Quality of Corporate Financial Reporting: A Longitudinal Study of the Listed Companies in Bangladesh

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A Longitudinal Study of the Listed Companies in Bangladesh

By

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Dedication

To my parents, my wife, and my daughter:

Soumitri Adrita Das

Thank you for your sacrifice, love, and support.

Integrity Declaration

I hereby declare that the material contained in this thesis has not been previously submitted for a degree in this or any other university. I further declare that this thesis is solely based on my own research.

Mr. Sumon Das

Acknowledgement

All praise be to God, the Almighty, for having made everything possible by giving me strength and courage to do this work.

Although my name is on the cover, this thesis is the result of years of hard work by many people, without whose support, it would not have been possible. My sincerest heartfelt gratitude to my supervisory team, **Professor Rob Dixon** and **Dr. Amir Michael** for their unwavering support, both academically and personally, during the course of my degree. They were always friendly and considerate. This thesis is the results of their guidance, encouragement, advice and constructive criticism. They were always there, with their smiling face, to listen to my limitless queries and frustrations and provided me motivation, insightful comments and directions over the period of study. The comments and the valuable feedback of the upgrade panel are also gratefully acknowledged.

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Abstract

The current study investigates the quality of corporate reporting practices of the listed companies in Bangladesh. It measure quality through the quality of mandatory reporting, the quality of voluntary reporting and the timeliness of reporting by using panel data from 2004 to 2010. The final sample consists of 123 companies with 861 firm year observations listed in the Dhaka Stock Exchange, Bangladesh.

In order to measure the mandatory reporting quality the current study determines the extent as well as the determinants of corporate mandatory disclosure in total and its categories. This study uses seven self constructed checklists (items ranging from 148 to 179) to measure the extent of mandatory reporting. The study presents average mandatory reporting at 76.42%. These results also indicate that mandatory reporting has significant positive association with firm size, firm profitability (ROA), and multinational parents, while it has significant negative association with ownerships. However, there is non-significant relationship between mandatory reporting and firm profitability (ROE), audit firm size and industry category.

For voluntary reporting both a weighted and unweighted index has been used. A self constructed voluntary reporting checklist consisting of 97 items has been prepared. A questionnaire survey has been conducted to determine the weight. A low level of voluntary reporting has been observed over the seven years, standing at 28.56%.There is a gradual increase in the average score. A significant positive relationship has been observed between voluntary reporting and firm size, firm liquidity, percentage of independent director and board structure, while there is a significant negative association with market categories, company age and number of independent director. However, there is a non significant relationship of voluntary reporting with audit committee, and board size.

The study determines the extent of timeliness through calculating audit lag, preliminary lag and total reporting lag. It also examines the determinants of timeliness for all three categories. Empirical finding indicate that the sample companies need about 110 days to complete the audit process whereas average reporting lag is 170 days for the entire period. Finally total reporting lag time has a significant positive association with earning, financial condition, company's age and industry classification, while it has significant negative association with firm size and audit firm size. However, audit opinion type has weak or no association with total reporting lag time.

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1.1 Introduction:

Disclosure represents one of the pillars of corporate governance as different stakeholders use corporate reporting in their decision-making process (Shehata 2014). Worldwide, several scandals have occurred due to the absence of, or improper, corporate reporting. It is used to reduce information asymmetry, thus increasing the exchange of company information to stakeholders who do not have ease of access to company information; corporate reporting increases accountability, in a time of growing demand for companies to become more transparent (Bhasin and Reddy 2011).

This chapter provides the foundation for the research reported in this thesis. First it discusses the background of the study and defines quality of reporting. Then it provides motivation and rational for the research. After that it focuses on aims and objectives. It also includes a summary of the methodology applied, as well as the structure of the thesis presented.

1.2 Background of the Study:

In the corporate sector, accountability and transparency is the slogan of the day. Communication of economic information to the interest groups is of greater importance due to the increasing control of economic activities by the corporate sector. Adequate disclosure is the most important way of meeting the information needs of diversely interested groups and enabling rational decision making. The aim of reporting is to communicate economic messages resulting from business decisions to the users from time to time: this ensures transparency and accountability. Thus corporate reporting is a total communication system between a company and users and it is the most direct, least expensive, most timely and fair method of reaching all shareholders and other, present and potential users (Tiwari 2010).

Currently, there is an increasing global concern about the issue of corporate governance in general and disclosure and transparency in particular. A key reason for such concern is the scandals in a number of developed markets around the world. Disclosure and transparency have been identified as a cause of these scandals. This raises questions about the possibility of future similar scandals in emerging capital markets that arguably lack institutions efficient enough to absorb the expected negative effects. Moreover, reporting is identified as one of the biggest challenges facing the implementation of corporate governance especially in developing countries (CIPE 2003).

Corporate reporting is a channel through which the existing and potential shareholders can obtain information regarding the firm. It is also the connection between corporate insiders and capital market investors (Omran and Marwa 2013). Disclosure encompasses the entire area of financial reporting. Financial reporting is by far the most effective and the most widely used medium by which management communicates to corporate stakeholders: it reports results as well as the latest financial position of the enterprise. Most users, both external and internal, depend heavily on the financial information contained in the annual reports when making their economic decisions concerning the enterprise.

Williams (2008) described financial disclosures as: providing quantitative information in the financial statements; business segment information; financial review information; foreign currency information; and stock price information. On the other hand, non financial information was the details about directors, employees, or intangible assets (Williams 2008). Disclosure is generally made in company annual reports through the statements or accompanying notes. Although other means of releasing information, such as medial release, interim reporting, letters to shareholders, and employee reports, are used by the companies, the annual report is considered to be the major source of information to various user-groups (Marston and Shrives 1991).

Financial reporting disclosure may be either mandatory or voluntary. Mandatory reporting may arise from a number of sources, such as company law, stock exchange listing requirements, professional promulgations, and any other relevant regulatory requirement. Voluntary reporting in the annual report refers to the information beyond the required content in the financial statements (Kumar et al. 2008) or the discretionary release of financial and non-financial information through annual reports over and above the mandatory requirements (Barako et al. 2006. p. 114). In other words, voluntary reporting represents disclosure in excess of mandatory disclosure, and in efficient markets is likely to be provided where the marginal benefits to the provider exceed the marginal costs (Baba 2011).

Since voluntary reporting is subject to managerial discretion, there is a need to align the information-disclosure tendencies of firms with the interests of shareholders. While mandated regulation of disclosure is a possible solution, management would have less discretion in disclosing selectively, and there is insufficient evidence on the benefits of regulating disclosure (Healy and Palepu 2001). Therefore, if there is new information, it cannot remain undisclosed as it should be disclosed either mandatory or voluntary (Al akra et al. 2010; Hassan 2013 and Omran and Marwa 2013). The majority of the research so far has focused on investigating voluntary rather than mandatory disclosure (Einhorn 2005), even though both mandatory and voluntary disclosures are potentially vital (Omar and Simon 2011).

Establishing the confidence of investors requires reliable and timely accounting information. Timeliness of reports is recognized, by the accounting profession, the users of accounting information, and the regulatory and professional agencies, as an important characteristic of financial accounting information (Al-Ajmi 2008). Timely reporting helps to mitigate, or reduce the level of, insider trading, leaks and rumors in the market (Owusu-Ansah 2000). As a result, most stock exchanges demand, from their listed companies, the prompt release to the markets of audited financial reports.

Reporting quality refers to the compliance of a company to all the disclosures required by the GAAP and the informativeness of the voluntary disclosures which are presented in the annual report. In effect, even if regulation of disclosure is effective, there is still concern about which disclosures should be mandated, and which should be voluntary (Cheng and Courtenay 2006). Thus, there is a need for an internal, as well as an external, monitoring mechanism to ensure sufficient disclosure.

Although Bangladesh inherited its internal company law from the British, it has yet to conform to the requirements of the existing law**.** In 1994 the 1913 Companies Act was replaced by the 1994 Companies Act. To ensure full, fair and adequate disclosure of information in the annual reports of companies in Bangladesh, financial reporting and disclosure are regulated by a number of regulatory bodies and acts. However, several empirical studies (Alam 1989; Parry and Groves 1990; Ahmed and Nicholls 1994; Karim 1995; and Karim et al. 1996, Akhtaruddin 2005) observed that companies do not comply with the requirements set by regulatory bodies and acts in Bangladesh. They also found that the rate of compliance with mandatory disclosure requirements is low. Moreover, reviewing the Companies Act 1994 and of the regulations issued by SEC indicates that there has not been any comprehensive policy framework for ensuring the quality of reporting. Information needs of users and the extent to which companies meets their needs are not available.

Moreover, the act, for instance, requires the listed companies to hold regular annual general meetings (AGMs), but most of them do not fulfill this statutory requirement (Uddin and Choudhury 2008 and Reaz and Arun 2006). In addition, when AGM(s) are held, these are characterized by domination by small groups of people, poor attendance and discussion of trivial matters (Siddiqui 2010; Uddin and Choudhury 2008). As such, in the absence of market-based monitoring and control measures, ownership based monitoring and controls have been established in Bangladesh as a core governance mechanism (Farooque et al. 2007).

1.3 Quality of Corporate Financial Reporting:

Quality is not readily measurable (Imhoff 1992). Financial reporting quality is an intangible concept in the accounting literature (Baba 2011). The literature suggests that the quality of reporting in corporate reports can be measured to determine whether the information contained in corporate report is: 1) adequate for a defined purpose (Buzby 1974b, p. 428-429); 2) informative--i.e., whether the reported accounting earnings numbers suggest the direction of share prices and stock returns (Alford et al. 1993, p. 210-213), or the direction of earnings (Imhoff 1992, p. 104-116; Lang and Lundholm 1993, p.252); 3) timely i.e., whether the time of release of the corporate report of a firm is affected by good or bad news or by the qualification or non-qualification of audit reports (Courtis 1976, p.48-50; Whittred 1980, p.624); 4) understandable/readable i.e., whether the corporate report communicates effectively with its reader (Smith and Smith 1971; Jones 1988; Smith and Richard 1992) and whether the level of communication is related to corporate performance or risk-return relationships (Courtis 1986, p. 291-292), and 5) comprehensive i.e., whether detailed information is provided (Barrett 1976, p. 11-21).

There is little harmony among researchers about how best to measure financial reporting quality (Dechow et al. 2010). Each reporting quality (adequacy, informativeness, timeliness, understandability or readability, and comprehensiveness) is a proxy for reporting and refers to a standard of reporting excellence, which can be measured along a range from poor to excellent. For example, *adequacy* is used when the desire is to determine whether each corporate report meets, say, a set of minimum standards of reporting; these could be compliance with accounting standards and rules or the information needs of a particular group of users. The desire may also be to examine the quality of reporting of several information items in a corporate report examining its role as a general-purpose document. On this basis, Imhoff (1992, p. 101) defined disclosure quality as an evaluator's "overall subjective assessment of the relevance, reliability, and comparability of the accounting data produced by the reporting entity--in essence, the relative usefulness of the data, and the analyses based on the data."

In this study, the quality of reporting is defined by the quality of mandatory reporting, the quality of voluntary reporting and the timeliness of reporting. That means the quality of reporting is comprised of the degree of compliance with mandatory requirements (mandatory reporting), disclosure in addition to mandatory requirements (voluntary reporting) and timeliness of disclosing information. So, the current study considers adequacy, comprehensiveness and timeliness as a measure of quality. To determine the quality of reporting, the current study measures the extent of reporting over the year as well as factors affecting such reporting practice. It is widely accepted that disclosing more information may improve the quality of the annual report (Healy and Palepu 2001; and Watson et al. 2002). Thus, the quality of reporting would be expected to increase if more details were given on each information item of interest. No previous studies in Bangladesh consider whether the reporting pattern improving or not. So, this study is the journey towards the measuring of quality.

1.4 Motivation of the Study:

Financial reporting underpins accountability, and is a process to provide information about the financial position that is useful to a wide range of users to make a diversity of decisions. Users need to know the status of the past performance of the businesses to predict the current or future capacity of the entity. To be transparent and more accountable to stakeholders, companies need to provide detailed information. Following the Enron, WorldCom, Sunbeam, Parmalat, Global Crossing, Halliburton, Nicor Energy and many other cases of real life corporate accounting scandals which preceded the ongoing global recession originating in 2007, there has been a wider recognition of the importance of corporate transparency and disclosure.

In Bangladesh, the stock market crashes in 1996 and 2011 also revealed that the traditional reporting culture does not provide enough information to investors and insider information has become the key to gain abnormal returns (Nurunnabi et al. 2012). Financial reporting is blamed in those instances as there are ostensible claims that the reported financial information could have limited the damage to some extent, although not entirely. In some instances, financial reporting can be instrumental in committing financial fraud: in the past financial reporting regulations have been abused and loopholes have been exploited for gain. After being badly damaged by the devastating effect of the financial disasters in Bangladesh, market regulators and other users of corporate financial information are now clamouring for quality financial reporting.

Although disclosure changes over time, most of the studies relating to reporting in Bangladesh consider either a single period of time (for example Akhtaruddin 2005; Karim and Jamal 2005) or two particular points of time (Hasan et al. 2008). Moreover, previous studies relating to Bangladesh focused on particular sectors such as the financial institutions (Das and Das 2008, Azim et al. 2009, Khan et al. 2009), non financial institution **(**Akhtaruddin 2005**,** Rahman and Muktakin 2005. Hasan et al. 2013, and Muttakin and Khan 2014**)** and some only considered the banking sector (Sobhani et al. 2012). In addition, most of the studies concentrated on a specific part of reporting. For example Imam (2000), Belal (2001), Belal and Owen (2007), Momin and Hossain (2011) focused on social performance; Hossain (2002), Bala and Yosuf (2003), Rahman and Muktakin (2005), Islam and Deegan (2008) concentrated on environmental reporting; Karim and Jamal 2005, Imam et al. 2001 focused on audit delay, and Ahmed (2003) highlighted only reporting lag. Some of the studies used small sample sizes (for example-Rahman and Muktakin 2005, 4%; Belal 2001, 15%; Imam 2000, 19.30%; Bose 2006, case study).

There is no single study in Bangladesh that considers mandatory reporting, voluntary reporting and timeliness of reporting focusing on all sectors and using a panel data set to provide information about reporting quality. That is why the total reporting pattern remains unrevealed. Moreover, from previous studies it is difficult to conclude whether the reporting pattern of Bangladeshi companies is improving or not. These gaps also motivate the researcher to conduct further study to answer these unanswered questions.

In order to improve the quality and quantity of reporting, it is important to study not only the current extent and quality of disclosure to determine best practice and detect trends, but also to study the factors influencing corporate reporting (Rizk 2006). This research, therefore, investigates the quality of reporting practices of the listed companies in Bangladesh by using panel data from seven years. The study is divided into three empirical models. Empirical model one determines the extent as well as determinants of corporate mandatory disclosure. Empirical model two focuses on the level of voluntary disclosure practices followed by listed companies; it also determines the factors affecting the voluntary disclosure practices of Bangladesh. In the third and final empirical model the study determines the reporting lag of corporate annual reports. At the same time, it also tries to find out the factors affecting the reporting delay of a company's annual report. All the three empirical models are based on a panel date set to discover whether the reporting patterns of Bangladeshi listed companies have improved over time.

1.5 Rational of Selecting Bangladesh:

This study has chosen Bangladeshi listed companies for a variety of reasons. Firstly, Bangladesh is a developing country at a transitional stage: major reforms of corporate governance started in 2006. As a result, accounting information in annual reports needs to be researched and understood so that it can better meet users’ needs. Moreover, it helps to identify whether regulatory reform has any impact on the quality of reporting at the firm-specific level of developing countries like Bangladesh.

Secondly, there is little research relating to corporate reporting practices and, in particular, no previous study has been undertaken in Bangladesh covering the total reporting pattern including mandatory reporting, voluntary reporting and timeliness of reporting using a panel data set. The current study can contribute to the reduction of this existing gap in the literature relating to Bangladesh as a developing country.

Thirdly, Bangladesh has drawn global attention in last few years as one of the fastest growing developing country with a rapidly developing capitalist economy (UNPF 2009), and some of the hottest emerging markets (Stevenson 2008), “Frontier Five” countries (Bloomberg News 2008 as cited Abdullah et al. 2011), “Next Eleven” nations (BOI Handbook 2007).

Fourthly, in February, 2006 the Bangladesh Securities and Exchange Commission introduced the first corporate governance code named the Corporate Governance Code 2006 which includes various recommendations. However, the effectiveness of the recommendations of the code is still empirically untested.

Fifthly, as the decision-making process is a critical issue, the quality of this process is dependent to a great extent on the reliability and validity of the information provided. Moreover, the poor levels of corporate disclosure have been identified as one of the factors that have not only contributed to the Asian financial crisis but are also a stumbling block in the regional economic recovery (Berardino 2001 as cited in Gul and Leung 2004). So, it is essential to have a diagnostic view of the disclosure practices in the emerging capital markets of Bangladesh.

Finally, since the researcher is based in Bangladesh, it might be more relevant to conduct this research using a sample of firms from the same country as it the researcher is familiar with the country’s relevant legislation, culture and reporting environment.

1.6 Objectives of the Study:

The present study will embark upon a number of objectives. Each objective will be achieved by answering a number of research question(s) (RQs). The objectives along with RQs are as follows:

Objective 1

To assess the quality of financial reporting and to determine the extent to which companies meet the information needs of users and comply with the regulatory requirements of Bangladesh.

- **RQ 1:** To what extent do Bangladeshi companies comply with the requirements of mandatory reporting?
- **RQ 2:** Do Bangladeshi companies disclose information more than the minimum required by accounting standards and regulatory requirements?

Objective 2

To assess the timeliness of financial reporting and determine the audit lag; preliminary lag and total lag of Bangladeshi Companies.

RQ 3: To what extent do auditors delay in giving their opinion, management delay to announce annual general meeting date and companies delay in disclosing financial reports?

Objective 3

To identify the determinants to be used for assessing the quality of financial reporting.

RQ 4: Is there any association of company characteristics, corporate governance characteristics and board characteristics with the extent of mandatory reporting, voluntary reporting and timeliness of reporting?

Objective 4

To evaluate whether the quality of reporting in Bangladesh has improved over the time.

RQ 5: Is there any significant difference in the extent of corporate reporting over the period of time and especially before and after the Corporate Governance Code of 2006?

1.7 Research Contribution to the Knowledge:

The current study can be distinguished from prior studies in the following areas-

To the best of knowledge, there is no prior empirical study, at the time of conducting this study, concerning the quality of reporting through mandatory, voluntary and timeliness of reporting using panel data set for seven years in the context of Bangladesh. So, it can be argued that the current study provides new evidence from a country which is important for the South Asian economy.

In order to improve the quality of corporate reporting, it is important to study not only the current extent and quality of disclosure to determine best practice and detect trends, but also to study the factors influencing corporate reporting. This research, therefore, seeks to explore three separate sets of factors that are related to mandatory reporting, voluntary reporting and timeliness of reporting among listed companies in Bangladesh via publicised documents and data sources.

To measure the extent of reporting self constructed checklists have been used. For mandatory disclosure, this study used seven checklists (items ranging from 148 to 179) based on particular year acts and laws relating to mandatory reporting: this is new for disclosure studies. In the case of voluntary reporting, the checklist contains 97 items focusing on corporate social reporting, corporate environmental reporting and corporate sustainability reporting along with the total voluntary reporting using both a weighted and unweighted index. It helps to identify the user preference and outcome by two methods and provides new evidence from a first- fast growing developing country like Bangladesh.

To identify the specific area of long standing lag problems in Bangladesh, audit lag, preliminary lag and total reporting lag has been determined from the annual report. The current study uses 861 firm year observations and measures the trend of reporting lag year by year: it pays attention to the situation before and after the corporate governance code of 2006. Moreover, the present study contributes to the literature by discussing categories and sector wise.

The study addresses reporting practices over a period of considerable change in the legal environment in general and the capital market in particular. The period of the study has witnessed, among other changes, the first issuance of a corporate governance code, adaptation of IAS and IFRS and major amendments of various laws.

1.8 Research Methodology:

The first two research objectives will be answered by applying a descriptive analysis of mandatory reporting, voluntary reporting, timeliness of reporting and its categories in the annual reports of the listed companies over the period of the study. The results of the checklist, the research instrument, will be analyzed in total and in different categories. In line with the objective 3, the study empirically examines the association between the extent of reporting and three different set of determinants; 7 for mandatory, 9 for voluntary and 8 for timeliness. Also in order to fulfill the research question 4, these results will be analysed year by year to outline the trend of reporting over the examined period.

To measures the extent of reporting and its categories in the corporate annual report, two self constructed checklists have been used one for mandatory disclosure (179 items) and another for voluntary disclosure (97 items). Three components are used to measure timeliness: audit lag, preliminary lag and total reporting lag. These have been determined from annual reports. The period of study covers the seven years from 2004 to 2010. The final sample consists of 123 companies with 861 firm year observations listed in the Dhaka Stock Exchange, Bangladesh. A questionnaire survey has been conducted to determine the weight of the voluntary disclosure index.

Descriptive statistics are used to measure the extent and trend of reporting. Bivariate analysis is used to determine the association between dependent and independent variables. In this study; linearity, independence and normality of error, homoscedasticity and multicollinearity are checked to justify the regression before multivariate analysis. The Hausman test is used to determine the primary model. As the examined data is not normally distributed and needs to be tested using a non- parametric test, robustness test is used to overcome this problem. Moreover, a sensitivity analysis is applied to examine the sensitivity of the results towards changing the statistical test**:** this ensures the reliability of the driven results.

1.9 Structure of the Thesis:

This section presents an overview of the structure of the current study. Chapter two reviews the legal framework of reporting in Bangladesh. It starts with general information about Bangladesh. Then it provides a summary of the financial systems. It also highlights the legal environment for reporting, majors' legislation relating to reporting, and present obstacles of corporate reporting. A review of the corporate governance code and its recent notification has been also discussed. It also discusses the consequence of non compliance and finally, in the conclusion, the implication of the legal framework.

Chapter three reviews the financial reporting literature. It divides the corporate reporting into mandatory reporting, voluntary reporting and timeliness of reporting. The literature of quality of reporting is also outlined. Previous disclosure studies are reviewed on three sub-sections: literature related to developed countries, literature related to developing countries and prior corporate reporting studies in the context of Bangladesh. This chapter also outlines the gap in the literature to which the current study contributes.

Chapter four outlines the theoretical framework used in the current study. It critically reviews the different theories that can be used to explain the mandatory disclosure requirements, voluntary reporting and timeliness of reporting. Then it makes a relationship among the theories. After that, based on this critical review and intregated relationships, a theoretical framework for the current study has been developed. At the end of chapter it makes clear that no single theory can fully explain the current study that includes mandatory reporting, voluntary reporting and timeliness of reporting and why Agency theory, Stakeholder theory, and Signalling theory have been chosen for the study.

Chapter five presents the bridge and articulates the theoretical section with the empirical section of the current study. This chapter starts with research philosophy, research paradigm, research approach, and research design. After that, it represents index construction, data collection and sample size. Then it divides the chapter into three parts: empirical one mandatory reporting, empirical two voluntary reporting and empirical three timeliness of reporting. Each empirical part shows the source and content of the disclosure checklist, variable measurements, determinants and hypothesis development, and regression equation. This chapter ends with the statistical techniques used in the current study's empirical section.

Chapter six aims to answer the research questions: what is the extent of total mandatory disclosure in the annual reports of the listed companies, what the determinants of mandatory disclosure are and how mandatory disclosure practices evolve over time? It starts with a descriptive analysis to the results of the checklist designed to measure the extent of mandatory disclosure and its categories: the dependent variable. It divides the data set into a combined sample and a non financial sample. The second part of this chapter reveals the determinants of mandatory disclosure practices. It starts with a descriptive analysis of the independent variables. Two types of analysis are employed in this part, bivariate and multivariate analyses. It summarises the results of regression diagnostics before choosing the suitable statistical technique. GLS random effect with robust standard error have been employed and GLS fixed effect with robust standard error have been used to add robustness to the results. The chapter ends with a discussion and implication of the results.

Chapter seven's objectives are to determine the extent of voluntary disclosure practice, how it evolves over time and what its determinants are. It starts with a descriptive analysis of the results of the checklist designed to measure the extent of voluntary disclosure and its categories: these include social responsibility reporting, environmental reporting and sustainability reporting: the dependent variable. It uses weighted and unweighted index to determine the extent. The second part of this chapter determines the determinants of voluntary disclosure practices. Bivariate and multivariate analyses have been used. It summarizes the results of regression diagnostics before choosing the suitable statistical technique. GLS random effect with robust standard error have been employed and GLS fixed effect with robust standard error have been used to add robustness to the results. The chapter ends with a discussion of the results and implication thereof.

Chapter eight is the third empirical part of the thesis which is composed of two main parts. The first part is the examination of the level of timeliness of corporate reporting, including audit lag, preliminary lag and total reporting lag of the listed companies of Bangladesh. The second part is the investigation of relationship between timeliness of reporting and its determinants. GLS fixed effect with robust standard error have been employed and GLS random effect with robust standard error have been used to add robustness to the results. The chapter ends with a discussion and implication of the results.

Finally, chapter nine presents a summary of the results and findings of the study and its contribution to the knowledge. In addition, it outlines the implications, limitations and suggests a number of recommendations for future research.

Chapter Two:

Legal Framework of Reporting in Bangladesh

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2.1 Introduction:

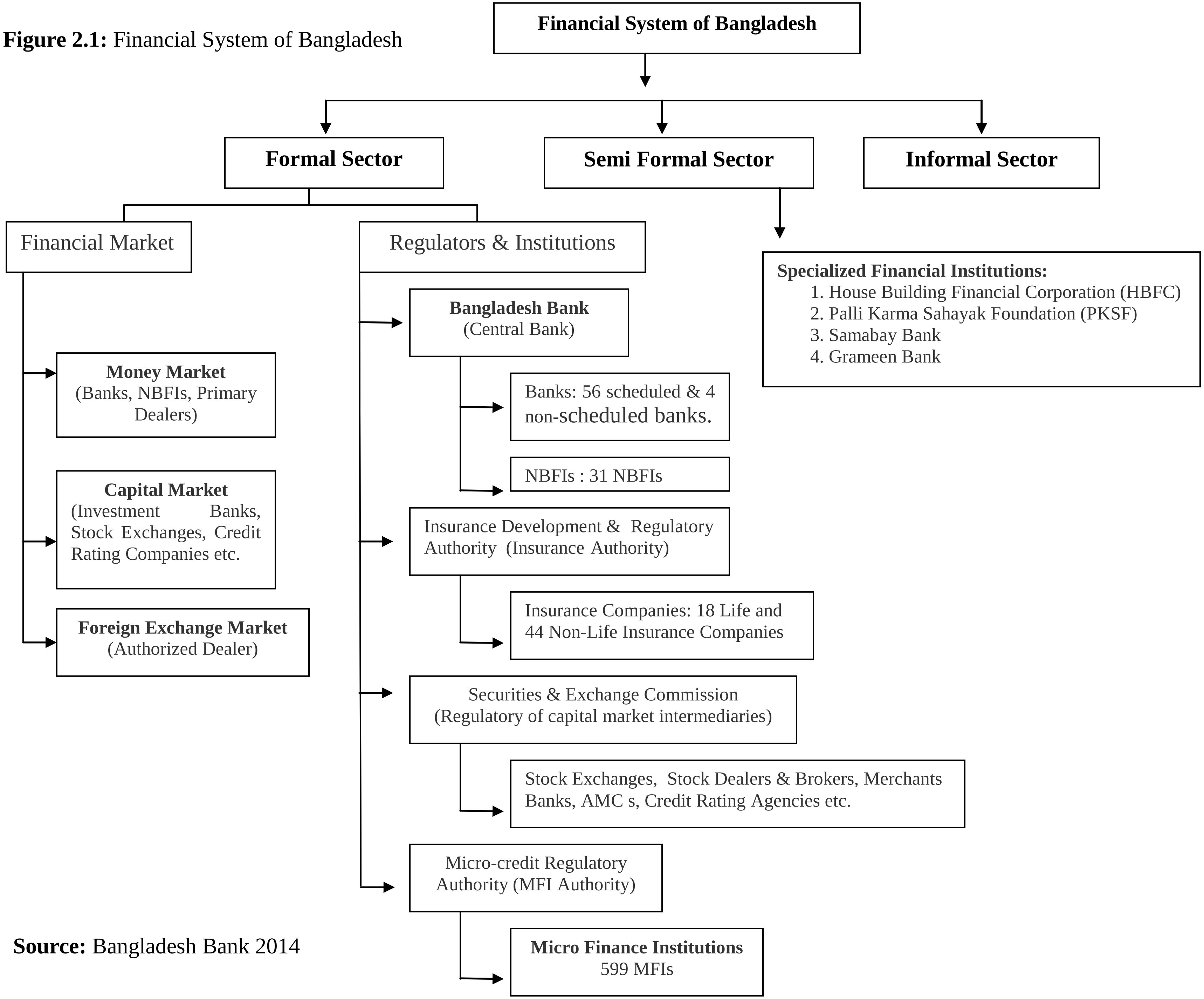
Bangladesh, officially name The People's Republic of Bangladesh, is a small South Asian country bordered by India on the east, west and north, by the Bay of Bengal on the south and a small border strip with Myanmar on the south-east. It has one of the highest densities of population in the world. According to the planning and housing census of 2011, it has a population of about 142319 thousand. The service sector contributes 53.5 % of its GDP industry another 28.2% and 18.3% comes from agriculture (World Bank 2013). The general corporate environment of this country is characterised by poor regulatory frameworks, dependence on bank financing and a lack of effective monitoring (Rahim and Alam 2013). Weak national financial architecture, inadequate transparency and accountability, and a dearth of appropriate policy interventions are among the impediments cited for the country's slow economic development (World Bank 2003).

This chapter starts in 2.2 with the overview of financial systems. After that it considers the legal environment of financial reporting and its major legislation in section 2.3 and 2.4 respectively. Section 2.5 examines the issues relating to present obstacles for corporate reporting. In addition it highlights SEC notification in section 2.6, penalties for non compliance in section 2.7 and finally a conclusion in section 2.8.

2.2 Overview of Financial System of Bangladesh:

The financial system of Bangladesh has three broad fragmented sectors: a) the formal sector, b) the semi-formal sector, and c) the informal sector. The sectors have been categorized in accordance with their degree of regulation. The formal sector includes all regulated institutions including Banks, Non-Bank Financial Institutions (FIs), Insurance Companies, Capital Market Intermediaries like Brokerage Houses and Merchant Banks etc. and finally Micro Finance Institutions (MFIs). The semi formal sector includes those institutions which are regulated but do not fall under the jurisdiction of Central Bank, Insurance Authority, Securities and Exchange Commission or any other enacted financial regulator. This sector is mainly represented by Specialised Financial Institutions like

Figure 2.1: Financial System of Bangladesh



Source: Bangladesh Bank 2014

The House Building Finance Corporation (HBFC), Palli Karma Sahayak Foundation (PKSF), Samabay Bank, Grameen Bank etc., Non Governmental Organizations (NGOs) and discrete government programs. The informal sector includes private intermediaries which are completely unregulated (Bangladesh Bank 2014).

2.3 Legal Environment of Financial Reporting:

Corporate reports generally include information conforming to reporting and disclosure laws: legislation requires them to provide a minimum amount of information to facilitate evaluation of the securities. Every country, in general, has its own regulatory framework that governs disclosure in corporate reports within that country. In Bangladesh, corporate reporting is governed by a number of statutes. For example, companies limited by liabilities are guided by the Companies Act 1994. Bangladesh is a common law country, and much of its corporate legal framework is based on significantly older UK legislation. The current legal framework surrounding corporate entities in Bangladesh include: The Companies Act 1994, Bangladesh Bank Order 1972, The Bank Companies Act 1991, Financial Institutions Act 1993, The Securities and Exchange Ordinance 1969, Securities and Exchange Rules 1987, The Securities and Exchange Commission Act 1993, and The Bankruptcy Act 1997 (BEI 2003, p. 28-29).

The extent and nature of disclosures is influenced through the BAS's and BFRS's. Three regulatory bodies, the ICAB, Bangladesh Securities and Exchange Commission (BSEC), and the Register of Joint Stock Companies provide the framework for corporate disclosures in Bangladesh. There is, however, no one set of generally accepted standards based on these three sources. Again, industries like railways, electricity, insurance, and banks have their own distinct regulations governing disclosures in their annual reports (World Bank 2003).

Like other countries of this region, Bangladesh adopted the Companies Act 1913 of the then British India. This Act was in force in Bangladesh before the promulgation of the Companies Act of 1994, which is largely influenced by the British Companies Act. The Companies Act 1913 required limited public companies to submit an annual balance sheet containing a summary of their capital, liabilities, and assets. But no specific formats were prescribed. Profit and loss accounts were prepared without mentioning the nature of activities in detail. These two statements needed to be audited and presented at the annual general meeting for approval prior to publication. The fundamental weakness of the regulation is that it does not provide any guidelines regarding the contents or how the value of the respective items has been arrived at.

The Companies Act 1994 made major alternations to the financial reporting practices and disclosures of limited liability companies (Ahmed and Kabir 1995). Under the 1994 Act fixed assets are to be shown at cost or valuation. The provisions for depreciation are an annual charge to be disclosed separately. The required disclosures are classified and specified in far more detail and include reserves and the changes that occurred during the year, director's remuneration, commission, tax provision, and the flow of foreign currency. Section 185 of the Companies Act provided mandatory items to be disclosed on the balance sheet and income statement and Section 186 provides a list of information items that must be disclosed in the director's report (GoB 1994). Companies Act 1994 included many provisions, which are mandatory and, some of those are also required by the approved IAS's (Hossain and Taylor 1998).

The accounting profession in Bangladesh is guided by two professional institutes, namely, the Institute of Chartered Accountants of Bangladesh (ICAB) and the Institute of Cost and Management Accountants of Bangladesh (ICMAB). The financial audit is done by members of ICAB and the cost audit by members of ICMAB. However, both are under the control of Bangladesh Ministry of Commerce. The two institutes are run and jointly managed by council members, who are elected internally and representatives from the government, responsible for the development of the accounting profession in Bangladesh. Moreover, the ICAB has been given the sole authority to develop and issue accounting and reporting standards and to monitor their application throughout the country.

The securities market is an important component of a robust financial system. The BSEC regulates capital market intermediaries, including stock exchanges, stock brokers and merchant banks (IMF 2010). The BSEC administer securities market regulation, and exercise a strong influence in regulating disclosure; in particular, it monitors whether companies prepare financial statements in accordance with extant securities market regulations (Ali and Kamran 2007). Moreover, the BSEC governs disclosure in company reports as a part of listing requirements. At the time of independence in 1971, Bangladesh inherited only one stock exchange, the Dhaka Stock Exchange (DSE). It was formed in

1954 and registered as a limited liability company. The Chittagong Stock exchange (CSE), another stock exchange of the country, was set up in 1999 and functions in Chittagong. Both stock exchanges are regulated under the Securities and Exchange Rules 1987 and the Companies Act 1994. However, both the banking system and the stock market are less developed and less efficient in Bangladesh than in East Asia (Beck and Rahman 2006).

It is recognized that IAS's issued by the International Accounting Standards Board (IASB) have made important contributions toward harmonization in accounting and reporting practices in individual countries. The IASB has, however, no authority to enforce the accounting practices of its member countries. The implementation of accounting standards is left to the local accountancy bodies. In countries where professional accounting institutions are not strong, the implementation of accounting standards will not be effective. The professional bodies may persuade the government to amend the law so that the standards issued by the IASB can be adopted. The Institute of chartered Accountants of Bangladesh as a member of this body (IASB) is entrusted with the task of adoption and enforcement of standards in Bangladesh.

As of 15 January 2014, the ICAB adopted 28 IAS and 12 IFRS and renamed it as the BAS (Bangladesh Accounting Standard) and BFRS (Bangladesh Financial Reporting Standards) respectively (ICAB 2014). Like the IASB, the ICAB is, however, recommendatory in nature, as the ICAB has no legislative power to enforce compliance with the disclosure requirements of the accounting standards they issue (Hossain 2000). To ensure the transparency, accountability and good governance in the corporate sector, the Securities and Exchange Commission issued a notification on 29th December 1997 that all listed companies are bound to follow the Accounting Standards adopted by the ICAB as Bangladesh Accounting Standards (BAS's) from February 2000 (BSEC 1997). Thus these accounting standards are mandatory for all companies listed in the Dhaka and Chittagong Stock Exchanges.

All companies in Bangladesh are required to prepare and present audited financial statements to shareholders, the SEC and the Registrar. Some companies also publish additional information on their website. The Registrar of Joint Stock Companies is responsible for registering and collecting the records of companies. The Registrar has certain enforcement and instigative powers under the Companies Act that are rarely used in practice. While all incorporated companies must file annual audited financial statements with the Registrar of Joint Stock Companies, there is no effective enforcement of the timely and accurate filing (Beck and Rahman 2006). The Registrar should undertake reforms to allow it to better fulfil its legal obligations and improve the disclosure of corporate control (World Bank 2010).

In the last few years, the authorities undertook a series of reforms of the supervisory and prudential framework. Nevertheless, the financial system continues to be hampered by the fragile institutional and operating environment that is contributing to poor performance and has often triggered solvency issues (IMF 2010). The legal and regulatory framework for the securities market is adequate, but enforcement is lagging, in part due to a shortage of resources and the regulator’s lack of autonomy in enforcement of rules and administrative matters (World Bank 2010).

2.4 Major Acts in the Regulatory Environment of Bangladesh:

The regulatory environment in this country came under reform just after the first stock market debacle in 1996. The World Bank has lead this reformation, and considers corporate governance reforms a development goal (Uddin and Choudhury 2008; Singh and Zammit 2006). A brief overview of the major changes in the regulatory environment in Bangladesh over the last two decades, as they relate to the compliance requirements, is presented below:

2.4.1 The Companies Act 1994 and its Amendment 2013:

The Companies Act 1994 is the cornerstone in the regulatory framework for companies in Bangladesh. The Act was modeled on the British Act of 1908 and was originally enacted as the Indian Companies Act 1913. After the partition of British India the Companies Act of 1913 was eventually adopted in Pakistan in 1949 and subsequently, Bangladesh in 1972. The accounting provisions in the 1913 Act were 'seriously out of date' (Parry and Khan 1984) and hence were limited to very minimum disclosure by companies. Consequently, this Act was replaced in 1994 with the Companies Act 1994.

The Companies Act 1994 provides the requirements for preparation and publication of financial statements, disclosures, and auditing, among other provisions. However, in most cases, the Act lacks clarity with regard to statutory requirements on disclosures in the financial statements of the incorporated companies. The formats for presentation of financial statements and requirements on disclosures prescribed in the Act need updating or removing. Moreover, some accounting requirements prescribed by the Act are incompatible with International Accounting Standards (IAS) (World Bank 2003 p.2). For example, contrary to IAS; the Companies Act requires capitalization of gains and losses arising from changes in foreign exchange rates under all circumstances. Inconsistencies between IAS and the Companies Act need to be eliminated. Consequently, a new amendment was made in 2013 and named as The Companies Act (Amendment) 2013.

2.4.2 The Securities and Exchange Related Laws:

The Securities and Exchange Ordinance 1969, Securities and Exchange Rule (SER) 1987, 1997 and 2000, Bangladesh Securities and Exchange Commission Act 1993, Securities and Exchange (Amendment) Act 2012 and different notification are related with this.

2.4.2.1 Securities and Exchange Commission Act, 1993:

The Securities and Exchange Commission was established on 8th June 1993 under the Securities and Exchange Commission Act, 1993 and renamed as the Bangladesh Securities and Exchange Commission (BSEC) in 2012 (GoB 2012). The BSEC holds very wide-ranging powers and regulates the activities of the capital market in Bangladesh, including licensing and regulation of capital market participants and intermediaries such as stock exchanges, brokers and dealers, merchant banks and portfolio managers. The objectives of the Commission as laid down in the SEC Act 1993 are to protect the interests of investors in securities, to regulate and develop securities markets, and to ensure proper issuance of securities (GoB 1993).

The BSEC does not have any disclosure requirements of its own. However, they have the authority to impose penalties on companies for publishing misleading information or for not complying with general accounting and reporting requirements set out by law. Besides regulating the capital markets, the BSEC has the objective: of promoting investors' awareness in areas including: investment guidelines, the correct format for lodging a complaint, caution notices regarding the circulation of fake shares, an investor's education program and the provision of training for intermediaries of the securities market (GoB 1993).

2.4.2.2 Securities and Exchange Rules:

The Securities and Exchange Rule (1987) is applicable for all listed companies. While the SER 1987 contains detailed disclosure requirements, extensive amendments were made to it in 1997 and 2000. Some of the most important features of the SER 1987 include the specification of detailed requirements and guidelines for the preparation of the balance sheet and the profit and loss account (income statement), the audit of financial statements by a chartered accountant (CA) and the format of the auditor’s report (GoB 1987). The annual report should be submitted to the shareholders, to the stock exchange and to the commission at least fourteen days before the Annual General Meeting (BSEC 1999). On the other hand, the major amendments contained in the SER in 1997 include requiring listed companies to publish in their annual reports, cash flow statements, set out in the prescribed format, as well as publishing half yearly financial statements within one month of the close of the first half year, audited or otherwise; they must also prepare financial statements of listed companies in accordance with the IAS's as adopted by the ICAB; additionally they must comply with applicable local GAAP. Since the October 1997 SEC rule did not mandate full compliance with all IAS and ISA. In February 2000, the SEC issued a new rule concerning the format of audit reports: it specified that auditors must verify that the financial statements have been prepared in accordance with IAS and the audit has been carried out in accordance with ISA (BSEC 2000).

