	-0.1603***	-0.1748***	-0.1863***	-0.1462***	-0.0929***	-0.0578***	-0.0186
	-2.5609	-2.4526	-0.7565	-1.8619	-0.9721	-4.6445	-8.1904	-8.5733	-8.9516	-9.4055	-6.9729	-4.2781	-2.6172	-0.8262
c	54.3013***	54.0120***	28.3896***	14.0654***	13.4358***	19.9405***	28.3887***	34.4322***	39.7814***	43.7987***	56.6550***	62.0854***	65.2606***	68.6735***
	-102.3461	-102.058	-54.7109	-29.3834	-32.0372	-44.0702	-55.5297	-63.0083	-69.7499	-75.8699	-92.7783	-98.2958	-101.686	-105.158
R^2	0.45	0.45	0.22	0.05	0.07	0.13	0.2	0.24	0.28	0.31	0.38	0.4	0.41	0.43
N	24,798	24,798	24,617	20,725	22,157	23,260	23,964	24,194	24,248	24,366	24,512	24,562	24,599	24,631

	Adverse Selection													
	200ms	*500ms*	*750ms*	*1sec*	*5sec*	*15sec*	*30sec*	*60sec*	*300sec*	*600sec*	*900sec*	*1200sec*	*1500sec*	*1800sec*
$\tilde{T}$	0.0278***	0.0319***	0.0327***	0.0327***	0.0240***	0.0155***	0.0089***	0.0021	-0.0064***	-0.0078***	-0.0076***	-0.0088***	-0.0088***	-0.0089***
	-14.2744	-16.1352	-16.5421	-16.5188	-12.4265	-8.3017	-4.9009	-1.1864	-3.9044	-4.8484	-4.7512	-5.5411	-5.5888	-5.6637
p^{-1}	-323.4200***	-347.5735***	-353.8570***	-357.0039***	-350.8730***	-336.0845***	-323.4205***	-308.3526***	-278.8896***	-268.6471***	-263.2107***	-258.1141***	-255.1004***	-254.3583***
	-105.8741	-112.2487	-114.3958	-115.5185	-116.498	-115.519	-113.9358	-112.444	-109.1769	-106.7818	-105.9724	-104.5894	-103.7394	-103.7528
$\mathcal{V}$	0.0037	0.0687***	0.0680***	0.0739***	0.0381*	0.0215	0.0144	0.0085	0.0098	0.0234	0.0211	0.0202	0.0131	0.0219
	-0.1611	-2.983	-2.9574	-3.2147	-1.6994	-0.9922	-0.6802	-0.4164	-0.5154	-1.2513	-1.1395	-1.0976	-0.7133	-1.2011
c	70.6907***	75.9568***	77.3310***	78.0217***	76.7492***	73.5735***	70.8478***	67.6011***	61.2281***	59.0046***	57.8192***	56.7164***	56.0611***	55.8993***
	-107.3561	-113.8038	-115.9834	-117.1278	-118.2262	-117.3271	-115.7955	-114.3707	-111.2043	-108.811	-108.0024	-106.6245	-105.771	-105.7871
R^2	0.43	0.45	0.46	0.47	0.48	0.49	0.49	0.49	0.49	0.48	0.48	0.47	0.47	0.47
N	24,651	24,705	24,715	24,737	24,776	24,794	24,796	24,798	24,798	24,798	24,798	24,798	24,798	24,798

*p<0.1; **p<0.05; ***p<0.01

Notes: This table describes the regression results on the tenth-order autocorrelation of the volume weighted average spreads for the five years to maturity group ($\tilde{T}$ smaller than five years). I utilize the following multivariate linear regression model to verify the maturity effects on the price discovery and market quality: $\boldsymbol{Y = c + \tilde{T} + p^{-1} + \mathcal{V}}$, where explanatory variables include the days to maturity ($\tilde{T}$), the inverse of transaction prices (p^{-1}), and the daily volatility ($\mathcal{V}$) is the highest daily transaction price subtracting the lowest daily transaction price. Dependent variables covers the volume weighted average tenth-order autocorrelations of bid-ask spreads ($\Omega^{\tilde{\mathscr{S}}^Q}$), quoted half-spreads ($\Omega^{\tilde{\mathscr{S}}^{Q^{1/2}}}$), quoted depth ($\Omega^{\tilde{\mathscr{S}}^D}$), effective half-spreads ($\Omega^{\tilde{\mathscr{S}}^E}$), realized spreads ($\Omega^{\tilde{\mathscr{S}}^R}$), and adverse selection ($\Omega^{\tilde{\mathscr{S}}^{AS}}$). Both realized spreads autocorrelations and adverse selection autocorrelations are measured at 26 varying time intervals, including tick-by-tick, 1 ms, 2 ms, 5 ms, 10 ms, 15 ms, 20 ms, 25 ms, 50 ms, 75 ms, 100 ms, 150 ms, 200 ms, 500 ms, 750 ms, 1 sec, 5 sec, 15 sec, 30 sec, 60 sec, 300 sec, 600 sec, 900 sec, 1,200 sec, 1,500 sec, and 1,800 sec. It worth noting that the days to maturity and the inverse of price are taken the logarithm value. All variables are the daily volume-weighted average results across five level order book data, with 25,481 daily observations in the five years group across 40 Eurodollar contracts. The asterisks $***$, $**$, and $*$ denote 1%, 5%, and 10% statistical significance of the coefficients of days to maturity. The t-statistics are presented in parentheses.