2.4.2.3 Securities and Exchange Ordinance 1969 and its Amendment 2012:

The Securities and Exchange Ordinance 1969 and its recent amendment named as Securities and Exchange (Amendment) Act 2012 includes arrangements for the registration and regulation of stock exchanges; the regulation of issues, enquiries, penalties, orders and appeals. Major amendments made in 2012 have increased the power of the stock exchange and commission: they may now suspend trading of listing securities for up to thirty days instead of fourteen; the disclosure of information without permission of the commission carries a penalty which may extend to five years, and or a fine not exceeding taka five lakh (BSEC 2012).

2.4.3 The Bank Companies Act 1991 and its Amendment 2013:

The Bank Companies Act, 1991 authorises the Bangladesh Bank to regulate financial reporting by banks (World Bank 2003). The accounting and auditing requirements set by the Bank Companies Act 1991 are in addition to the requirements set by Companies Act

1994. The Bank Companies Act prescribes the format of balance sheets and income statements, including the disclosure requirements that each bank must follow for regulatory reporting to the Banking Inspection Department of the Bangladesh Bank. The same accounting and financial reporting rules are required to be followed by banks in preparing financial statements for external users (GoB 1991). The Bank Companies Act also empowered the Bangladesh Bank to approve the appointment of bank auditors. Although the Bangladesh Bank is formally independent, this is not reflected in reality. Rather, anecdotal evidence suggests that the licensing process is a political one, with the Bangladesh Bank following recommendations of the political class to allow new banks into the system (Beck and Rahman 2006). Moreover, the Bangladesh Bank's supervisory and regulatory capacity is still weak – "compliance based instead of risk based" (World Bank 2014, p.10).

On the 22nd July 2013, some amendments are passed and named it as the Bank Companies (amendment) Act 2013. This amendment has fixed the maximum number of directors at twenty, which must include three independent directors. If any bank has less than twenty directors, it must have at least two independent directors. Moreover, before appointing independent directors a bank has to seek approval from the Securities and Exchange Commission. In addition to this, it allows a maximum of two members of the same family to sit on the board of directors at the same time. Other important amendments relate to the lowering of job experience of aspirants for the posts of MDs of banks from fifteen years to ten years. The amendments limit banks' capital market exposure, direct or indirect, to twenty-five percent of the sum of paid-up capital, share premium, statutory reserves, and retained earnings, to be attained over a period of three years from the enactment of the Act. There are also provisions regarding general limits on loan exposure, lending to bank-related persons, and cross-ownership of banks (GoB 2013).

2.4.4 Insurance Act 2010:

In order to modernise the insurance sector a new Insurance Act was passed on 18th March 2010 in place of the Insurance Ordinance 2008, the Insurance Corporation Act 1973 and the Insurance Act 1938. The Government and the Authority under the Insurance Act 2010 regulates the financial reporting practices of insurance companies in place of the Chief Controller of Insurance under the Insurance Act 1938. Financial statements must comply with formats provided in the Insurance Act. The Insurance Act 2010 specifies that insurance companies' audited accounts, statements and abstracts together with a report on the working of the corporation during that year should be submitted to the Government and the Authority within six months from the balance sheet date (GoB 2010).

2.4.5 Income Tax Ordinance 1984:

Tax laws influence presentation and disclosure in general-purpose financial statements (GoB 1984). Taxation authorities do not accept some IAS, compatible accounting treatments for determining taxable profit: an example would be, recognising finance leases, prior period adjustments, and expensing of pre-operation costs. Although there is no legal requirement on observance of tax accounting rules in external financial reporting, those who prepare and audit financial statements generally ensure that the accounting treatments that are acceptable to the taxation authorities are used not only for tax reporting purposes but also for preparing the general-purpose financial statements. There are several weaknesses in the current Income Tax Ordinance. These include, the excessive discretion provided to tax authorities on policy issues and the proliferation of tax incentives and concessions; there is poor compliance arising from weak enforcement and limited use of information about taxpayers from other taxes, as well as third party information from other agencies; finally there is an over dependence on presumptive taxes as a final tax, irrespective of taxpayer size (World Bank 2003).

2.5 Present Obstacles for Corporate Reporting:

Bangladesh's capital markets remain some of the most underdeveloped in the region. The basic legal framework for corporate reporting in Bangladesh is dated, and there are a number of contradictions and points of confusion between the various rules and regulations that apply to listed companies. Shareholders do not have sufficient rights regarding related party transactions, the choice of board members, or the disclosure of control. Building on current efforts, more needs to be done to raise the quality of accounting and reporting (World Bank 2009). Greater independence and professionalism is required in the boardrooms of the listed companies.

In fact, Bangladesh has lagged behind its neighbours and the global economy in corporate reporting (Ali and Kamran 2007). One reason for this is that most companies are family oriented. Moreover, motivation to disclose information and improve governance practices by companies is viewed negatively. There is neither any value judgment nor any consequences for corporate reporting practices. The current system in Bangladesh does not provide sufficient legal, institutional and economic motivation for stakeholders to encourage and enforce corporate reporting practices; hence failure in most of the constituents of corporate reporting is witnessed in Bangladesh. The BSEC is the only regulatory body working to improve the quality of financial reporting. But, the BSEC lacks sufficiently trained staff to conduct detailed analyses to monitor compliance with accounting and financial reporting requirements.

The banking regulator has no mechanism to monitor and enforce accounting and financial reporting requirements. The Bangladesh Bank, as the regulator of banking and non banking financial institutions, conducts routine supervision exercises to monitor and enforce prudential regulations. Bangladesh Bank inspectors examine whether financial statements have been prepared in accordance with established regulations. In this inspection process, no attempt is made to assess the degree of compliance with the requirements on preparing general-purpose financial statements. Also, no attempt is made to determine the reliability of the auditor's opinion on a set of financial statements.

The office of the Registrar of Joint Stock Companies (RJSC) has legal authority to enforce the provisions of the Companies Act 1994 but it is not particularly effective at enforcing the Companies Act. Moreover, the RJSC has no technical capacity to identify accounting and auditing violations; in most cases it does not even enforce timely filing of annual audited financial statements. The RJSC records lack up-to-date information to verify the number of companies that have not submitted the required annual audited financial statements and returns.

No effective and efficient institutional arrangement exists to ensure compliance with auditing standards and the code of ethics. The ICAB has not established an effective and efficient mechanism to ensure member compliance nor did they make an effective effort to review the practices of the auditors and audit firms to evaluate the degree of compliance with the auditing requirements. Intense work pressures force many large audit firms to comply more in form than in substance. Moreover, small firms find it difficult to bear the cost of implementing proper quality control arrangements. Auditors seldom note any material irregularities in their audit reports and poorly supervised trainee students who work for audit firms carry out most audits. Auditors are required to be rotated every three years, and cannot perform internal audit functions for the client, although they do perform other services.

The Company's Act requires inclusion of the balance sheet, profit and loss account and schedules/notes as a part of the annual accounts. Moreover, the Company's Act stipulates the time limit for presentation of annual accounts and reports at the annual general meeting of the shareholders of the company should be nine months from the balance sheet date; whereas other South Asian countries like Indian and Pakistani laws set the time limit as six months. Overall, the companies' legislation contributed substantially to the development of their financial reporting systems. However, it fails to provide proper guidelines with respect to maintaining proper records and the preparation and distribution of financial statements to users.

There is no separate accounting standard-setting body in Bangladesh. The ICAB therefore acts as the standard-setting body in most cases where there is a need for standards. In western developed countries, national accounting standards came into existence in the wake of public criticism against auditors and through societal and government demands (Ali and Kamran 2007). However, such pressure and lobbying is not common in the development of accounting and auditing standards in South Asia (Hossain and Islam 2002). The process of standard setting is narrow and lacks rigorous debate, which dictates that the 'due process' requirements function is considered a formality, particularly in Bangladesh, due to the non-existence of a separate standard-setting body.

As in other South Asian countries, accounting firms escape responsibility and accountability because they are not under pressure from the investing public or investor protection groups (Dalal 2000) and there are few incentives to produce quality financial statements (Ashraf and Ghani 2005): there is a lack of effective enforcement mechanisms. The market for audit and consultancy services is currently dominated by local firms, and the 'Big Four' international accounting and auditing firms represented through their local associated firms. Moreover, ICAB has incorporated a number of international standards, but not all have been adopted, and some have not been updated. The CA and other legislation also contain provisions that are not consistent with IFRS. Legally, these provisions are superseded by securities regulation, but in practice they still hinder IFRS implementation by companies.

2.6 SEC Notification on Corporate Governance in 2006 and 2012:

The BSEC has promulgated different orders and notifications from time to time to ensure good corporate governance practice in the listed public limited companies. On 9th January 2006, the Commission issued an order requiring the listed companies to follow a number of corporate governance related conditions. On 20th February 2006, the commission revised its order and issued a notification (No.SEC/CMRRCD/2006-158/Admin /2-08) for complying with a number of governance codes (BSEC 2006). This was the SEC striving to stimulate the listed companies to comply with the corporate governance guidelines so that suppliers of funds could assure themselves of gaining a return on their investment (Imam 2006, p.34). All these guidelines are issued on the basis of "Comply or Explain". In other words, although the disclosure of compliance statement was mandatory, companies had the option to comply with individual provision or else explain the reasons for noncompliance (Biswas 2012).

The objective of this notification, which is summarized in Table 2.1, is to oblige listed firms to disclose their corporate governance status and to motivate them to meet the set governance standards. As shown in the table, these CG conditions include: the size of the board of director (BOD), formation of audit committee, chief financial officer (CFO) and head of internal audit and company secretary, reporting to the audit committee and external / statutory auditors etc.

Table 2.1: Format and Description of the Corporate Governance Compliance Report

Section	Title	Condition
1.1	Board's size	Not less than five and more than twenty.
1.2(i)	Independent Director	At least one tenth (1/10) of the total number of the company's board of directors, minimum 1.
1.2(ii)	Appointment of Independent Director	The independent director(s) should be appointed by the elected directors.
1.3	Chairman of the board and CEO	The positions of the Chairman of the Board and the Chief Executive Officer of the companies should preferably be filled by different individuals.
1.4(a)	Fairness of financial statements	Financial statements present fairly its operations prepared by the management.

1.4(b)	Maintenance of proper books of accounts	Proper books of account of the issuer company have been maintained.
1.4(c)	Appropriate accounting policies	Appropriate accounting policies applied in preparation of the financial statements and estimates are based on reasonable judgment.
1.4(d)	Compliance with accounting standards	International Accounting Standards have been followed in preparation of the financial statement.
1.4(e)	Soundness of internal control system	The system of internal control is sound in design, effectively implemented and monitored.
1.4(f)	Abilities to continue as a going concern	There are no significant doubts upon the issuer company's ability to continue as a going concern.
1.4(g)	Changes in operating results	Significant changes from last year operating results should be highlighted and explained.
1.4(h)	Financial data	Financial data of at least preceding three years should be summarized.
1.4(i)	Declaration of Dividend	If the issuer company has not declared dividend for the year, the reasons should be given.
1.4(j)	Details of Board meeting	The number of Board meetings and attendance by each director should be disclosed.
1.4(k)	Shareholding pattern	The pattern of shareholding should be reported to disclose the aggregate number of shares.
2.1	Appointment	The company should appoint a CFO, a Head of Internal Audit and a Company Secretary and should clearly define their respective roles.
2.2	Requirement to attendance Board meetings	The CFO and the Company Secretary of the companies should attend meetings of the BOD.
3.1(i)	Constitution of Audit Committee	The Audit Committee should be composed of at least 3 members.
3.1(ii)	Inclusion of Independent Director on the Audit Committee	The BOD should appoint members of the Audit Committee who should be directors of the company and include at least one independent director.
3.1(iii)	Filling of casual vacancy in the audit committee	In case of vacancy, BOD should appoint the new committee member immediately not later than 1 (one)

		month from the date of vacancy.
3.2(i)	Chairman of the committee	The BOD should select one member of the Audit Committee to be Chairman of the Audit Committee.
3.2.(ii)	Qualification of Chairman	The Chairman of the audit committee should have a professional qualification or knowledge, understanding and experience in accounting or finance.
3.3.1	Reporting of the Board of Directors	i) The Audit Committee should report on its activities to the Board of Directors. ii)The Audit Committee should immediately report to the Board of Directors on the following findings, if any:- (a) Report on conflicts of interests; (b) Suspected or presumed fraud or irregularity or material defect in the internal control system; (c) Suspected infringement of laws, including securities related laws, rules and regulations; and (d) Any other matter which should be disclosed to the Board of Directors immediately.
3.3.2	Reporting to the concerned Authorities	Audit Committee has reported to the BOD about anything which has material impact on the financial condition and results of operation.
3.4	Reporting to the share holders and general investors	Report on activities carried out by the Audit Committee should be signed by the Chairman of the Audit Committee and disclosed in the annual report.
4.	External/Statutory auditors	The issuer company should not engage its external /statutory auditors to perform the following services of the company; namely:- (i) Appraisal or valuation services or fairness opinions; (ii) Financial information systems design and implementation; (iii) Book-keeping or other services related to the accounting records or financial statements; (iv) Broker-dealer services; (v) Actuarial services;

		(vi) Internal audit services; and (vii) Other service that the Audit Committee determines.
5	Reporting the compliance	The directors of the company shall state in the directors' report whether the company has complied with these conditions.

Source: Compiled from (BSEC 2006)

Major Changes in 2012:

In 2012, BSEC issued its latest Corporate Governance Guidelines which is followed by all listed companies on a "Comply" basis. The said CG Guidelines were issued by BSEC through Notification no. SEC/CMRRCD/ 2006-158/134/Admin/44 dated 07 August 2012 under Section 2CC of the Securities and Exchange Ordinance, 1969 (BSEC 2012). Major additions or changes in the 2012 notifications are given below:

2.6.1 Involvement of Independent Directors in the Board:

At least one fifth (1/5) of the total number of directors in the company's board shall be independent directors. Previously it was one tenth (1/10) of the total number of the company's board of directors. The new CG guidelines also specified some conditions to be fulfilled by aspiring independent directors. The independent director(s) shall be appointed by the board of directors and approved by the shareholders in the Annual General Meeting (AGM). The post of independent director(s) cannot remain vacant for more than 90 (ninety) days. The Board shall lay down a code of conduct of all Board members and annual compliance of the code to be recorded. The tenure of office of an independent director shall be for a period of three years, which may be extended for one term only.

2.6.2 Qualifications of Independent Director:

In 2012, notification added that an independent director should be a knowledgeable individual with integrity who is able to ensure compliance with financial, regulatory and corporate laws and can make meaningful contribution to business. The person should be a business or corporate leader, a bureaucrat or university teacher with economics, business studies or a law background; they might also be professionals like chartered accountants, cost and management accountants, and chartered secretaries. In addition to this, independent directors must have at least twelve years of corporate management or professional experiences but it may be relaxed subject to prior approval of the Commission.

2.6.3 The Directors' Report to Shareholders:

In addition to the previous 2006 CG Guidelines, the new CG Guidelines in 2012 mentioned that the directors' report to shareholders must include the industry outlook and the possible future developments in the industry, segment-wise or product-wise. It should also include performance, risks and concerns, a discussion on the cost of goods sold, gross profit margin and net profit margin, and continuity of any extra-ordinary gain or loss. Moreover, the director's report to the shareholder must include a statement of all related party transactions, utilisation of proceeds from public issues, rights issues and/or through any others instruments, any deterioration of financial results caused by initial public offering, repeat public offering, rights offer direct listing, significant variance occurs between quarterly financial performance and annual financial statements, remuneration to directors including independent directors, key operating and financial data of at least preceding 5 (five) years, in place of 3 years. In the case of the appointment or re-appointment of a director the company shall disclose a brief resume of the director, the nature of his or her expertise in specific functional areas, the names of companies in which the person also holds a directorship and the membership of committees of the board.

2.6.4 Attendance of CFO and CS in Board Meetings:

The new CG Guidelines make attendance mandatory at board meetings for corporate financial officer and company secretary. They can only absent parts of a meeting of the Board of Directors which involves consideration of an agenda item relating to their own personal matters.

2.6.5 Audit Committee:

The new CG Guidelines make it mandatory to have an audit committee as a sub-committee of the Board of Directors. All members of the audit committee should be "financially literate" and at least one member must have accounting or related financial management experience. The company secretary must act as the secretary of the committee. The audit committee meeting is not quorum without at least one independent director. The chairman of the audit committee must remain present throughout the Annual General Meeting (AGM).

2.6.5.1 Role of Audit Committee:

This section has been inserted into the new CG Guidelines, specifying the roles of the audit committee in overseeing the financial reporting process, monitoring the choice of accounting policies and principles and monitoring the internal control risk management process. It should also oversee the hiring and performance of external auditors, review along with the management, the annual financial statements before submission to the board for approval, review along with the management, the quarterly and half yearly financial statements before submission to the board for approval, review the adequacy of internal audit function, review statement of significant related party transactions submitted by the management, and review management letters/ letter of internal control weakness issued by statutory auditors. When money is raised through Initial Public Offering (IPO)/Repeat Public Offering (RPO)/Rights Issue the company must disclose to the audit committee the uses and applications of funds by major category (capital expenditure, sales and marketing expenses, working capital, etc), on a quarterly basis, as a part of their quarterly declaration of financial results. Further, on an annual basis, the company must prepare a statement of funds used for purposes other than those stated in the offer document or prospectus.

2.6.5.2 Reporting of the Audit Committee:

The duration of reporting to the BSEC, about anything which has a material impact on the financial condition and results of operations, and where the Board of Directors and the management decide that some rectification is necessary has changed. The Audit Committee has reduced the time allowed for rectification from nine months to six. Moreover**,** reports on activities carried out by the audit committee, including any report made to the board of directors during the year, must be signed by the chairman of the audit committee and disclosed in the annual report of the issuer company.

2.6.6 External/ Statutory Auditors:

The new CG Guidelines mentioned that no partner or employees of the external audit firms should possess any share of the company they audit at least during the tenure of their audit assignment of that company; also some services are restricted as they were in previous CG Guidelines.

2.6.7 Subsidiary Company

This new section has been incorporated in new CG Guidelines specifying that the board composition of the subsidiary company must be the same as the holding company; the holding company appoints one of its IDs to be the director of the subsidiary company; the minutes of the subsidiary company's board meeting should be reviewed by the board meeting of the holding company, and the minutes of the board meeting of the holding company must state that the board has reviewed the affairs of the subsidiary company; finally, the AC of the holding company shall review the financial statements of the subsidiary company including any investment made by the subsidiary.

2.6.8 Duties of Chief Executive Officer (CEO) and Chief Financial Officer (CFO):

This new section has been incorporated in new CG Guidelines specifying that the CEO and CFO review the financial statement for the year to the best of their knowledge and belief that the financial statements do not contain any materially untrue statement or omit any material fact or include any misleading statement; they must also consider whether the statements present a true and fair view of the company's financial affairs and are in compliance with existing laws and accounting standards; there should be no transactions by the company during the year which are fraudulent, illegal or violations of the company’s code of conduct.

2.6.9 Reporting and Compliance of Corporate Governance:

The company must obtain a certificate from a practicing Professional Accountant/Secretary (Chartered Accountant/Cost and Management Accountant/Chartered Secretary) regarding compliance of conditions of corporate governance guidelines of the commission and send a copy of this to the shareholders along with the annual report on a yearly basis.

2.6.10 Mode of Implementation:

Listed companies must comply with the guideline conditions and report their compliance statements in the annual reports, making both compliance and the reporting of the compliance statement mandatory.

2.7 Penalty for Non Compliance:

Under the Securities laws, the Enforcement Dept takes legal measures including imposition of penalty against those who break /violate securities laws in consideration of the nature of offences they commit. Prior to taking measures it follows due process that includes carrying out inspection and enquiry. On the basis of violations of securities laws detected during the inspection/enquiry process, explanations are sought from the concerned issuer and person or institution alleged and then hearing is conducted as per the concerned securities laws and thereafter a report is submitted before the Commission. The Commission takes necessary legal action as per securities laws. The said actions include warning letter, imposition of penalty, suspension or cancellation of registration certificate.

2.7.1 Penalties in Companies Act 1994:

Section	Provision	Penalty
68	Penalty on concealment of name of creditor.	Imprisonment which may extend up to two years, or with fine, or with both.
79(1)	Penalties for non-publication of name	Fine not exceeding five hundred taka for everyday during which the default continue.
79(2)	Name without engrave in legible characters on its seal	Fine not exceeding one thousand taka, and shall further be personally liable for the amount thereof.
82	Penalty for default in complying with AGM	The company and every officer - fine which may extend to ten thousand taka- which may extend to two hundred fifty taka for every day.
139	Penalty for contravention in prospectus	Punishable with fine which may extend to five thousand taka.
146	Penalty for untrue statement in prospectus	Imprisonment which may extend to two years, or with fine which may extend to five thousand taka or both.
147	Penalty for fraudulently inducing persons to invest money	Imprisonment for a term which may extend to five years or with fine which may extend to fifteen thousand taka or with both.
173(1)	Filing with the Registrar for registration	Fine not exceeding one thousand taka for everyday during which the default continues.
173(2)	Non compliance of the Act	Conviction to a fine not exceeding two thousand taka.

173(3)	Delivery of debenture without Registrar	Liable of conviction to a fine not exceeding two thousand taka.
218	Penalty for non-compliance with provisions of auditor	Punishable with fine which may extend to one thousand taka.
219	Penalty for non-compliance by auditor	Punishable with fine which may extend to one thousand taka.
332	Penalty for falsification of book	Imprisonment for a term which may extend to seven years, and shall also be liable to fine.
334	Penalty for false evidence	Imprisonment for a term which may extend to seven years, and shall also be liable to fine.
335(1)	Director, managing agent and others alleged offence	Imprisonment for a term two to seven years.
335(2)	Any person pawn, pledges or disposes of any property	Imprisonment for a term not exceeding three years.
397	Penalty for false statement	Imprisonment may extend to five years and shall also be liable to fine.
398	Penalty for wrongful with holding of property	Fine not exceeding five thousand taka, and may be ordered by the Court trying the offence to deliver of or refund within a time to be fixed by the Court.
399	Penalty for misapplication of securities by employers	Conviction to a fine not exceeding five hundred taka.
400	Penalty for improper use of the word "Limited"	Liable to a fine not exceeding five hundred taka everyday upon which that name or title has been used.

Source: Complied from (GoB 1994)

2.7.2 Penalties in Securities and Exchange Ordinance 1969 and Amendment 2012:

Section	Provision	Penalty
19B	Penalty for disclosure of secret information	Imprisonment for a term which may extend to five years, or with fine not exceeding taka five lakh, or with both
22	Penalty for refusal or failure	Not less than one lakh taka, in the case of a continuing default, ten thousand taka for every day.
24	Penalty for market	Imprisonment for a term which may extend to five

	manipulation of security prices and fraudulent acts	years, or with fine which shall not be less than five lakh taka or with both.

Source: Complied from (GoB 2012)

It has been observed that the most common type of noncompliance during the period of study is the failure to submit the half-yearly financial statements and the failure to comply with securities related laws. The consequences, in general practice, for the failure to submit half yearly statements is a warning to the relevant company. Because of the tendency of authority not to punish, by fining or even imprisonment, companies are not usually very much concerned about submitting their half yearly statement in due time. On the other hand the maximum penalty for non compliance of securities related laws is taka 2000 for section 173(2) and taka 1000 for 173(1), 218 and 219(average exchange rate in 2014 was for the dollar 80 taka and for the pound, 130 taka). Moreover, in recent year there has been no example of imprisonment, cancellation or suspension for noncompliance. In order to reduce the non compliance and improve the quality or reporting, it is prime time to revise the fines and punishments. Besides, implementation of laws and rules are most important and in this case the Securities and Exchange Commission needs enough capacity and authority to implement the laws. An overview of the fines and warnings during the period of study is given in **Appendix M**.

2.8 Conclusion:

An overview of legal framework of reporting in Bangladesh is necessary to answer the research questions one and two: to what extent do Bangladeshi companies comply with the requirements of mandatory reporting? Do Bangladeshi companies disclose more than the minimum information required by accounting standards and regulatory requirements? By using the legal requirements of Bangladesh, a mandatory disclosure checklist will be set out in chapter 5(Research Methodology and Hypotheses Development). This check list will be used to determine the extent of mandatory disclosure in the first part of chapter six. In chapter 7 there is further consideration of the legal framework to determine whether Bangladeshi companies do or do not disclose additional information voluntarily (in addition to the mandatory). Chapter 8 will explore the time frame relating to the audit of financial statement and the submitting of the annual report to SEC, register of joint stock and shareholders before the AGM.

The financial reporting environment in Bangladesh is not in full conformity with international standards (Farooque et al. 2007). They found that financial disclosure is made primarily to satisfy tax authorities rather than to meet the needs of investors; furthermore, markets do not necessarily reward more transparent firms. On the other hand, in relation to reliability and comparability of financial information, the general level of compliance of Bangladesh firms to International Accounting Standards (as adopted in Bangladesh) is at best satisfactory (Karim and Ahmed 2005). Although the BSEC, the exchanges, and the ICAB have taken legal actions against wrongdoers from time to time, these actions are viewed by some as insufficient since many who break the law are believed to go undetected (World Bank 2002, 2003; Mir and Rahaman 2005; Solaiman 2006; Uddin and Choudhury 2008; World Bank 2009; Rashid 2011).

The quality of audited financial statements is a concern to investors and other users of financial statements. There is a widespread view that the low-level skills among accounting professionals and the lack of enforcement mechanisms contribute to noncompliance with established accounting requirements and auditing standards (World Bank 2009). There is a need to take some steps to ensure that the legal and regulatory requirements on accounting, auditing, and financial reporting fully protect the public interest. In order to meet this need the Companies Act (Amendment) 2013, Bank Company (Amendment) Act 2013, BSEC notification 2012 was published.

There is a need for a new Financial Reporting Act and the repeal of the provisions on accounting, auditing, and financial reporting in the Companies Act 1994, Bank Companies Act 2013, Insurance Act 2010, and other related regulations. The audit of financial statements prepared by public interest entities should be carried out in accordance with ISA and other related pronouncements issued by IFAC. Also the IFAC Code of Ethics for Professional Accountants should be mandatory for all practicing accountants and auditors.

Moreover, an independent oversight body should be established to monitor and enforce accounting and auditing standards and codes. This body should be empowered to monitor and enforce accounting and auditing requirements with respect to general-purpose financial statements. In addition to this, Government should take the necessary steps to strengthen the capacity of the Securities and Exchange Commission, Bangladesh Bank, and Authority of Insurance for enabling these regulatory bodies to effectively deal with accounting and financial reporting practices of the regulated entities.

Finally, preventive measures can improve the degree of compliance with accounting requirements by the publicly traded companies. The BSEC can raise awareness among the top management of listed companies of the importance of compliance with accounting and auditing requirements through outreach programs: top management should be briefed on their responsibility for compliance with standards and on enforcement policies.

Chapter Three:
Literature Review

Chapter Three: Literature Review

3.1 Introduction

It is argued that disclosure, transparency, accountability, and corporate governance play an important role in gaining market confidence (Ghazali and Weetman 2006). Moreover, disclosure is an important variable in any measurement of accounting quality (Marston and Robson 1997). Research focusing on the central theme of disclosure has been growing rapidly in recent years (Beattie 2005). The current chapter reviews the relevant prior studies concerning financial reporting and factors affecting financial reporting practices. It aims to provide a clear overview of prior studies and, a clear description of the new contribution this current study makes to the literature**.** Moreover, the literature review will improve the consistency of the current study. Reviewing the literature is a starting point that will help to identify the relevant theoretical framework, research hypothesis and methodology for this study.

This study concentrates on the quality of corporate financial reporting: it considers the quality of mandatory and voluntary reporting and the timeliness of reporting. Section 3.2 reviews the relevant literature of corporate financial reporting and its quality. In the same way section 3.3 reviews prior studies relating to empirical 1, mandatory reporting, section 3.4 reviews prior studies of empirical 2, voluntary reporting and 3.5 reviews prior studies relating to empirical 3, timeliness of reporting. All three models of the literature review are subdivided into: developed countries, developing countries and Bangladesh following a research gap in that particular model. Finally, the conclusion and the research gap to which the current research can contribute are presented in section 3.6.

3.2 Corporate Financial Reporting:

Corporate financial reporting has been variously defined by different writers (Cerf 1961; Singhvi and Desai 1971; Buzby1974a; Chandra 1974; Wallace 1988; Marston and Shrives 1991; Gibbins et al. 1990; Chow and Wong-Boren 1997, Botosan 1997; Owusu-Ansah, 1998) as the external release by the organisation, of information concerning its economic performance, position or prospects particularly as measured in monetary terms. It includes measurement, adjustment, quantification and application of accounting rules and any other shaping of data prior to its release and also any subsequent interpretation. Corporate financial reporting is a multidimensional array of managed activities, which occur in varying contexts, and have various costs and benefits in factor markets (Gibbins et al. 1990).

Quality is not readily measurable (Imhoff 1992). Financial reporting quality is an intangible concept in the accounting literature (Baba 2011). According to Cooke and Wallace (1989) the quality of financial reporting is a conceptual term and cannot be calculated directly because it does not possess inherent distinctiveness by which one can determine its intensity or capacity. Consequently, there is little harmony among researchers about how best to measure financial reporting quality (Dechow et al. 2010). Prior research shows that stated accounting rules can be evaded by insiders and hence do not reflect firms' actual reporting practices (Ball et al. 2003). Baba (2011, p. 8) suggested that to assess the financial reporting quality of a firm, it is not proper to rely on "what they say" but on rather "what they do."

Although one should expect that "better" corporate governance leads to improved financial reporting, there is a lack of consensus as to what constitutes "financial reporting quality": the notion of financial reporting quality remains a vague concept (Cohen et al. 2004, p 5). Auditors, audit committee members, and management are now struggling to define quality in relation to financial reporting (Jonas and Blanchet 2000). In the disclosure literature many expressions have been used to describe the quality of disclosure. Singhvi and Desai (1971) use the term "adequate", Owusu-Ansah (1998) uses the term "extent", Wallace et al. (1994) use "comprehensiveness", and Naser et al. (2002) use "depth". In most cases, however, "quality" of disclosure was only used in the sense of measuring the number of items disclosed.

Wallace et al. (1994) are one of the few studies that investigate both the quantity and quality of disclosure, and not just whether the item is disclosed or not. They base the measurement of quality on the depth of information; that is, on a consideration of whether the disclosure improves how a user understands financial statements. Moreover, the aspect of quality that is being investigated and measured in Palmer's (2008) study is the perceived informativeness of the disclosure. It includes the total extent of disclosures as well as the quality of disclosures; that is, inferences are drawn from what companies have disclosed in their notes. It is recognized that it is difficult to define or offer an absolute measure of quality in relation to financial accounting information. There are many ways to define the quality of narrative accounting disclosures which suggests it is a complex, multifaceted concept (Beattie et al. 2004).

According to Marston and Shrives (1991) calculating an index score for a particular company can give a measure of the extent of disclosure but not necessarily the quality of the disclosure. For financial reports to be valuable to potential users, they must be made available in a timely manner, and users must be satisfied as to the accuracy of the information they contained (Abayo and Roberts 1993). They found a positive association between the extent of voluntary disclosure and compliance with mandatory standards, and between the type of audit opinion and the timeliness of the corporate annual reports.

Prior empirical studies on corporate reporting and governance are varied. While some studies focus on specific types of reporting such as share option disclosure, Forker (1992), and corporate social responsibility, Haniffa and Cooke (2005): others address the comprehensiveness of information in financial reporting, Chen and Jaggi (2000). Elsewhere, disclosure of corporate governance information in corporate annual reports has been addressed by many researchers in developed countries (Anand 2005). Examples include Bujaki and McConomy (2002) in Canada, Parum (2005) in Denmark, Bauwhede and Marleen (2008) in the European Union and Sheridan et al. (2006) in the UK.

In a study, Khandewal and Agarwal (1991) established that reporting levels were not significantly different between years but that they varied significantly across companies whereas, Abayo and Roberts (1993) found no significant difference in the disclosure quality of companies employing and not employing qualified accountants. In addition, the study reports evidence of a weak positive association between mandatory and voluntary disclosure. Moreover, they conclude a positive association between the type of audit opinion and the timeliness of the corporate annual reports. But their findings are based on only 51 companies using cross section data for four industries only which limits the findings to generalise.

Chipalkatti (2002) examined the association between the nature and quality of annual report disclosures and found no significant association between the level of disclosure with share ownership and profitability. On the other hand, Felo et al. (2003) empirically examined the relationship between two audit committee characteristics - the composition (expertise and independence) and the size of the audit committee - and the quality of financial reporting. They showed that the percentage of audit committee members having expertise in accounting or financial management is positively related to financial reporting quality. They also found some evidence of a positive relationship between the size of the audit committee and financial reporting quality. However, audit committee independence is not related to financial reporting quality.

Regarding quality, Naser and Nuseibeh (2003) assessed the quality of information disclosed by a sample of non-financial Saudi companies listed on the Saudi Stock Exchange. The study also compared the extent of corporate disclosure before and after the creation of the Saudi Organization of Certified Public Accountants (SOCPA) using the annual reports of 1992 and 1999. The outcome of the analysis indicated a relatively high compliance with the mandatory requirements in all industries covered by the study. As for the voluntary disclosure, whether related or unrelated to mandatory disclosure, the analysis revealed that Saudi companies disclose more information than the minimum required by law. The level of voluntary disclosure, however, is still relatively low. A major weakness of the study was the sample selection; they offer no justification for using two specific points in time. Results may have differed if the researchers had used panel data from 1992 to 1999. Moreover, they did not use match pair data making it very difficult to measure whether the reporting pattern is improving or not.

On the other hand, Robinson and Paul (2004) examined how financial reporting quality relates to the overall quality of the financial statements and related disclosures; they considered how fairly the reported results present the operations and financial position of the company. Moreover, Han (2005) investigated the relationship between patterns of stock ownership and the quality of a firm's financial reporting in the USA, as measured by the magnitude of discretionary accruals, the mapping of accruals into cash flows and the level of disclosure. The researcher found that managerial stock ownership is negatively associated with reporting quality and the level of disclosure, while a positive relationship is observed for institutional stock holdings.

As regards to corporate governance on the financial reporting quality, Klai and Abdelwahed (2011) examined the effect of the governance mechanisms for a sample of Tunisian firms. Specifically, they focus on the characteristics of the board of directors and the ownership structure of the firms listed on the Tunis Stock Exchange during the period 1997–2007. The results reveal that the governance mechanisms affect the financial information quality of the Tunisian companies. Particularly, the power of the foreigners, the families and the block holders reduces the reporting quality, while control by the State or the financial institutions is associated with a good quality of financial disclosure.

There is no study that measured the quality of corporate reporting in Bangladesh. More than two decades before, Parry and Groves (1990) examined empirically the annual reports of 94 companies to assess whether employment of qualified accountants by companies in Bangladesh had any impact on the quality of financial reporting. They found no significant relationships between the qualifications of accountants preparing the reports and those variables. In reaching their conclusions, however, the study did not assess the degree of statutory compliance or whether other corporate attributes had any impact on the level of disclosure compliance.

In order to fill the gap in the literature, the current research investigates the quality of corporate financial reporting from longitudinal data. As the current study measures quality through quality of mandatory reporting, quality of voluntary reporting and timeliness of reporting, the following three section of this chapter will highlight the literature relevant to the study according to the empirical model that suits the investigation.

3.3 Empirical Model 1: Mandatory Reporting:

Reporting is the communication of economic information, financial or non-financial, quantitative or otherwise concerning a company’s financial position and performance. It is described as mandatory if companies are obliged to disclose insofar as the regulations are applicable to them (Owusu-Ansah 1998). Mandatory reporting is a regulatory tool and is perceived as the minimum framework of transparency (Brown et al. 2009). On the other hand, Wallace and Naser (1995) defined it as the presentation of a minimum amount of information required by laws, stock exchanges, and the accounting standards setting body to facilitate evaluation of securities. More specifically, Akhtaruddin (2005) concentrated on items of information required by the Companies Act, the listing rules of the stock exchanges, and the approved IAS's that listed companies need to disclose in their annual reports.

Since Bangladesh was a British colony prior to August 14, 1947, its financial reporting system is largely influenced by the British accounting system. As mentioned in chapter two, the mandatory disclosure requirements in Bangladesh are generally guided by the Companies Act 1994, Securities and Exchange Ordinance 1969, Securities and Exchange Rules (SER) 1987 and the subsequent amendments in 1999 and 2000, listing rules issued by Securities and Exchange Commission and BAS and BFRS adopted by the Institute of Chartered Accountant of Bangladesh (ICAB).

Since the 1960s, there has been increased interest in accounting disclosure studies exploring various determinants of companies' reporting practices. The best part of these studies concentrated on developed countries such as the UK (Spero 1979; Firth 1979), the USA (Buzby 1974b; Lang and Lundholm 1993), Canada (Belkaoui and Kahl 1978), Sweden (Cooke 1989), Switzerland (Raffournier 1995), Japan (Cooke 1992). A small group of studies have inspected developing countries, such as Hong Kong (Singhvi and Desai 1971), Egypt (Mahmood 1999), Jordan (Naser et al. 2002), Nigeria (Wallace 1987), and Bangladesh (Ahmed and Nicholls 1994). Moreover, a few studies have adopted a comparative approach to evaluate the intensity of reporting across two or more countries, for example Barret (1977), Zareski (1996), and Camfferman and Cooke (2002). In this study, the literature review is divided into developed countries, developing countries and finally those studies that focused on Bangladesh.

3.3.1 Prior Studies in Developed* Countries:

Most of the study relating to mandatory reporting is focused on compliance/ noncompliance of disclosure and determinants of it. Cerf (1961) is the pioneered in this area considering 527 corporate annual reports against a disclosure index of thirty one information items. He found that the level of reporting was positively associated with corporate size and listing status but not with profitability. He also concluded that financial reporting practices of many US companies need improvement. Subsequently, several researchers have replicated his methodology applying the same approach to different countries. Wallace et al. (1994) investigated both the quantity and quality of disclosure, and not just whether the item is disclosed or not. Their study provided evidence that the

***Note: Developed country list was taken from Human Development Index as on 14 March 2013,* Average disposable wage of OECD members in 2012, and IMF advanced economies**

amount of detail in Spanish corporate annual reports and accounts concerning size and stock exchange listings is increasing: the detail relating to liquidity is decreasing. They also showed that the average compliance of mandatory disclosure in Spain is 59% with a range of 29% to 80%. However, the study excludes the finance sector and uses a small sample size for a particular year. Moreover, the study has focused on sixteen selected disclosure items. The results may be different if the numbers of items were increased or another set of disclosure items examined.

Regarding the extent of compliance of mandatory requirements, Glaum and Street (2003) investigated the compliance with IAS and US GAAP disclosure requirements for companies listed on Germany's New Market. Compliance levels range from 41.6% to 100%, with an average of 83.7%. This high compliance may be due to the small sample used and data collected from a particular year. If the study considered a large sample for a period of time, the results might be different. They also suggested that average compliance level is significantly lower for companies that apply IAS compared to companies applying US GAAP. This finding only related to that particular country and cannot be generalised.

In a similar study, Owusu-Ansah and Yeoh (2005) found that, after controlling for the effects of other mandatory disclosure-related variables, the improvement in corporate disclosure compliance behavior is the result of the implementation of the financial reporting act. They investigated the effect of the financial reporting act of 1993 on mandatory disclosure practices and found that compliance levels increased throughout this period from an average of 78% in 1992 to an average of 88% in 1997. At the same time standard deviation has dropped from 4.3% to 2.87%. However, they used a short observation window: the reliability of the study would have been greater if they had considered a longer consecutive timescale rather than two specific points of time.

As regards to extent and determinants of mandatory reporting, Fekete et al. (2008) investigated whether Hungarian listed companies comply with IFRS disclosure requirements or not. They identified some factors associated with the level of compliance using a very small sample of seventeen companies for a particular time point, 2006. They found that average compliance is 62%. They also mentioned that corporate size and industry type are statistically associated with the extent of compliance with IFRS disclosure requirements. They only provide a snapshot of Hungary and the study does not represent the total picture due to its sample selection.

In a similar study, Apostolos and Nanopoulos (2009) explored disclosures and the significant extent of noncompliance in respect of IAS's and Greek regulations. The key factors associated with the levels of compliance with IAS's include the composition of the board of directors, profitability and the number of common shares. The public firms in the sample have shown that because of the political cost, the management is forced to disclose accounting data and support transparency. However, the study limited only to manufacturing and construction companies.

On the other hand, association between corporate mandatory disclosure and corporate governance quality has been examined by Kent and Stewart (2008). They computed the number of sentences in annual reports: they used the results to explore the effect of the transition to the Australian Equivalent of International Financial Reporting Standards**.** They found that corporate disclosure quality is positively related to board size and audit firm size; on the other hand, there is no relation between board committee independence and corporate mandatory disclosure. However, a count of the number of sentences of narrative and reference to specific accounting policies do not fully measure the quality of disclosure. Moreover, Matocsy et al. (2012) examine the association between corporate mandatory disclosure and board composition and different types of continuous disclosure. The study used both ordinary least-squares (OLS) regressions and two-stage least-squares (2SLS) regressions. They find that there is no relationship between board composition and different types of continuous disclosure. A summary of developed countries prior literature is given in table Appendix Q.

3.3.2 Prior Studies in Developing* Countries:

Like developed countries, most of the study of developing countries investigated the extent and determinants of mandatory reporting. Concerning the extent of mandatory reporting, Wallace (1988) examined the publicly quoted companies in Nigeria. The paper deals with the entire contents of the annual reports and highlights its different parts. The results of spatial analysis reveal a dualistic pattern in the corporate annual report. The

***Developing Countries list is taken from- World Bank, March 2013 -** *http://data.worldbank.org/about/country-classifications/country-and-lending-groups* more desired types of information are relatively abandoned and/or overshadowed by the types which are not relevant to the needs of users but preferred by the accounting profession and by the reporting entities. The results are derived from a sample of forty-seven profit seeking listed companies of manufacturing, commercial and service sectors: it is unlikely that finding are applicable to all other listed companies.

In a similar study, Benjamin et al. (1990) identified ten mandatory disclosure items and assessed whether companies listed on the Hong Kong Stock Exchange comply with those items. Based on a sample of seventy-six companies, they observed an averaged non-compliance rate of 22%. The study considers only ten mandatory items to assess the compliance which does not provide the total picture of reporting. In another study, Wallace and Naser (1995) examined the comprehensiveness of mandatory reporting in Hong Kong. Their study provided evidence that the researcher-created indexes vary positively with asset size and the scope of business operations but negatively with profits and average compliance of mandatory disclosure: the latter stands at 73%. Finance firms were excluded from the population and they selected every third firm systematically from the remaining names of firms in the list on the stock exchange. Moreover, they only consider the firm-specific variables when examining the relationships.

Moreover, Xiao (1999) investigates corporate disclosure requirements placed upon Chinese listed companies, concluding that the general level of compliance was satisfactory in the sample studied. But the study represents a snapshot of disclosure practice based on a small sample of thirteen listed companies and hence some findings, especially those related to the level of compliance, may not be generalisable. Nevertheless, it provides evidence of the ways in which standard setting responds to disclosure practice.

In addition, Samuel Sejjaaka (2003) studied corporate mandatory disclosure in Uganda including banks and insurance companies: he found that the extent of disclosure in the financial sector in terms of compliance with IAS is still poor. He only considers the financial sector so his findings cannot be generalised for non financial sectors in Uganda. However, findings indicate that reporting in the financial sector was particularly limited by lack of an accounting standard for insurance companies and a weak regulatory regime: regulators need to improve the standard of reporting in Uganda in order to improve the acceptability of annual reports.

Moreover, Ali et al. (2004) empirically examined the level of compliance with disclosure requirements mandated by fourteen national accounting standards and evaluate the corporate attributes which influence the degree of compliance with these standards. The results indicate significant variation in total disclosure compliance levels across countries and different national accounting standards. They found an average compliance of approximately 80% for each country with a large average standard deviation of 8%. They only considered the non financial companies using a single year's data. Moreover, using a common 131 mandatory checklist items for all three countries is not always justifiable as mandatory requirements vary from country to country.

As regards to extent and determinants of mandatory reporting, Hassan et al. (2006) used panel data to investigate the compliance. Results showed gradual increases in disclosure levels, with a high compliance for mandatory disclosure with an average of 90% over the entire period. Public business sector companies appear generally to disclose less information than private sector companies. But the study only considers non-financial companies and so findings may not apply to other sectors. Similarly, Aljifri (2008) examined the extent of disclosure in annual reports, and sought to determine the underlying factors that affect the level of disclosures among firms and between sectors. He reports an average compliance rate of 67% with a standard deviation of 11%. This study concludes that the extent of disclosure in the UAE has significant association with the sector type (banks, insurance, industrial, and service) The number of the firms examined is not large and the study only considers annual reports for the year 2003. It could be extended by including more factors which could have an effect on the extent of disclosure.

In a similar study, Al-Akra et al. (2010) examined mandatory disclosure compliance of listed Jordanian companies. They found that disclosure compliance with the IFRS is significantly higher in 2004 than that in 1996. Moreover, the size of the board, liquidity and gearing ratio emerged as significant determinants of mandatory disclosure in 1996 but not in 2004. The study shows that corporate disclosure research must consider the interaction of accounting systems and economic factors contingent to particular countries. However, the study used a two match pair sample of financial companies rather than panel data including all the sectors. Additionally, Gao and Kling (2012) found that auditor opinion increases the mandatory disclosure requirement. Moreover internal governance measured by board size, CEO salary, CEO duality and external governance has a positive effect on firm compliance to corporate mandatory disclosure requirements. They exclude banks and financial institution from their study and consider mainly corporate governance characteristics.

Regarding quality of reporting, Agyei-Mensah (2013) investigated the financial reports before and after adopting IFRS's in Ghana, and also the influence of firm-specific characteristics on the quality of financial information disclosed. The study confirms that the implementation of IFRS's generally reinforces accounting disclosure quality. It also indicates that company size and auditor type were found to be associated at a statistically significant level with the quality of financial information disclosed. A major limitation of the study is the time period. The author used years 2006 and 2008, to measure the effect of IFRS's adoption in 2007. It would have been better to go back two years before the cut-off point and then to have studied the effects for two or three years after the adoption. Using panel data set would have been useful in measuring the improvement. A summary of developing countries prior literature is also given in Appendix Q.

3.3.3 Mandatory Reporting in Bangladesh:

In Bangladesh, Parry and Khan (1984) conducted the first study on mandatory disclosure using the annual reports of seventy-four companies for the fiscal years from 1978 to 1982: they established several areas of non-compliance with the Bangladesh Companies Act 1913. In particular, they highlighted major deficiencies with respect to non-compliance in the case of fixed assets, inventories, intangibles assets, and loan and equity capital. However, the study was undertaken before the promulgation of the Securities and Exchange Commission Rules 1987. Consequently, it is not possible to assess the extent of disclosure compliance with the combined reporting requirements of the companies.

Later, Alam (1989) found that the sample companies failed to observe the minimum disclosure requirements in Bangladesh. Similarly, Parry (1989), Parry and Groves (1990), and Ahmed and Nicholls (1994) also found that the rate of compliance with mandatory disclosure requirements is low. They also found that subsidiaries of multinational companies and companies audited by large audit firms showed a higher degree of compliance to disclosure requirements while the accountant's qualification in the reporting company had weak influence on such compliance. All the studies mentioned above are conducted before the promulgation of Companies Act 1994. So, their findings are no longer valid in the present perspective as new disclosure requirements came into operation as a result of the Companies Act.

On the other hand, Bala and Habib (1998) made a study on the practice of financial reporting to the employees in Bangladesh. They found that financial reporting to employees is not mandatory in Bangladesh and thereby not in practice. They concluded that the extent of disclosure is at minimum scale and even the mandatory disclosure under the Security and Exchange Rules was violated. This study was also conducted before introduction of BAS and BFRS (first BAS adopted in 1st January 1999). So, this study does not inform the present perspective.

According to a World Bank review, the Bangladesh institutional environment suffers from several significant defects. For example, while the Registrar of Joint Stock Companies (RJSC) has the legal authority to enforce the provisions of the Companies Act, the RJSC lacks the technical competence to monitor compliance with accounting and auditing matters (World Bank 2003, para 23). The World Bank reported that the RJSC did not monitor or take action against companies that failed to file annual audited financial statements (World Bank 2003, para 23). The same body (2003, para 24) also noted that the BSEC did not have sufficiently qualified staff to effectively monitor the accounting practices of listed firms.

Following previous studies, Karim and Jamal (2005), empirically examined the association between the extent of disclosure and various corporate characteristics. They used a sample of 188 corporate annual reports for a single period ending between January and December 2003. Moreover, they only considered firm characteristics rather than using a combination of firm and corporate governance characteristics. They found that corporate size, profitability, stock exchange security category, size and international link of company's auditor, and multinational subsidiary are all significantly associated with the extent of disclosure.

In a similar study, Akhtaruddin (2005) indicates that companies in general have not responded adequately to the mandatory disclosure requirements of the regulatory bodies. It has been found that companies, on average, disclose 44% of the items of information, which leads to the conclusion that prevailing regulations are ineffective monitors of disclosure compliance by companies**.** Company age appears to be an insignificant factor for mandatory disclosure. Profitability, industry size and also status, i.e., whether a company is modern or traditional also have no effect on mandatory disclosure. The study is limited to only non-financial manufacturing companies, and the sample size is 54% of the population for the single year of 1999. The findings have limitations and may not be generalised. Moreover, this study used sales as the basis of size and profitability which suggests a chance of multicollinearity. In addition sales as a basis can only be used for the non -financial sector. Additionally, age is measured through three categories for this variable: companies registered prior to the 1st of January 1972 are grouped as very old, companies registered after the 1st of January 1972 but before the 1st of January 1986 are old and companies registered after the 31st of December 1985 are new companies. There is no rationale provided for these categories and the author did not consider time related differences within the fairly broad categories.

On the other hand, Hasan et al. (2008) found a significant improvement in the quality of compliance during the more regulated time period when investigating the quality of compliance to mandatory disclosure requirements in Bangladesh. Their findings differ from Akhtaruddin (2005) who found that the size of the firm, the qualification of the accounting staff who prepare financial statements as well as the reputation of its auditing firm, all have significant positive impact on the quality of compliance. The analysis presented in the study point to two additional important findings: a lack of profitability for the firm does not seem to affect the quality of its compliance, and the performance of domestic firms are at par with foreign affiliated firms as far as the quality of the compliance is concerned. They used a match pair sample of eighty-six listed companies for the less regulated (1991) and the more regulated (1998) environments in Bangladesh rather than panel data for all the examined period. Although they used two indexes for the two time periods, they did not focus on what might provide leverage for financial companies.

In a recent study, Hasan et al. (2013) examine the level of financial disclosures among Bangladeshi companies and its association with corporate governance characteristics. They conclude that the level of financial disclosures in Bangladesh has been increasing gradually but it is still below the level of expectation: their findings are based on data obtained from a small number of samples of forty for four non financial sectors. They used a stratified sampling technique: a sample of 25% from the population for a year which limits the accuracy of generalisations based on these. Using six corporate governance variables, the association between external auditor and the level of financial disclosures is found to be significant. It is observed that external auditor, profitability and multi listing are significantly associated with disclosures level.

3.3.4 Research Gap in Mandatory Reporting:

To understand the nature of overall disclosure, it is necessary to undertake a study taking five to ten years' data in order to investigate whether the quality of disclosure has improved over time (Galani et al. 2011). However, most of the studies relating to mandatory disclosure in Bangladesh consider either a single period of time **(**Akhtaruddin 2005; Karim and Jamal 2005) or two particular points of time (Hasan et al. 2008). On the other hand, mandatory disclosure requirements of a country change over that period of time. New IAS's and IFRS's are adopted by ICAB and listed companies in Bangladesh must follow this. In this sense, the most recent studies discussed above, relating to mandatory disclosure, are no longer valid. For example, Hasan et al. published their study in 2008 but use the annual reports of 1991 and 1998; Akhtaruddin published his study in 2005 but used annual reports of 1999, which was well before the introduction of the Corporate Governance Code of 2006.

The current study makes a new contribution to the literature by not only considering multiple years of data but also considering the recent available data for the study. Moreover, the study used disclosure indexes that have changed over the period as a result of new laws and regulations relevant to that particular year. As far as study aware, this is the first study that used seven disclosure indexes for seven years: this will give a more reliable and accurate overview of Bangladesh.

Most of the studies from developing countries tend to examine the level of compliance with mandatory disclosure; this is related to enforcement policies that are more relaxed than in of developed countries (e.g., Ali et al. 2004). As the current study focuses on quality, it also considers what factors affect the reporting of mandatory disclosure. Moreover, this study will focus on mandatory disclosure and its different categories which will help to discover the particular area where the major non compliance occurred.

Previous studies relating to Bangladesh focused on particular area such as the financial institution or non financial institution and some only considered the banking sector. However, in the current study covers all the listed companies in Bangladesh which will give us the total picture. In addition to this, the study will provide results sector wise which will give a more useful picture of reporting patterns in Bangladesh.

3.4 Empirical Model 2: Voluntary Reporting

Voluntary reporting in the annual report means disclosing information beyond the required content in the financial statements (Kumar et al. 2008). In other words, voluntary reporting is to release more information based on managerial incentives (Healy and Palepu 2001) and depends, apart from managerial motives, on the culture, the legal system, and the institutional background of the country in which the firms work (Hossain and Helmi 2009). The aim of voluntary reporting is to provide a clear view to stakeholders about the business’s long-term sustainability and to reduce information asymmetry and agency conflicts between managers and investors (Healy and Palepu 2001; Boesso and Kumar 2007).

Voluntary reporting can avoid impairment of allocation of resources in the capital market by reducing the information asymmetry (Kristandl and Bontis 2007). However, Core (2001) and Einhorn and Ziv (2012) argued that voluntary disclosure will still remain a theme of biased information selected by managers. Because mandatory disclosure does not usually meet the information needs of investors, the need for voluntary information disclosure arises. Hence, voluntary disclosure is perceived as filling the gaps missed by mandatory disclosure (Graham et al. 2005). Researchers provide arguments in favour of voluntary reporting (Latridis 2008; Mcknight and Tomkins 1999; Skinner 1994; Trueman 1986).

Holland (1998) comparing the benefits to the costs of voluntary disclosure, states that the management will publish until they will reach the point when they will observe that the capital agency costs reduction has equalled the increase of the information publication costs for the market and the other users. The first benefit of the publication of a great volume of information is represented by a better capital allocation at national and international level, which can be translated as a capital cost reduction. Through the increase of the publishing level, especially of the information provisioned, the firms can reduce the cost of capital attainment (Healy and Palepu 1993). However, Thompson (1995) warns that an undisciplined expansion of business reporting can lead to an unnecessary increase in expense. According to Malone et al. (1993) the firms which are economically stimulated to supply more information, do so only if the marginal cost will surpass the marginal profit of the additional disclosure.

Research on voluntary reporting has attempted to examine the nature and patterns of corporate social reporting (CSR) and investigate the determinants of CSR (Cormier and Magnan 2003). CSR is no longer a 'fad' or an 'extra option', but describes a more holistic approach to understanding organisations and their relationships with their stakeholders (Lewis 2001). CSR has been criticised by Milton Friedman and others, who argue that the responsibility of a corporation is to earn profits and that CSR is a distribution of shareholder wealth for the pursuit of managers' own interests (Friedman 1970). On the other side of the CSR debate, some theoretical models and empirical findings indicate that CSR can be an economically justified business expenditure that enhances a firm's future financial performance (e.g., Fisman et al. 2006; Lev et al. 2010; Caroll and Shabana 2010) or reduces a firm's cost of capital (e.g., Dhaliwal et al. 2011; El Ghoul et al. 2011).

The literature recognizes that CSR practices differ from country to country (Adams et al. 1998) and between developed and developing countries (Imam 2000). Furthermore the nature and patterns of CSR vary between types of industry (Gray et al. 2001). Surveys of CSR practices in western countries reveal that companies place the greatest emphasis on disclosing human resource information such as employee numbers and remuneration, equal opportunities, employee share ownership, disability policies, and employee training (Gray et al. 2001). Little disclosure exists in sensitive areas such as trade union activities, redundancy schemes, and costs (Adams et al. 1998). Moreover, the vast majority of disclosures are qualitative in nature.

Corporate environmental reporting (CFR) can be defined as a mechanism whereby companies disclose the environmental aspects of their corporate activities to stakeholders. Since the Earth Summit in Rio de Janeiro in 1992, people recognised that improved decision making needed sound environmental information (DEAT 2005). Environmental reporting was traditionally a voluntary process but from the mid-1990s, a number of

European countries began to introduce mandatory environmental reporting (DEAT 2005), Denmark being the first country to do so in 1996.

Sustainability reporting is the practice of 'measuring, reporting, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development' (GRI 2006, p.3). The global issue of sustainability urges corporate bodies to be transparent by disclosing those sustainability activities that may affect the earth and society at large (Sobhani et al. 2011). Sustainability or more usually sustainable development is typically defined as development which: 'meets the needs of the present without compromising the ability of future generations to meet their own needs' (UN WCED 1987, p 8).

In fact, corporate sustainability disclosure (CSD) around the world has been steadily rising since the end of 2000 and Japan is the pioneer in terms companies issuing sustainability reports (Kolk 2003). Thousands of global organisations now report their sustainability strategies and practices in their annual reports and corporate websites. According to KPMG (2008), 80% of the globally large companies (G250) now disclose sustainability reports. According to the report of KLD (2008), 51% of sample companies in emerging markets publish a standalone sustainability report.

The Bangladesh Companies Act 1994 sets the general framework for corporate financial reporting. However, no provisions regarding CSR, CFR, and CSD exist in the Companies Act 1994 (GoB 1994). Neither is there a separate Bangladesh Accounting Standard (BAS) regarding social and environmental reporting (IASCF 2003). However, since the adoption of International Financial Reporting Standards (IFRS) in Bangladesh on 5 July 2006, the Presentation of Financial Statements (BAS 1) encourages companies listed on the Stock Exchange of Bangladesh to publish additional statements on their non-financial activities. Therefore, in Bangladesh, CSR CFR and CSD are still voluntary, with the exception of disclosure of expenditures on energy usage which required under the Companies Act of 1994 and the Securities and Exchange Rules of 1987; this requires the total amount spent on energy to be shown as a separate expenditure in the notes to the financial statements.

For voluntary reporting, the literature review is also separated into research relating to developed countries, developing countries and Bangladesh.

3.4.1 Prior Studies in Developed Countries:

Regarding voluntary reporting, Firth (l979) addresses the extent and the association with three firm characteristics: firm size, listing status and auditor type. The firm size and listing status were found to be positively associated with the level of voluntary reporting. The results indicate that the audit firm is not associated significantly with voluntary reporting. In another study, Firth (1980) examines the extent of the changes in voluntary reporting of companies at the time of raising finance. He uses six different samples of manufacturing firms in UK. The study concluded that the levels of voluntary disclosure by smaller sized companies increase when raising new stock market finance, via new issues and right issues. Using data from New Zealand, McNally et al. (1982) also examined the association between voluntary disclosure and five firm characteristics: size, profitability, growth, audit firm and industry. The study employed rank order correlations using Spearman and concluded that firm size is associated positively and significantly with voluntary reporting while the other characteristics were found to be insignificant. All these three study consider single year data. Their findings are relate to past practices and may well not illuminate the current perspective.

In a similar study**,** Cooke (1989) used data from ninety non-financial companies of Sweden to examine corporate voluntary reporting. He classified the investigated companies into three groups according to their listing status: thirty-eight unlisted, thirty-three single listed on the Swedish Stock Exchange (SSE), and nineteen multiple listed. The study provided evidence that the level of disclosure in the annual reports differs significantly among the three groups. The regression analysis indicated that listing status and firm size are positively associated with voluntary reporting. Cooke (1991) also conducted a similar study with the annual reports of some Japanese companies. He used the same criterion to classify the sample into three groups: thirteen unlisted, twenty-five listed and ten multiple listed. The study employed stepwise regression and concluded that firm size is the best explanatory variable followed by listing status. Unlike Swedish manufacturing companies, Japanese manufacturing companies were found to disclose more information voluntarily than trading and service companies. Both studies are based on a particular period and focus on firm characteristics only.

Considering industry specific disclosure decisions, Craswell and Taylor (1992) addressed Australian oil and gas companies to find out information disclosure about estimated reserves. As the study focuses on the specific item of disclosure, there is no checklist, a dichotomous approach was used. The results indicated that the audit firm is associated positively with the disclosure decisions, while there is weak support for the effect of leverage, firm size, cash flow risk, and the proportion of shares held by the top twenty shareholders, on the disclosure decision. Their findings differ from previous studies. As secondly one particular sector was taken into account, findings are not applicable for other sectors of the country.

In Switzerland, Raffournier (1995) examines the relation between voluntary reporting and some firm characteristics of listed companies. The disclosure items were derived from the Fourth and Seventh EU directives. Using univariate analysis and stepwise regression, he concludes that firm size and internationality play a major role in the disclosure policy of firms. The interesting point in this study is the use of ownership diffusion as an explanatory variable of voluntary reporting. Similarly, Hossain et al. (1995) addressed voluntary disclosure in corporate annual reports and examined empirically the effect of five firm-specific characteristics. As with the majority of disclosure studies, they use OLS regression, concluding that firm size, leverage, and foreign listing status all have significant association with the level of information voluntarily disclosed in the annual reports of investigated companies.

In France where the annual report was not mandatory, Depoers (2000) relies on agency theory and limitations imposed by information costs to conduct a cost benefit analysis for the voluntary disclosure practices in corporate annual reports. The study investigates the effect of some economic determinants on the extent of voluntary disclosure in the annual reports. The results of multiple regressions based on stepwise procedure indicate that firm size, foreign activity and proprietary costs have significant association with the extent of voluntary disclosure.

Concerning voluntary reporting, Gruning (2007) commented that driving factors do not have singular impacts on disclosure but are interrelated. Using sixty annual reports from Germany and Poland, he employed a structural equation model to investigate interrelations between four firm characteristics as drivers of corporate disclosure. The results of this study showed that the four characteristics are interrelated factors that affect corporate disclosure quality. His findings contradict that firm size was found to have only an indirect effect on corporate disclosure. However, the effect of the home country is of a direct and indirect nature with the latter being mediated by firm size and cross listing.

On the other side, Wang and Claiborne (2008) examined empirically the determinants of voluntary reporting in the annual reports of listed firms that issue both domestic and foreign shares. The results indicated that the level of voluntary reporting is positively related to the proportion of state ownership, foreign ownership, firm performance measured by return on equity, and reputation of the engaged auditor while leverage has no significant association. They examined the extent of voluntary disclosure cross-sectionally using annual reports from 2005. The specific time frame of the study suggests that findings may not be generalised.

In the same way, Alves et al. (2012) studied the effects of corporate governance determinants on voluntary disclosure. Using several corporate governance mechanisms, they investigate the association among corporate characteristics, corporate governance variables and corporate voluntary disclosure. The results indicate that the main determinants of corporate voluntary disclosure are those variables related to firm size, growth opportunities, organisational performance, board compensation and the presence of a large shareholder. Their study contradicts previous studies indicating that board independence, board size or the existence of monitoring structures do not have a statistical association with voluntary disclosure.

As regards to environmental reporting, Walden and Schwartz (1997) investigated the practices for selected firms in four industries, including oil and forestry products, subsequent to the 1989 Alaskan oil spill. From an industry perspective, they showed that significant positive differences in the levels of environmental disclosures from year 1988 to 1989 and from year 1989 to 1990, using both assessment measures. Their findings support environmental disclosures being time- or event-specific, and being made in the firm's self-interest in response to public policy pressure.

Bewley and Li (2000) also examined factors associated with the environmental reporting in Canada from a voluntary disclosure theory perspective. The study found that firms with more news media coverage of their environmental exposure, higher pollution propensity, and more political exposure are more likely to disclose general environmental information, suggesting a negative association between environmental disclosures and environmental performance. The results in this study are based on a cross-sectional sample of different types of manufacturing firms for a single year. So, findings are not applicable in other settings.

Similarly, using a sample of 191 firms from the five most polluting industries in the US, Clarkson et al.(2008) found a positive association between environmental performance and the level of discretionary environmental disclosures. They found that the result is consistent with the predictions of the economics disclosure theory but inconsistent with the negative association predicted by socio-political theories. They showed that socio-political theories explain patterns in the data ''legitimisation'' that cannot be explained by economic disclosure theories. On the other hand, highlighting the factors affecting the environmental disclosures in listed firms from, heavy polluting industries Tang and Geling (2010) showed that the level of environmental disclosure from heavy polluting industries is low and the level of disclosure among industries is greatly different. Only firm size and capital structure are significant for environmental disclosure, others are not. As the sample firms come from twenty-one heavily polluting industries, the findings did not represent the total picture. Moreover, the study considers single year data.

Regarding social and environmental reporting, Deegan et al. (2000) examined the reaction of Australian companies, to five major social and environmental incidents. The incidents reviewed are the Exxon Valdez, Bhopal disasters, the Moura Mine oil spill disaster in Queensland and the Kirki oil spill, off the coast of Western Australia. They found that, following the incidents, sample firms operating in the affected industries provided more environmental information in their annual reports than they did prior to the incidents. In another study, Skouloudis et al. (2014) investigate non-financial aspects of performance, mainly within the domains of social and environmental responsibility. The analysis suggests that only a small group of leading Greek firms appear to endorse a meaningful business and society dialogue as an instrument for stakeholder communication and the discharging of organisational accountability. However, the sample size is small and reflects only the indicative findings of organisational practices of firms pertaining to different sectors and ownership structure. Moreover, the study does not assess any potential for improvement in accountability practices over time, since it only examines the disclosures within a narrow time frame.

On the other side, Hedberg and Malmborg (2003) analyzed why companies have chosen to use the GRI guidelines and how this has affected corporate social responsibility and environmental management. They found that companies produce CSR's mainly to seek organisational legitimacy, and that the main reason for use of the GRI guidelines is an expectation of increasing credibility of the CSR: it also provides a template for how to design a report. Moreover, they found that the CSR report and the GRI guidelines are of more help for internal than external communication at this stage of development. In this study, the use and experiences of GRI in ten companies based in Sweden were investigated. Its findings cannot be generalised for all companies.

As regards to sustainability reporting, Visser (2002) examined the nature and extent of disclosure in the annual financial reports of South Africa’s largest 184 companies, as well as in 17 standalone public reports on sustainability or aspects of sustainability: these included environment, health, safety or social responsibility. The findings of the survey suggested that disclosure on sustainability issues by South African companies continues to improve. In annual financial reports, the issues most reported are corporate governance, codes of conduct, ethics, employment equity and education and training: black economic empowerment, fraud prevention and HIV AIDS are the least reported. The production of standalone public reports on sustainability issues has also increased in South Africa, but still lags substantially behind international levels.

In a similar study, significant inconsistencies and frequent gaps in sustainability reporting has been observed by Frost et al. (2005) examining the nature and extent of sustainability reporting practices in various reporting media (annual reports, discrete reports and websites) of Australian companies. They found that annual report is the least valuable source of information on corporate sustainability in terms of the number of indicators observed: corporate websites provided a more diverse range of disclosure. The discrete report and websites provide greater levels of information on sustainability, however the overall levels of information is low. This analysis is merely a snapshot of reporting practices of a limited number of companies, and these companies do not represent of the general reporting practices of Australian companies on sustainability issues.

On the other side, sustainability reporting and its reputation is measured by Michelon (2007) using a control group sample matched on country, industry and size. He examined sustainability disclosure by type of information – strategic, financial, environmental and social. This study extends previous research on CSD by concentrating on information released not only in annual reports, but also in the multimedia, including social reports, environmental reports and sustainability reports. Two major findings in this study are that reputation does affect the extent of sustainability disclosure and European companies disclose more than US companies.

With reference to corporate social reporting, Idowu and Towler (2004) analysed the contents of different companies across different industries in the UK. They found that some UK companies issue separate reports for their corporate social reporting activities and others devote a section in their annual reports. They found that UK corporate social reporting discloses information about the contributions an entity has made in four main perspectives. These are the environment, community, the marketplace and the workplace. They were also concluded that corporate social reporting in the UK is still in its infancy. However, the small sample size and the use of telephone interviews question their findings.

Similarly, O'Dwyer et al. (2005) investigated of nongovernmental organisations' perceptions of corporate social disclosure. Evidence is collected from in-depth interviews with senior representatives of major Irish NGOs. The researcher found active corporate resistance to discursive dialogue, corporate resistance to voluntary reporting, and compliant political elite unwilling to confront the corporate sector on social and environmental issues. On the other hand, Silberhorn and Warren (2007) explored why and how corporate social responsibility was developed. Although the samples are not representative for the British and German economies, they found that CSR policies varied with turnover, industry sector and nationality. Their finding also argued that the size of company has an impact on corporate social responsibility practices and that different starting points exist for corporate social responsibility in Germany and the UK.

In similar study, Prado- Lorenzo et al. (2009) examined the effect that shareholder power and a dispersed ownership structure have on the decision to disclose corporate social responsibility information. They found that the influence exerted by certain stakeholders together with the strategic posture of the companies, have an important effect on the publication of corporate social responsibility reporting. However, the study result shows the power of stakeholders to be quite limited. Government is one of the most important agents for change and has an impact on social responsibility disclosure practices. A summary of developed countries prior voluntary reporting literature is given in Appendix Q.

3.4.2 Prior Studies in Developing Countries:

As regards to voluntary disclosure, Hossain et al. (1994) address the association between the extent of voluntary disclosure in corporate annual reports and some firm characteristics of Malaysia. The findings of the study indicated that both firm size and ownership structure have significant association with the level of voluntary disclosure in corporate annual reports. But the findings of the study cannot be generalised as it only consider non financial companies based on cross sectional data. Moreover, it measure the association with firm characteristics only and omitted corporate governance and others factors.

In a similar study, Barako et al. (2006) using a longitudinal examination of voluntary disclosure practices, suggested that the extent of voluntary disclosure is influenced by a firm's corporate governance attributes, ownership structure and company characteristics. The presence of an audit committee, institutional and foreign ownership, large companies and companies with high debt are positive significant factors associated with the level of voluntary disclosure; the proportion of non-executive directors on the board has significant negative association with the extent of voluntary disclosure. In contrast, board leadership structure, liquidity, profitability and type of external audit firm do not have a significant influence on the level of voluntary disclosure.

On the other hand, Alsaeed (2006) found that firm size is the only variable that has significant positive association with the level of voluntary disclosure while the remaining variables are insignificant in explaining the variation of voluntary disclosure of Saudi firms. When interpreting the results, caution should be exercised as the study focused on 20 selected disclosure items; the sample includes non-financial companies and used firm characteristics only. Moreover, the items constituting the disclosure index were subjectively assembled from three prior studies. The choice of the items, however, does not reflect their level of importance as perceived by financial information users.

In a similar study, Akhtaruddin et al. (2009) investigate the extent of corporate governance and voluntary corporate disclosure in Malaysian listed companies. The proportion of independent non-executive directors has a positive association with voluntary disclosure but is negatively related with family control. The study randomly selected one out of every four firms listed, and limited itself to non-financial firms in Malaysia. The results may not extend across all firms in Malaysia. Moreover, the study considers only one year of data. The results may differ across different years if multiple years are considered for analysis.

In a different research, Akhtaruddin and Haron (2010) examined the linkages between board ownership and audit committees' (ACs) effectiveness on corporate voluntary disclosures. Using different corporate governance characteristics that affect the financial disclosure, their results indicate that board ownership is associated with lower levels of corporate voluntary disclosures. More independent directors on the AC increases disclosure levels and reduce information asymmetry between firm management and investors. In the same way, Al Shammari and Al Sultan (2010) investigated the relationship between corporate governance characteristics and corporate voluntary disclosure. Using a self-disclosure index to measure corporate voluntary disclosure, the results indicate that the average level of voluntary disclosure stands at 19%: the existence of a voluntary audit committee is significantly and positively related to the extent of corporate voluntary disclosure.

Regarding voluntary disclosure, Samaha and Dahawy (2010) also examine the factors influencing corporate disclosure transparency as measured by the level of corporate voluntary disclosure in the annual report. They use archival data to collect information on the corporate voluntary disclosure, corporate governance characteristics and company characteristics. The study results indicate that lower managerial ownership was associated with increased corporate voluntary disclosure; moreover there is a relationship between an independent board of directors', existence of an audit committee and corporate voluntary disclosure. Findings from this study suffer from an external validity problem as they come only from the actively traded, listed firms in Egypt. In addition, only firms with the highest trading were included in the sample: the results may not extend across all companies in Egypt.

In the same way, but using graphs from annual reports, Uyar (2011) investigates the association between firm characteristics and corporate voluntary disclosure. The results of univariate and multivariate analyses indicate that firm size and auditor size have significant positive association with corporate voluntary disclosure level using graphs. On the other hand, profitability and ownership structure do not have any significant association with graphical disclosure level. The study has its limitations as the sample consists of the listed companies in the ISE-100 Index, one should be cautious, when generalising the results to the entire ISE Index. In addition, the findings may not be valid for non-listed companies.

Samah et al. (2012) assess the extent of corporate voluntary disclosure on the extent of corporate governance by using a measure of disclosure based on published data created from a checklist developed by the United Nations; this was gathered from a manual review of financial statements and websites of a sample of ESE. The study's findings indicate that the extent of corporate voluntary disclosure is lower for companies with duality in position and higher for concentrated ownership. However, Qu et al. (2012) examined how firms in the Chinese stock market have responded to the coercive pressure exerted upon them by the market regulatory body, the Chinese Security Regulatory Commission, and its demand to provide transparent information to the stock market is examined They find that over the study period, listed companies have gradually increased their voluntary disclosure. They conclude that corporate voluntary disclosure has been adopted by firms to achieve institutional legitimacy in the stock market.

In another study, Haji and Ghazali (2013) investigate the quality of corporate voluntary disclosure practices in Malaysia. They indicate that the quality of voluntary disclosures overall is low which is consistent with prior studies. The multivariate regression analyses reveal that board size, company size, leverage and government ownership are significant in explaining the quality of corporate voluntary disclosure.

Regarding corporate social responsibility, reporting in Malaysian companies is in its infancy compared with other developed countries (Thompson and Zakaria 2004). The study suggested that reasons for the poor state of social disclosure are many and varied, but essentially the dearth is largely a consequence of a lack of drivers and in particular a lack of government and societal pressure to report on social issues. The study is only cross sectional and the robustness of its findings would be improved by extending the empirical analysis over a time series**.** Furthermore, no effort has been made to standardise the page and font size either within or between the annual reports. In a similar study, Abreu et al. (2005) explored CSR the experience and practice of enterprises in Portugal. Their findings showed the relationship between CSR activity and corporate image, cultural differences and performance. On balance, the shortcomings of this survey are the sample size [10] and the sensitivity of the consequent statistical analysis and inferences. The survey could provide some evidence, but this cannot be generalised, without more empirical demonstration.

In a comparable study, Gunawan (2007, p. 26) found that the level of CSR reporting in Indonesia is 'relatively low'. The most important information on CSR perceived by the stakeholders relates to "products" while information about "community" is perceived as the least important. However, "community" is considered as the most influential party of CSR for the companies. This study provides useful information and describes early pictures of CSR practices in Indonesia. However, its findings may be limited because of only small samples were investigated and they are not representing the population. The study needs to re-test the hypotheses. Another study on Malaysia, Ghazali (2007) provides a starting point for understanding the influence of ownership on CSR disclosure. They found that there are influences of ownership structure on CSR practices on the Malaysia stock market. The sample for this study comes from larger and actively traded stocks on the Bursa Malaysia. Thus, the results may not be generalisable to smaller and less actively traded stocks. However, his findings appear to suggest that the level of CSR disclosure in annual reports of companies depends on the extent of ''public pressure'' faced by each company. The results also raise the question of whether corporate involvement in social activities should be made a mandatory disclosure in annual reports.

Some studies try to explain variation in the extent of corporate voluntary disclosure within the corporate social disclosure context. For Example, Naser et al. (2006) test the validity of theories employed in the literature to explain variation in the extent of corporate voluntary disclosure within the corporate social disclosure context under Qatari companies. The findings indicate that variations in corporate social disclosure are associated with the firm size, business risk and corporate growth. There is no significant difference in the level of disclosure achieved by the financial and non-financial companies. Same as Ratanajongkol et al. (2006), for Thai companies over a three-year period, emphasised that industry membership strongly influences the key themes of CSR disclosures which are increasingly, related to human resources. Environment is the dominant theme in the manufacturing sector. One limitation of this study is the short time period considered. Moreover, the extent and nature of CSR in annual reports was measured according to the number of words disclosed. It is very difficult to measure the importance of a particular word.

In an attempt to determine the most successful companies on social responsibility issues Dincer and Dincer (2007) conducted a study in Turkey. They collected data from two sources: firstly, a survey conducted on consumers and secondly face-to-face interviews. However, this should not be taken as an accurate representation of the situation in Turkey since these companies are leaders in the field. Although the aim of this study had been to examine the future prospects of CSR projects in Turkey, the interviewees did not provide give details relating to future projects. It is also impossible to make generalizsations for Turkey with the data that was collected from consumers as it was collected only in the urban area of Istanbul. Furthermore only five firms are included in the interviews.

In a study, Narwal (2007) highlighted the CSR initiatives taken by the Indian Banking Industry, which help them to enhance their overall performance. The findings showed that banks have an objective view-point about CSR activities. They are concentrating mainly on education, balanced growth, health, environmental marketing and customer satisfaction as their core CSR activities. The study was conducted on 33 banks in Northern Haryana. A small sample size of a particular sector limits the usefulness of generalising its findings. Moreover, whether Libya follows the western capitalist model or has developed its own practices for CSR has been scrutinized Pratten and Mashat (2009). Content analysis was used to analyze the annual reports. The results suggested that the emphasis on CSR disclosure in Libya is different from that to be found in the west. The study used 56 firms from manufacturing, service, banking and insurance sectors which limits the application of its findings to other sectors.

Attitudinal displays of Kazakhstan companies towards CSR have been analysed by Potluri et al. (2010). The study examined CSR towards Kazakh owners or shareholders, employees, customers, creditors and suppliers, general public or the community at large and government. A total of four types of questionnaires were used to collect the information through informal personal interviews with concerned respondents. They found difference of opinions between Kazakh corporate sector and their employees, customers and general public on CSR.

Haji (2013) examines CSR disclosures when the business environment, particularly the Malaysian environment, experienced several significant financial crises and regulatory changes. The results showed that the extent and quality of CSR disclosures is, on average, low, with narrative disclosure being the most commonly adopted mode to disclose CSR information. The paper considers factors influencing the CSR disclosures before 2006 and after 2009 when the changes of 2007 would have affected conditions. However, it would be more practical if the study considered a panel data including two years before the major reforms and regulatory changes.

The objective of De Villiers and Alexander (2014) is to examine corporate social responsibility reporting structures through a comparison of the disclosures in two countries with different social issues. Among the thirty comparisons of disclosure patterns, twenty-nine show no difference, indicating that the same reporting templates are used in CSR reporting globally. They examined overall patterns of CSR reporting in diverse settings; there remain differences in CSR reporting content at a more detailed level remain. Moreover, management intent or company-specific characteristics, such as social and environmental performance, do not necessarily drive CSR reporting patterns. However, findings may not be generalisable beyond the mining industry.

Concerning environmental reporting, Sumiani et al. (2007), conclude that the level of reporting in Malaysian annual reports is relatively low. Interestingly, ISO certification is an influential factor on the motivation of environmental disclosures (p. 900). With the increase in awareness of environmental issues, the level of environmental disclosure and stakeholder demands for environmental information is increasing.

As regards to social and environmental reporting, Rizk et al. (2008) explored corporate practices of Egyptian corporate entities. Their random sample found that there are significant differences in reporting practices among the members of the nine industry segments surveyed. Findings from this study also lend support for the significance of ownership structure on the reporting decision. The study is based on the annual report disclosures of corporations in the industrial sector. Hence, the conclusions arrived at cannot be generalised to the non-industrial sector. A small sample size further limits its findings. In a similar study, Mitchell and Trevor (2009) investigated the businesses within a large municipality in South Africa. The authors found no evidence to suggest companies would engage in increased external reporting despite measuring and recording significant environmental and social data to meet the requirements of legislation or internal environmental policy. Purposeful selection was undertaken from the population, selecting the three largest companies from each of the business sectors. It has been argued that three companies should provide enough understanding about each sector and the forces that operate within it.

The interrelationship between corporate governance and corporate disclosure of companies has been investigated in a study by Francis et al. (2012). The results indicate that although there has been improvement of disclosure practices over the years, the level of disclosure in Ghana is only moderate or fair. The study also documents a significant positive relationship between the presence of accounting or finance expert(s) on the audit committees and corporate disclosure practices. However, the study findings are limited due to its small size. A summary of developing countries voluntary reporting prior literature is given in Appendix Q.

3.4.3 Voluntary Reporting in Bangladesh:

The disclosure of voluntary information in corporate annual reports and their determinants has attracted considerable attention in the West, but, there has been much less concern in developing countries like Bangladesh. Expectations about the responsible role of business in society are increasing and the recent research on corporate social responsibility discourse shows that there have been developments of a variety of instruments that aim to improve, evaluate and communicate socially responsible practices (Golob and Bartlett 2007).

The concept of CSR and CFR is still very new in Bangladesh. In the developed and developing countries reporting corporate social responsibilities is very much emphasised, whereas in Bangladesh, it was generally being neglected (Imam 2000). In recent years there is considerable pressure from various agencies for companies to act responsibly and be accountable for the impacts they have on social, political and ecological environments (Azim et al. 2011).

Some earlier studies, Chowdhury and Chowdhury (1996) concluded in their study that some progressive companies in Bangladesh voluntarily provide some information with regard to social and environmental matters. The study of Belal (1997) on green reporting practice in Bangladesh observed that out of fifty companies, only three (6%) companies made environmental disclosures. However, a later study by Belal et al. (1998) revealed that all selected companies disclosed at least some social information. His study showed that the highest number of companies disclosed information which fell into employee and other categories and the lowest number of companies made ethical disclosures followed by environmental disclosures. Belal (1999) also surveyed annual reports of thirty companies of Bangladesh of which twenty-eight were listed and two were unlisted. He found that 90% of the companies studied made some environmental disclosures, 97% made employee disclosures and 77% made some ethical disclosures. These studies lack detailed findings on the CSR practices in Bangladesh. All of these studies consider small sample sizes and single year data. Moreover, they consider a particular aspect, either social reporting or environmental reporting.

Early studies provide a largely descriptive account of corporate social disclosure in developing countries like Bangladesh. Of them, Uddin et al (1999) found that disclosure as well as performance of social responsibility activities had been confined to mainly employees' welfare, contribution to government, operational activities and business expansion. However, disclosure or performance in the area of community development, human resource development and environment was very low. Similarly, Belal (2001) found CSR reporting focus on employee-related disclosures, presence of a unionized labor force and responses to the government's strong emphasis on employee welfare. Over time the focus of business reporting has changed as Das and Das (2008) found that companies are focusing more on general corporate information, corporate strategy and accounting policy and little focus is placed on financial performance, corporate social disclosure and corporate governance. The main weakness of these studies is that Imam considers only 15% of the total listed companies and Das and Das consider only financial institution.

Hossain et al. (2004) identified the nature of voluntary disclosure in the annual reports of Bangladeshi companies. They conducted a questionnaire survey to find out users' perception on this issue and concluded that Bangladeshi companies are making some disclosures on human resource even though this kind of disclosure is not required by any regulatory authority. Using the same technique of questionnaire survey, Khan et al. (2004) investigated the status of voluntary disclosure on corporate governance through a case study on the BEXIMCO group. They found that sample companies make some disclosures on corporate governance on a voluntary basis. This is mainly a case study and the result of this study cannot be generalised.

As regards to corporate voluntary disclosure, Rouf and Al Harun (2011) also examine the association between ownership structure and levels using ninety-four listed companies from 2007. The results show that the extent of corporate voluntary disclosure is negatively associated with a higher management of ownership structure. Furthermore, the extent of corporate voluntary disclosures is positively associated with a higher institutional ownership structure. In this study ownership structure is separated into management ownership and institutional ownership. But in Bangladesh, listed companies ownerships are categorised as sponsor, government, foreign, institution and public ownership: these distinctions should have been incorporated into the study.

Considering environmental reporting, Imam (2000) studied companies listed in the Dhaka Stock Exchange, Bangladesh and concluded that only 22.5% of the sample companies provided environmental information in their annual reports. He reported that company size is a vital factor behind the voluntary reporting practices in this country. Imam used 40 out of 207 listed companies for 1996–1997; this represents 19.30% of companies and failed to come to a unified conclusion that is applicable to all listed companies. Moreover, Hossain (2002) conducted a survey of annual reports of 150 listed non-financial companies for the year of 1998-99. The study reveals that only 5% of the companies disclosed environmental information in their Directors', Chairman's or annual reports: not a single company disseminated any quantitative information on environmental items. Similarly, Bala and Yusuf (2003) found some improvement in environmental reporting: 10.4% companies included environmental information in their Directors' Report or in the Chairman's Statement or elsewhere in their annual reports. Using 249 public limited companies for the year of 2001, they also reported that the information disclosed was qualitative in nature. Companies did not follow any specific or standard reporting format.

In a similar study, Khan and Hossain (2003) conducted a very short study on the environmental reporting practices of manufacturing companies in Bangladesh. The study covered fifteen companies listed from 1999 to 2002. They also found that Bangladeshi manufacturing companies are mostly reporting environmental information in a non-financial manner and this reporting is mainly done in the Directors' or Chairman's statement in the annual report. Out of these fifteen companies only one company included financial reporting: they included 'environmental expenses' under the head of 'Administrating expenses' in the financial statements. In another short study, Bose (2006) used case studies of eleven Petrobangla companies to examine their environmental reporting status. The study found that environment reporting of Petrobangla companies is increasing (1998-1999 and 1999-2000 45.45%; 2000-01, 63.63%; 2001-02 and 2002-03, 81.81%) and the nature of the information disclosed was qualitative and descriptive.

Concerning environmental reporting, Rahman and Muttakin (2005) surveyed 125 manufacturing companies listed on the Chittagong Stock Exchange of Bangladesh, analysing the annual reports for 2003-04 and found that only 4% companies disclosed environmental information. The information was descriptive in nature and not quantitative. They also report that the disclosure of environmental information was done in different places of the annual report and there was no standard environmental reporting framework. Moreover, Shil and Iqbal (2005) reported that only 11% companies disclosed environmental information. They also focused on 121 manufacturing companies listed on the Dhaka Stock Exchange. Both studies consider manufacturing sectors and so their findings may not apply to other sectors.

Considering social and environmental disclosure, Hossain et al. (2006) examined 107 non-finance companies, for the financial year 2002-2003. This study reports that 8.33% companies in Bangladesh are making efforts to provide social and environmental information on a voluntary basis, which is mostly qualitative in nature. Companies in Bangladesh appeared to have the lowest levels of social and environmental disclosure which they reported as "very disappointing". Using a combination of interviews, and content analysis of annual reports, Islam and Deegan (2008) describe and explain the social and environmental reporting practices of major garment export companies. The result shows that particular stakeholder groups have placed pressure in the Bangladesh clothing industry in terms of its social performance. This pressure, which is also directly related to the expectations of the global community, in turn drives the industry's social policies and related disclosure practices.

Similarly, Hossain and Anna (2011) explored the enablers of corporate social and environmental responsibility (CSER) practices in Bangladesh by seeking the views of senior managers of listed companies in Bangladesh. Preliminary findings reveal that the enablers of CSER in Bangladesh include: social obligation; regulations, poverty alleviation desire; and corporate branding motivation. The primary motivation for embracing CSER by the textile sectors appear to stem from powerful stakeholder pressures, including that exerted by international buyers.

On the other side, Banerjee and Probal (2009) investigated the use corporate annual reports and corporate websites for communicating corporate environmental information by the listed companies of Bangladesh. The sample for the study consists of corporate annual reports of thirty companies and corporate websites of seventeen companies in Bangladesh. The study showed that corporate environmental reporting in Bangladesh is still in its infancy, no matter which medium of communication is used. The sample selection process mainly limits the findings. They select seventeen company websites which only have environmental reporting and thirty annual reports which include those from sixteen out of the seventeen companies in the online sample.

To determine the motivational factors for social voluntary disclosure, Belal and Owen (2007) conducted a series of interviews with senior corporate managers during 2001-2002. They held interviews with 23 Bangladeshi companies representing the multinational, domestic and public sector and found that the main factors behind corporate voluntary disclosure practices lay in the desire of corporate management to manage powerful stakeholder groups. Using the same questionnaire survey, Khan et al. (2009) used twenty banking companies, listed on the Dhaka Stock Exchange, to investigate the level of users' understanding and their perceptions of CSR reporting. Their study revealed that the selected banking companies did some CSR reporting on a voluntary basis and the user groups favored CSR reporting and would like to see more disclosure. However, their study used selected banks only and a very small sample size.

Regarding corporate social reporting, Azim et al. (2009) investigated the practices of listed companies from Bangladesh. Findings showed that the highest rank in terms of corporate social reporting come from companies in the banking sector; three quarters of all disclosures are generalised qualitative statements without any attempt at attestation; more than half of the disclosures are located in the director's report; the mean space devoted to disclosures was less than half a page. Although these provide a snapshot of social reporting, they only concentrate on the finance sectors of Bangladesh. In the similar way, Momin and Hossain (2011) examined the extent of CSR reporting by subsidiaries of MNC in Bangladesh. They suggested that MNC subsidiaries report less social information in Bangladesh compared to their parent corporations. However, most prior studies of CSR reporting in Bangladesh have been descriptive in nature, and limited to measuring the volume of CSR reporting using content analysis.

In a similar study, Muttakin and Khan (2014) investigate the firm and industry characteristics that determine corporate social responsibility disclosure practices using 116 manufacturing firms from 2005 to 2009. They found that CSR disclosure has a positive and significant relationship with export-oriented sectors, firm size and types of industries while family ownership has negative relationship. They only consider the manufacturing sector. In order to contribute to the literature the current study considers all the listed companies. In addition, the current study uses corporate governance characteristics to measure the motivation of disclosure

In a study, Belal and Cooper (2011) concentrated upon the lack of disclosure on three particular eco-justice issues: child labor, equal opportunities and poverty alleviation. They examined the underlying motives behind corporate unwillingness to address these issues. For this purpose, 23 semi-structured interviews were undertaken with senior corporate managers in Bangladesh. They suggest that the main reasons for non-disclosure include lack of resources, the profit imperative, lack of legal requirements, a lack of knowledge or awareness, poor performance and the fear of bad publicity.

Corporate sustainability disclosure practices in Bangladesh were first highlighted by Sobhani et al. (2012). They focus on the annual reports and corporate websites of the banking industry in Bangladesh and found that all listed banks, to varying degrees, practice sustainability disclosure in an unstructured manner in both the annual reports and corporate websites. They only consider the banking sector and do not represent the total picture across all industry in Bangladesh. Moreover, it is important to highlight that this study focuses on sustainability disclosure where, in terms of the issues, coverage is greater compared to CSR. Therefore, it may be considered an extension of the same authors' earlier work in the arena of social and environmental disclosure Sobhani et al. (2009).

All the studies discussed above consider single period data except Muttakin and Khan (2014), Bose (2006) and Khan and Hossain (2003). Khan and Hossain (2003) used a small sample size of fifteen to measure environmental reporting whereas Bose employed a case study of Petrobangla. Muttakin and Khan (2014) consider manufacturing firms only. Therefore, no previous studies, based on Bangladesh, considered the total number of listed firms for the panel data: doing so, will provide a fuller understanding of reporting patterns in Bangladesh. Moreover, all the studies discussed above investigate only CSR or CFR or sustainability reporting: studies considering the total voluntary disclosure fail to mention without mentioning the contribution CSR, CFR and sustainability disclosure.

3.4.4 The Research Gap in Voluntary Reporting:

Therefore, it is clear that although there have been extensive research work in voluntary disclosure around the world; little attention has been paid to general and voluntary reporting in Bangladesh. Moreover, the selection of voluntary items varies from country to country (Cooke 1991; Ahmed and Nicholls 1994; Hossain and Reaz 2007). Most of the studies concentrated on a specific part of voluntary disclosure. For example Imam (2000), Belal (2001), Belal and Owen (2007), Momin and Hossain (2011) focused on social performance and Hossain (2002), Bala and Yosuf (2003), Rahman and Muktakin (2005), Islam and Deegan (2008) concentrated on environmental reporting. Some of the studies used small sample sizes (for example- Rahman and Muktakin 2005, 4%; Belal 2001, 15%; Imam 2000, 19.30%; Bose 2006, case study). On the other hand some used only particular sectors rather than the total, including Rahman and Muktakin (2005) and Muttakin and Khan (2014) manufacturing and Das and Das (2008) concentrated on financial institutions only. For these reasons, the current study consider all the listed companies in Bangladesh and at the same time it covers CSR, CFR and sustainability disclosure under the head of voluntary reporting.

Kanto and Schadewitz (1997) indicate that while disclosure literature provides plenty of evidence on the determinants of disclosure in accounting reports, relatively few studies have focused on the differences between the determinants of mandatory and voluntary disclosures. In this study, a separate determinant is selected for determining the quality of voluntary disclosure. To broaden the understanding, the current study includes firm characteristics and corporate governance characteristics to identify the determinants of voluntary reporting.

Although disclosure changes over time, most of the previous disclosure studies concentrate on one point in time (e.g. Cooke 1989; Tai et al. 1990; Ahmed and Nicholls 1994; Hossain et al. 1994 and 1995; Haniffa and Cooke 2002, Ghazali and Weetman 2006). Therefore, suffering from bias may be one of the criticisms that faces the results of these studies (Hossain et al. 1994). A limited number of disclosure studies examine the extent of disclosure over a period of time (e.g., Marston and Robson 1997; Watson et al 2002; Abd-Elsalam and Weetman 2003). However, most of these few studies select only two points in time, the first year and the last year of the study period. The reason may be the availability of data (Marston and Robson 1997). These studies address the effect of specific changes in the business environment such as new regulations. However, by adopting a longitudinal approach covering several years and studying the same companies over that period, this research hopes to provide more explanations and a clearer view about the trend of disclosure practice employed by companies. Marston and Robson (1997) indicate that our understanding of disclosure decisions will be enhanced by studying disclosure practice over time. Considering the benefits of panel data study and to contribute to the literature the current study used panel data from 2004 to 2010.

Previous studies indicated that there was a low level of CSR reporting in Bangladesh. There is an implicit aspiration from different stakeholders group that corporate houses should spend on societal well-being and they like to look into such information in companies' financial statements. The above contradictory information provide motivation for further longtitudinal study on the quality of voluntary reporting practices to determine whether it has improved over time.

In the case of developing countries, and especially in Bangladesh, there has been no attempt to either assess the information needs of users and the extent to which companies meet their needs. In order to correct this omission, the voluntary disclosure index will be measured through a weighted and unweighted disclosure index: weight is measured through a questionnaire from academics, professional accountants and accounting personnel from different institutions and the users of financial statements. In the case of sustainability reporting, very few researchers concentrated on Bangladesh. So, there is a gap in the research literature concerning corporate sustainability reporting in Bangladesh. In order to fill the gap, the current study highlights CSR, CFR and sustainability reporting under the categories of voluntary reporting.

3.5 Empirical Model 3: Timeliness of Reporting

Corporate reporting is generally directed at providing information which will assist the user in decision making. Establishing the confidence of investors requires reliable and timely accounting information. In developing capital markets, the audited financial statements in the annual report are likely to be the only reliable source of information available to the market (Leventis et al. 2005). Timeliness of financial reporting, an important qualitative characteristic of accounting information, has received much attention from regulatory and professional bodies (Al-Ajmi 2008; Soltani 2002; Knechel and Payne 2001).

Timely reporting contributes to the prompt and efficient performance of stock markets in their pricing and evaluation functions. Timely reporting helps to mitigate or reduce the level of insider trading, leaks and rumors in the market (Owusu-Ansah 2000). As a result, most stock exchanges in the world demand from their listed companies the prompt release of audited financial reports to the markets. Moreover, timely reporting is a function of audit-related and company-specific factors. Audit-related factors are those that are likely to impede or help the auditor in carrying out the audit assignment and issuing the audit report promptly. In contrast, company-specific factors are those that either enable management to produce a more timely annual report or reduce costs associated with undue delay in reporting.

Prior research has studied the audit report lag in the US (Givoly and Palmon 1982; Ashton et al. 1987; Bamber et al. 1993; Kinney and McDaniel 1993; Schwartz and Soo 1996;

Henderson and Kaplan 2000; Knechel and Payne 2001), Canada (Newton and Ashton 1989; Ashton et al. 1989), Australia (Davies and Whittred 1980), New Zealand (Courtis 1976; Carslaw and Kaplan 1991) and France (Soltani 2002). The few studies that could be regarded as exploring emerging or developing capital markets relate to Hong Kong (Ng and Tai 1994; Jaggi and Tsui 1999), Zimbabwe (Owusu-Ansah 2000), Bahrain (Abdulla 1996) and Pakistan (Hossain and Taylor 1998). In general these studies use public domain data; exceptions are Ashton et al. (1987) and Knechel and Payne (2001) who was given access to audit firms' data.

The issue of the audit delay is important because, the informative value of audited financial statements decreases proportionately to the number of days it takes to obtain audit report signatures: users will seek information from alternate resources (Knechel and Payne 2001). Moreover, audit delay adversely affects the timeliness of financial reporting (Ashton et al. 1987). The effect of audit delay on investors' decisions has motivated numerous researchers to investigate factors affecting that delay. Most studies have focused on markets in large developed countries such as the United State, Canada, Australia, Hong Kong, New Zealand, and China (Courtis 1976; Gilling 1977; Davis and Whiltred 1980; Garsombke, 1981; Ashton et al. 1987; Ashton et al. 1989; Carslaw and Kaplan 1991; Ng and Tai 1994; Simnett et al. 1995; Jaggi and Tsui 1999; Wang and Song 2006).

Research on financial reporting timeliness span most regions. There are a number of studies the issue of timeliness in the United States (Ashton et al. 1987; Payne and Jensen 2002), in Canada (Ashton et al. 1989), in Bahrain (Abdulla 1996), in Bangladesh (Karim et al. 2005), in France (Soltani 2002), in Saudi Arabia (Almosa and Alabbas 2008), in Greece (Owunsu-Ansah and Leventis 2006), in Malaysia (Che-Ahmad and Abidin 2008; Ismail and Chandler 2004; Ahmad and Kamarudin 2005 and Mohd Naimi et al. 2010), in Egypt (Afify 2009), in Singapore (Sharma et al. 2007) and in China (Firth et al. 2009). This activity shows that financial reporting timeliness is of great concern whether in developed or developing countries. The motivation for this study is derived from a long-standing problem of a lack of timely provision of corporate financial information in Bangladesh.

3.5.1 Prior Studies in Developed Countries:

Ashton et al. (1987) for the US, Ashton et al. (1989) for the Canada and Simnett et al. (1995) for Australia reported empirical evidence for certain determinants of audit delay, defined as the length of time from a company's fiscal year-end to the date of the auditor's report. All three studies used variables that describe companies, their auditors, and the various types of interaction between these parties. They showed that audit delay is significantly longer in the case of companies that receive qualified audit opinions. Additionally, Simnett et al. showed that it is not only the issuing of a qualification, but also the type of qualification, that affects audit delay. Besides this, Simnett et al. indicate that variables representing audit complexity, debt/equity position, extraordinary items, audit technology, and the Big Eight–non-Big Eight status of the auditor had little or no impact on audit delay. All three studies consider more or less same perspective in different countries and they only consider audit delay.

Furthermore, Carslaw and Kaplan (1991) investigates variables affecting audit delay, using seven variables employed by Ashton et al. (1989), adding company ownership and debt proportion, The R^2 level calculated in this study exceeded the level reported by Ashton et al. (1989), indicating more association between the variables and audit delay. On the other hand, Leventis et al. (2005) explored the audit report lag of companies listed on the Athens Stock Exchange at the time of its transition from an emerging market to a newly developed capital market. The results suggest that audit report lag is reduced by appointing an international audit firm or paying a premium audit fee, but is extended by aspects of potentially bad news. This results contradicts Simnett et al, who found big eight and non big eight status of auditors had little or no impact.

Ng and Tai (1994) and Jaggi and Tsui (1999) scrutinise the effect of company specific characteristics on audit delay in Hong Kong. Following mainly Ashton et al. (1989) and Carslaw and Kaplan (1991), Ng and Tai (1994) observe, in both 1990 and 1991, that company size and the degree of diversification are significantly associated with audit delay: extraordinary items and financial year-end affected only one year. Jaggi and Tsui (1999) enlarge Ng and Tai (1994) by integrating the firm's financial condition, ownership control and audit firm technology. Findings of their study suggest that longer audit processes are associated with the structured audit approach and the need to ensure the reliability of audit opinion as well as the proper documentation of audit results.

Al-Ghanem and Hegazy (2011) investigate the factors that affect delays in the signing of audit reports. Major limitations of the study are that it only considers two years' data and concentrated only on company characteristics rather than corporate governance characteristics or audit related factors. Although, timeliness remains unexplored in non-profit settings, Reheul et al. (2013) adds to the recent and rapidly growing literature on financial reporting and auditing by examining audit report lag among a large sample of Belgian non-profit organization. The study itself suffers from the generalisation of findings regarding audit report lag by considering only non-profit sector. However, their findings are important in a sense that audit report lag decreases after two years following the introduction of new legal obligations.

Most of the studies relating to developed countries only consider the audit lag. But audit lag is only a part of total reporting and more specially the timeliness of reporting. So, the current study focuses on audit lag, preliminary lag and total reporting lag to fill the gap in the literature and identify the time required for audited reports to be submitted to the annual general meeting. Studies in the various countries show differences in respect of periods, methodology, variables introduced and conclusions obtained. In this section, reference is made to some of those research studies, with the object of establishing similarities and differences. A summary of timeliness of reporting in developed countries prior literature is given in appendix Q.

3.5.2 Prior Studies in Developing Countries:

Non-compliance and poor timeliness in annual report publishing is more concentrated in developing countries. For this reason, most of the research on timeliness concentrated on developing countries. In this part, the study critically analyses some of the previous work relating to timeliness of reporting in developing countries. A summary of the study is also given in Appendix Q.

Regarding audit delay, Hossain and Taylor (1998) examined the relationship with several company characteristics in Pakistan. Their evidence suggests that timeliness may not be an important concern for Pakistani companies in financial reporting policy. With regard to timeliness as a qualitative objective of financial statements, this evidence can be regarded as unsatisfactory. This study only considers non-financial companies for one year's data.

Moreover, it only focuses on audit delay and used company a characteristic that limits a wider application of its findings.

Examining the determinants of audit delay of listed companies on the Kuala Lumpur Stock Exchange, Ahmad and Kamarudin (2003) found that non-financial industry, audit opinion, financial year-end, non–Big Five firm, negative earnings, and higher risk significantly affect audit delay. However they limit their study to audit delay alone. In a similar study, Owusu-Ansah and Leventis (2006) empirically investigated the factors that affect timely financial reporting practices of companies listed on the Athens Stock Exchange. They found that companies in the construction sector, companies whose audit reports were qualified and companies that had a greater proportion of their equity shares directly and indirectly held by insiders do not promptly release their audited financial statements. They used non financial company's data to determine financial reporting lag avoiding audit lag and preliminary lag.

In a study, Prabandari and Rustiana (2007) examined the factors affecting the audit delay of listed financial firms at the Jakarta Stock Exchange (JSE). They found earnings or revenue affect audit delay which is similar to the findings of previous studies but audit opinion is non-significant which contradicts Owusu-Ansah and Leventis (2006) and Ahmad and Kamarudin (2003). They also limit their study by employing financing firm's data to measure audit delay for a shorter period from 2002 to 2004. In another study, Che-Ahmad and Abidin (2008) extend the research of Ahmad and Kamaruddin (2003) by including another three variables which include the number of subsidiaries, change of auditor, and ratio of inventory: the only significant variable was the number of subsidiaries a company had. Their analysis model is replicated and extended by Carslaw and Kaplan (1991) and follows only one year’s data. The study found that delays were much more common than in developed countries such as U.S.A, Canada and New Zealand. The results on significant variables in this study are consistent with studies in Western countries.

Regarding the impact of CG characteristics on audit report lag, Afify (2009) examined in listed companies of Egyptian companies. He found that the maximum and mean score number of days to complete and submit the annual report was 115 days and 67 days respectively. The study includes explanatory variables relating to CG characteristics, which have not previously been considered: these may shed more light on the structure and dynamics of the audit report lag. In another study, Tauringana et al. (2008) investigated the association between corporate governance mechanisms, dual language reporting and the timeliness of annual reports of companies listed on the Nairobi Stock Exchange. The result showed that the average time taken to publish the report in 2005 was 74.50 days and was 76.47 days in 2006. The study posits that dual reporting will increase the time taken to produce the annual report. However, dual reporting is not suitable for all countries where there is only one official language. Moreover, this research is limited as it only considers thirty-six companies for two years' data.

In order to measure the effect of the Malaysian's code of corporate governance, Mohamad-Nor et al. (2010) examined audit report lag in Malaysian public listed companies. The result of this study suggests that more emphasis should be given to strengthening the independence and expertise of the audit committee. The study measures the effect of the code in 2001 by using data from 2002. It would be more practical if the study showed the audit lag position before and after the code. Moreover, it would more justifiable if the study also considers 2003 and data from a later period: it takes more than a year for some companies to adopt and maintain the standards set out within the code (Reheul et al. 2013).

In the same way, following Tauringana et al. and Afify, Hashim and Abdul Rahman (2011) used corporate governance mechanisms and examined the audit report lag. They found that reporting among listed companies in Malaysia is relatively better compared to results found in previous studies by Che-Ahmad and Abidin (2008) and Ahmad and Kamarudin (2003). There are significant negative relationships between board diligence and audit report lag. However, they could not provide any evidence concerning the link between board independence, board expertise and CEO duality on audit report lag. This indicates corporate governance characteristics are not significant for audit lag. In a similar study, Apadore and Noor (2013) analyse the relation between corporate governance characteristics and audit report lag. They consider 180 companies chosen randomly from 843 companies, which lack the generalizations of findings. However, the results show that on average, the companies took around 100 days to complete their audit report. They also found that with few exceptions, Malaysian companies comply with listing requirement.

Regarding timeliness of annual reporting, Owusu-Ansah (2000) investigated non-financial companies listed on the Zimbabwe Stock Exchange (ZSE). The empirical data indicate that audit reporting lead time is significantly associated with the timeliness with which sample companies release their preliminary annual earnings announcement, but not with the timeliness of their audited annual reports. These findings need testing for their relevance for other developing country. However, the results of this study should not be generalised to financial companies listed on the ZSE. In addition, the study investigates the timeliness of reporting at a particular year rather than over a period. Elsewhere, Al-Ajmi (2008) studied the effect of seven variables on timeliness in a sample of 231 financial and non-financial firms listed on the Bahrain Stock Exchange over the period 1992–2006. He found company size; profitability and leverage had significant effects on audit lag but not in preliminary lag and reporting lag: this indicates that some determinants may affect a particular part of reporting but not all areas of reporting.

Moreover, Iyoha (2012) examined the impact of company attributes on the timeliness of financial reports in Nigeria. However the study suffers from a number of limitations: it uses a small sample size and only considers total reporting lag. Findings in the literature add that reporting lag is reduced by the existence and enforcement of rules and regulations of regulatory bodies: this encourages current study to measure the effect of the corporate governance code of 2006 on reporting of timeliness.

Almost all the study discussed above considers either audit delay or reporting delay except Owusu-Ansah (2000) and Al-Ajmi (2008). These studies consider audit lag, preliminary lag and total reporting lag. However, Owusu-Ansah narrows their focus by selecting non financial companies only. To obtain a detailed overview of timeliness of a particular country, it is necessary to consider all the components (audit lag, preliminary lag and total reporting lag) as well as all sectors of the country. Like other studies discussed above Owusu-Ansah (2000) only give attention to a particular year rather than behavior over a period of time. Bearing in mind these limitations, the current study considers audit lag, preliminary lag and total reporting lag for listed companies over the period of 2004-2010.

3.5.3 Timeliness of Reporting in Bangladesh:

Timeliness of reporting and its determinants has attracted considerable attention in developing countries, but, there has been much less concern in Bangladesh. Karim (1995) revealed that the financial reporting environment in Bangladesh is characterised by a lack of transparency, adequacy, reliability, and timeliness. In Bangladesh, the first study on timeliness was carried out by Imam et al. (2001). They conducted a study on 115 listed companies for the year 1998. They examined the association between audit delay and an audit firm's association with international firms. The results found average audit delay stood at 5.86 months with a standard deviation of 2.56. Moreover, audit firms associated with international firms have longer audit delays.

In a similar study, Ahmed (2003) reports long delays in reporting to shareholders in the three South Asian countries India, Pakistan and Bangladesh. Using a sample of 115 annual reports for the year 1998, Ahmed finds that the total lag between the financial year end and holding the annual general meeting is 179 days. In Bangladesh, Ahmed did not find any association between corporate characteristics and timely reporting. Both Imam et al and Ahmed consider the same sample size, collect data from the same year, 1998 but their findings are contradictory. Imam found an average audit delay of 5.86 months**,** or approximately 176 days where as Ahmed found a total reporting lag of 179 days. Generally, this situation is impractical as the company needs to send their annual report to shareholder fourteen days before the AGM. It may be due to the different companies used in the studies' samples: there is scope for further study.

Considering only audit delay, Karim and Jamal (2005) investigate the impact of regulatory change on timeliness of financial reporting. For this purpose, the study considers the year immediately preceding the regulatory change and the year two years after the change: these are examined using observations of 1999 and 2001, and then using the observation from 1999 and 2003. The results showed that audit delays could be reduced by the regulatory change. Long audit delay is one of the main causes behind the chronic delay observed in issuing financial statements to shareholders. On the other hand, Karim et al. (2006), considering all the parts of timeliness of reporting found no improvement after regulatory changes, as measured by audit lag, issue lag and total lag. The average audit lag is 156 days, preliminary lag is 187 days and total lag is 218 days for all listed companies that published annual reports during the period 1990 to 1999. However, the study used fifty-seven companies for each of the ten years. Their findings contradict with other recent studies; Reheul et al. (2013) and Iyoha (2012), and previous studies in Bangladesh (Karim and Jamal 2005) all conclude that enforcement of laws and regulations reduce the lag time of reporting: again this is an area that would benefit for further study.

3.5.4 Research Gap in Timeliness of Reporting:

The motivation for this study derives from: a longstanding problem with achieving of timely provision and of a lack of studies measuring the timeliness of reporting quality in Bangladesh. The few studies that have been done so, relating to Bangladesh is no longer valid. Moreover, upon reviewing the literature, it would of seem that some of variables that have of been tested in previous studies can be re-examined the future studies of reporting lag. This is because over the years, the trend and characteristics may change and will give significantly different significant results.

The current study will contribute to the literature and reveal whether the timeliness of reporting is changing over time or not. As the study considers audit lag, preliminary lag and reporting lag, it helps to identify the cause of delay. In addition, determinants will help to identify the factors affecting the timeliness in total and its categories.

3.6 Conclusion:

Reviews of voluntary reporting in Bangladesh have revealed that interest in social and environmental disclosure by corporations is increasing, although the level of reporting is still poor compared to that in developed countries (Akhtaruddin 2005; Belal 2008; Belal and Owen 2007; Islam and Deegan 2008; Sobhani et al. 2009). Sobhani et al. (2009) concluded that although the disclosure level appeared to have increased over the last ten years, the quality of disclosure was poor. Belal and Roberts (2010) suggested that mandatory CSR reporting through regulation was preferred by stakeholders in Bangladesh, although the authors believed that the imposition of social accounting standards without consideration of the important socio-economic context of Bangladesh would lead to unintended consequences.

Developing countries, including Bangladesh, are lagging far behind in sustainability research. Although a significant amount of theoretical and empirical research on corporate social and environmental reporting has been conducted, excluding Sobhani et al (2009), there is a lack of research on sustainability disclosure in Bangladesh. Previous authors including Belal (2001), Belal and Owen (2007), Imam (2000), Islam and Deegan (2008) and Belal and Cooper (2011) are the main contributors to Social and Environmental

Accounting research in this country. The studies of Belal (1999, 2001) and Imam (2000) were mostly limited to an overview of social and environmental disclosure practices in corporate bodies.

The majority of disclosure studies cover a single point of time, which may just be one single year. Other studies address disclosure over two points of time in order to assess the extent of disclosure. However, a longitudinal study on a yearly basis that can trace disclosure practices over a number of years may help to provide more explanation as to how disclosure practices evolve over time. In addition, it will help trace the trends of disclosure and the impact of culture and corporate governance against the backdrop of social and economic development in the country (Haniffa and Cooke 2005).

The current study tries to contribute to disclosure literature and corporate governance literature through examining the mandatory, voluntary and timeliness of disclosure practices in the corporate annual reports of Bangladeshi listed companies. The study is cover seven years that witnessed increasing awareness of corporate governance and transparency: in addition this period saw the introduction of a number of initiatives including of the code of corporate governance.

Financial reports in their present form might become obsolete as users decided individually on the types of information that are important to them **(Baker and Philip 2000)**. However, there has been no attempt to either assess the information needs of users and the extent to which companies meet their needs; additionally there has been no attempt to or measure disclosure quality longitudinally and to determine whether it has improved over time. In order to do this the present study uses questionnaire survey in voluntary reporting and uses panel data for 2004 to 2010 for all empirical models.

A literature review is justifiable because on the basis of that current study can find the research gap, focus the research area and select the methodology suitable for the study. Moreover, of the literature review can help to justify the hypotheses of the current study. So on the basis of current literature review, the methodology will be selected in chapter 5 and hypotheses will be examined in chapter 6, 7 and 8.

Chapter 4:
Theoretical Framework

Chapter 4: Theoretical Framework

4.1 Introduction:

The purpose of a theoretical framework is to understand the financial reporting and disclosure practices and the reasons behind non-disclosure. According to Haniffa (1999) these theories seem to be unclear in the sense that all of them are logical and acceptable but none could be nominated as the best theory to explain corporate reporting and disclosure practice. When explaining why particular disclosures are made, or in describing how organisations should make particular disclosures, reference is made to a particular theoretical perspective. As there is no perfect theory for social and environmental accounting, there is much variation in the theoretical perspectives being adopted (Deegan 2010).

However, theories enable us to understand in general terms how the world works, to move around mentally, among the objects and relationships to which the theories relate, and to act in ways that, as far as we can tell, will not defeat our reasonable expectations. A theory will not tell us what to do; but it will tell us what it is possible to do and what is not possible to do. In that way it removes countless things from consideration when we are confronted with the necessity of choosing or acting (Chambers 1996 as cited in Iskander 2008).

The aim of this chapter is to provide critical analysis of the most used theories employed in the corporate reporting literature to achieve three main objectives:

1. Give a general idea of different theoretical perspectives.
2. Offer a critical evaluation of the various theoretical perspectives adopted in explaining the corporate reporting phenomenon.
3. Choose the appropriate theoretical base for the three empirical models of this study, measuring the quality of corporate financial reporting.

In the context of disclosure, as an accounting topic, clearly the literature employs several theories as guidance in explaining disclosure practices. There is no comprehensive theory of reporting and more work is suggested and called for to understand reporting practices (Hopwood 2000; Healy and Palepu 2001; Verrecchia 2001). It is argued that corporate reporting does not have an accepted theoretical base or commonly accepted paradigm as yet (Parum 2005). Although there are marked differences between the various theoretical frameworks, as they each attempt to analyse the same problems but from different perspectives, they do share significant features (Solomon 2007). In corporate reporting literature, agency theory and stakeholder theory are the dominant theories. Mueller (2006), points out that central to any discussion of corporate reporting is the question of how well a particular set of institutions mitigates the various principal agent problems that arise in a firm**.** However, Haniffa and Cooke (2005) used legitimacy theory to address the potential effects of corporate governance and culture on social disclosure.

In attempting to provide a theoretical underpinning and a link between disclosure and company characteristics, researchers developed different theoretical approaches based on the disclosure situations being investigated (Haniffa 1999). As the study seeks to measure quality through mandatory reporting, voluntary reporting and timeliness of reporting, different relevant theories are presented under the heading of Relevant Theories of Corporate Reporting in section 4.2 and the relationship among theoretical framework i.e., integrating the concepts among the theories, is presented in section 4.3. Section 4.4 represents the theoretical framework of the study and the rationale behind the chosen theoretical base for the current study. Finally, a summary and conclusion will be presented in section 4.4.

4.2 Relevant Theories of Corporate Reporting:

According to Gray et al. (1995), there is a lack of any agreed theoretical perspective to explain reporting activities. However, there are several possible explanations regarding why organisation do, or do not, engage in corporate reporting: the two most obvious being**,** legitimacy theory and stakeholder theory. Other theories which are used to explain reporting are agency theory and signalling theory. The perspectives of the legitimacy theory and stakeholder theory are seen to be consistent and build on the assumptions of the political economy perspective (Deegan 2010; Gray et al. 1996). Legitimacy theory and stakeholder theory are two theories referred to as system-oriented theories. Watson et al. (2002) suggest that the important advantages of voluntary reporting by the firms for both firms and managers are explained by three main theoretical theories: legitimacy theory, signalling theory, and agency theory.

The majority of literature does not refer to any theory at all, while those studies adopting or at least considering a theory show a preoccupation with stakeholder theory (e.g., Belal and Roberts 2010; Parsa and Kouhy 2008; Reynolds and Yuthas 2008), legitimacy theory (e.g., Criado- Jiménez et al. 2008; De Villiers and Van Staden 2006; Haniffa and Cooke 2005), and to a certain extent also institutional theory (e.g., Fortanier et al. 2011 and Chen and Bouvain 2009. Agency theory, legitimacy theory, stakeholder theory, signalling theory, institutional theory, and political economy theory, will explain in the following sections to choose a theoretical framework for the study.

4.2.1 Agency Theory:

Agency theory was developed by Berle and Means (1932) for a corporate setting with a clear separation between ownership and control. Its central issue is how to resolve the conflict between owners, managers, and debt holders over the control of corporate resources through the use of contracts (Simerly and Li 2000). Agency theory helps to explain why a diversity of accounting practices exists. Moreover, agency theory provides a necessary explanation of why the selection of particular accounting methods would affect the organisation, and hence is an important facet in the development of positive accounting theory (Deegan 2010).

According to Deegan and Samkin (2009, p. 71), agency theory is based on the central assumption of economics that ". . .all individual action is driven by self-interest and that individuals will act in an opportunistic manner to increase their wealth". Agency theory assumes that both the principal and the agent are utility maximisers and the interests of both parties might not be aligned (Berle and Means 1932; Jensen and Meckling 1976). The two assumptions indicate that both the principal and the agent have their own interests and they seek to maximize their individual utility, which is likely to result in conflicts between them, referred to as "the agency problem". The agency problem could not be avoided unless both parties share the same interests completely.

Traditionally, research into corporate governance has adopted an agency theory approach, focusing exclusively on resolving conflicts of interest or agency problems between corporate management and the shareholder (Jensen and Meckling 1976; Fama 1980; Fama and Jensen 1983; Eisenhardt 1989). Jensen and Meckling (1976) emphasised that the agency theory shows the contract between principal and agent. By means of this contract, the principal will delegate the authority to the agent to make different decisions on the behalf of this principal. Using the terms of agency theory, there is a contract between the shareholders (principal) and the management (agent) regarding managing and operating the organisation on their behalf. Moreover, there is another network of contracts between the shareholders (principal) and the auditor (agent) regarding controlling and auditing the disclosures of the management about the organisation's performance.

Agency theory may explain why managers voluntarily disclose information (Chow and Wong-Boren 1987; Cooke 1989, 1991, 1992; Firth 1980; Hossain et al. 1994). Shareholders will seek to control managers' behaviour through bonding and monitoring activities. Therefore, managers may have an incentive to communicate with and convince shareholders. By disclosing more information, companies attempt to reduce cost of capital by reducing investor uncertainty (Ball and Foster 1982; Watson et al. 2002). Moreover, agency theory indicates that managers will disclose social information if it increases their welfare, while the benefits of this disclosure outweigh its associated costs (Ness and Mirza 1991).Theory predicts that agency costs will vary with different corporate characteristics, such as size, leverage and listing status.

As a result of the separation between ownership and management or control, agency theory has been used to explain the relationships within organisations that create uncertainty amongst their stakeholders due to various information asymmetries (Deegan 2010). Such relationships involve the delegation of some decision making authority to managers (Jensen and Meckling 1976). Therefore, managers have power to use the resources and they consequently have access to all information about the company. On the other hand owners, resources providers, have the power to hire managers and need information to evaluate performance. As such, there is a problem of information asymmetry. So, the theory indicates that there is an interest conflict, or lack of goal congruence between agent (managers) and the principal (owners); agents may take decisions that maximize their benefits but not necessarily maximize the benefits of owners. Such conflict requires a number of mechanisms to measure and monitor the agent's behavior (Abdel-Fattah 2008) not because agents are universally selfish, but because it is difficult for principals to know when this occurs and when it does not. Furthermore, agents may interpret what is best for the organisation in a manner that differs from that of a principal.

It is widely accepted that disclosing more information may improve the quality of the annual report (Healy and Palepu 2001; and Watson et al. 2002). Given that managers aim to reduce agency costs using disclosure, the agency theory can explain why managers wish to improve their disclosure quality. But, Moldoveanu and Martin (2001) identify two kinds of managerial failures that restrict the agent from acting perfectly towards the principals (shareholders). Firstly, failures of managerial competence related to unwitting mistakes in the discharge of managerial control. Secondly, failures of managerial integrity related to willful behaviors on the part of managers having a negative impact on the value of firm's assets.

Since agency relationships suffer from the problems of conflict of interest and information asymmetry, an optimal solution needs to be discovered to control such problems. Healy and Palepu (2001, p. 409) outline several solutions to the agency problem. Firstly, appropriate contractual incentives must be developed to reduce conflict of interests. Secondly, the monitoring function of the board of directors must be effective in observing and controlling managerial behavior on behalf of the shareholders. Finally, capital market players, including financial analysts and rating agencies, must accept responsibility and act as whistleblowers, in the case of any wrongdoing.

Given that disclosure is effective in limiting agency cost (Huang and Zhang 2008), agency theory has been widely used in the literature to explain variations in disclosure quality that are due to managerial disclosure decisions. Within agency theory, disclosure quality is viewed as one form of monitoring mechanism used by investors. It has the potential to reduce of information asymmetry between an agent and the managers and may, therefore, be effective in lowering agency cost in the firms (e.g. Jensen and Meckling 1976; Huang and Zhang 2008; Junker 2005). In other words, disclosure is recognised as one of the possible solutions to the agency problem (Eng and Mak 2003). Well informed investors are expected to scrutinise firms on the basis of the information provided to them and this subsequently reduces the agency cost (Junker 2005; Huang and Zhang 2008).

Critics of agency theory have argued that the theory lacks validity outside a specific social context. Specifically, they contend that agency theory relies on an assumption of self-interested agents who seek to maximize personal economic wealth while minimizing personal effort (Bruce et al. 2005; Davis et al. 1997; Lubatkin et al. 2007). Thus, their view of agency theory is that it applies only to settings in which agents (and possibly principals) hold little regard for others and have little compunction when it comes to avoiding one’s responsibilities (Davis et al. 1997). Also, agency theory doesn't take into consideration corporate environments that have no discernible separation between ownership and control, nor does it consider that managers might have to make choices from a perspective other than maximizing wealth for stockholders (Rahman et al. 2010). Moreover, agency theory ignores the fact that managers have significant motives to conceal adverse information or artificially enlarge the firm's short term results (Vlachos 2001; Ghazali 2004).

Agency costs stem from the assumption that the two parties, agents and principals, have different interests. According to Jensen and Meckling (1976), the separation of the ownership and management that occurs between the principal and the agent results in a variety of agency problems and different agency costs including monitoring costs, bonding costs, and residual loss.

Monitoring costs are paid by the principals, shareholders, to limit the agents’ aberrant activities (Fama and Jensen 1983). The monitoring process is restricted to certain groups (Denis et al. 1997). At the same time, the monitoring process must have the necessary expertise and incentives to monitor the management, and provide a credible thread to management's control of the company. Therefore, the cost of undertaking an audit is referred to as a monitoring cost (Deegan 2010). However, too much monitoring would results in constricting the managerial initiative (Burkat et al. 1997).

Bonding costs are paid to guarantee that no harm of the principal’s interests will result from their decisions and actions. Agents need to disclose additional information to show their shareholders that they are acting in a satisfactory behavior that coincides with their interests. Moreover, managers have an obligation to prepare financial statements. This is costly, and referred in positive accounting theory as a bonding cost (Deegan 2010). Moreover, the agents would accept bearing the bonding costs in order to reduce monitoring costs (McColgan 2001). As it is impractical to satisfy all the request of the shareholders, there would not be a perfect bonding contract that satisfies all their needs (Denis 2001).

Residual loss occurs when decisions of the agents diverge from decisions that would maximize the principal's welfare. The existence of the residual or agency loss is due to the existence of the monitoring costs and bonding costs and the imbalance between them (Iskander 2008). That means the failure agent to satisfy the needs of the shareholders regarding monitoring the agent's performance and so the agency contract is imperfectly satisfied (McColgan 2001).

The agency relationship leads to the information asymmetry problem due to the fact that managers have greater access to information than shareholders (Jensen and Meckling 1976). Optimal contracts is one of the means of mitigating the agency problem as it helps in bringing shareholders' interests in line with managers' interests (Healy and Palepu 2001). In addition, voluntary disclosure is another means of mitigating the agency problem, where managers disclose more voluntary information, reducing the agency costs (Barako et al. 2006): it can also convince the external users that managers are acting in an optimal way (Watson et al. 2002). Finally, regulations are another means of mitigating the agency problem as they require managers to fully disclose private information (Healy and Palepu 2001). However, full disclosure is never guaranteed even in the presence of regulations (Al-Razeen and Karbhari 2004). The absence of full disclosure is explained by the conflict that exists between the interests of managers and shareholders (Lev and Penman 1990; Samuels 1990). In addition, corporate reporting regulations are intended to provide investors with the minimum quantity of information that helps in the decision-making process (Al-Razeen and Karbhari 2004).

The implications of this theory have given rise to several hypotheses. Among others, the size hypothesis, gearing hypothesis, listing status hypothesis, auditor size and ownership hypothesis which will all be discussed in chapter five under the development of hypotheses for the current study. Agency cost tends to increase with firm size (Hossain et al. 1995). As disclosure can reduce monitoring costs, a significant agency cost, one would expect to find greater disclosure among large firms relative to small firms. Francis and Wilson (1988) argue that company size may proxy for agency costs since, in general, as a company's size increases so do its agency costs. The existence of a positive relationship between auditor size and disclosure has been explained on the basis of agency costs.

Agency theory also predicts that managers of companies whose ownership if diffuse have an incentive to disclose more information to assist shareholders in monitoring their behaviour (Raffournier 1995). In addition, agency theory explains that the potentials for wealth transfer from fixed claimants to residual claimants increase with leverage (Jesen and Mecking 1976; Myers 1977 and Watts 1997) suggesting that highly leveraged companies would disclose more information in order to satisfy the needs of debenture holders and trustees. Finally, Cookie (1989) argues that agency cost increases as shareholder become more remote from management. Due to greater separation between owners and managers, Z category companies are likely to incur higher agency cost such as monitoring costs.

4.2.1.1 Evaluation of Agency Theory:

Although agency theory has been widely used in disclosure literature, a number of authors criticise the assumption that individuals act in self- interest to maximise their benefits and suggest that there are internal and external pressures that direct the performance of managers to serve the interests of owners in addition to their interests (Fama 1980; Eisenhardt 1989; Ashton 1991). Moreover, agency theory ignores the fact that managers have significant motivation to conceal adverse information or artificially enlarge the firm's short term results in order to maximise benefits related to these short term results (Vlachos 2001; Ghazali 2004). Coffee (1984) pointed out that agency theory ignores the fact that some managers have strong incentives to withhold positive information. It is the incentive problems that are at the heart of agency theory. Again, agency theory does not assume that individuals will ever act other than in self-interest, and the key to a well functioning organisation is to put in place mechanisms that ensure that actions that benefit the individual also benefit the organisation. On the other hand, Crowther and Jatana (2005) argue that there may be no relationship between the principal and agent. They indicate that there is no requirement or even expectation that a shareholder will remain a shareholder for an extended period of time. In addition managers under share option schemes may be considered also as principals.

4.2.2 Legitimacy Theory:

Legitimacy theory is based on the premise that companies signal their legitimacy by disclosing certain information in the annual report. Legitimacy theory is centered on the notion of a contract or agreement between an enterprise and its constituents (Shocker and

Sethi 1974). Suchman (1995) defined legitimacy as: “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definition”(p. 573). The concept of a social contract is the basic notion of the legitimacy theory (Guthrie and Parker 1989; Mathews 1993; Patten 1992). In this respect, Guthrie and Parker (1989) claim that business operates in society via a social contract where it agrees to perform various socially desired actions in return for approval of its objectives, other rewards and its ultimate survival.

The legitimacy theory assumes that a company has no right to exist unless its values are perceived as matching with that of the society at large where it operates (Dowling and Pfeffer 1975; Lindblom 1994; Magness 2006). Since the objective of accounting is providing users with information that help in decision-making, i.e., satisfying social interests, the theory has been integrated in accounting studies as a “means of explaining what, why, when and how certain items are addressed by corporate management in their communication with outside audiences” (Magness 2006, p. 542). Since the legitimacy theory is based on a society’s perception, management is forced to disclose information that would change the external users’ opinion about their company (Cormier and Gordon 2001). Legitimisation can occur both through mandatory disclosures -disclosures provided in financial statements because of regulations, and voluntary disclosures provided in other sections of the annual report (Magness 2006; Lightstone and Driscoll 2008).

According to Gray et al. (1996), legitimacy theory is derived from the idea that every company operates in a society through an expressed or implied social contract. It is essentially a systems-oriented theory, i.e. companies are viewed as components of the larger social environment within which they exist. Thus, a company needs this theory to legitimise its activities to the society in which it operates in order to justify its continued existence. Deegan (2002) suggests that organisations need to take community expectations into account if they want to be successful. Organisations will be penalised or may not survive unless they are congruent with the society in which they operates (Dowling and Pfeffer 1975).

According to Lindblom (1994), the legitimacy is defined as 'a condition or status which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is part. When a disparity, actual or potential, exists between the two value systems, there is a threat to the entity's legitimacy' (p.2). Moreover, Tinker and Neimark (1987) state that 'the public in general, become increasingly aware of the adverse consequences of corporate growth. They apply pressure on business and government to make outlays to repair or prevent damage to the physical environment, to ensure health and safety of consumers, employees, and those who reside in the communities where products are manufactured and wastes are dumped and to be responsible for the consequences of technological unemployment and plant closure. Therefore, businesses are forced to respond to the diversified social issues that are consequences of their activities' (p.84).

In legitimacy theory, the organisation is said to be a part of a wide social construct with different expectations that must be met to maintain its operations (Ratanajongkol et al. 2006). Legitimacy theory suggests that there is a stress on the corporations to react to the community's expectations (Guthrie and Parker 1989). Therefore, the community's expectations are satisfied by additional disclosure of information (Wilmshurst and Frost 2000). However, organisational legitimacy is not fixed, and it is subject to change in terms of time and place due to changing community attitudes (Deegan 2010). So, to survive, organisations need continually to adapt their activities to the changing requirements of legitimacy. They also need to take all measures necessary to ensure that their activities are perceived to be commensurate with the societal expectations of various stakeholder groups in society.

The term 'social contract' reflects the expectations of society about how an organisation should conduct its operations. These expectations could be explicit or implicit. Deegan et al. (2000) argued that legal requirements form the explicit terms of contract, while community expectations constitute the implicit. Deegan (2010) also argued that the implicit terms of a social contract are difficult to determine and different organisations might have different perceptions of the terms. However, as the societal bounds and norms may change over time, the organisation continuously has to demonstrate that its actions are legitimate and that it behaves as a good corporate citizen, usually by engaging in corporate social responsibility.

Legitimacy theory argues that organisations can only continue to exist if the society recognizes it as acting within acceptable value system (Rizk 2006). Based on this theory, organisations aim to win social approval, in other words to legitimize their actions (Patten 1991; Mathews 1993; Reich 1998 and Deegan 2010). According to Lindblom (1994), to legitimise its actions, a company has four ways or strategies: firstly, it may educate and inform its relevant stakeholders about changes in the company's performance; secondly it may change the perceptions of the relevant stakeholders but not change its actual behavior; thirdly, it might manipulate perception by deflecting attention from the issues of concern to other related issues through an appeal, and lastly, it may change the external expectations of its performance.

Suchman (1995) articulates three types of legitimacy - pragmatic, moral, and cognitive - and suggests that in most settings they co-exist and reinforce one another. Pragmatic legitimacy behaviors may focus on ‘delivering favorable outcomes vis-à-vis audience interests, or the dynamics may focus on incorporating constituents into policy-making and/or adopting constituent measures of performance’ (p. 578). Moral legitimacy “. . . rests not on judgments about whether a given activity benefits the evaluator, but rather on judgments about whether the activity is ‘the right thing to do’, and it “reflects[s] beliefs about whether the activity effectively promotes societal welfare . . .” (Suchman 1995, p. 579). Cognitive legitimacy stems mainly from the availability of cultural models that furnish plausible explanations for the organisation and its endeavors.

Jenkins (2004) asserts that the legitimacy theory is dominating research theory usd to explain why companies disclose corporate information. This theory leaves much of corporate reporting and disclosure to the discretion of management and ignores both the right of many stakeholders to receive information, and the obligation of the company to provide this type of information. In recent years, this particular theory has been subjected to empirical testing within several corporate social reporting and disclosure studies (see for example, Abeysekera and Guthrie 2005; Guthrie et al. 2006; Petty and Cuganesan 2005; Whiting and Miller 2008; Adams and Harte 1998; Adams et al. 1998; Ahmad and Sulaiman 2004; Deegan and Rankin 1996; Deegan et al. 2000; O’Dwyer 2002; Patten 1992; Tsang 1998, Guthrie and Parker 1989; Patten 1992; and Deegan and Gordon 1996.

Prior empirical research attempted to use legitimacy theory to explain voluntary disclosure practices by firms. Voluntary disclosure can be used by managers to communicate with stakeholders and to acquire their support (Watson et al. 2002). Moreover, legitimacy theory is most successful in explaining the extent and content of social and environmental reporting (Gray et al. 1995 and Milne 2002). Different stakeholders have different priorities (Wolfe and Putler 2002), and need different information. Moreover, their abilities to gain information are different. So, the effective use of disclosure policy, especially the voluntary one, may help in building the trust with the shareholders and other stakeholders.

4.2.2.1 Evaluation of Legitimacy Theory:

The idea of the legitimacy theory resembles a social contract between the company and society (Magness 2006). Organisational legitimacy theory predicts that corporations will do whatever they regard as necessary in order to preserve their image of a legitimate business with legitimate aims and methods of achieving those aims (Rizk 2006). Legitimacy is mostly used in the literature to support the idea that social disclosures will be maintained at present levels, or increased over time, to avert legitimacy crises. The most important unanswered question is whether nondisclosure then can also have a legitimising effect? If not, then the applicability of legitimacy theory to developing countries becomes quite limited. However, organisational legitimacy is not fixed, and it is subject to change in terms of time and place due to changing community attitudes (Deegan 2010). Moreover, Guthrie and Parker (1989) provided evidence that legitimacy theory is not adequate as a means of explaining social disclosure during a specific period of time. This is based on the absence of any reaction to economic, social or political events as a result of the social disclosures. Furthermore, given that legitimacy theory is dealing with perceptions, the theory has not provided an appropriate measure of the effect of disclosure changes in the perception of the relevant public in isolation from other influences and events in the society (Campbell et al. 2003).

4.2.3 Stakeholder Theory:

Stakeholders are the central focus of stakeholder theory. Stakeholders include a wide range of people and interest groups who are involved in some capacity with organisations (Price 2004). While agency theory concentrates only on the relationship between managers (agent) and shareholders (the principal), stakeholder theory considers the relation between managers and all stakeholders (the principal); such as shareholders, employees, customers, suppliers, and government. Based on stakeholder theory, a variety of stakeholders are involved in the organisation and each of them deserves some return for their involvement (Crowther and Jatana 2005).

From a stakeholder perspective, an organisation should attempt to meet multiple goals of a wide range of stakeholders rather than merely those of shareholders. As Guthrie et al. (2006, p. 256) state: an organisation's management is expected to undertake activities deemed important by their stakeholders and to report on those activities back to the stakeholders. Stakeholder theory highlights organisational accountability beyond simple economic or financial performance.

The ethical branch purports that all stakeholders have certain intrinsic rights (e.g. fair treatment) that should be protected by the organisation. Therefore the management should engage in activities for the benefits of all stakeholders, or seek to satisfy the demands, needs and expectations of all stakeholders (Deegan 2010; Deegan and Samkin 2009). According to Deegan and Samkin (2009) and Gray et al. (1996), a good relationship with various stakeholders could gain their support and approval, an example being loyalty of customers. The good relationship with stakeholders might distract competitors and draw their disapproval, which is beneficial for the organisation allowing it to survive and succeed in a sustainable manner in society.

Stakeholder theory was applied to the concept of corporate social responsibility and disclosure in the 1960s and 1970s. Since that time many ideas concerned with corporate social responsibility and disclosure were added to the literature of company management. However, the confusion about the nature and purpose of the stakeholder theory can be identified as one of the essential problems in the evolution of this theory; it has been used either explicitly or implicitly, for different purposes (Elmogla 2009)

The contemporary stakeholder literature can be traced back to the seminal work of Freeman (1984). He drew attention to the role of external stakeholders, which were defined as "any group who can affect, or is affected by, the accomplishment of organisational purpose" (p. 25). Stakeholders are persons or groups that have or claim, ownership, rights, or interests in a corporation and its activities, past, present, or future.

Such claimed rights or interests are the result of transactions with, or actions taken by, the corporation, and may be legal or moral, individual or collective (Rizk 2006, p. 26).

A primary stakeholder group is one without whose continuing participation the corporation cannot survive as a going concern. Primary stakeholder groups typically are comprised of shareholders and investors, employees, customers, and suppliers, together with what is defined as the public stakeholder group: the governments and communities that provide infrastructures and markets, whose laws and regulations must be obeyed, and to whom taxes and other obligations may be due (Clarkson 1995: 106). Secondary stakeholder groups are defined as 'those who influence or affect, or are influenced or affected by, the corporation, but did not engage in transactions with the corporation nor are they essential for its survival. The media and a wide range of special interest groups, such as lobbyists and NGO's, are considered as secondary stakeholders under this definition' (Rizk 2006, p.27).

According to this theory, 'managers should assess the importance of every group of stakeholders and try to satisfy them. For the purpose of benefit maximization, managers must work on behalf of all stakeholders not only the shareholders. Consequently, shareholders will benefit, as the main stakeholder, in the long run' (Abdel-Fattah 2008, p.107).

Sternberg (1997), a proponent of agency theory, criticises stakeholder theory arguing that this theory is incompatible with business and also with corporate governance. It rules out the objective of business which maximizes long term owner value. Also, the theory implies that a company should be accountable to everyone not just to their owners and encourages managers to violate their prior obligations to owners. In addition, Sternberg indicates that balancing stakeholder benefits is an unworkable objective and is unjustified. Moreover, stakeholder theory undermines private property and accountability.

On the contrary, Turnbull argues that stakeholder relationships can legitimise and protect private property, agency, and wealth. Three aspects of stakeholder theory can be identified: descriptive; instrumental and normative (Donaldson and Preston 1995). The first, descriptive, is used to describe and explain specific firm characteristics and behaviors such as how board members consider the interests of corporate constituencies, i.e. stakeholders. The second, instrumental, is concerned with the connections between stakeholder management and the achievement of corporate objectives such as profitability. The third, normative; is used to interpret the function of the corporation and the related moral and ethical guidelines.

In recent years stakeholder theory has gained significant ground in the area of business ethics and also in issues such as organisation or company strategy, economics and public policy. Freeman (1984) deserves full credit for popularizing the term since 1984. He defines stakeholders as groups or individuals who can affect and are affected by the achievement of an organisation's mission. Amongst these interest groups would be investors, employees, customers, suppliers, creditors, government bodies, pressure groups and the wider society. The list may become even more comprehensive in future generations (Gray et al. 1996).

According to Deegan (2010) a large body of literature on stakeholders has developed since the publication of Freeman (1984). He argues that this development varied in nature and becomes somewhat tangled as different researchers use different theories with different aims and assumptions but under the one label of stakeholder theory. In the words of Deegan (2010, p. 345):

> "More correctly, perhaps, the term of stakeholder theory is an umbrella term that actually represents a number of alternative theories that address various issues associated with relationship with stakeholders, including considerations of the rights of stakeholders, the power of stakeholders, or the effective management stakeholders".

Freeman (1984) suggests that each firm should have a generic stakeholder map identifying specific stakeholders**.** As the organisation changes over time, and as decisions change, the specific stakeholder map will vary. Stakeholder theory has become important for companies that want to secure their relationship with stakeholders through corporate social disclosure. This view is supported by Carroll (1999) who explains that corporate social disclosure relates to the wider society, which is represented by stakeholders. Wilson (2001) argues the importance of stakeholder theory as a concept whereby companies are able to integrate social and environmental information in their business operations and in their interaction with stakeholders.

To deal with the stakeholder, managers should consider a number of points such as information cost and competitive advantage. In addition, the power held by a stakeholder will affect the disclosure decision (Mitchell et al. 1997). That means managers must make a balance, or tradeoffs, between the stakeholders' information needs. Rizk (2006) indicates that stakeholder theory may be particularly relevant in developing countries, transitional economies and highly regulated industries. To address the voluntary disclosure practice, it is helpful to consider the different types of voluntary disclosure that aim to satisfy the stakeholder's information needs.

Deegan and Unerman (2006) and Gray et al. (1996) make a different subdivision in the theory. In their view, there are two variants. One variant is related to accountability, which is: “The duty to provide and account (by no means necessarily a financial account) or reckoning of those actions for which one is held responsible” (Gray et al. 1996, p. 38). Deegan and Unerman (2006) mentioned that the accountability variant is similar to the ethical or normative perspective of the theory. The second variant is organisational stakeholder theory. Deegan and Unerman (2006) describe the organisational and managerial variants of stakeholder theory as both being instrumental. Like Gray et al. (1996), Van der Laan Smith et al. (2005), suggest that the organisational perspective of stakeholder theory describes the relation between the corporation and its stakeholders.

Using the strategic management view presented by Freeman (1984), Ullmann (1985) suggested a three-dimensional conceptual model of corporate activity based on stakeholder theory. The first dimension is stakeholder power which reflects the theoretical basis of the proposed framework; this dimension suggests that a company would be responsive to the intensity of stakeholder demands. The second dimension of the model is the company’s strategic posture towards corporate reporting and disclosure action, which describes the company's mode of response or attitude to its key decision makers regarding social demands. The third dimension in Ullmann’s model is concerned with a company’s past and current economic performance. Ullmann argues that the financial capability of a company to undertake corporate social activities and disclosure is influenced by its economic strength.

Hence it can be expected that disclosure could reduce information asymmetry between the organisation and its stakeholders, and as a consequence improve the relationships between them. According to Deegan and Samkin (2009) and Gray et al. (1996), a good relationship with various stakeholders could gain support and approval from them (e.g. loyalty of customers) or distract their opposition and disapproval, which is beneficial for the organisation to survive and succeed in a sustainable manner in society. Some researchers in the area, such as Guthrie et al. (2006), Schneider and Samkin (2008), Vergauwen and Alem (2005) and Whiting and Miller (2008), have used stakeholder theory or some concepts of the theory to interpret the disclosure practice of organisations. However empirical evidence in those studies indicates that the organisations did not fulfill the expectations of various stakeholders for voluntary disclosure sufficiently.

4.2.3.1 Evaluation of Stakeholder Theory:

Stakeholder theory implies that managers will measure the magnitude of various stakeholder groups in the organisation, and may voluntarily disclose information, as they deem most important, to gain the approval of the stakeholders. On the other hand, stakeholder theory implies that managers identify the importance of stakeholders based on their power. In order to predict disclosures using stakeholder theory, an assessment of the relative importance managers' place on each of the stakeholder groups would need to be made. Such an assessment is arguably, quite difficult, and is unlikely to be homogeneous across different firms or different industries (Rizk 2006). Finally, there is also a further problem with the stakeholder concept in that an individual can have multiple stakes in the business as an employee, consumer, shareholder and a member of the local community. It is easier to identify the information needs of a stakeholder group than those of an individual who has multiple stake holdings in the same organisation (Sternberg 1997).

4.2.4 Signalling Theory:

According to signalling theory, a manager discloses information in order to reduce information asymmetry; one party tries to credibly convey information about itself to a second party (Spence 1973; Álvarez et al. 2008, Connelly et al. 2011) and to signal to outsiders that a firm is performing better than its peers (Miller 2002). Signalling theory is useful for describing behavior when two parties, individuals or organisations, have access to different information. Typically, one party, the sender, must choose whether and how to communicate, or signal, that information, and the other party, the receiver, must choose how to interpret the signal (Connelly et al. 2011). Signalling theory also posits that, in making decisions, investors rely on the information delivered by firms (Abhayawansa and

Abeysekera 2009), highlighting that the credibility of information is crucial in ensuring lower information asymmetry (Hughes 1986).

Signalling is a reaction to informational asymmetry in markets; in this case, companies have information that investors do not. Asymmetries can be reduced if the party with more information signals to others. This is done to signal quality and to distinguish themselves from competitors. In order to signal successfully, managers should use credible signals (Eccles et al. 2001). Bauwhede and Marleen (2008) suggest that companies disclose corporate governance information in order to reduce information asymmetry and agency costs stemming from the separation between ownership and control, and to improve investor confidence in the reported accounting information.

Verrecchia (1983) argues that a manager's decision to disclose information will be made on the basis of the effect of the disclosure or signal on the market. He posits that there will be a "threshold level of disclosure" below which information will be withheld and above which information will be disclosed. This level, it is suggested, will be determined in part by how non disclosure would be interpreted by the market. In 1990, Verrecchia added to this concept by suggesting that the quality of information available to the manager may influence the threshold level. The higher the quality of the information the lower the threshold level of disclosure.

It is argued that when information is costless, the seller will disclose both good and bad information, as buyers would put the worst interpretation on non-disclosure (Grossman 1981). Likewise, disclosing favorable information by the firms is necessary as non-disclosure will result in users inferring the content of such information as unfavorable (Milgrom 1981; Jung and Kwon 1988). Such disclosure provides credible signals about a firm's value as the firm would be penalized if it provides misleading information (Hughes 1986). Furthermore, managers voluntarily disclose both good and bad news, as the good news signals quality and bad news is signaled to prevent a decline in the firm's share price (Skinner 1994). According to Khaled (2011), companies will try adopt the same level of disclosure as other companies within the industry: where this does not happen the organisation may be perceived by stakeholders that hiding bad news.

Newman and Sansig (1993) explored the use of signalling and disclosure decisions using of three parties: the incumbent or existing market player, the stockholders and an entrant or potential competitor. Going on the assumption that the incumbent acts to maximize shareholders' wealth, they argue that in order to assist stockholder investment or consumption decisions, disclosures will be made. However, these disclosures will be imprecise or noisy in order to try and deter market entry. They conclude that if this analysis were expanded to include more users, including government and lobby groups, the company's communication problems would be complicated even further.

Moreover, Okcabol and Tinker (1993) indicate that there is a question whether non disclosure means bad news especially in a highly competitive environment. Non disclosure in this case aims to protect the company from adverse effects not to hide or mitigate the severity of bad news. Dye (1985) pointed out that even a company with good news may choose to withhold information. On the other hand a company with bad news may choose to disclose this news if the company is worried about the competitors' reaction to this information. A number of authors indicate that the reason for non disclosure may be that managers do not have information to disclose (Penno 1997) or may be uncertain about the effect of disclosure on the manager's performance (Nagar 1999).

Cheung and Lee (1995) suggests that being listed in reputable foreign exchanges (e.g. the New York Stock Exchange) signals a firm’s high level of disclosure and increases its opportunity to be listed in other stock exchanges. Other studies that use signalling theory include Chiang (2005), who showed that high firm transparency signals sound firm performance. Hussainey and Aal-Eisa (2009) demonstrate that disclosure of narrative forward looking information is superior to dividend information in respect to reducing investor uncertainty about future earnings.

Lang and Lundholm (1993, pp. 248- 249) suggest that there is a common perception that management is more forthcoming with information".... when the firm is performing well than when it is performing poorly". In such situations management is keen to raise shareholder confidence and support management compensation contacts (Singhvi and Desai 1971 and Malone et al. 1993). This is also true for highly liquid companies. Managers of highly liquid companies may be motivated to reveal their high levels of liquidity through disclosure (Wallace and Naser 1995 and Owusu- Ansah 1998).

Signalling theory also suggest industry differences in disclosure. If a company within the industry fails to follow the disclosure practice of others in the same industry it may be thought that the company is hiding bad news (Craven and Martson 1999).

4.2.4.1 Evaluation of Signalling Theory:

Signalling is a reaction to informational asymmetry in markets, that is, firms have information that stakeholders do not. Asymmetries can be reduced if the party with more information signals it to the other relevant parties, implying that market participants will not only interpret the signal correctly, but will also react and adjust accordingly. As such, signalling theory has been used in many studies to explain disclosure decisions by managers. However, signalling theory is based on several assumptions, the most important of which is the efficient market hypothesis. While signalling theory may be an appropriate explanatory theory in developed market economies with at least semi-strong efficient capital markets, it is arguably invalid in developing or transitional economies. Moreover, over time, the key concepts underlying signalling theory have become blurred (Highhouse et al. 2007), causing some to argue that signalling theory is ill defined (Ehrhart and Ziegert 2005). Although a number of studies integrate signalling concepts with related management theories (e.g., Deephouse 2000; Ryan et al. 2000; Sanders and Boivie 2004), no existing management research has systematically described the core ideas of signalling theory and how management scholars have applied them.

4.2.5 Institutional Theory:

Institutional theory explores how, at a broader level, particular organisational form might be adopted in order to bring the legitimacy to an organisation (Deegan 2010). Institutional theory offers a generic framework to analyse corporate practices. It provides insights into how an organisation understands and responds to changing social and institutional pressures and expectations. Institutional theory has been developed since the late 1970s, by researchers such as Meyer and Rowan (1977), DiMaggio and Powel (1983), and Zucker (1977, 1987). Researchers who adopt institutional theory typically embrace a view that managers are expected to confirm the norms that are largely imposed on them.

Institutional theory tends to take a broader macro view to explain why organisations take on particular forms or particular reporting practices. Moreover, it provides an argument that, while organisations might put in place particular processes, such processes might be more for 'show' than for influencing corporate conduct (Deegan 2010, p.365). Through the processes of adoption and adaptation, the institutional norms and rules impact on the positions, policies, programs, and procedures of organisations (Scott 2003).

Institutional theorists point out that all social systems, hence all organisations, exist in an institutional environment that defines social reality and that, just as with technical environments, institutional environments are enormously diverse, and variable over time (Scott 2003). Institutional theory proposes that organisations are affected by “common understandings of what is appropriate and, fundamentally, meaningful behavior” (Zucker 1983, p.105). Accordingly, institutional theory advocates that "organisational structures and processes are moderated by the institutional environment "(Lincoln et al. 1986, p.340).

Institutional theory, therefore, is capable of explaining organisational behaviour in any setting, whereas, agency theory deals with the setting of the separation between ownership and control. In other words, institutional theory can explain why businesses have similar organisational structures and cultural elements within a particular socio-cultural setting, even though they are separate entities, and, in turn, can explain why the features of an organisation, in a particular setting are different from those of another. Agency theory is a theory of a particular institutional setting, the setting where ownership is separate from control: whereas institutional theory is a generic theory, intended to identify and explain the features of organisations in any setting.

In recent years, various types of institutional theory have been used to gain insights into organisational change and accounting practices. These include: old institutional economics which is concerned with the institutions that outline the actions and thoughts of individual human agents, new institutional economics, which is related with the structures used to govern economic transactions and new institutional sociology (NIS), which is connected with the institutions that figure organisational compositions and systems. A brief outline of the nature of these three types of institutional theory is as follows.

4.2.5.1 Old Institutional Economics (OIE)

The OIE; the most established and oldest type of institutional theory; considers individuals as a cultural product affected by their institutional and cultural situations; therefore it is important to add other dimensions, anthropological and evolutionary, to the economic dimension. In this approach, human beings, organisations, and the economic system itself are regarded as part of a larger social system. However, OIE is criticised because its focus is primarily on the micro (individuals, groups and organisations) rather than the macro-level institutions. The concern expressed, regarding the limitation of OIE, is that it pays insufficient attention to environmental pressures (Yazdifar 2003). Burns (2000; 2001) argues that OIE is more suitable for studies of processes of change and resistance to change within organisations. In particular the theory is effective in investigating the role of power, politics and vested interests in change.

4.2.5.2 New Institutional Economics (NIE)

The institutions matter for economic performance is the essence of NIE (Furuboton and Richter 2000). A distinguishing feature of this theory is its persistence in maintaining that transactions are costly and the creation of institutions and organisations, and their day-today use, requires the input of real resources. In order to explain the determinants of institutions and their development over time, the function of NIE includes assessing the influence of institutions on economic performance, efficiency, and distribution. The relationship between institutions and economic growth is mutual. i.e., institutions have an insightful impact on economic growth, and, economic growth often results in a change in institutions (Nabli and Nugent 1989).

The basic elements in the literature of NIE are transaction costs, property rights, and contractual economics. Martinez and Dacin (1999) argued that as efficiency is not the overriding imperative guiding organisational and individual decisions, transaction cost economics can not explain all organisational actions and outcomes. Consequently, in the context of disclosure, NIE may be not appropriate for studying reporting practices especially in developing countries. There are two reasons for this conclusion: firstly, the difficulty of defining and identifying transaction costs in developing countries, and the secondly the accessibility of a range of additional theories that may be more helpful in understanding reporting practices.

4.2.5.3 New Institutional Sociology (NIS)

While recognizing the social and cultural basis of external influence on organisation is one of the contributions of institutional theory, neo institutionalists moved beyond recognition to describe the processes by which practices and organisations become institutions (Hatch and Cunliffe 2006). NIS focuses on change at an extra-organisational, or macro, level and primarily focuses on the 'legitimation' of organisational structures, forms and processes in society. Institutional theory suggests that social legitimacy is considered an input to the organisational transformation process (Hatch and Cunliffe 2006).

According to Hussain and Hoque (2002), NIS has contributed significantly to the understanding of relationships between organisational structures and their wider social environment. Institutional theory, specifically (NIS), has been applied in a number of financial reporting studies: Carpenter and Feroz 2001; Chalmers and Godfrey 2004; and Rodrigues and Craig 2006). Carpenter and Feroz (2001) employ institutional theory to explore how institutional pressures exerted, affect the adoption of generally accepted accounting principles for external financial reporting by public sector entities. In addition, institutional theory has been applied to financial accounting standards setting by the FASB (Fogarty 1992), the changing process of standard setting and regulation in UK (Radcliffe et al. 1994). Moreover, Fogarty (1996) discusses institutional theory and the insight it provides into the accounting profession's self-regulation actions. In developing countries in transition, Al-Twaijry et al. (2003) use institutional theory to address the development of internal audit in Saudi Arabia; while Hassan (2008) relies on institutional theory to address the development of accounting regulations in Egypt.

New institutional sociology is a popular choice among researchers who study the adoption of corporate governance reform by countries (Tareq 2013) Examples of the use of this theory for studying a country’s corporate governance reform are Sanders and Tuschke (2007), Khadaroo and Shaikh (2007), Siddiqui (2010), Chizema and Kim (2010), and Chizema (2010).

4.2.5.4 Evaluation of Institutional Theory:

Institutional theory has made great advances in recent years, but also has a number of significant theoretical and methodological problems. The most important of these problems is the generally static nature of institutional explanations (Guy 2000). Moreover, OIE is criticised because its focus is primarily on the micro (individuals, groups and organisations) rather than the macro-level institutions. On the other hand, Ahmed and Scapens (2000) point out that NIE does not recognise the impact of the broader economic, political and social institutions, which can be important in understanding the development of accounting practices. Moreover, Robins (1987) was critical of NIE for their failure to recognise the importance of the institutional environment. However, new institutional sociology does not consider the effectiveness and efficiency perspective which is the focus of traditional institutional theory.

4.2.6 Political Economy Theory:

According to Gray et al. (1996, p. 47) "…the political economy theory is the social political and economic framework within which human life takes place". The main theme of this theory is that it recognizes the interaction of economic activities with politics, society and institutions (Hannifa 1999). In other words, it emphasizes the specific historical and institutional environment of the society in which it operates. It is argued that by considering the political economy, a researcher is able to consider broarder issues that impact on how an organisation operates and what information it elects to disclose (Deegan 2010). This theory concentrates on exchanges that arise in any framework (e.g., the market) and the relationship among social institutions participating in such exchanges (Gray et al. 1995).

Guthrie and Parker (1990) assert that the main theme of this theory is that political, economic and social contexts are inseparable and should all be considered in corporate social reporting and disclosure researches. It also helps researchers to interpret social disclosure from the rich social political and economic context within which disclosure take place. This is a first move in recognising that the nexus of contracts for a company is not only between management and shareholders but other stakeholders as well.

Political economic theory has been divided into two broard streams which Gray et al. (1996, p. 47) have labelled 'classical' and 'bourgeois' political economy. Classical Political Economy Theory is related to the works of Karl Marks, and explicitly places 'sectional interest, structural conflicts, inequity, and the role of the state at the heart of the analysis'(Gray et al. 1996, p.47). This can be contrasted with 'bourgeois' Political Economy Theory which according to Gray et al. (1995, p. 53) largely ignores those elements and as a result, is "content to perceive the world as essentially pluralistic".

According to Rizk (2006) the political environment could affect the development of accounting both directly and indirectly; the political freedom of a country is also important in the development of accounting. Belkaoui (1983, 1985) argues that the political atmosphere, in general, and political rights and civil liberties, in particular, have significant influence on the development of accounting practices. In addition, the political environment affects accounting in an indirect way through its effect on the national culture and the economy. Moreover, many believe that factors in the political environment, such as stable governments and a stable currency can significantly affect the economic environment, which in turn, may have an impact on the accounting environment (e.g. Larson and Kenny 1995).

To explain and understand aspects of corporate reporting, a number of disclosure studies have used the idea of 'the bourgeois' form of political economic theory (Guthrie and Parker 1990; Williams 1999). Williams (1999) further argued that firms voluntarily provide social and environmental information in response to the pressures of the social, political and economic systems that surround them.

4.2.6.1 Evaluation of Political Economy Theory:

The political economy theory has much to offer as a basis for explanation of corporate social reporting and disclosure when compared with other theories (Guthrie and Parker 1990 and Gray et al. 1996). This theory sees the world from a view point that involves social, economic, and political factors. On the other hand, this theory fails explicitly to consider the inter-organisational factors, internal factors including the corporate characteristics and the management attitude and cognition, which have an important role in corporate reporting and disclosure in a given country (Belkaoui and Karpik 1989; Cowen et al. 1987; Patten 1991; and Tilt 1994).

4.3 Relationship among Theories:

To construct an integrated theoretical framework based on the aforementioned theories it is necessary to integrate the concepts among the theories that are consistent in explaining mandatory reporting, voluntary reporting and timeliness of reporting. The study need to understand the relationships between the theories as a basis for explaining quality of reporting. In the following section, those relationships are explained.

4.3.1 Agency Theory and Stakeholder Theory:

Agency theory is mainly concerned with the relationship between the principal and the agent; it is generally referred to as the management-owner relationship in a business setting. It is based on the central assumption of individual self-interest. It argues that both the principal and the agent tend to maximize their own returns by all means, which might result in conflicts between both parties - the agency problem. Information asymmetry is seen as one of the key factors leading to agency problems. It is also considered to be the most relevant concept because it is widely accepted that disclosures whether mandatory or voluntary could reduce information asymmetry between the management of a company and its shareholders, and consequently improve the relationship between them.

Stakeholder theory deals with the relationships of an organisation with various stakeholder groups in the society. Within the theory, the organisation is a part of the broader societal system. From a stakeholder perspective, organisations should discharge accountability not only to the shareholders, but also to other stakeholders. However, stakeholder theory does not utilise the concept of information asymmetry. Therefore in explaining the corporate reporting quality both theories need to be integrated. As a consequence, it can argue that corporate reporting can reduce information asymmetry between the organisation and various stakeholders, and improve the relationship between them.

4.3.2 Stakeholder Theory and Legitimacy Theory:

Similar to stakeholder theory, legitimacy theory deals with the relationship between the organisation and the society (or community) in which it operates. Both theories place the organisation within the larger social system. However, legitimacy theory is concerned with the society as a whole, both stakeholders and non-stakeholders, and has a relatively broader context than stakeholder theory, which focuses principally on the stakeholders of an organisation (Deegan 2010).

Legitimacy theory argues that organisations should operate within societal expectations and norms, or comply with the social contract, and simultaneously seek to ensure their operations are perceived to be legitimate by society. This is a two-way interaction between the organisation and society, unlike stakeholder theory that emphasises a one-way delivery of organisational accountability to various stakeholders in society (Li 2008). From this perspective, legitimacy theory plays a more positive role in explaining corporate disclosure since disclosure is not only a means for organisations to discharge their accountability to various stakeholder groups, but also to gain and maintain their legitimate status in society. Apart from this difference, most notions within legitimacy theory in relation to disclosure are consistent with those of stakeholder theory. Moreover, legitimacy theory and stakeholder theory are both derived from a broader theory which has been called Political Economy Theory (Gray et al. 1996).

4.3.3 Signalling Theory and Agency Theory:

Signalling theory deals with how to address problems arising from information asymmetry (e.g. adverse selection and moral hazard) and thus is closely linked to agency theory. Signalling theory suggests a number of potentially effective solutions to the information asymmetry problem in that the management of an organisation can positively highlight its excellence to various stakeholders through mandatory and voluntary disclosure of accounting information in a timely manner.

Agency theory and signalling theory partially overlap, in the sense that both theories relate to information asymmetry between firms and investors. Both theories suggest that promoting disclosure quality is crucial in reducing information asymmetry (Álvarez et al. 2008). However, one of the basic assumptions of signalling theory which makes it slightly different from agency theory is that there are signalling costs that are inversely related to the quality of information (Morris 1987). He also suggested that they do not share the same necessary conditions, they are not equivalent, and nor does one theory imply the other.

Morris (1987) concludes that agency theory and signalling theory are consistent and that there is a considerable amount of overlap between them: the sufficient conditions of both are consistent. The two theories recognise rational behavior; information asymmetry, the necessary condition of signalling theory, is implied in agency theory; quality can be defined in terms of agency theory variables; and signalling costs are implicit in some bonding devices of agency theory.

4.3.4 Legitimacy Theory and Signalling Theory:

Legitimacy theory suggests that organisations should report the information on a mandatory and voluntary basis in order to indicate (or signal) that they are complying with societal expectations and norms. Signalling theory provides a range of disclosure strategies through which organisation can disclose information and fulfill societal expectation and norms. Accordingly legitimacy theory and signalling theory are complementary theories in explaining corporate reporting practices of organisations.

4.3.5 Institutional Theory and Legitimacy Theory:

Legitimacy theory discusses how particular disclosure strategies might be undertaken to gain, maintain or as operating within a social framework of norms, values, and shared assumptions about what constitutes appropriate or acceptable economic behavior (Oliver 1997).

Legitimacy theory and institutional theory are linked to political economy theory: the political economy constitutes the social, political and economic framework within which human life takes place and social, political and economic issues are considered as inseparable. Moreover, institutional theory provides a complementary, and partially overlapping, perspective to both legitimacy theory and stakeholder theory (Deegan 2010. p. 366)

4.4 Choosing a Theoretical Framework for the Study:

The theoretical discussion has shown that the theories are interrelated and underpin each other in explaining disclosure practice. While each of these theories may provide some interesting insights into the disclosure decision, applicability of single theory to the current study is questionable due to the inherent limitations in each of the theories. Moreover, it is clear that there is overlap among these theories. After examining the relationships between the theories it indicates that each theory takes a look at disclosure from a different perspective. Regardless of which theories are adopted and used to explain disclosure practice, they are equally important: appropriate theories should be selected according to the nature of the study. The choice of the theory should depend on the focus of the study (Chen and Roberts 2010). Some theories may be more appropriate and relevant to some countries than others (Mallin 2010). Adrem (1999); and Cormier et al. (2005) argue that disclosures are a complex phenomenon that cannot be explained by one single theory whereas Yi et al. (2011) suggested a comprehensive theoretical framework to study disclosure decisions. When the aim of the study is to explain an empirical phenomenon, it could be problematic to consider theories as competitive instead of complementary (Gray et al. 1995).

There could, of course, be several motivations simultaneously driving organisations to report information and expecting that one motivation might dominate all others is probably unrealistic. Due to the overlapping nature of a number of theories, and because these theories can provide slightly different and useful insights, there has been a move by some researchers to use more than one theory to provide an explanation for particular managerial actions (Feidler and Deegan 2002). There is no reason to believe that the different emphasis is simply a shift in paradigm; this depends on the objectives of accounting**,** whose interests are being emphasised, and the underlying assumptions and the limitations of the proposed theories (Haniffa 1999).

The first part of this study examines mandatory disclosures and significant regulatory noncompliance: these **e**pisodes of organisational transgression reveal negative consequential outcomes. Such conditions are expected to result in agency problems. Moreover, mandatory disclosure serves to reduce agency losses that arise because of the conflicting interests of promoters, directors, investor, and managers. It is clear that part of the purpose of mandatory disclosure is to address some standard agency problems. In Bangladesh, the Securities Exchange ordinance of 1987 requires that all publicly traded companies make periodic disclosures, including detailed information about management's compensation and significant transactions between managers and the company. The evident purpose of such disclosures is to help the shareholders to monitor management's self-interested behavior. Given that the present study is designed to examine disclosure quality, which is associated with information asymmetry in principal agent relationships, agency theory is found to be the most relevant theory for the purposes of the study.

The second part of this study, addresses the voluntary reporting practices in the annual reports of the Bangladeshi listed companies. The annual report is prepared for general purposes and is not directed towards a specific user: it can be used by several stakeholders and not only by shareholders. As voluntary disclosures are in addition to mandatory, for the purpose of benefit maximization, managers must work on behalf of all stakeholders not only the shareholders. Moreover, to address the voluntary disclosure practice, it is helpful to consider the different types of voluntary disclosure that aim to satisfy the stakeholder's information needs. Furthermore, management may choose either to disclose information voluntarily that differentiates them from competitors or may adopt the same level of disclosure as other firms within the same industry i.e., to signal in the market about the quality. Therefore stakeholder theory and signalling theory are most appropriate for second part of the study.

The timeliness of corporate financial reporting helps in the efficient allocation of resources by reducing dissemination of asymmetric information. In this regard, agency theory is considered to be relevant because it explains how the board of directors, director's ownerships and audit committee, all function as monitors of mechanisms to reduce the agency problems. Moreover, timeliness is regulated by the Companies Act and stock exchange listing requirements. As the annual report reaches different stakeholder, the company uses it to signal their performance; it can be assumed that stakeholder theory and signalling theory is also relevant in this part.

The study does not examine political pressure and used all the listed firms and users rather than only large or political sensitive firms: therefore, political cost theory is not useful in the study. In the same way, the economic approach that is based on assumptions of an efficient market, profit maximization and self interest is considered to be not appropriate for the purpose of the current study. Again this study does not focus on any particular organisational structure rather it considers all listed companies and therefore institutional theory will not be applicable because this theory explores how particular organisational forms might be adopted in order to bring legitimacy. Legitimacy theory is most successful in explaining social and environmental reporting (Gray et al. 1995 and Milne 2002). This study focuses on overall disclosure, including social and environmental but not only social or environmental disclosure. That is why it is assumed that legitimacy theory will not support the study.

The current study addresses the mandatory reporting, voluntary reporting and timeliness of reporting practices and their determinants by the listed companies in Bangladesh. So due to the countries legal perspective, the nature of the data and objectives of the study- agency theory, stakeholder theory and signalling theory will be most appropriate. Therefore, it can be assumed that organisations disclose mandatory and voluntary information in a timely manner for three reasons: firstly, to reduce information asymmetry; secondly, to discharge accountability to various stakeholders; and thirdly, to signal their performance, quality and excellence to society and the market.

Information asymmetry is seen as one of the key factors leading to agency problems whereas; stakeholder theory deals with the relationships of an organisation with various stakeholder groups in the society. Signalling theory also deals with how to address problems arising from information asymmetry. So, agency theory and signalling theory partially overlap, in the sense that both theories relate to information asymmetry between firms and investors. However, stakeholder theory does not utilise the concept of information asymmetry. All these theories are interrelated to each other but not contradictory. Although the constructed framework has some limitations, it is expected that this research could initiate more in-depth explorations in future research with respect to theoretical perspectives on corporate reporting, for instance, combining more relevant theories into the framework.

However, it must be emphasised that choosing these theories does not mean that they have some absolute superiority over other theories. Due to the inherent limitations of the respective theories and the multifaceted nature of the disclosure decision, it is the position of this research that no single theory alone can be used to accurately capture, convey and explain the reporting phenomenon.

4.5 Conclusion:

This chapter summarises the dominant theories that have been used to justify different types of disclosure practices. When explaining why particular disclosures are made, or in describing how organisations should make particular disclosures, reference is made to a particular theoretical perspective. Regardless of which theories are adopted and used to explain disclosure practice, they are all important: their value is dependent on the emphasis of the study. However, as there is no perfect theory for disclosure, there is much variation in the theoretical perspectives being adopted (Deegan 2010). Moreover, each of the theories is questionable due to inherent limitations.

By considering the country’s legal perspective, the nature of the data and objectives of the study, agency theory, stakeholder theory and signalling theory have been relevant to the purpose of the present study. Agency theory is considered to be the most relevant concept because it is widely accepted that disclosures whether mandatory or voluntary could reduce information asymmetry between the management of a company and its shareholders, and consequently improve the relationship between them. Moreover, stakeholder theory deals with the relationships of an organisation with various stakeholder groups in society. As the organisation is a part of the broader societal system, organisations should discharge accountability not only to the shareholders, but also to other stakeholders. In addition, signalling theory suggests a number of potentially effective solutions to the information asymmetry problem in that the management of an organisation can positively highlight its excellence to various stakeholders through mandatory and voluntary disclosure of accounting information in a timely manner.

It is therefore the intention of this research to follow a multi-theory approach; neither to focus on any one theory nor to discard any of these theories but rather carry them through the thesis with the aim of revisiting them in light of the results of the empirical study. The next part of the study is concerned with examining the validation of this theoretical argument. These theories are used to develop the hypotheses in the chapter 5, which will be empirically tested in the chapter 6, chapter 7 and chapter 8.

Chapter Five:
Methodology and Hypotheses Development

5.1 Introduction
5.2 Research Philosophy
5.3 Research Paradigm
5.4 Research Approach
5.5 Research Design
5.6 Index Construction
5.7 Data Collection
5.8 Sample Size
5.9 Empirical 1: Mandatory Reporting
5.10 Empirical 2: Voluntary Reporting
5.11 Empirical 3: Timeliness of Corporate Reporting
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Chapter Five: Methodology and Hypotheses Development

5.1 Introduction:

The previous chapter, Chapter Four, presents the theoretical sections of this study and outlines the appropriate theories for the study. Chapter three reviews the relevant literature, and an overview of the legal framework of Bangladesh is presented in chapter two. Based on the chosen theoretical framework and the literature, the core intention of this chapter is to outline the methodology and hypotheses in the light of the research ontological and epistemological positions that would be employed in the current study's empirical analysis. The empirical section in the present study aims to measure the quality of financial reporting and its trend over the period of study. Furthermore, the research justifies the investigated level of mandatory, voluntary and timeliness of reporting by examining their different determinants.

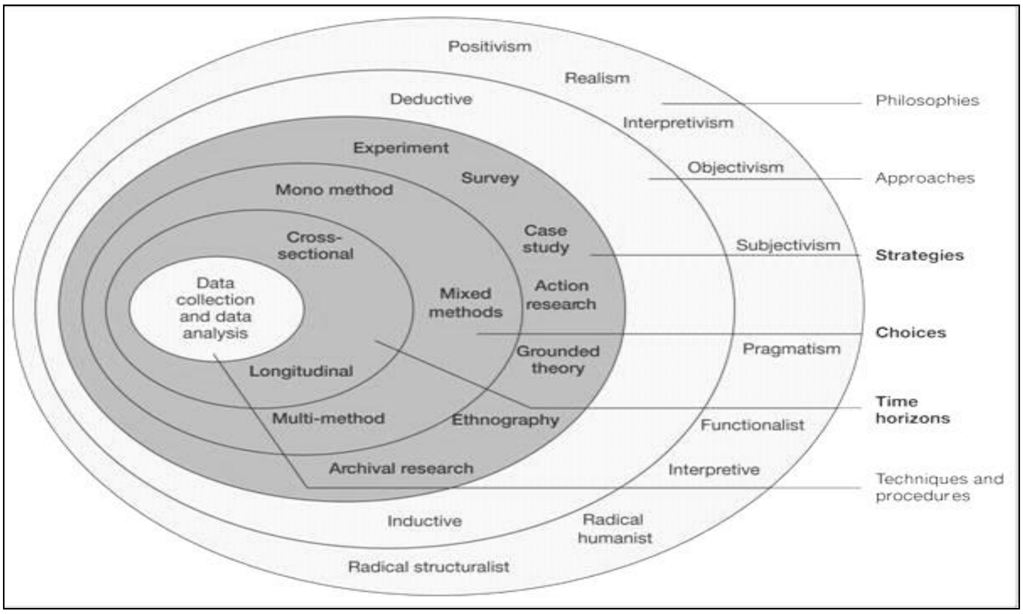
In the current study, the first two empirical studies depend on the designing of a checklist that includes the main issues of the mandatory and voluntary reporting. Furthermore, the results of the checklist would form an index of their disclosure. Current research also uses questionnaire survey to examine the weight of voluntary disclosure. The third empirical study measures the reporting lag time by clearly distinguishing the audit lag time and preliminary lag time.

The current chapter outlines the research method and the procedures employed in the empirical section. Section 5.2 outlines the research philosophy. The research paradigm is presented in section 5.3. While section 5.4 provides the research approach and section 5.5 presents the research design. Section 5.6 outlines the index construction. Moreover, section 5.7 and 5.8 provides detail of the data collection and sample size. The next three sections of this chapter, 5.9, 5.10 and 5.11 describe the three empirical models, their determinants, and the hypotheses development. Section 5.12 represents the statistical test followed by a conclusion in section 5.13.

5.2 Research Philosophy:

Research is “a systematic investigation to find answers to a problem” (Burns 2002, p. 3). Eldabi et al. (2002) mentioned that for conducting any type of research, a researcher should follow a well-defined research methodology based on scientific principles. In this context, Hussey and Hussey (1997) argue that research can be classified in several ways. The first is the reason why the researcher is conducting such research – the purpose of the study. The second is the method by which the researchers collect and analyse data – the process of the research. The third is whether the researcher is moving from the general to the specific or vice versa – the logic of the research. The last one is whether the research is attempting to investigate a particular problem or to make a general contribution to knowledge – the outcome of the research. However, the choice of any particular method of research depends on the research philosophy or paradigm that researchers follow to conduct their research (Creswell 2003). Thus, it is essential to understand the philosophical issues of research i.e., how the search for truth, reflected in the accomplishment of the aims of the research, is to be achieved.

Figure 5.1: Research Onion

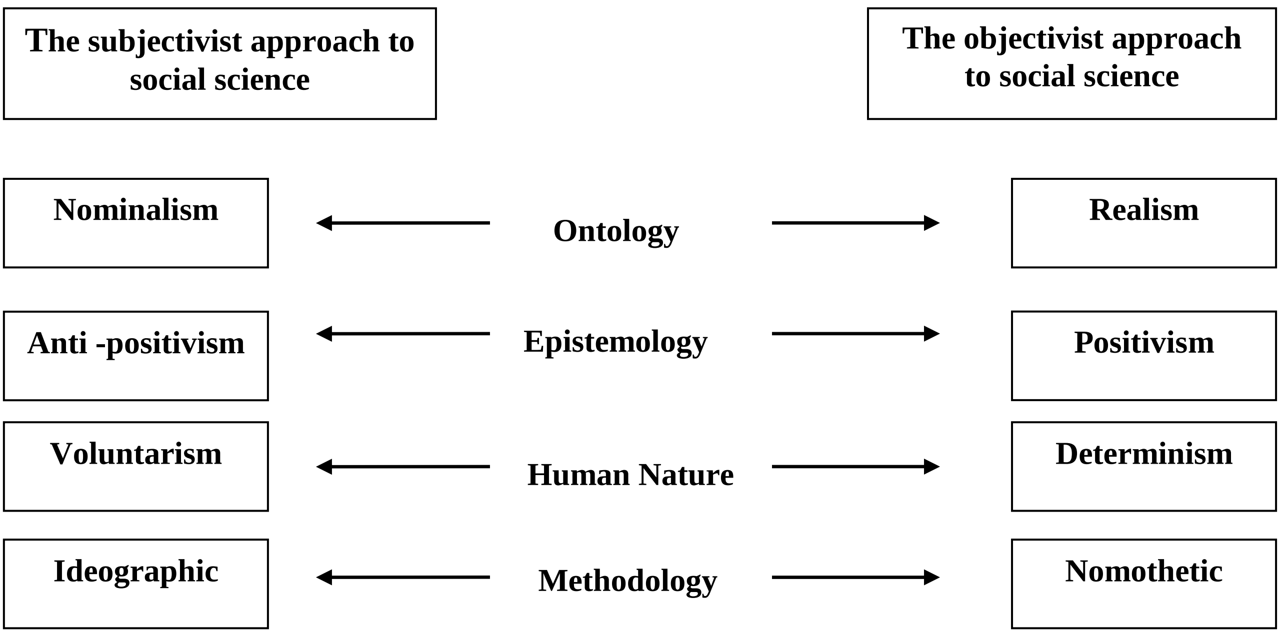


Source: Saunders et al. (2007).

The research process involves a number of steps or procedures that should be followed to conduct research. Saunders et al. (2007) indicated that the steps of research process can be viewed as layers of a research onion. The research onion consists of six layers namely, research philosophies, approaches, strategies, choices, time horizons, techniques and procedures: these are shown in figure 5.1. There are important layers of the research onion which need to be peeled away before deciding about data collection and data analysis. Questions of research method are of secondary importance to questions of ontology, epistemology, and paradigm applicable to the research (Guba and Lincoln 1994; Saunders et al. 2007). Based on this classification of the steps of research process, this section sheds light on the first layer of the research onion of the current study; the research philosophy.

The term research philosophy relates to the development of knowledge and the nature of that knowledge (Saunders et al. 2007). The research philosophy adopted by researchers contains important assumptions about the way in which they view the world. Research in social science, including accounting, is based on assumptions about the nature of social science and the nature of society. The assumptions about the nature of social science are related to the ontological perspective, epistemology perspective, human nature and methodology. Two extreme positions can be identified on each of these assumptions, based on the subjective and objective dimension. These positions are presented in figure 5.2.

Figure 5.2: Assumptions about the Nature of Social Science



Source: Burrell and Morgan (1979, p. 3).

Thus, four assumptions are related to the nature of social science; ontology, epistemology, human nature and methodology. The subjective - objective dimension can be used to distinguish the extreme positions of each assumption.

5.2.1 Ontology:

The first assumption, ontology, concerns with the very essence of the phenomena under investigation. The choice of a suitable research philosophy that fits with the nature of the research is based on the ontological position of this sort of research. In short, ontological assumptions are concerned with 'what we believe constitutes social reality' (Blaikie 2000, p.8). Therefore, the research ontological position is referred to as the answer to the question of what is the nature of the investigated social and political reality; it is a theory of being (Marsh and Stoker 2002, p.169).

There are two ontological positions: objectivism (realism) and subjectivism (nominalism) (Burrell and Morgan 1979; Hirschheim 1985; Chua 1986; Hirschheim and Klein 1989; and Weber 2003). While the former considers that 'an ontological position that implies that social phenomena confront us as external facts that are beyond our reach of influence' (Bryman 2001, p.16), the later involves that 'social phenomena and their meanings are continually being accomplished by their social actors. It implies that social phenomena and categories are not only produced through social interaction but that they are in a constant state of revision' (Bryman 2001, p.18). In other words, the question is whether the reality is external to the individual cognition or it is a product of individual cognition. The realists believe that the social world exists independently of an individual's appreciation of it (Burrell and Morgan 1979). It is also noted that objectivists view the organisation's culture as something that the organisation 'has'. On the other hand the subjectivist's view the culture as something that the organisation 'is' as a process of continuing social enactment (Smircich 1983).

The current research argument is based on the agency theory, stakeholder theory and signalling theory(as discussed in chapter 4) which are considered to be an important part of the positive accounting theory (descriptive research). So, an objectivism ontological position is suitable for the study. Baker (2011) informed that, by the end of 1980s, there was a major shift in accounting research from a normative framework to empirical and positivist research. The positive accounting theory is referred to as a neo-empirical research. Ontologically neo-empirical research (positive accounting theory) adopts a strong realist (objective) position. It was founded on the ontological view that "the reality of accounting can be discovered by the use" (Bisman 2010, p. 6). It is believed that there is an objective reality that exists independent of any human agency (human involvement). Moreover, Bisman (2010) explained that positive accounting theory based on objectivist ontology had dominated the literature. Ashton et al. (2009) explained that there was increased popularity of positivist approaches to research. The positivist approach is the scientific approach that appropriately identifies, explains and predicts accounting phenomena (Sharma 2013).

5.2.2 Epistemology:

The second assumption is Epistemology, a word coming from two Greek words: “Episteme which means ‘knowledge’ or ‘science’ and Logos which means ‘knowledge’, ‘information’, ‘theory’ or ‘account’ (Johnson and Scholes 1997). Epistemology concerns what constitutes acceptable knowledge; the grounds and the nature of knowledge. In short, ‘claims about how what is assumed to exist can be known' (Blaikie 2000, p.8). In other words, epistemology is the theory or science of the method or grounds of knowledge (OECD 2004).

In general, two contrasting epistemological positions can be identified, anti-positivism and positivism. Positivist epistemology seeks to explain and predict what happens in the social world, based on the traditional approaches that dominate the natural sciences, by searching for regularities and causal relationships between its constituent elements (Burrell and Morgan 1979). According to this position the main objective of the theory is to generate hypotheses that can be examined. Hence, the role of research is to test theories and develop these theories if possible (Bryman and Bell 2003). On the other hand, Anti-positivism is an epistemology that advocates that it is necessary for the researcher to understand the differences between humans as social actors. Anti-positivism epistemology indicates that researchers have to adopt an empathetic stance, which is considered to be a challenging task, to enter the social world of the research subjects and understand their world from their point of view.

Empiricism (positivism) is the epistemological foundation of positive accounting theory. The positivist epistemology is built on an assumption of dualism between subject and object. This position believes that it is necessary to separate the subject and the object (Keat and Urry 1975). This indicates that role of the researcher is neutral showing that he/she does not influence what is being observed. Therefore, the current study follows the positive epistemological position. This position is called 'theory-neutral observational language' (Gill and Johnson 1991).

5.2.3 Human Nature:

The third assumption is related to the human nature debate concerned with the relationship between human beings and their environment. Human nature assumption debate concerns the relationship between the human being and the society in which he/she lives and the effects of each on the other (Burrell and Morgan 1979). The two extreme positions in these debates are voluntarism and determinism. The determinist view considers human beings and their activities as being completely determined by the situation in which they are located. That is, it is based on perceiving human beings and their experience as the products of their environment. The voluntarism view, in contrast, is based on the idea that human beings are completely autonomous and free-willed. This view considers the human being as the creator and the controller of his environment (Burrell and Morgan 1979).

5.2.4 Methodology:

The last assumption is related to the methodology debate which is concerned with the methods used to investigate and learn about the social world. A methodology is a set of rules which helps researchers to carry out their research. It is also a theory and analysis of how research does or should proceed. According to Collis and Hussey (2003, p.55), "methodology refers to the overall approach to the research process, from the theoretical underpinning to the collection and analysis of data". In a similar vein, Easterby-Smith et al. (2002) maintain that methodology refers to a combination of techniques to assist researchers to enquire into a specific situation. There are a number of key issues with which methodology is concerned, including why data is collected, what data is collected and from where the data is collected; also, when and how the data is to be collected, and how it is to be analysed (Collis and Hussey 2003).

Ideographic and Nomothetic are the contrast positions in this debate. The ideographic approach assumes that one can only understand the social world by obtaining firsthand knowledge of the subject under investigation. It implies the analysis of the subjective accounts that one generates by participating inside the situations. On the contrary, the nomothetic approach emphasises the importance of basing research upon systematic protocol and technique and involves a rigorous and scientific testing of the hypotheses (Burrell and Morgan 1979; Riahi-Belkaoui 2002).

Both ontological and epistemological positions have direct impacts to the employed methodological approach. Accordingly, if the philosophical assumptions of positivism and its consequent epistemological prescriptions are accepted, a nomothetic methodology would be suitable which means that it is set out to establish law-like generalisations (Gill and Johnson 1991).

5.3 Research Paradigm:

A paradigm is a way of examining social phenomena from which understandings and explanations can be gained (Saunders et al. 2007). A research paradigm is based on the ontological and epistemological positions. Burrell and Morgan (1979) illustrate four research paradigms by the following figure 5.3:

Figure 5.3: Paradigms of Social Science

Radical Change

Subjectivist	**Radical Humanist**	**Radical Structuralist**	**Objectivist**
	Interpretive	**Functionalist**	

Regulation

Source: Developed from Burrell and Morgan (1979, p. 22).

The previous figure shows four paradigms: functionalist, interpretive, radical humanist and radical structuralist. The four paradigms are arranged to correspond to four dimensions: radical change; regulation; subjectivist; and objectivist. These paradigms can be used to differentiate between four visions of accounting research (Riahi-Belkaoui 2002). The purposes of the four paradigms are to assist researchers in clarifying their assumptions, offering useful understanding of the way in which researchers approach their work and to help researchers plotting their own route of research, to understand where it is possible to go and where they are going (Burrell and Morgan 1979).

Subjectivist and objectivist dimensions are present in the research ontological positions. The radical change dimension adopts a critical perspective on organisational life. The regulatory perspective is less judgmental and critical. Regulations explain the way organisations are regulated and provide suggestions as to how they may be improved at present. On the other hand, radical change dimension explains organisational problems from the viewpoint of the existing state of affairs (Burrell and Morgan 1979).

In the top left corner the radical humanist paradigm is located within the subjectivist and radical change dimensions. Burrell and Morgan (1979) indicate that this is the state 'to articulate ways in which humans can transcend the spiritual bonds and fetters which tie them into existing social patterns and thus realize their full potential' (p. 32). The ontological position that would fit with this state is the subjectivist approach of social science; nominalism, anti-positivism, voluntarism and ideographic. In the top right corner of the quadrant is the radical structuralist paradigm which tends to the objectivist approach to social science; realism, positivism, determinism, and nomothetic. In this state, the researcher's concern would be to approach the research with an intention of fundamental change based upon an analysis of specific organisational phenomena (Saunders et al. 2007). The current study is concerned with the status quo of the corporate reporting practices in the annual reports of the listed companies. Therefore the radical humanist and radical structuralist paradigms are considered to be irrelevant to the current study.

The bottom left corner of the quadrant contains the interpretive paradigm. Burrell and Morgan (1979) stated that this paradigm suggests that 'everyday life is accorded the status of miraculous achievement' (p. 31). This state does not require the researcher to achieve change in the order of things, but it would be to understand and explain what is going on. However, this paradigm tends to the subjectivist approach of social science; the nominalist, anti-positivist, voluntarist and ideological positions which is not related with current research.

Finally, the bottom right corner of the quadrant is the functionalist paradigm. It is noted by Burrell and Morgan (1979) that this paradigm 'is often problem-oriented in approach, concerned to provide practical solutions to practical problems' (p. 26). This paradigm assumes that organisations are rational entities, in which rational explanations provide rational solutions to rational problems. Its main assumptions include the separation between theory and observations that are used to test that theory, employing the hypothetic - deductive approach and quantitative methods in collecting and analysing data. Objectivism is the ontological position that fits with this paradigm. Referred to the research philosophy discussion, objectivism is the current research ontological position.

Therefore, the functionalist would be the appropriate paradigm that fits with the current research nature and philosophy.

5.4 Research Approach:

The second layer in the research onion according to Saunders et al. (2007) is the research approach. In general, there are two main research approaches to choose: the deductive approach and the inductive approach. Deduction is "the process by which we arrive at a reasoned conclusion by logical generalization of a known fact". On the other hand induction is "a process where we observe certain phenomena and on this basis arrive at conclusions" (Sekaran 2003, p.27). Deductive research's beginning point is the search to explain causal relationships between variables leading to the hypothesis development. Consequently, it is necessary to collect quantitative data, or even qualitative data, to test the developed hypothesis using a highly structured methodology to facilitate replication of the findings (Gill and Johnson 2002). The other alternative is the inductive approach. This approach begins with collecting and then analysing the data, the result of this analysis would lead to the formulation of a theory. Alternatively, the researcher may end with the same theory, but he/she would have gone about the production of that theory in an inductive way.

Therefore, it is noted that theory would follow data rather than vice versa as in the deductive approach (Saunders et al., 2007). The deductive approach is moving or starting from a theory: the hypothesis is developed based on this theory and then a research strategy is designed to test this hypothesis, using data collected. On the other hand, under the inductive approach data is collected and analyzed and then a theory is developed as a result of the conclusion from data analysis (Bryman and Bell 2003; Sekaran 2003).

Saunders et al. (2007) indicate that deduction owes more to positivism and induction to anti- positivism. In addition, Bryman and Bell (2003) indicate that the deductive approach, the testing of theory, is related to quantitative research that follows objectivism/ realism and positivism as ontological and epistemological positions respectively. In contrast, the inductive approach, the generation of theory, is related to qualitative research that follows constructionism/ nominalism and interpretivism as ontological and epistemological positions.

The current study does not aim to develop a theory but it seeks to describe the quality of corporate reporting practices in the annual reports and to investigate the relationship between the extent and trend of such disclosure and a number of determinant variables. Therefore, the deductive approach is considered to be more suitable to the present study. The deductive approach has been employed heavily in the disclosure literature (for example, Haniffa and Cooke 2002; Eng and Mak 2003, Ghazali and Weetman, 2006; Barako et al 2006; Iskander, 2008 and Abdel-Fattah 2008). This approach involves five sequential stages: deducing a hypothesis from the theory; expressing the hypothesis in operational terms; testing the operational hypothesis; examining the specific outcome of the inquiry (confirms the theory or indicates the need for modification); and finally modifying the theory, if necessary (Saunders et al. 2007).

5.5 Research Design:

The key underlying assumption is whether quantitative or qualitative research approaches would be appropriate. It is believed that quantitative research considers objectivity not only desirable but an essential aspect of this type of research. On the other hand, qualitative research believes that objectivity is not possible therefore subjectivity must be acknowledged for this sort of research. As this sort of research is based on the realist (subjective) ontology, variables are representations of the real world and can objectively determine the established causal relationship where the outcome can be generalised to other (similar) situations (set of variables). Moreover, while employing quantitative research, the researcher remains separate from the data in order to maintain objectivity (Gaffikin 2005). As a result, with reference to the objective ontological position of the current research, it is believed that a quantitative research stance would be appropriate to test the developed hypotheses deduced from the agency theory, stakeholder theory and signalling theory employed by the study. It can be said that the current study uses quantitative research to find out the quality of corporate reporting.

The survey technique is appropriate to this type of quantitative research and is usually associated with the deductive approach (Saunders et al. 2003). Surveys give a picture of what many people think or report doing and are often used in descriptive or explanatory research (Neuman 1997). The survey technique facilitates the research of the 'what' question in the form of 'how many' or 'how much' (Yin 2003). Strategically, the research is using the survey method to gather the required data through two different sources, secondary and primary data respectively.

The current study is a single country study; it focuses on the mandatory reporting, voluntary reporting and timeliness of reporting practice in the annual reports of the Bangladeshi listed companies. As indicated in chapter three, the majority of single country disclosure studies employ cross sectional analysis and focus on the reporting practice in a specific point of time (one year), a few studies address the reporting practices over a period of time. The present study is considered to be a longitudinal study; it examines quality of reporting through quality of mandatory reporting, quality of voluntary reporting and timeliness of reporting practice over a period of time using up to date data; the recent available data at the time of conducting the study.

As a result, the study adopts an objectivist ontology and positive epistemological position because the current research is considered to be neo-empirical research adopting a positive accounting theory (descriptive research): in this light this research relies on agency, stakeholder and signalling theory. Therefore, the study used a hypothetico-deductive methodological approach because it fits with testing the employed theory by setting a set of research hypotheses.

5.6 Index Construction:

Disclosure indices are extensive lists of selected items, which may be disclosed in company report (Marston and Shrives 1991). A disclosure index could include mandatory items of information and/or voluntary items of information. It can enclose information reported in one or more disclosure vehicles such as corporate annual reports, interim reports and investor relations. It can also cover the information reported by the company itself or others including the reports of financial analysts (Hassan et al. 2009). Hence, a disclosure index is a research appliance to evaluate the extent of information reported in a particular disclosure media or medium, by a particular organisation(s) according to a list of selected items of information. The first use of such an index was in 1961 by Cerf and it has been in use ever since. Some of the examples of using disclosure index are given below:

1970s	Singhvi and Desai 1971; Choi 1973; Buzby 1974a; 1975; Firth 1979.
1980s	Firth 1984; Chow and Wong-Boren 1987.
1990s	Cooke 1992; Wallace et al. 1994; Meek et al. 1995; Inchausti 1997; Botosan 1997.
2000s	Depoers 2000; Hope 2003a; 2003b; Abd-Elsalam and Weetman 2003; Naser and Nuseibeh 2003; Ali et al. 2004; Coy and Dixon 2004; Das and Das 2008; Hasan et al. 2008; Hassan et al. 2009; Alsaeed 2006; Aljifri 2008; Hossain 2008; Hossain and Hammami 2009.
2010s	Al Shammri and Al Sutal 2010; Rouf and Al Harun 2011; Galani et al. 2011; Sobhani et al. 2012; Bhayani 2012; Ahmed 2012; Alves et al. 2012; Samah et al. 2012; Hassan 2013; Hajji and Ghazali 2013; Antonis et al. 2014; Kaya 2014; Muttakin and Khan 2014.

Disclosure studies that employ a disclosure index can be classified based on the extent of content analysis, into two types: a partial content analysis and a holistic content analysis. In a partial content analysis, researchers identify a list of disclosure topics, while in holistic content analysis researchers investigate the whole annual report to construct their disclosure index (Beattie et al. 2004 and Hussainey 2004). The current study focuses on the whole annual report to measure the level of mandatory and voluntary disclosure. The disclosure index is a ratio of the actual disclosure scores awarded to a company to the maximum possible disclosure required or expected (Cooke 1989 and Hodgdon 2004).

A review of previous studies shows a great variation in the construction of the disclosure index. Prior studies using the disclosure indexes vary in terms of the degree of the researcher involvement in constructing the index, the type of information disclosed and the number of items of information included in the index. There are differences in the measurement approach, the range of industries/countries covered by the index and other differences, which are subject to the research purpose(s), design, and context. For example, studies from developing countries tend to examine the level of compliance with mandatory disclosure because of a relaxed enforcement policy compared to that of developed countries (e.g., Ali et al. 2004).

The degree of the researcher involvement in constructing a disclosure index varies from full involvement to no involvement. Full involvement means that the researcher controls the entire process of constructing a disclosure index from selecting the items of information to be included in the index, to scoring these items. No involvement means that the researcher depends on available disclosure indices from prior studies or professional organizations (see, for example Patel et al. 2002; Ali et al. 2007; Barron et al. 1999; Salter 1998; Hope 2003a; 2003b; Bushman et al. 2004; Richardson and Welker 2001). Between these two extremes, various degrees of researcher involvement are found (see, for example, Choi 1973; Buzby 1974a, 1975; Firth 1979; 1984; Chow and Wong-Boren 1987).

Different disclosure indices have been used in previous studies since there is no agreed theory on either the type or the number of items of information to be included in the index. The number of items of information included in disclosure indices in prior studies varies from a few items (Tai et al. 1990) to a few hundreds of items of information (Ahmed and Karim 2005, 411 items). In addition the type of information selected can cover:

Mandatory disclosure	Tai et al. 1990; Ahmed and Nicholls 1994; Wallace et al. 1994, Akhtaruddin 2005; Hasan et al. 2008; Galani et al. 2011; Hassan 2013.
Voluntary disclosure	Chow and Wong-Boren 1987; Botosan 1997; Depoers 2000; Meek et al. 1995; Das and Das 2008; Akhtaruddin et al. 2009; Al Shammari and Al Sultan 2010; Rouf and Al Harun 2011; Samah et al. 2012; Qu et al. 2012; Hajji and Ghazali 2013.
Mandatory and Voluntary	Singhvi and Desai 1971; Buzby 1975; Cooke 1992; Inchausti 1997; Marston and Robson 1997; Naser and Rana 2003; Hossain 2008; Hassan et al. 2009.

5.6.1 Steps of Disclosure Index:

In order to construct a disclosure index, three steps have be taken. The first is developing a checklist or scoring sheet, by selecting informational items to be included in this checklist. The second is to score the items and the third is to compute the disclosure index. The three steps involve some practical problems that may affect the reliability and validity of the disclosure index e.g. using partial scores, weighted scores, and scoring inapplicable items (Marston and Shrives 1991). The following paragraphs deal with these steps.

5.6.1.1 Developing the Checklist:

The first and important step is the selection of items that might be expected to be reported in corporate annual reports. However, Wallace (1988) indicates that there is no general theory on the items that should be selected to assess the extent of disclosure. Moreover, the relevant literature shows that there is no commonly used theory to determine the number and selection of items for a disclosure index (Hooks et al. 2000). The content of and number of items in a disclosure index have varied from one study to another and selection depends on the focus of the research (Wallace and Naser 1995). The majority of disclosure studies base their selection of items on many sources such as previous studies, laws and regulations, recommendations from specialised professional organisation, and comments from the users of annual reports.

The present study follows the laws and regulations to develop a self-constructed mandatory index. In the case of the voluntary disclosure index, this research follows prior disclosure studies and recommendations from specialised professional organisation. To develop the checklist a number of steps have been taken as follows:

• A mandatory disclosure index was constructed by considering each of the financial reporting requirements in Bangladesh, including the Company Act SEC rules and guidelines, BAS and BFRS. In the case of the voluntary index, with the first stage was to prepare a preliminary checklist that contains the expected voluntary information items. The literature concerning voluntary disclosure in corporate annual reports and voluntary items recommended for disclosure by professional organisations has been used to develop such checklist.

• To ensure the clear distinction between mandatory and voluntary checklist items, the preliminary checklist that includes voluntary disclosure items, is reviewed against the mandatory disclosure requirements in accounting standards, company act, listing rules and other laws.

• Since the current study covers seven years, attention has been paid to any new requirement for mandatory disclosure during the examined period to ensure that the checklist is relevant to each of the seven years. For this reason, index items for mandatory disclosure are different in different periods.

• As one of the steps used to achieve the validity of the research instrument, three Bangladeshi academics have been asked to refine the preliminary checklist for independent review; one of them experienced in auditing with Bangladeshi listed companies and another has experience of working with the Securities and Exchange Commission.

• Additionally to ensure that the final checklist includes the voluntary and mandatory items that are important and relevant to the context of Bangladesh, the checklist is updated by following a pilot study of annual reports of ten companies for the first and last year of the examined period, 2004 and 2010. These ten companies are selected randomly from different sectors in the sample population.

5.6.1.2 Scoring the Items:

To capture the level of disclosure, Cooke (1989) indicates two main approaches to developing a scoring scheme: The first approach, advocated by Copeland and Fredericks (1968), depends on the presentation of information. Under this approach, the researcher counts the number of words used to describe an item disclosed. Cooke (1989) criticises such a scoring procedure due to the subjectivity in the allocation of scores and suggests a second approach: a dichotomous procedure. Under a dichotomous procedure, a required disclosure item scores one if it is disclosed and zero if it is not disclosed. Support for such a system stems from Cooke (1989, 1993) and is endorsed by Williams (2001), Bujaki and McConomy (2002), Barako et al. (2006), and Morris et al. (2011).

However, to avoid any negative effect on the reliability and validity of the disclosure scores, two issues related to the scoring process must be considered: weighting the score and inapplicable items. The literature on the use of indexes was divided between unweighted and weighted indexes. For the unweighted index, dichotomous scores are used, where 0 is given for nondisclosure and 1 is given for disclosure item. The weighted index, however, is based on the rank a user of the annual report attaches to the information in a disclosure item. Those who advocate the use of the weighted index believe that such a score reflects both the extent and importance of each disclosure item that forms the index

(Robbins and Austin 1986). However, those who argue against the use of the weighted index contend that the weighting does not significantly alter the results (Chow and Wong-Boren 1987; Robbins and Austin 1986; Wallace and Naser1995).

In this study, for mandatory reporting an unweighted (i.e., all elements are treated equally) disclosure model was used. An unweighted index obviates the necessity of making judgments on the relative importance of each information item. Research shows that individuals, even experts, have poor insight into their own judgment process (see, e.g. Ashton 1974). Secondly, it permits an independent analysis devoid of the perceptions of a particular annual report user group. Finally, this study does not focus on the interest of any particular annual report user group and since this reporting is mandatory, users do not have any options to choice or rank them. The differential weighting system is beset by several problems which are well documented in the literature (see, e.g., Firer and Meth 1986; Dhaliwal 1980; Owusu-Ansah 1998). Einhom and Hogarth, (1975) also demonstrated that the equal weighting system is superior to the differential weighting system.

In contrast, the analysis of voluntary reporting is based on both weighted and unweighted methods. This helps assess the outcome under the two methods and provides new evidence from a developing country such as Bangladesh. Five weighting points are given to items viewed as very important by the respondents; four points for those viewed as important, three points for moderately important, two points for little importance, and one point for very little importance.

5.6.1.3 Index Computation:

After scoring all items, the disclosure score is calculated by summing the scores. It is common in the literature to use additive indices (Williams 2001; Bujaki and McConomy 2002; Gompers et al. 2003; Bebchuk et al. 2009; Aggarwal et al. 2010). To avoid a situation where a sample company will be penalised for non-disclosure of certain items in the index which, in fact, are inapplicable to it, a 'relative index' was used (Babbie 2009, p. 172). The relative index is the ratio of what the reporting company actually discloses to what the company is expected to disclose under a regulatory regime. The relative index approach has been used in prior studies (e.g., Wallace 1988; Cooke 1989, Wallace et al. 1994; Inchausti 1997, Leventis and Weetman 2004; Akhtaruddin 2005; Barako et al. 2006;

Ghazali and Weetman 2006; and Galani et al. 2011). This can be presented mathematically as follows:

$$UIx = [\sum T_{tx}]/ nx$$

Where, UIx is the unweighted index scored by company, x, $0 \leq Ix \leq 1$; T_{tx} is the information item disclosed by company x; nx is the maximum number of items expected to be disclosed by a company;

$$WIx = [\sum wT_{tx}]/ nx$$

Where, WIx is the weighted index scored by company x, $0 \leq Ix \leq 1$; w is the weighting point, and T_{tx} is the information item disclosed by company x.

5.6.1.4 Questionnaire Survey:

In order to determine the weightings for voluntary disclosure, the research uses a questionnaire survey. The main objective of this questionnaire is to determine the extent of voluntary disclosure using user expectation. In total 450 questionnaires were sent and a total of 198 individuals responded, giving an overall response rate of 44%, ranging from 23% for financial analyst to 72% for academicians (see Table 5. 1), 65% of these responded are male and the rest are female. The questionnaire was conducted online. A sample questionnaire and basic information on respondents is given in ***appendix P and N*** respectively.

Table 5.1: Response Rate of Questionnaire

S.L.	Categories	No. in Sample	No. of Responding	Response rate
1	Accountant	86	36	42%
2	Financial Analyst	26	6	23%
3	Researchers	20	12	60%
4	Academician	71	51	72%
5	Students	145	57	39%
6	Other Users	102	36	35%
	Total	450	198	44%

The questionnaire was sent to six different categories of user: Accountants, Financial Analysts, Researchers, Academicians, Students and Other users. For the students' group the questionnaire was only given to those who had completed at least three years in undergraduate study. The main intention of these six categories is to cover the major area of knowledgeable users as the questionnaire is related to the expectation of voluntary disclosure. The current study obtained this objective as 97% of those who responded hold educational qualifications at Bachelor degrees or above and 48% of those who responded have work experience of five years or more. On the basis of users response different categories of voluntary disclosure weight is given in table 5.2. In addition individual weight of each voluntary item has been given in Appendix O. From the table 5.2 it is observed that financial information got the highest priority followed by corporate strategic information: whereas social responsibility information had the lowest priority. Using the weight from the questionnaire a weighted disclosure index will be computed in chapter 7.

Table 5.2: Weight of Different Categories of Voluntary Disclosure

Categories of Voluntary Disclosure	Weight
General Information	0.8217
Corporate Strategic	0.8455
Corporate Governance	0.7507
Financial Information	0.8260
Financial Review	0.8462
Social Responsibility	0.7404
Environmental Reporting	0.7594
Sustainability Reporting	0.7674

5.7 Data Collection:

Published reports are the main vehicle firms use to communicate information to external users and the annual report is perceived as the most important, frequent and major source of information among all other sources (Epstein and Pava 1993; Lang and Lundholm 1993; Cook and Sutton 1995; Gray et al. 1996; Bartlett and Chandler 1997; Botosan 1997; Naser et al. 2002; Akhtaruddin 2005; Alattar and Al-Khater 2007; Catasús 2008; Chau and Gray 2010). In the case of Bangladesh, according to Karim et al. (1996), annual reports of the companies are considered as the most important source of information about the company.

To provide answers to the research question mentioned in chapter 1, a two step approach was used. For primary data, in order to measure the weight of voluntary disclosure, a questionnaire was prepared and sent to professional accountants, academics, research organisations employees, regulatory authorities and users of annual report who had a business education background. For secondary data, three steps are followed to collect the data. Firstly, collection from the DSEB Library; secondly, where annual reports are not available in the DSE, current study first try to collect them from that particular company's website: finally, if this fails to uncover the reports then a direct address is made to the company. In general companies' websites did not have previous year's annual reports and most interestingly, in most of the cases they provide only a summarised version of their annual report. Also, the company's respective personal did not reply to the mail and letter. Even when approached directly in person, they are not interested in providing the published annual report.

But the fact is that in Bangladesh, except for the Dhaka Stock exchange library; there is no particular organisation that can provide companies' annual reports. There is a regulation that every listed company has to submit their annual report to the BSEC. When collecting data for the study, it is observed that either companies did not follow that regulation or the DSE authority did not manage it properly. Recently, scanned PDF copy of annual reports may be bought from the DSEB library by the intended user. However, they did not have a soft copy of all the annual reports that are in the library. For this reason, both soft and hard copies of annual report are secondary information sources.

5.8 Sample Size:

The data set for this study is based on panel data collected from companies listed on the Dhaka Stock Exchange of Bangladesh for the period 2004-2010. In order to compare the changes of reporting pattern before and after the corporate governance code of 2006, the study considers two years back from the cut-off point and uses data up to the year 2010 when the latest published annual reports available during the period of data collection. Bangladeshi listed companies made a significant delay in publishing their annual reports on a timely basis, and approximately 10 percent of listed companies have do not published annual reports even three years after fiscal year-end dates (Karim and Jamal 2005). It is desirable to take the same number of years before and after the code for comparison. However this would have required working with a much smaller sample size as the number of available annual reports of sample companies was very small before 2004. So, the current study decided that it was better to enlarge the sample size to find out the boarder picture. However, the current sample year is not inappropriate with the research objectives as it analyses the findings year by year rather than only before and after the code of 2006. Moreover, as the study shows reporting patterns increase significantly year by year: there is also a significant difference before and after the code: giving the study an earlier start date would produce the same results.

According to annual report of SEC 2010, the total number of listed companies in 2010 is 233. Data is taken from the annual reports of listed companies on the Dhaka Stock Exchange (DSE); all companies were considered for inclusion in the survey. The main criteria used for sampling the firms were: firstly, the firm must have been listed for the entire period of the study (2004-2010) and secondly, annual reports must be available at the stock exchange. In order to fix the population size, the current study tracks the following simple mathematical formula:

Particulars	Population Size
Companies listed at the end of 31st December, 2010	233
Less: Total companies listed in period from 2005 to 2010	72
Companies listed and operated from 2004 to 2010	161

Based on the above criteria, a population size is 161 firms. From the population the study obtained 123 companies (sample's name is given in **appendix L**) annual report for the seven year by using all possible sources mentioned above. For this reason the total sample size is (123*7)861 firm years. An overview of the sector wise sample size is shown in table 5.3.

Table 5.3: Population and Sample Size of the Study

Sectors	**Total*[1]**	**Population*[2]**	**Sample**
Bank	30	25	24
Cement	5	5	5
Ceramic	5	3	3
Financial Institution	21	4	3
Engineering	22	17	11
Food and Allied	17	17	8
Fuel and Power	12	5	1
Insurance	44	21	20
IT Sector	5	4	4
Jute	4	4	2

Paper and Printing	1	1	1
Pharmaceuticals and Chemicals	19	15	11
Services and Real Estate	6	4	2
Tannery Industries	5	5	4
Textile	25	21	16
Telecommunication	1	0	0
Travel and Leisure	2	1	1
Miscellaneous	9	9	7
Total	**233**	161	123

1** ***Total listed companies at the end of 2010.
****2 Based on criteria, total listed companies operating from 2004 to 2010.***

5.9 Empirical 1: Corporate Mandatory Reporting:

5.9.1 Introduction:

In empirical one, the study aims to investigate the quality of mandatory reporting practices in the annual reports of the listed companies in Bangladesh. Furthermore, it seeks to examine empirically, the association between the extent of mandatory reporting: and a number of corporate governance characteristics, ownership aspects and firm characteristics. It measures the extent of total mandatory reporting and its categories in the corporate annual report based on a self-constructed checklist of mandatory reporting items and using an unweighted disclosure index. The index was applied to the sample companies' annual reports from 2004 to 2010: accounting period ending any time between January and December 2004 and 2010.

5.9.2 Mandatory Disclosure Checklist:

The checklist forms a disclosure index that will show the level of mandatory corporate reporting. The checklist is composed of different sections relating to the different categories of mandatory reporting. The disclosure level is measured using the percentage of the present items over the total disclosure index items. Table 5.4 shows the number of items relevant to each of those parts of an annual report.

A disclosure index was constructed based on a rigorous study of the existing regulatory framework for listed companies and an examination of the IASs and IFRS adopted in Bangladesh until January 2010, when it was last updated. The mandatory components of the regulatory framework, as mentioned in Chapter Two, included the Companies Act

1994, the Securities and Exchange Rules 1987 and SEC Corporate Governance Code of 2006 and others. The mandatory corporate disclosure checklist is shown in the **Appendix A** with their sources.

Table 5.4: Distribution of Index into Different Parts of Annual Report

	Parts of Annual Report	2004	2005	2006	2007	2008	2009	2010
Mandatory Disclosure	**General Information**	25	25	26	27	27	27	27
	Directors Report	8	8	9	9	9	9	9
	Balance Sheet	48	48	48	57	57	57	59
	Income Statement	35	35	35	40	40	40	40
	Cash flow Statement	6	6	6	6	6	6	6
	Accounting Policies and Notes	17	17	18	23	23	23	25
	Other information	9	9	10	13	13	13	13
	Total	**148**	**148**	**152**	**175**	**175**	**175**	**179**

Current study used seven mandatory disclosure indexes, as all BAS, BFRS and corporate governance code are not applicable to all year of the study. Some regulations are imposed during the period of study and these items are checked from the year of adaptation and not before that. For example BAS 1, BAS 2, BAS 8, BAS 10, BAS 16, BAS 17, BAS 18, BAS 21, BAS 26 and BAS 33 are adopted on or after 1st January 2007, so these items are only included in the year 2007 and onwards. Moreover, BAS 23, BAS 27 and BEFS 3 adopted on or after 1st of January 2010, so these are only applicable in the year 2010. All others mandatory items are applied from the beginning of the study or the items are sourced from a law that was passed before the study period.

5.9.3 Hypotheses Development for Mandatory Disclosure:

Demand for corporate disclosure and financial reporting increases day by day due to agency conflicts and information asymmetry between managers and outside investors (Healy and Palepu 2001). Firm characteristics as well as corporate governance attributes are considered to be important in this respect (Ahmed and Courtis 1999; Ho and Wong 2001; Chau and Gray 2002; Haniffa and Cooke 2002; Eng and Mak 2003; Aktaruddin 2005; Barako et al. 2006; Aljifri 2008; Hossain 2008; Hossain and Hammami 2009; Akhtartuddin et al. 2009; Rouf 2011; Galani et al. 2011; Hajji and Ghazali 2013). Based on the literature review in chapter three and theory in chapter four the study consider firm size, profitability, leverage, audit firm size, multinational parents, industry and ownership as determinants of mandatory reporting for listed companies in Bangladesh.

5.9.3.1 Firm Size:

Prior studies have found a positive relationship between company size and the extent of disclosure. A number of reasons have been advanced in the literature in an attempt to justify this relationship on a priori grounds. For example, Singhvi and Desai (1971, p.131) offered three justifications for the variations in the extent of financial disclosure in firms of different sizes. Firstly, the cost of accumulating certain information is greater for small firms than for large firms. Secondly, larger firms have a greater need for disclosure because their securities are typically distributed across a more diverse network of exchanges, and thirdly, management of a smaller corporation is likely to believe more strongly than the management of a larger corporation, that the full disclosure of information could endanger its competitive position.

Larger companies tend to disclose more information than smaller companies in their annual reports due to their competitive cost advantage (Lang and Lundholm 1993; Lobo and Zhou 2001). Larger companies are more likely to have the resources in place to prepare for an event (Ahmed and Nicholls 1994; Hossain and Adams 1995) and are likely to have a higher level of internal reporting to keep senior management informed of progress and, therefore, are likely to have relevant information available (Owusu-Ansah, 1998). Additionally, larger companies are likely to come under more scrutiny from financial analysts (Hossain and Adams 1995) and shareholders (Cooke 1989) than smaller companies: this leads to pressure for better disclosure. Wallace and Naser (1995) argue that larger firms naturally attract a large number of suppliers, customers, and analysts, which consequently increases the demand for information about their activities. The higher disclosure enables these large companies to maintain their reputation in the eyes of the public and to attract investors (Camfferman and Cooke 2002; Wallace and Naser 1995). Moreover, political cost arguments have been put forward in support of a positive association between firm size and disclosure (Cooke 1989; Wallace and Naser 1995; Wallace et al. 1994).

Empirical evidence generally supports the association between firm size and financial reporting quality (Singhvi 1968; Singhvi and Desai 1971; Buzby 1975; Davies and Kelly

1979; Courtis 1979; Firth 1979; McNally et al. 1982; Chow and Wong-Boren 1987; Cooke 1989, 1991, 1992; Tai et al. 1990; Hossain et al. 1994; Wallace et al. 1994; Hossain et al. 1995; Raffournier 1995; Wallace and Naser 1995; Inchausti 1997; Marston and Robson 1997; Patton and Zelenka 1997; Owusu-Ansah 1998; Clarkson et. al. 2003; Kamal et al. 2006; Alsaeed 2006; Hasan et al. 2008; Adelopo 2010; Nandi and Ghosh 2012) although there are a number of notable exceptions, such as Stanga (1976), Spero (1979), Malone et al. (1993), Ahmed and Nicholls (1994); Ahmed (1996) , Aljifri (2008), Pahuja and Bhatia (2010) and Hasan et al. (2013).

H1: There is a significant positive association between firm size and the extent of mandatory reporting in the listed companies of Bangladesh.

5.9.3.2 Profitability:

Profitability is another factor that is found to affect the extent of mandatory reporting (Ahmad and Karim 2005). Corporate annual reports are deliberately made complex to communicate bad news and made more lucid to communicate good news (Adelberg 1979). Inchausti (1997) employing signalling theory, states that management when in possession of "good news" due to better performance are more likely to disclose more detailed information to the stock market than that provided by "bad news" companies who wish to avoid undervaluation of their shares. It can also be argued that unprofitable companies will also be inclined to release more information in defense of poor performance.

Profitability was found positive association with reporting by Cerf (1961), Singhvi (1967), Singhvi and Desai (1971), Belkaoui and Kahl (1978), Spero (1979) and Wallace (1987), Wallace et al. (1994), Karim et al. (1996), Owusu-Ansah (1998), Hossain (2000), Ali et al.(2004), Wang and Claiborne (2008), Tagesson et al. (2009), Nandi and Ghosh (2012) and Wu and Chung-Hua (2013). In contrast, Reverte (2009), Bujaki and McConomy (2002), Belkaoui and Kahl (1978) found a negative association between them. Bujaki and McConomy (2002) asserted that firms facing a slowdown in revenue tend to increase their disclosure on issues relating to disclosure. However, previous researchers such as Wallace et al. (1994), Akhtaruddin (2005), Hasan et al. (2008), Aljifri (2008) and Uyar (2011) found that the association between the profitability and comprehensiveness of disclosure is not significant.

H.2 There is a significant positive association between profitability and the level of mandatory reporting in the annual reports of listed companies.

5.9.3.3 Leverage:

The degree to which a firm's financial structure is geared has been used in a few disclosure studies to examine the association between gearing ratio and reporting levels. Highly leveraged firms have a wider obligation to disclose the information, especially financial information, in order to convince their long-term creditors that they have enough sources to fund the business (Muhamad et al. 2009). Agency theory has largely been used also to explain the relationship between firm leverage and financial reporting quality. It is argued that as leverage increases, there are wealth transfers from fixed claimants to residual claimants (Baba 2011). Ahmed (1996) suggests that the agency costs of debt are higher for companies with more debt in their capital structure and these costs may be reduced by an increased the level of reporting. Thus, to reduce monitoring costs, firms are expected to disclose more information and so there is an association between the levels of corporate disclosure and leverage (Jensen and Meckling 1976 and Aksu and Kosedag 2005). Moreover, a company with a higher gearing level has a greater obligation to satisfy the needs of its long-term creditors for information and may therefore provide more information in its annual reports than a more modestly geared company (Wallace et al. 1994).

Empirical evidence appears to be inconclusive. While Courtis (1979), Ahmed and Courtis (1999), Malone et al. (1993), Hossain et al.(1994), Wallace and Naser (1995), Hossain et al.(1995), Patton and Zelenka (1997), Aksu and Kosedag (2005), Barako et al. (2006), Adelopo (2010) and Hajji and Ghazali (2013) found a positive relationship between leverage and the extent of financial reporting, many researchers have not (Chow and Wong-Boren 1987; Ahmed and Nicholls 1994; Wallace et al. 1994; Raffournier 1995; Wallace and Naser 1995; Ahmed 1996; Inchausti 1997; Owusu-Ansah1998; Collett and Hrasky 2005 and Gunawan 2007. On the other hand, Belkaoui and Kahl (1978), Zarzeski (1996), Nandi and Ghosh (2012) and Allegrini and Greco (2013), found a negative relationship between leverage and corporate reporting, suggesting that highly leveraged companies tend to disclose private information to their creditors which may not be reflected in their annual reports. These conflicting results provide genuine incentives for further investigation of this relationship.

H3: There is a significant positive association between the leverage and the level of mandatory reporting for non-financial companies.

5.9.3.4 Audit Firm Size:

The audit firm responsible for reporting to shareholders can significantly influence the amount and quality of information disclosed in the corporate annual report (Belkaoui and Kahl 1978; Ahmed and Nicholls 1994, and Owusu-Ansah 1998). It is expected that in countries where the Big Four audit firms operate, financial statements certified by any Big Four firm carry more credibility than those audited by non Big Four firms. Many disclosure studies examined the potential association between the audit firm size and extent of reporting. Among them Singhvi and Desai (1971), Ahmed and Nicholls (1994), Clarkson et al. (2003), Owusu-Ansah and Yeoh (2005), Kent and Stewart (2008); Hasan et al.(2008) and Uyar(2011) found positive association between audit firm size and the extent of reporting. However, Wallace et al. (1994); Hossain et al. (1994) and Barako et al. (2006) found an insignificant association. On the other hand, Wallace and Naser (1995) reported a negative association between type of auditor and the extent of compliance with mandatory disclosure.

In practice, auditor reputation or quality is perceived in a connection to the major audit firms, namely the BIG 4 (Brown et al. 2010) and financial information is more reliable for BIG 4 clients in comparison with other companies (Teoh and Wong 1993; Becker et al. 1998). Clients believed larger audit firms offer greater assurance on financial statements prepared for external parties and consequently they may have appointed a larger audit firm to signal their own quality (Omran and Marwa 2010). It is also assumed that these firms have a greater incentive to protect their reputation because of their larger client base (Francis and Krishnan 1999; Krishnan 2003). But, Kabir et al. (2011) adds to the literature by demonstrating that the Big 4 affiliates may have no positive impact on reporting quality in a small and emerging market with poor regulations and low investor protection.

According to signalling theory, audit firms may benefit from the higher level of disclosure in the annual reports of its clients as a signal of their own quality and reputation. Therefore, auditing firms may support and encourage their clients to comply with mandatory disclosure requirements (Ahmed and Nicholls 1994; Inchausti 1997; Abdelsalam 1999). In Bangladesh, none of the Big Four audit firms have a named branch. The Big 4 international audit firms tend to operate in smaller capital markets through a local audit firm and Bangladesh is one such setting where this unique alliance occurs. To enhance the reputation of its capital market, Bangladesh attracted the international Big 4 audit firms to operate through a local audit firm (Kabir et al. 2011). Four local audit firms are members of the Big 4 auditors; Rahman Rahman Huq (RRH), Hoda Vasi Chowdhury, A Qasem and Co. and S F Ahmed are linked with KPMG International, Deloitte Touche Tohmatsu, Price Waterhouse Coopers and Ernst and Young, respectively.

H4: There is significant positive association with audit firm size and extent of mandatory reporting of listed companies.

5.9.3.5 Multinational Parent:

Multinational Corporation (MNC) affiliation status is believed to positively influence disclosure level, i.e., firms, which have MNC affiliation, are likely to disclose more information. MNC's are expected to demand more information because of various reasons associated with emerging economies (Owusu-Ansah 1998). Wallace (1987) and Ahmed and Nicholls (1994) used multinational company influence as an explanatory variable in developing their models and the latter found it to be the most significant variable explaining disclosure levels.

Subsidiaries of multinational corporations operating in developing countries are expected to disclose more information and observe higher standards of reporting for a number of reasons. Firstly, they have to comply with the regulations of not only the host country but also the parent company, where substantially higher standards of accounting and reporting are maintained (Karim and Jamal 2005). Secondly, demand for information is expected to be higher from foreign investors due to the geographical separation between management and owners (Bradbury 1992; Craswell and Taylor 1992). Thirdly, they are under closer scrutiny from various political and pressure groups within the host country who view them as sources of economic exploitation and agents of imperialist power (Ahmed and Nicholls 1994). Finally, diffusion of ownership has been empirically found to be an important variable in explaining the variability of corporate financial disclosure (Leftwich et al. 1981; Craswell and Taylor 1992; Hossain et al. 1994): the demand for information is expected to be greater when a high proportion of shares are held by foreign investors.

H5: There is a significant positive association between the multinational company influence and the extent of mandatory reporting.

5.9.3.6 Industry:

The nature of the industry has been identified as a significant factor that influences the disclosure practices (Amran and Haniffa 2010). A number of studies investigate the relationship between a company's industry membership and the extent of its disclosure (e.g. Cerf 1961; Owusu- Ansah 1998). Because of their unique features, companies from a particular industry group might have different disclosure levels compared to others (Wallace et al. 1994). As a result of competition or political pressure, companies in some industries may face a level of pressure to disclose certain type of information. If a company does not adopt a similar reporting strategy to other companies in the same sector or industry, the market may interpret this situation as a bad signal (Inchausti 1997).

The empirical evidence from previous studies is mixed. A number of studies report evidence of a significant association between the extent of disclosure and the industry type: manufacturing companies were found to disclose more information than non manufacturing companies (Cooke 1991, 1998; Ng and Tai 1994; Meek et al. 1995; Camfferman and Cooke 2002; Haniffa and Cooke 2002 and Fekete et al. 2008). It may be worth mentioning that the suggested reasons for this association differ among studies. On the other hand, some studies provide evidence of no significant association between the industry type and the extent of disclosure (Tai et al. 1990; Wallace et al. 1994; Raffournier 1995; Inchausti 1997; Patton and Zelenka 1997; Naser et al. 2002; Eng and Mak 2003; Alsaeed 2006).

H6: There is significant positive association between financial institutions and the extent of mandatory reporting of the listed companies.

5.9.3.7 Ownership:

Ownership structure is another mechanism that aligns the interest of shareholders and managers (Wang and Claiborne 2008; Eng and Mak 2003; Haniffa and Cooke 2002 and Chau and Gray 2002). Studies have found conflicting results on the impact of ownership structure on a firm's financial reporting quality. Hossain et al. (1994) suggested a negative association between management ownership structure and the level of disclosure by Malaysian listed firms. Moreover, Adelopo (2010) found that the percentage of block share ownership and the percentage of managerial share ownership were found to be negatively related to firm disclosures. Akther and Rouf (2011) argued that firms with higher management ownership structure may disclose less information to shareholders. This is because the determined ownership structure provides firms lower incentives to disclose information to meet the needs of non-dispersed shareholders groups. Chau and Gray (2002) found a negative relationship between insider-family controlled companies and reporting quality. Again, Eng and Mark (2003) reported that lower management ownership and significant government ownership are associated with higher disclosure. Similar results are also found in Oliveira et al. (2006), Bauwhede and Marleen (2008) and they reported that firms with a lower management ownership report more information.

From an agency theory perspective, a positive relationship is envisaged between ownership and firm disclosure (Fama and Jensen 1983; Jensen and Mecklings 1976). In addition, Hongxia and Ainian (2008) show that higher managerial ownership companies have high level of disclosures. Eng and Mark (2003) reported that significant government ownership is associated with higher disclosure among listed firms in Singapore. McKinnon and Dalimunthe (1993) reported a positive relationship between dispersed ownership structure and financial reporting quality. Similar results have been reported in Barako et al. (2006) who found a positive relationship between foreign and dispersed ownership and corporate disclosure. Hongxia and Ainian (2008) also show that companies with a higher managerial ownership have a high level of disclosure. On the other hand, Naser et al. (2002) and Wallace et al (1994) could not document any significant relationship between ownership structure and firms' reporting quality.

H7: There is significant negative association between ownership and mandatory disclosure of the listed companies in Bangladesh.

5.9.4 Variable Measurement:

Firm Size:

Corporate size can be measured in a number of different ways and there is no overriding reason to prefer one to the other(s) (Cooke 1991). Foster (1986) highlighted corporate size by total assets, net sales (structure related characteristics) and/or market capitalized value of the firm (a market-related characteristic). These three measures have been used as predictors of the level of disclosure in corporate reporting:

Asset size	Cerf (1961, pp. 31-32), Singhvi and Desai (1971, p. 131), Buzby (1975, p. 24), Belkaoui and Kahl (1978, p. 40), Firth (1979, p. 279), Kahl and Belkaoui (1981, p. 192-195), Chow and Wong-Boren (1987, p.539), Wallace (1987, p. 575), Cooke (1989, p. 118; 1991, p. 176; 1992, p. 231; 1993, p. 531), Imhoff (1992, p. 105), Malone et al. (1993, p. 253) Hossain et al. (1994, p. 342) and Wallace et al. (1994, p. 44);Ho and Wong (2001) and Aljifri (2008).
Sales	Stanga (1976, p. 47), Belkaoui and Kahl (1978, p. 40), Cooke (1989, p. 118; 1991, p. 176), Wallace et al. (1994, p. 44);
Market capitalization	Belkaoui and Kahl (1978, p. 40), Chow and Wong-Boren (1987, p. 539); Lang and Lundholm (1993, p. 258), and Hossain et al. (1994, p. 342)

Numerous studies combine some measures together (Cooke, 1992) while others use one measure. However, there is no criterion to select the finest proxy of firm size (Hassan et al. 2006). In the present study, the size of the company was determined by taking the basis of asset and the log of total asset: this is used consistently in the disclosure model as the size variable.

Profitability:

A number of profitability measures were used by previous researchers. They include net profit to sales, earnings growth, dividend growth and dividend stability (Cerf 1961), rate of return and earnings margin (Singhvi 1967 and Singhvi and Desai 1971), and return on assets (Belkaoui and Kahl 1978). In this study, dividend based measures could not be used because many companies in the sample may have earned profits but have paid no dividends during the period under study. This problem limited the choice of profitability measures to: net profit to sales, return on total assets, and return on equity. Following Belkaoui and Karpik 1989; Bewley and Li 2000; Magness 2006, the current study employs both the return on equity (ROE) and return of assets (ROA) as a proxy for the firm profitability.

Leverage:

The debt equity ratio is used in the present study as the measure of leverage but, due to difficulties in computing the ratio for financial institutions, the variable was used only for non-financial companies.

Audit Firm Size:

In previous studies, both size and an international link for audit firms were considered for use as explanatory variables, but there was no obvious cutoff point for firm size. Moreover, the number of chartered accountants, partners and employees, employed by an audit firm is not available in all the cases: furthermore, the number employed varies from time to time. However, since information on the audit firms' international links was available, it was considered a more objective measure of audit quality than using any arbitrary measure of auditor size. Therefore, in the present study, international links of audit firms were used as explanatory variables. Audit firms having an affiliation with an international Big Four firm were treated as 'Big' and audit firms' failing to meet the criterion were treated as ‘non big firms” in the context of Bangladesh. A dichotomous procedure was used awarding one if the company's audit firm was big and zero otherwise.

Multinational Parent:

The influence of a multinational parent is used by means of a dummy variable with 1 for MNC subsidiaries and 0 for domestic companies.

Industry:

Some disclosure studies have concentrated solely on non-financial companies in developing their models (see for example, Wallace 1987 and Ahmed and Nicholls 1994). The reasons for excluding financial companies are the rather different disclosure regulations applied in many countries to banks, insurance and investment companies, the unique nature of the transactions and the asset portfolio of such entities. In the current study, financial institutions are not excluded because they form a major part of the corporate structure in Bangladesh as a whole and of the Dhaka Stock Exchange (DSE) in particular. A dummy variable is used entering with the value of 1 for financial sector companies and zero otherwise.

Ownership:

The corporate sector in Bangladesh is predominantly owned and controlled by founder families, groups of families or foreign owners (Farooque et al. 2007). The prevalence of family-owned businesses, together with state ownership, thus plays a significant role. In Bangladesh, Public Limited Companies’ ownership pattern includes sponsor ownership, institutional ownership, government ownership, foreign ownership and public ownership (Bhuiyan and Pallab 2006). Since the study concentrates on listed firms in Bangladesh, and listed firms are of limited liability in nature, so the study focuses on sponsors as a dependent variable rather than single or dual ownerships. Sponsors are investors holding

50% or more of a company's reflects the concentrated ownership (50% or more) by the sponsors of the company. Following Hossain and Arifur (2006) it is expected that if ownership is concentrated with the sponsor in a company the disclosure pattern might be influenced. The phenomenon is captured with a dummy variable with the value of 1 if it has concentrated sponsors and 0 otherwise.

5.9.5 Regression Equation-Empirical 1:

In order to provide primary evidence of the impact of corporate attributes on corporate mandatory disclosures of different enlisted companies in Bangladesh, the following regression has been estimated:

Dependent Variables:

MDI = Mandatory Disclosure Index

Explanatory Variables:

Explanatory variables and their expected sign of the study are given below:

Determinants	Variable	Variable Level	Expected sign
Firm Size	Natural log of total asset	LDASST	+
Profitability	Return on Equity and Return of Assets	ROE and ROA	+
Leverage	Debt to equity ratio	LEVERAGE	+
Audit Firm Size	Audit firms link with Big Four Firm	AUDITOR	+
Multinational Parents	Subsidiary of a multinational company	MNCSUBSI	+
Industry	Financial and non-financial sector	FIN	+
Ownership	Sponsor hold 50% or more ownership	SPONSOR	-

5.9.5.1 Regression model:

The following multiple linear regression models are used to investigate the association between the determinants and mandatory disclosure requirements in Bangladesh:

The model based on the combined sample:

Equation 1:

MDI = β_0 + β1 LDASST + β2 ROE and ROA + β3 AUDITOR + β4 MNCSUBSI + **β5 FIN** + β6 SPONSOR+ Є

The model based on the non-financial services sector companies stands as:

Equation 2:

MDI = β_0 + β1 LDASST + β2 ROE and ROA + β3 AUDITOR + β4 MNCSUBSI + β5 LEVERAGE + β6 SPONSOR+ Є

Where,

MDI= Mandatory Disclosure Index

β_0 = Constant

β_{1-} β_6 = Explanatory variables

Є = Error term

5.10 Empirical 2: Voluntary Reporting

5.10.1 Introduction:

In Empirical 2, the study aims to investigate the voluntary reporting practices in the annual reports**;** the status quo of the listed companies in a promising capital market; namely Bangladesh that lacks prior voluntary reporting studies. Furthermore, it seeks to examine empirically the association between the extent of voluntary reporting and a number of corporate governance characteristics, ownership aspects and firm characteristics. It measures the extent of total voluntary reporting and its categories in the corporate annual report based on a self constructed checklist using both an unweighted and a weighted index.

The checklist would form a disclosure index that shows the level of voluntary corporate disclosure. The model aims to measure the disclosure level by examining the presence or absence of the different items on the checklist using a dichotomous procedure. The presence of the item in the annual reports is represented by 1, while the absence of the item in the annual reports is represented by 0. The checklist is composed of different sections showing the voluntary disclosure categories. The disclosure level is measured using the percentage of the present items over the whole disclosure index items.

5.10.2 Voluntary Disclosure Index:

For the purpose of this study, voluntary reporting will be classified as; General information, Corporate strategic information, Corporate governance/directors information, Financial information, Financial review information, Social reporting, Environmental reporting, and Sustainability reporting. The voluntary corporate disclosure checklist and their source(s) are in the Appendix B. The checklist has total 97 items in 8 categories. In order to prepare the checklist the current research follows prior disclosure studies and recommendations from specialised professional organisation. At the same time it also checked whether the items are important and relevant to the context of Bangladesh.

5.10.3 Determinants of Voluntary Disclosure

5.10.3.1 Firm Size:

Firm size is the most common variable in disclosure literature either in developed or developing countries. The firm size of a certain corporation is considered to be the most statistically significant variable in examining the differences between voluntary reporting practices of firms (McNally et al. 1982, McKinnon and Dalimunthe 1993; Hossain and Adams 1995; Meek et al. 1995; Ahmed and Courtis 1999; Choon et al. 2000). Moreover, the previous literature offers evidences that the firm size is positively related with the extent of voluntary disclosure level (Tai et al. 1990;Lee and Morse 1990; Marston and Shrives 1991; Cooke 1992; Hossain et al. 1994; Ward 1998; Ahmed and Courtis 1999; Beiner et al. 2006; Black et al. 2006; Ghazali and Weetman 2006; Barako et al. 2006; Alsaeed 2006; Agca and Onder 2007 and Boesso and Kumar 2007; Khanchel 2007; Da Silveira et al. 2009; Uyar 2011; Samaha et a. 2012, Alves et al. 2012; Hajji and Ghazali 2013). It can be noticed that firm size is a comprehensive variable that can proxy a number of corporate attributes such as competitive advantage, information production costs, and political costs (Hossain et al. 1994 and Abdelsalam 1999). Also, Gruning (2007) concludes that firm size has an indirect effect on disclosure which is mediated by listing status.

Many theories have been used to explain the influence of firm size on disclosure policy. Referring to agency theory, larger firms disclose more information because they have higher agency costs and they are more sensitive to political cost (Jensen and Meckling 1976; Leftwich et al. 1981) Moreover, the advocates of stakeholder theory argue that firms are expected to have a high level of voluntary disclosure in order to be registered in the stock market to attract more funds at lower cost of capital: so in this case, they have greater responsibility to provide information to customers, suppliers, analysts and government (Choi 1973; Cooke 1991). However, due to being more exposed to political attacks, Cooke (1998) indicates that large companies may respond by reducing the extent of disclosure in their annual reports. Therefore, the theoretical relationship is somewhat uncertain. Drawing on the theoretical and empirical evidence from prior studies, the current study can expect a positive relationship between the firm size and the level of voluntary reporting in the annual reports of the listed companies in Bangladesh.

H1: There is a positive significant association between firm size and the level of voluntary reporting in annual reports of the listed companies in Bangladesh.

5.10.3.2 Liquidity:

A high liquidity ratio is an indicator of good management performance. Accordingly, companies with higher liquidity ratios are expected to disclose more information (Al-Akra et al. 2010). Some of the prior disclosure studies use signalling theory to explain the relation between liquidity and disclosure. According to this theory companies with a considerable or reasonable liquidity ratio may be more motivated to disclose information voluntarily to distinguish themselves from other companies that face liquidity problems (Abd El Salam 1999). On the other hand, agency theory suggests that companies with a low liquidity ratio might disclose more to satisfy the needs of shareholders and creditors (Aly et al. 2010). According to stakeholder theory**,** managers may be motivated to disclose more information about liquidity (Barako et al. 2006). It is hypothesised that a company's liquidity level impacts on its disclosure practices.

According to Wallace and Naser (1995), regulatory bodies, as well as investors and lenders, are particularly concerned with the going-concern status of companies. In view of this, companies that are able to meet their short-term financial obligations without a recourse to the liquidation of their assets-in-place may desire to make this known through disclosure in their annual reports (Belkaoui and Kahl 1978). Camfferman and Cooke (2002) and Ghosh and Nandi (2009) provide evidence of a positive association between liquidity and disclosure However, Wallace et al (1994) and Naser et al. (2002) report evidence of a negative association between liquidity and disclosure, while Barako et al. (2006) provide evidence of an non significant association between liquidity and voluntary disclosure.

H2: There is significant positive association between liquidity and the level of voluntary disclosure in annual reports of the listed companies of Bangladesh.

5.10.3.3 Market Category:

Market category concerns the sector of the market in which the company performs. In Bangladesh there are five market categories at present. Category A indicates companies which are regular in holding the annual general meetings and have declared dividends at the rate of 10 percent or more in a calendar year. Category B includes companies which are regular in holding the Annual General Meetings but have failed to declare dividends of at least10 percent in a calendar year. Companies which have failed to hold the Annual General Meetings or failed to declare any dividend or which are not in operation continuously for more than six months or whose accumulated loss after adjustment of revenue reserve, if any, is negative and has exceeded its paid up capital are in Z category. Moreover, Category N indicates newly listed companies and G indicates Greenfield companies. The categorisation helps investors in choosing companies when making investment decision. Stock exchange security categories are all significantly associated with the extent of disclosure (Karim and Jamal 2005).

H3: There is a significant negative association between market category and the level of voluntary disclosure in the listed companies of Bangladesh.

5.10.3.4 Age:

The level of a firm's disclosure may be influenced by its age, i.e. stage of development and growth (Owusu-Ansah 1998; Aktharuddin 2005). Older, well-established companies are likely to disclose much more information in their annual reports than younger companies. On the other hand, younger firms might also exhibit better reporting quality since they need to compete with older firms to survive. For this study, it is expected that company age is a critical factor in determining the level of corporate disclosure. Older companies with more experience are likely to include more information in their annual reports in order to enhance their reputation and image in the market (Owusu-Ansah 1998; Akhtaruddin 2005). Owusu-Ansah (1998) pointed out three factors that may contribute to this phenomenon. Firstly, younger companies may suffer competition, secondly, the cost and the ease of gathering, processing, and disseminating the required information may be a contributory factor, and finally, younger companies may lack a track record on which to rely for public disclosure (p. 605).

Empirical evidence is also mixed in relation to age of the firm and the level of reporting. Owusu-Ansah (1998) have found a positive association between the said variables, whereas, Akhtaruddin (2005), Alsaeed (2006) Hossain (2008), Nandi and Ghosh (2012) found no significant association. This notion is weakly supported by Black et al. (2006) and Haque et al. (2011), who report a positive, though statistically non-significant association. Owusu-Ansah and Yeho (2005) found company age as the critical factor in explaining the extent of disclosure practices. Al shammari et al. (2007) found that age does not have significant impact on corporate governance disclosure. However, Lei (2006) finds a negative association between firm age and the level of reporting.

H4: There is significant positive association between the age of the company and the level of voluntary disclosure of the listed companies.

5.10.3.5 Audit Committee Size:

The audit committee is a subset of the corporate board of directors and has the responsibility of enhancing internal control procedures, overseeing a firm's financial-reporting process, external reporting and the risk management of companies. The audit committee acts as a monitoring mechanism and can help to improve the overall quality of information flows between managers and the different interested parties (Nandi and Ghosh 2012). Audit committees, therefore, may play a key role by facilitating communication between the board, external auditors and internal auditors (Klein 2002 and Chau and Leung 2006) which, in turn, are expected to reduce information asymmetry. The structure and characteristics of effective audit committee are currently under the spotlight to ensure reliable and high quality financial reporting (Bhuiyan et al. 2007).

Previous research provide evidence of a positive association between the presence of an audit committee and corporate reporting practices (Barako et al. 2006; Rosario and Flora 2005; Ho and Wong 2001; McMullen 1996). The board usually delegates responsibility for the oversight of financial reporting to the audit committee to enhance the breadth of relevance and reliability of annual report (Wallace et al. 1995). Thus, audit committees can be a monitoring mechanism that improves the quality of information flow between firm owners, who are in effect shareholders and potential shareholders, and managers, especially in the financial reporting environment where the two have disparate information levels (Akhtaruddin and Rouf 2011).

Previous research has examined the relationship between the presence of an audit committee and the quality of corporate reporting (Beasley 1996; DeFond and Jiambalvo 1991; McMullen 1996; Felo et al. 2003; Barako et al. 2006). The empirical evidence regarding this matter is mixed. Simnet et al. (1993) found that audit committees do improve or maintain the quality of the financial reporting process and improve the confidence in the quality of financial reports for financial statement user. Bradbury (1990), Pincus et al. (1989), Ho and Wong (2001), Akhtaruddin and Rouf (2011) supported the view that the presence of an audit committee will reduce financial reporting problems and improve the transparency and disclosure of financial reports. Goodwin and Seow (2002), and Beasley et al. (2000) found that investors, auditors and directors believe that a strong and effective AC is able to increase the level of quality disclosure. Ho and Wong (2001) found that companies, which have an AC, are more likely to have a higher extent of voluntary disclosure. On the other hand, Akhtaruddin et al. (2009) evidences insignificant positive association between size of the audit committee and the degree of corporate voluntary disclosure.

In Bangladesh, Islam et al. (2010) found that an independent audit committee is one of the important mechanisms for minimising, not only agency problems, but also the failure of different instruments of corporate governance which create so many further problems. Kamal and Ferdousi (2006) in a study of the effects of audit committees in the banking sector of Bangladesh were unable to provide information regarding the magnitude of audit committee disclosure in the annual reports. Moreover, Akhtaruddin and Rouf (2011) found positive association between audit committee and voluntary disclosure. While these studies suggest that the existence of an audit committee has an impact on financial reporting quality, they do not investigate whether audit committee size affect financial reporting quality.

H5: There is significant positive association between audit committee size and level of voluntary reporting in the listed companies.

5.10.3.6 Board Characteristics:

A corporate board is the primary and dominant internal corporate governance mechanism (Brennan 2006). The board monitors or supervises management, gives strategic guidelines to the management and may even act to review and ratify management proposal (Jonsson

2005). Large boards are usually more powerful than small boards and, hence, considered necessary for organisational effectiveness (Florackis and Ozkan 2004). For instance, as Pearce and Zahra (1991) point out, large powerful boards help in strengthening the link between corporations and their environments, provide counsel and advice regarding strategic options for the firm and play a crucial role in creating corporate identity. Hossain (2008) has found that the board composition of a firm may be an important determinant of corporate disclosure level. Several previous research studies have found a significant association between these two variables (Haniffa and Cooke 2002; Akhtaruddin et al. 2009). In this study three board characteristics have been used- independent non-executive director, board leadership structure and board size.

5.10.3.6.1 Independent Non-executive Directors:

A board is generally composed of inside and outside members. Kosnik (1990) argues that outside directors are more effective than inside directors in maximizsing shareholders' wealth. In contrast, Klein (1998) suggests that inside directors can contribute more to a firm than outside directors due to their firm-specific knowledge and expertise. According to agency theory (Jensen and Meckling 1976) board independence reduces managerial leeway thus increasing transparency and financial reporting quality.

There are mixed results concerning the relationship between independent boards of directors and corporate reporting. For example, Chau and Gray (2010), Samah and Dahawy (2010), Duchin et al. (2010), Ho and Wong (2001), Chen and Jaggi (2000), Rosenstein and Wyatt (1990), Klein (1998), Fama and Jensen (1983) find a positive relationship between independent board of directors and corporate reporting. Meanwhile, Al Shammari and Al Sultan (2010), Andres and Vallelado (2008), Barako et al. (2006), Ghazali and Weetman (2006), Haniffa and Cooke, (2002), and Ho and Wong (2001), find no relationship between independent non-executive directors and management voluntary disclosures; while, Eng and Mark (2003), Gul and Leung (2004) found a negative association. Moreover, Cheng and Courtenay (2006) found that boards with a larger proportion of independent directors are significantly and positively associated with higher levels of voluntary disclosure.

H6: There is significant positive association between independent non-executive director and level of voluntary reporting in the listed companies.

5.10.3.6.2 Board Leadership Structure:

Within the context of corporate governance, the central issue often discussed is whether the chair of the board of directors and CEO positions should be held by different persons, a dual leadership structure or by one person, unitary leadership structure. Supporter of this view believe that duality gives a greater understanding and knowledge of the firms operating environment and this should impact positively on a firm's performance (Nandi and Ghosh 2012). While others believe that a combined chair and CEO positions signals the absence of separation in decision management and decision control (Dulacha 2007).

In the sense of the stakeholder theory and the agency theory this situation affects the independency status and the bias as this person would accumulate much power by driving two critical positions at the same time (Williams 2002 as cited in Iskander 2008). According to agency theory, the important function of a board can be damaged by the unitary leadership structure. A CEO may be engaged in some opportunistic behavior in a firm with a unitary leadership structure because of his or her dominance over the board (Rechner and Dalton 1991; Donaldson and Davis 1991; Forker 1992; Shamser and Annuar 1993, Stiles and Taylor, 1993; Blackburn 1994, Nandi and Ghosh 2012). However, there are other views, based on the stakeholder theory, suggesting that the existence of role duality would improve the board's effectiveness allowing it good control over the board and the selection of its members (Eisenhardt 1989; Dahya et al. 1996; Rechner and Dalton 1991; Donaldson and Davies 1991).

Therefore, it is argued that the separation of the roles of chairman and chief executive will increase monitoring quality and improve the level of disclosure (Forker 1992). However, some studies argue that there is no association between CEO duality and the extent of voluntary disclosure of information (Haniffa and Cooke 2000; Ho and Wong 2001). Rashid (2011) found that neither the board composition, nor the CEO-duality influence the firm performance. The finding of this study does not support the agency theory for board composition, implying that external, independent directors are not good for firm performance in Bangladesh. Moreover, the "CEO duality diminishes the monitoring role of the board of directors over the executive manager, and this in turn may have a negative effect on corporate performance" (Elsayed 2007, p 1204).

H7: There is significant positive association between board leadership structure and level of voluntary reporting in the listed companies.

5.10.3.6.3 Board Size:

Board size may influence the level of voluntary disclosure. The level of disclosure is a strategic decision made by the board of directors. As a top-level management body, the board of directors formulates policies and strategies to be followed by managers. Larger boards are better for corporate performance because they have a wide range of collective experience and expertise that may result in better decision making (Nandi and Ghosh 2012). Moreover, to maintain the agency theory logic it is recommended to raise the board size (Hermalin and Weisbach 2003). At the same time, big boards would be more diverse that would help the companies to secure critical resources and reduce environmental uncertainties (Pearce and Zahra 1992; Goodstein et al. 1994). Several previous research studies have found a significant association between board size on the level of corporate disclosure (Akhtaruddin et al. 2009; and Allegrini and Greco 2011).

From the stakeholder theory perspective, large board size is believed to enable a high degree of independence as it enables the election of a broad range of directors that lead to diversification of the board composition. This variation addresses wider scope for the stakeholder's interests, which leads to a greater propensity to disclose more information (Williams 2002 as cited in Iskander 2008). Research emphasises the importance of strategic information and resources in a highly uncertain environment. Birnbaum (1984) suggests that uncertainty and the lack of information may be minimised by a larger board. The size of the board is believed to affect the ability of the board to monitor and evaluate management and a small board encourages faster information processing (Zahra et al. 2000).

However, other researchers put forward the opposite argument: board size needs to be reduced to improve board effectiveness (Jensen 1993; Lipton and Lorsch 1992; Kesner and Johnson 1990) and a greater number of directors on the board may reduce the likelihood of information asymmetry (Chen and Jaggi 2000). Other studies suggest that board size does affect the corporate performance and corporate disclosures (Monks and Minow 1995).

H8: There is a significant positive relationship between board size and the level of voluntary corporate disclosure of the listed companies in Bangladesh.

5.10.4 Variable Measurement:

Firm Size:

Different measures for firm size have been used in the disclosure literature including total assets, total sales, number of employees and market capitalization. A number of studies combine some measures into one measure (Cooke 1992) while others use a single measure. However, there is no criterion to choose the best proxy of firm size (Hassan et al. 2006). Reviewing the literature, it can be noticed that the most common measure is total assets. The study measures firm size by a log of total assets.

Liquidity:

A sample of a company's liquidity position is measured by quick (acid test) ratio, as it is a more stringent measure of corporate liquidity. It is defined as the ratio of current assets less inventories to current liabilities.

Market Category:

It is expected that Bangladeshi companies which are in the Z category, according to BSEC criteria, are likely to have less voluntary information than those in the other categories. The phenomenon is captured with a dummy variable with the value of 1 if it is in the Z category and 0 otherwise.

Age:

There are two dates that the study can use to measure the age of the company. One is establishment date and the other is the listed date. There are some companies that are established as private limited companies, partnerships or single ownership companies after that transform into public limited companies. Reporting rules are also different among the sole ownership, partnerships, private limited and listed public companies. Moreover, as the study is working with listed companies, listing date would be more justifiable. Age is measured by a simple count of years passed from its listing year to the particular sample year.

Audit Committee Size:

In Bangladesh, the existence of an audit committee was not mandatory in the earlier years. However, in the 2006 the BSEC provided some conditions relating to audit committees. SEC notification suggested that a company should have an Audit Committee as a sub-committee of the Board of Directors and it should have at least three members. As the notification indicates the minimum number, it is assumed that large number of audit committee member can influence the voluntary reporting. In the current study, audit committee size is measured through audit committee members as a percentage of board size.

***Independent Non-executive Directors*:**

Given the mixed findings in relation to the impact of independent non-executive directors on manager's disclosure decisions, this study will further investigate the relationship. A firm may have a higher level of disclosure if the board contains more independent directors. In this study two measures have been used: one is the number of independent directors on the board and another is the proportion of independent directors in the audit committee. It is assumed that more independent non-executive directors have more power to influence the disclosure of voluntary information.

***Board Leadership Structure*:**

Based on mixed findings the current study is also motivated to determine the effects of board leadership structure on voluntary reporting. In this study a dummy variable 1 is used if any company has dual leadership structure in the board and otherwise 0.

***Board Size*:**

Following previous studies it is hypothesised that a large board would improve disclosure level. In this study board size has been measured by the number of board members on the board.

5.10.5 Voluntary Disclosure Model Specification:

In order to provide primary evidence of the impact of corporate attributes on corporate voluntary reporting of different listed companies in Bangladesh, the following regression has been estimated:

Dependent Variables:

VDI = Voluntary Disclosure Index

Explanatory variables:

Explanatory variables and their expected sign of the study are given below:

Determinants	**Variable Label**	**Variable**	**Expected sign**
Firm Size	LASST	Natural log of Total Assets	+
Liquidity	LIQ	Current assets-Inventories/ Current liabilities	+
Market Category	MKT	Market category of DSE, 1 for Z, 0 otherwise.	-
Firm Age	AGE	Listed year of the firm. Number of year.	+

Audit Com. Size	AUDITCOM	Audit committee percentage in the board.	+
Independent director	INDDIR	Number of independent director and proportion of independent director in the audit committee.	+
Leadership Structure	CEODU	Dummy variable 1 for CEO Duality or Role Duality, otherwise 0.	+
Board Size	BSIZE	Number of board member	+

5.10.6 Regression Model:

The following multiple linear regression model is used to investigate the association between determinants and extent of voluntary disclosure in Bangladesh:

VDI = β0 + β1 LASST + β2 LIQ+ β3 MKT+ β4 AGE+ β5 AUDITCOM +β6 INDDIR+ β7 CEODU+ β8 BSIZE + Є

Where,

VDI= Voluntary Disclosure Index

β_0 = Constant

β_{1-} β_8 = Explanatory variables

Є = Error term

5.11 Empirical 3: Timeliness of Corporate Reporting

5.11.1 Introduction:

According to the FASB's conceptual framework (SFAC) No. 2, there are four criteria that a financial report can be useful for users' decision-making. The four criteria include relevance, verifiability, free from bias and quantifiable. For annual report to be relevance the provision of information must have predictive or feedback value and that information should be provided in timely manner. Timely financial statement information helps in efficient allocation of resources by reducing dissemination of asymmetric information (Statement of Financial Accounting Concepts No. 2, 1980), by improving pricing of securities (Chambers and Penman 1984, p. 32), and by mitigating insider trading, leaks and rumors in the market (Owusu-Ansah 2000). Timeliness of financial reporting is crucial to all users of financial reports. This is because most users and particularly the shareholders and potential investors, rely on the audited financial reports before deciding whether to remain as shareholders or to become investors of a company (Ghosh et al. 2009).

With regards to the quality of annual reporting, efficiency is an important feature. Efficiency is often referred to as the timeliness that enhances the qualitative characteristics. This is provided in the Exposure Draft of an improved Conceptual Framework for Financial Reporting, (May 2008) issued by the International Accounting Standard Board (IASB). Usefulness of information disclosed in a company's annual report reduces when time lag increases (Ghosh et al. 2009). This is consistent with the note that the longer the period between year end and publication of the annual report, the higher the chances that the information would be leaked to some interested investors (FASB, 2000).

For listed companies in Bangladesh, there are primarily two sources that govern timely reporting: (1) the Companies Act and (2) the Stock Exchange Listing Requirements. The Companies Act, 1994 in Bangladesh requires that the first annual general meeting (AGM) must be held within eighteen months from the date of incorporation and the subsequent general meeting must be held within fifteen months from the first AGM (Section 81). This provision also suggests that public limited companies have a maximum of nine months to prepare annual accounts and to present the accounts to the shareholders for approval at the AGM.

With regard to stock exchange listing rules on the release of audited financial statements, the provisions are consistent with those of the Companies Act. According to the listing regulations of the Dhaka Stock Exchange (DSE) in Bangladesh (Section 19), a listed company must hold its AGM within nine months following the close of its financial year and present the audited financial statements to shareholders for approval at the AGM. Moreover, Securities and Exchange Rules, 1987 required that companies are required to complete the audit process within 120 days from the end of the financial year and submit audited annual reports, approved by the directors, to the relevant stock exchange at least fourteen days before holding the AGM.

5.11.2 Reporting Lag:

Conceptually, timeliness denotes a quality of: firstly, 'being available at a suitable time' or secondly, 'being well-timed' (Gregory and Van Horn 1963: 576). The key variable in timeliness is the delay in the release of annual reports. Gregory and Van Horn (1963) defined delay as ‘the length of time between the cut-off point, the time no transactions are accepted for inclusion in the particular report, and the distribution of reports to users.’ According to the International Accounting Standards Board (IASB 2008:p.40) timeliness of financial reports is the “availability of information needed by decision makers for useful decision making before it loses its capacity to influence decisions”. Delay, in this study, is described as reporting lag time. Reporting lag time is defined here as the length of time a company takes after its financial year-end to release its financial information to the public.

The operational definition of reporting lag varies in the literature depending on the research design and context. Following Dyer and McHugh (1975), Courtis (1976) and Whittred (1980), Owusu-Ansah (2000), Ahmed (2003) and based on the availability of information, the following three definitions of reporting lags have been offered:

(***1) Audit lag*** – interval of days between the balance sheet’s closing date and the signed date of the auditor’s report stated in the corporate annual report.

(2) Preliminary lag – interval between the balance sheets closing date and the date of notice of the AGM when companies are required to submit their audited accounts to the Stock Exchange.

(3) Total lag – interval of days between the balance sheet closing date and the date of the AGM.

5.11.3 Determination of Reporting Lag Time:

Following Dyer and McHugh (1975), Owusu-Ansah (2000) and Ahmed (2003) three reporting events for each sample company were specified : firstly the audit report date, secondly the preliminary earnings announcement date, and finally, date of annual general meeting. The audit report dates were taken from the annual reports of each sample company and were used to compute the audit lag for each company. A preliminary lag time is the number of days between each sample company’s financial year-end and the date of notice of the AGM when companies are required to submit their audited accounts to the Stock Exchange. A final total lag time is the number of calendar days between a sample company’s financial year-end and the date on which its annual general meeting is held.

5.11.4 Model Development and Variables:

Following prior research, eight audit-related and firm-specific variables have been selected in order to evaluate the determinants of these variables on timeliness of reporting in Bangladesh. These variables are: Firm size, Sign of earning, Financial condition, Audit firm size, Company year-end, Company age, Industry and Modified audit opinion. Ashton et al. (1989) suggested incorporating specific internal audit related variables such as the number of auditors assigned to the audit engagement, the efficiency of the internal control department, time spend and the degree of overtime actually spent on the job. However, Ng and Tai (1994) suggested that the use of these additional variables does not improve significantly the model's explanatory power on those that used only publicly available information. Further, in the context of Bangladesh, it is not possible to obtain this information mainly due to a lack of data and the partnership type organisational structure of audit firms (Ahmed 2003). Therefore, only publicly available sources such as corporate financial statements, proxy forms and notices of the AGM are used to extract the required information.

5.11.5 Determinants of Reporting Lag

5.11.5.1 Firm Size:

Corporate size has been found to be a significant factor associated with reporting lag (see, for example, Courtis 1976; Davies and Whittred 1980; Givoly and Palmon 1982; Newton and Ashton 1989; Ashton et al. 1989; Carslaw and Caplan 1991; Jaggi and Tsui 1999; Ng and Tai 1994; Owusu-Ansah 2000; Ahmad and Kamarudin 2003; Ismail and Chandler 2004; Dogan et al. 2007; Al-Ajmi 2008; Afify 2009; Mohamad-Nor et al. 2010; Hashim and Abdul Rahman 2011 and Apadore and Noor 2013. Most of the previous studies supported the negative association between audit lag and firm size (Jaggi and Tsui 1999; Afify 2009; Mohamad-Nor et al. 2010; Hashim and Abdul 2011 and Apadore and Noor 2013) with exceptions (for example, Ashton et al. 1987; Bamber et al. 1993; Simnett et al. 1995; Abdulla 1996; Leventis and Weetman 2004; and Owusu-Ansah and Leventis 2006) find an non significant association between timeliness and the firm size.

Ahmed (2003) identified several reasons for a negative association between reporting lag and the reporting firm's size. Firstly, larger firms have more resources to establish sophisticated internal control systems and to use auditors on a continuous basis, thus enabling the auditors to carry out more interim compliance, and substantive tests of year-end balances (Ng and Tai 1994). Secondly, larger firms are subject to more public scrutiny and are followed by a large number of investment and media analysts who review their performance for investment decision-making: this places pressure on these firms to release financial information on a more timely basis than their smaller counterparts (Dyer and McHugh 1975; Ashton et al. 1989; Frost and Pownall 1994; Owusu-Ansah 2000). Finally, larger companies may be able to exert greater pressures on the auditor to start and complete the audit on time (Carslaw and Caplan 1991).

H1: There is significant negative association between firm size and timeliness of financial reporting.

5.11.5.2 Sign of Earning:

Prior research documents that good news is released more promptly by managers than bad news (Chambers and Penman 1984; Ng and Tai 1994). It has also been found that firms that experience losses for the period would result in longer audit report lag (Givoly and Palmon 1982; Ashton et al. 1989; Ismail and Chandler 2004). Moreover, an auditor may take a cautious approach if he or she believes that a loss is going to increase the likelihood of financial failure or management fraud, and therefore the probability of litigation by the stakeholders for failure to take due care and diligence (Carslaw and Kaplan 1991; Afify 2009). According to Owusu-Ansah (2000), 'the market for corporate managerial skills uses the performance of a company to set management's outside opportunity wage. It is, therefore, reasonable to expect the management of a successful company to report its good news to the public on a timely basis. In contrast, auditors take much time to audit failing (high risk) companies as a defense against any potential future litigation'(p.10).

However, Annaert et al. (2002) found that there are no significant associations between report lag and either good or bad news and profit or loss. This is because the investors already have the warnings concerning profits through the half yearly report of the company. So, it would not have any effect on delay of the report with the earnings for the year. Overall, it is expected that companies would be more eager to release 'good news' without delay and be reluctant in releasing 'bad news'.

H2: There is significant positive association between the sign of earning and the timeliness of financial reporting in Bangladesh.

5.11.5.3 Financial Condition:

Profitability, leverage and liquidity are separately used by previous studies to examine the effects of a firm's financial condition on reporting delays (Abdullah 1996; Carslaw and Kaplan 1991; Owusu-Ansah 2000). Prior studies in emerging nations did not find any significant association between reporting delays and debt and profitability (Abdullah 1996; Owusu-Ansah 2000).

Rather than relying on one measure of risk, a combination of other financial indicators may be necessary to fully capture financial risk, explaining why some studies used a combined index to reflect the firm's financial condition following Zmijewski (1984) (see Bamber et al. 1993; Jaggi and Tsui 1999; Ahmed 2003). Zmijewski Financial Condition (ZFC) represents an estimated risk index of the financial condition of the company, which indicates the company's propensity to fail. From an auditor's perspective, Jaggi and Tsui (1999) have argued that a firm with weak financial condition poses a greater audit risk, which in turn increases the time spent by auditors to review the accounts. Although several bankruptcy models have been developed in the U.S., no such model has been developed in the context of emerging nations. However, Jaggi and Tsui (1999) have argued that the Zmijewski (1984) model is relevant for other countries such as Hong Kong**.** They found a significant positive association between the higher the value of the index, the higher the propensity to fail and the weaker the financial condition. Conversely, the lower the value of the index, the lower the propensity to fail and the stronger the financial condition.

H3: There is a significant positive association between the financial condition and timeliness of reporting.

5.11.5.4 Audit Firm Size:

Large audit firms have a stronger motivation to complete their audit work on time in order to maintain their reputation and name (Afify 2009). Moreover, the large audit firms normally have more resources (Palmrose 1986; Hossain and Taylor 1998; Ahmad and Kamaruddin 2003), quality staff (Chan et al. 1993; Hossain and Taylor 1998; Ahmad and Kamaruddin 2003), conduct more trainings for their staff (Owunsu Ansah and Leventis, 2006), and are also able to employ more powerful audit technologies (Williams and Dirsmith 1988) which will reduce the time of audit work. Thus Big audit firms are expected to complete audits more efficiently and in less time than non-big audit firms. Conversely, Affify (2009) found that type of audit firm did not reduce audit report lag.

Previous research reports some mixed findings. Some studies found no difference in audit delay between big and non-big audit firms (Garsombke 1981; Carslaw and Kaplan 1991; Ng and Tai 1994; Al-Ajmi 2008; Affify 2009). While other studies found differences in audit delay between big and non-big firms (Abdulla 1996; Gilling 1977; Davis and Whittred 1980; Ashton et al. 1987; Ashton et al. 1989; Hossain and Taylor 1998; Ahmad and Kamaruddin 2003; Krishnan 2005; Owusu-Ansah and Leventis 2006; Choudhary et al. 2012; Impink et al. 2012).

H4: There is a significant negative association between the audit firm size and timeliness of financial reporting.

5.11.5.5 Financial Year End:

It is expected that the month of the year in which a company's financial year ends would influence its reporting lead time. If most companies in a country have their financial year-ends within a particular period of time, and because they are required by law to have their final accounts audited, there will be much demand for the services of auditors operating in that country. This may result in possible audit delay as the workload of auditors increases (Owusu-Ansah 2000). Most of the listed firms have their year-ends either in June or December in Bangladesh (Ahmed, 2003). These months are considered to be busy seasons. According to Ng and Tai (1994), because of difficulties with scheduling, delays are likely when performing audits during a busy season.

On the other hand, audit firms may employ more audit staff and pay overtime to complete audits on time. In the context of emerging countries, it is costly to complete an audit on schedule because audit firms may have difficulties in finding trained audit staff: developing countries always suffer from a shortage of qualified accounting staff (Ghosh 1990). So, recruiting additional staff by an audit firm may not be an option, which will prolong the audits and hence delay the release of annual financial statements by the reporting firm. Davies and Whittred (1980), Newton and Ashton (1989), Ng and Tai (1994), Owusu-Ansah (2000), Knechel and Payne (2001), and Ahmed (2003) found a positive association between financial year-end and reporting lag.

H5: There is a significant positive association between financial year end and the audit lag reporting in Bangladesh.

5.11.5.6 Company Age:

The age of a company has been identified in prior literature as an attribute likely to have an impact on the quality of accounting practice in terms of timeliness. The older the firms, the more likely they are to have strong internal control procedures. Similarly, younger firms are more prone to failure and have less experience with accounting controls (Hope and Langli 2008). That is, age has the potential to reduce reporting lag although Courtis (1976) did not find age a significant attribute in his study of listed companies in New Zealand. However, Owusu-Ansah (2000) employs a two-stage least square regression model and found age as significant determinants of reporting lags of Zimbabwean listed companies. Moreover, Musa et al. (2013) found age appear to exert a positive influence in reporting.

It is proposed in this study that promptness in financial reporting by a company is influenced by its age (i.e., its development and growth). In the context of this study, the theory suggests that a reduction in reporting time would occur as the number of annual reports produced is increased. As a company continues and its accountants learn more, the ‘teething problems’ which would cause unusual delays are minimised. As a result, an older, well-established company is likely to be more proficient in gathering, processing and releasing information when needed because of their experience.

H6: There is significant negative association between the age of the company and the timeliness (reporting lag) of financial reporting.

5.11.5.7 Industry Classification:

The nature of the industry has been identified as a significant factor that influences the timeliness of reporting. Prior empirical studies found that audit delays for financial companies are shorter than audit delays for non-financial companies (Courtis 1976; Ashton et al. 1987 and 1989; Newton and Ashton 1989; Carslaw and Kaplan 1991; Ng and Tai 1994). Moreover, Al-Ajmi (2008) found that industry membership (bank) has a negative and significant relation with reporting, indicating that members of highly regulated or scrutinised industries underwent audits earlier than other firms. One of the causes of longer delay for non-financial companies was the existence of non-financial assets that take more auditing time than financial assets.

Abdulla (1996) hypothesises that there are a number of plausible explanations for such behaviour. Some of them are: the importance of the company in the economy in terms of its role; the importance of company relative to other listed firms; the level of regulation pertaining to that sector and regulators who may differ within themselves in terms of expertise and effectiveness. As regulated industries are followed by different regulators this might affect the timeliness of corporate reports of the companies they regulate and monitor.

H7: There is a significant positive association between non-financial companies and timeliness of reporting.

5.11.5.8 Audit Opinion:

The presence of remarks in the audit report arises from the requirements of audit regulation. According to the Bangladesh Standard on Auditing 700 and 701 (similarly IAS 700 and 701), requires the auditor's report to include, any observations or remarks on material matters taken into account by the auditor to support the audit conclusions. This applies whenever these conclusions contain some qualification, adverse opinion or disclaimer of opinion. Spathis (2003) reported that some qualifications refer to 'subject to' (or 'except for') opinions. These are not for qualified opinion but for unqualified opinion with modified wording. According to Spathis(2003), the 'subject to' (or 'except for') qualifications observed mainly refer to depreciation, provision for bad debts, issues related to subsidiaries; provision for redundancy payments and falsifying accounts for tax purposes. Arens et al. (2010) identified five reasons for modified opinion: lack of consistent application of GAAP, substantial doubt about going concern, departure from promulgated accounting principles, emphasis placed on a matter and reports involving other auditors.

There is evidence in the literature that the qualification of an audit report will delay the audit (Whittred 1980; Dodd et al. 1984). Whittred (1980) found that the time lag increases as the qualifications become more serious. It is expected that the greater the number of 'subject to' opinions, the longer the delay might be. This is partly because auditors are expected to extend tests when they find or suspect irregularities, and partly because auditors might wish to take more time to audit transactions as a defense against any potential future litigation. Furthermore, while negotiations between auditor and client occur on a regular basis (Beattie et al. 2000; Gibbins et al. 2001) it is likely that negotiation is more intense and lasts longer when accounting problems arise. In addition, studies found that firms that receive modified audit opinions and going concern opinions require more days to complete their financial statement audit (Schwartz and Soo 1996; Leventis et al. 2005; Ettredge et al. 2006).

H8: There is a significant positive association between audit opinion and timeliness of reporting of the listed companies in Bangladesh.

5.11.6 Variable Measurement

Firm Size:

In this study, the natural log of total assets is used to measure firm size following- Gilling 1977; Davies and Whittred 1980; Simnett et al. 1995; Jaggi and Tsui 1999; Owusu-Ansah 2000 and Ahmed 2003.

Sign of Earning:

Consistent with prior studies (Ashton et al. 1989; Carslaw and Kaplan 1991, Ahmed 2003), a dummy variable is used where 1 is assigned to indicate a loss, otherwise 0.

Financial Condition:

Current study used Zmijewski's (1984) model which is shown below:

$$\mathbf{ZFC = -4.336 - 4.513(ROA) + 5.679(FINL) + 0.004(LIQ)}$$

where:

ZFC represents an estimated risk index of the financial condition of the company.

ROA is measured as the ratio of net income to total assets.

FINL as the ratio of total debt to total assets; and

LIQ is the ratio of current assets to current liabilities.

Audit Firm Size:

This study classifies audit firms into the Big Four (Four local audit firms are members of the Big 4 auditors; Rahman Rahman Huq (RRH), Hoda Vasi Chowdhury, A Qasem and Co. and S F Ahmed are linked with KPMG International, Deloitte Touche Tohmatsu, Price Waterhouse Coopers and Ernst and Young, respectively) and non-Big Four audit firms, these are other local domestic firms. The Big 4 audit firms are assigned a dummy variable 1 and the non-Big 4 audit firms are assigned as 0 and expect relationship between them.

Financial Year End:

The study expect that financial year end is only applicable to audit lag that's why a dummy variable is used in the model and expected a positive association between financial year end and audit lag. Companies completing the financial year in the month of December which is considered a busy season and are assigned a dummy variable 1, otherwise 0.

Company Age:

There are two dates that the study can use to measure the age of the company. One is establishment date and another one is listed date. There are some companies that establish as a private limited or partnerships or single ownership company and then are transformed as public limited companies. Reporting rules are also different among the sole ownership, partnerships, private limited and listed public companies. Moreover, as the study consider listed companies, listed date would be more justifiable for the present study. The research measures the variable by a simple count of the number of years passed since its listing year to the particular sample year.

Industry Classification:

Companies listed on the Dhaka Stock Exchange Bangladesh are classified into seventeen categories that have been divided into two groups in this study: financial and non-financial companies. The study uses dummy variable 1 for financial companies and 0 for non-financial companies.

Audit Opinion:

In this study, unqualified opinion with modified wording and qualified opinion, which are termed as modified audit opinion, expected to increase the reporting time that is why a dummy variable of 1 is used for companies reported a modified wording and qualified opinion and 0 otherwise.

5.11.7 Model Specification

In order to provide primary evidence of the impact of corporate attributes on timeliness of reporting of different enlisted companies in Bangladesh, the following regression has been estimated:

Dependent Variables:

ADLAG = Audit lag time

PRELAG = Preliminary lag time

TOTLAG = Total reporting lag time

Explanatory variables:

Explanatory variables and their expected sign of the study are given below:

Determinants	Variable Level	Variable	Expected sign
Firm Size	LASST	Natural log of Total Assets	-
Sign of Earning	ESIGN	Dummy variable 1 for the sign of net loss, if profit 0	+
Financial condition	ZFCINDEX	Financial condition as defined by Zmijeski's(1984) index .	+
Audit Firm Size	AFSIZE	Dummy variable 1 for Big 4 affiliated audit firm, otherwise 0;	-
Financial Year End	YEND	Dummy Variable 1 for company financial year end in December, otherwise 0.	+
Company Age	CAGE	Number of year passed from listed.	-
Industry Category	IND	Dummy variable 1 for financial companies, otherwise 0	+
Audit Opinion	MOPINION	Dummy variable 1 for modified wording and qualified opinion, otherwise 0.	+

The following three linear equations present the model that will be tested using multivariate statistical procedures:

Equation 1:

ADLAG = β_0 + β1 LASST + β2 ESIGN + β3 ZCFINDEX+β4 AFSIZE + β5 YEND + β6 CAGE+ β7 IND + β8 MOPINION+ Є

Equation 2:

PRELAG = β_0+ β1 LASST + β2 ESIGN + β3 ZCFINDEX+β4 AFSIZE + β5 CAGE+ β6 IND + β7 MOPINION+ Є

Equation 3:

TOTLAG = β_0+ β1 LASST + β3 ESIGN + β3 ZCFINDEX+β4 AFSIZE + β5 CAGE+ β6 IND + β7 MOPINION+ Є

Where,

β_0 = Constant; β_{1-} β_8 = Explanatory variables; Є = Error term

Following Owusu-Ansah (2000) and Ahmed (2003), YEND is dropped from Equation (2) and (3) since this variable is audit related and is not expected to influence managerial decision to hold the AGM or submission of financial statements to the Stock Exchange.

5.12 Statistical Tests:

This section provides an overview of the statistical techniques that will be used to carry out the empirical sections. The study will first analyse the total disclosure; then the categories of such disclosure. The model is analysed using descriptive statistics of the collected data using Pearson correlation and Spearman correlation to identify the correlation between the dependent and independent variables. The regression models would be applied on two dimensions. Firstly, in investigating the association between total mandatory disclosures, total voluntary disclosure and timeliness of disclosure as a dependent variable, and the different determinants of mandatory, voluntary and timeliness of disclosure, as independent variables. Secondly, an examination of the association between the different categories of mandatory disclosure, voluntary disclosure and timeliness of disclosure as dependent variables, and the different determinants of mandatory, voluntary and timeliness of disclosure, as independent variables.

The empirical section will start by performing regression diagnostics to examine the data before choosing the appropriate tests. Normality of residuals can be checked by most common normality plots: Q-Q plot; P-P plot. Moreover, the most common normality tests skewness-kurtosis and Shapiro-Wilk will be used for both the residuals and the dependent variable. To check for the linearity assumption, the residuals will be plotted versus the independent variable(s) values. Linearity can also be checked through plotting each independent variable against the dependent variable and see how well does the fitted regression line represent their relationship. To check for heteroscedasticity, two tests will be conducted by STATA the first is Breusch-Pagan / Cook-Weisberg and White's tests and the second is Cameron & Trivedi's decomposition of IM test. To check for multicollinearity, the current study will apply the common methods which include correlation coefficients; parametric (Pearson) and non-parametric (Spearman); and variance inflation factors (VIF) in addition to tolerance values.

The hypotheses are examined using Generalized Least Squares (GLS) regression of panel data. The Hausman test will be used to determine the primary model. A robust standard error is employed as the examined data is not normally distributed, which needs to be tested using a non- parametric test. Therefore, a robustness test is used to overcome this problem. Moreover, a sensitivity analysis will be applied to examine the sensitivity of the results towards changing the statistical test which ensures the reliability of the driven results. The models are statistically analysed using STATA statistical package.

5.13 Conclusion:

The current chapter helps in making a link between the theoretical and empirical sections. Based on the theoretical framework in chapter four, evidence from the corporate literature in chapter three and the legal framework in chapter two, it seeks to examine empirically the extent and determinants of mandatory reporting, voluntary reporting and timeliness of reporting. The current research argument is based on agency, stakeholder and signalling theory (as discussed in chapter 4) which are considered to be an important part of the positive accounting theory. The objectivist ontological and positivist epistemological position would fit with this research. Based on ontological and epistemological positions, a nomothetic methodology is appropriate for the study. Referred to the research philosophy discussion, objectivism is the current research philosophical assumption. Therefore, the functionalist paradigm and deductive approach are fit with the current research nature and philosophy. With reference to the objective ontological position of the current research, it is believed that the quantitative research and survey technique would be appropriate to test the developed hypotheses.

The study measures the extent of reporting and its categories in the corporate annual report based on a self constructed checklist of mandatory and voluntary reporting items. Moreover, it also calculates audit lag, preliminary lag and total reporting lag from the listed companies in Bangladesh. The period of study is the seven years from 2004 to 2010 during which time the important corporate governance code was issued in 2006. The final sample is 123 companies with 861 firm year observations. This chapter developed three sets of hypotheses and regression equations for three empirical chapters. Different sets of hypotheses are used based on the theoretical framework, literature review, country perspective and empirical model. For example, firm year end is suitable for timeliness of reporting rather than mandatory reporting. Hypotheses are related to corporate governance characteristics, ownership structure, firm characteristics and audit. Based on the current chapter the next three chapters will demonstrate how the empirical section answers the research questions of the current study.

Chapter 6:
Analysis and Findings-
Corporate Mandatory Reporting

Chapter Six: Analysis and Findings-Corporate Mandatory Reporting

6.1 Introduction:

As indicated in chapter five, the current study developed a self constructed checklist as a research instrument to measure the extent of total mandatory reporting and its sub categories. The current chapter aims to answer the research question, to what extent do Bangladeshi listed companies disclose mandatory information in their annual reports. Furthermore, to what extent do mandatory reporting practices in annual reports evolve over time, and what are the determinants of mandatory reporting practice. It provides answers for these questions primarily through a detailed analysis of the level of mandatory corporate information and its different categories using descriptive analysis. Then, it examines the determinants of mandatory reporting and tests the hypotheses; finally it finds associations between different determinants within different categories of mandatory reporting.

The chapter starts with the analysis of the extent and trend of total mandatory reporting over the period of study and then moves to different categories of mandatory reporting in section 6.2. The findings of the empirical analysis showed the contribution of each mandatory reporting category to the whole level of reporting over the seven examined years as well as sector wise performance. The level and determinants of mandatory reporting is given in section 6.3 and 6.4 respectively. Then it examines the bivariate analysis in section 6.5. Section 6.6 discusses the multivariate analysis: starting with regression diagnostics to determine the regression technique. After that, the merits of fixed and random effects are discussed and finally the test of the hypothesis, the association between, the total mandatory reporting and its determinants on one side, and the association between each reporting category and the different determinants on the other side. A sensitivity analysis is applied to identify the effect of changing the statistical test on the results and findings of the main applied test in section 6.6 followed by the conclusion in section 6.7.

6.2 The Extent and Trend of Mandatory Reporting and its Categories:

To measure the extent of mandatory reporting in annual reports of the listed companies of Bangladesh, the study constructed a checklist of items ranging from 148 to 179 for seven year and divided into seven groups (for example 148 items in year 2004 and 179 items in

2010, given in chapter five). The total 861 annual reports of 123 companies for the years of 2004 to 2010 have been analysed using this checklist. The percentage of awarded reporting score to the applicable score represents the extent of mandatory reporting; the dependent variable in the current study. The mandatory reporting scores over the seven years provide the trend of mandatory reporting practice in the annual reports.

To start the analysis, appendix C presents the descriptive statistics of total mandatory reporting and its categories for each year and for the seven years all together. Appendix C indicates that the mean of total mandatory reporting score over the seven years is about 76.42 %. This average suggests a low level of mandatory reporting which is to be expected. At the same time, the study observed some improvement in reporting when current study compares the results with a previous study (Akhtaruddin, 2005; 44% reporting). Also, direct comparisons with other countries are applicable. For example, Wallace and Naser 1995 (Hong Kong, 73%); Glaum and Street 2003(83.7%, Germany); Owusu Ansah and Yeoh 2005(New Zealand, 78% in 1992 and 88% in 1997) and Aljifri 2008(UAE, 68%).

Appendix C also shows that the extent of mandatory reporting over the years has a wide range. While the minimum reporting index obtained is 41.22% for the years 2004 and 2005, the maximum is 93.85% for the year 2010. This wide range of mandatory reporting level can be noticed also in each year of the investigated period. The minimum score of mandatory reporting for all the following years is still under 42.29%. On the other hand, the maximum score has been not crossed over 93.85%. This result confirms the wide variation in the mandatory reporting practices in the annual reports of listed Bangladeshi companies. This is because of institution factors and the strength of legal enforcement, which significantly affects accounting quality. In a series of papers, La Porta et al. (1998, 1999, 2000, and 2002) documented the importance of legal rules and enforcement for understanding financing patterns and ownership structures across countries. In addition, it justifies our decision to focus the current study on the extent of mandatory reporting practices over the period.

Appendix C also indicates the variation in the level of mandatory reporting categories over the period of study. It can be seen from appendix C that there is gradual increasing in the average score of each of the seven groups. However; the increasing rate differs among the categories. For example, while the maximum increasing rate in director report reporting, 21.37% (from 69.51 in 2004 to 84.37% in 2010) over the year followed by miscellaneous reporting 16.79% (from 73.89% in 2004 to 86.30% in 2010). On the other hand, the lowest increasing rate in cash flow statement reporting for the same years is 3.78 % (from 71.54% in 2004 to 74.25% in 2010). Regarding the average over the period, current study found that general information reporting was the highest at 90.23% (maximum 93.74%, minimum 86.31%) and structures of notes reporting is the lowest, 70.34%(maximum 74.95%; minimum 66.26%).

6.2.1 Sector Wise Mandatory Reporting:

From previous discussion it is already understand that average compliance rate of mandatory reporting is relatively low (76.42%) in Bangladesh. In order to obtain a detailed overview, it is necessary to discuss sector wise mandatory reporting performance of the listed companies in Bangladesh. No previous studies in Bangladesh consider different sectors to analyse mandatory reporting performance. It will help to find out the most compliant sector and at the same time it will focus on which sectors' regulatory authorities need more close monitoring.

Table 6.1: Sector Wise Total Mandatory Reporting

Sectors	Mandatory
Bank	81.83%
Cement	67.44%
Ceramic	70.98%
Engineering	74.47%
Financial Institution	78.57%
Food & Allied	64.70%
Insurance	75.43%
IT Sector	73.09%
Jute , Paper and Printing	72.53%
Pharmaceuticals and Chemicals	83.87%
Services and Real Estate, Tannery	75.60%
Textile	77.13%
Miscellaneous	75.69%

From the table 6.1, it is observed that highest reporting over the period of time is in Pharmaceuticals and Chemicals sectors (83.87%) followed by Banks (81.83%). On the other hand the worst reporting pattern is found in Food & Allied sector (64.70%). Moreover, the reporting patterns of Service and real estate, Tannery, Insurance and Engineering sectors are very close to the average reporting in Bangladesh.

6.2.2 Mandatory Reporting Before and After the Code:

As the study focused on the difference between before and after the corporate governance code of 2006, table 6.2 clearly justifies the effect of that code. It is observed that the average mandatory reporting of 2004 and 2005 is 72.86%, which is quite low compared to the average of 2007 to 2010, 78.62%. This can be justified by the issuing of the corporate governance code in year 2006 in which year average reporting is 74.73%. It is also finds that average mandatory reporting before the corporate governance code was 72.86%. It represents total company disclosure at an average of 108 (72.86% of 148 checklist items) checklist items of the study. On the other hand, average disclosure after the corporate code of 78.62%. This indicates an average company disclosure of 140 (78.62% of 175 and 179 checklist items) checklist items which the study investigates. This clearly showed a significant improvement in the reporting pattern of mandatory disclosure after the corporate governance code.

Table 6.2: Descriptive Statistics of Average Reporting Before and After the Code

	2004- 2005	2006	2007-2010
Mandatory	72.86%	74.73%	78.62%
General	86.43%	88.40%	92.59%
Director	70.07%	75.43%	82.91%
Balance Sheet	71.34%	73.12%	76.74%
Income Statement	68.72%	70.34%	72.70%
Cash Flow	71.61%	72.63%	73.95%
Structure of Notes	66.67%	66.26%	73.19%
Miscellaneous	74.30%	78.05%	85.16%

Now, it is necessary to identify whether this difference between total mandatory reporting over the period under investigation and before and after the code is significant or not. Testing for normality is essential to determine the type of tests to be used (parametric tests or non-parametric tests). After conducting a series of statistical tests, the results indicate that total mandatory reporting is not normally distributed, so nonparametric tests are recommended. For this study, it is decided to use Kruskal-Wallis tests and Wilcoxon Matched-pairs Signed Rank test to measure the significance over the period and before and after the code respectively.

Regarding the differences among the seven years, Kruskal-Wallis test indicate that there is significant difference between total mandatory reporting over the period. Again to test the effect of corporate governance code 2006 on the extent of mandatory reporting Wilcoxon Matched-pairs Signed Rank test indicate that there is significant difference of mandatory reporting before and after the corporate governance code.

Kruskal-Wallis test	**Wilcoxon signed-rank test**
Chi-squared = 113.223 with 6 d.f. probability = 0.0001	Ho: before = after z = -2.521 Prob > z = 0.0117
Chi-squared with ties = 113.235 with 6 d.f. probability = 0.0001	

In summary, from the descriptive analysis it is observed that extent of mandatory reporting is improving over the period and this increase is sufficient to be statistically significant especially before and after the corporate governance code.

6.3 Measuring the Level of Mandatory Corporate Reporting:

The empirical study of this model is considered to be a descriptive analysis that shows the average mandatory reporting and the averages of the different components of this mandatory reporting. Descriptive statistics help us to simplify large amounts of data in a sensible way. The strength of descriptive statistics is their ability to collect, organise and compare vast amounts of data in a more manageable form. Descriptive analysis is necessary in this study to find out the extent of disclosure in total and in different categories showing the average along with the range. Also it will give an idea of whether the data set are normal or abnormal which suggests the alternative analysis techniques for the next part of the analysis. The descriptive study includes two different samples. The first sample includes the combined data set that includes all the companies of the sample and second sample includes only the non financial companies.

6.3.1 Descriptive Statistics for Combined Sample:

Table 6.3 shows the descriptive statistics of the total mandatory reporting level and the level of each of the mandatory reporting categories for the combined sample of data for year 2004-2010. The total mandatory reporting level presents 76.42% of the examined checklist items with a variant between 41.22% and 93.85% for the least and highest Bangladeshi companies reporting respectively. Moreover, the general reporting represents the highest reporting level at 90.23%, while the structures of notes reporting presents the lowest reporting level at 70.34 %. In addition, it is observed that the maximum reporting of all categories is 100% presented by general, director, balance sheet, cash flow statement, structures of notes and miscellaneous reporting. As usual notice that for the whole categories of reporting, the minimum reporting for any category is 0%, which means that at least one company of those examined missed the director's report in their annual report.

Table: 6.3 Descriptive Statistics for Combined Sample

	Mean	Median	Std. Devi.	Minimum	Maximum	Skewness	Kurtosis
Mandatory	0.7642	0.7763	0.086	0.4122	0.9385	-0.9818	4.7123
General	0.9023	0.9200	0.060	0.6800	1	-0.4564	3.1449
Director	0.7817	0.7778	0.170	0	1	-1.1640	5.4600
Balance Sheet	0.7468	0.7627	0.095	0.3542	1	-0.7844	4.2411
Income Statement	0.7122	0.7143	0.109	0.3000	0.9429	-0.5762	3.7307
Cash Flow	0.7309	0.6667	0.142	0.3333	1	0.2237	3.0894
Structure of Notes	0.7034	0.7222	0.150	0.2222	1	-0.7447	3.5043
Miscellaneous	0.8104	0.8462	0.153	0.2000	1	-1.1438	4.4301

Moreover, in relation to the standard skewness of statistics the presented data is normally distributed. As a common rule, the standard skewness of the data needs to be within the range of ±1.96 (Gujarati and Dawn 2009). It is observed that of the total mandatory reporting and its different categories standard skewness is within the range of ±1.96, evidencing that the data is normally distributed. On the other hand, with respect to the standard kurtosis the data is not normally distributed. The data is said to be normally distributed if the standard kurtosis falls in the range of ±3 (Gujarati and Dawn 2009). The standard kurtosis of the total mandatory reporting and its different categories are more than 3 indicating that the data is not normally distributed. As a result any hypotheses test related to the entire data needs to use a robust analysis.

6.3.2 Descriptive Statistics for Non Financial Sample:

Table 6.4 shows the descriptive statistics of the total mandatory reporting level and the level of each of the mandatory reporting categories for the sample of non financial companies over the period 2004 to 2010. These results indicate that the mean total mandatory reporting is 75.03% which is considered a low level in comparison to the combined sample. The highest component of the mandatory reporting is the general reporting of 89.51%, while the lowest reporting level is represented by the cash flow statement reporting of 67.07%.

Table 6.4: Descriptive Statistics for Non Financial Sample

	Mean	**Median**	**Std. Devi.**	**Minimum**	**Maximum**	**Skewness**	**Kurtosis**
Mandatory	0.7503	0.7653	0.0962	0.4121	0.9371	-0.885	3.945
General	0.8951	0.8888	0.0612	0.68	1	-0.546	3.398
Director	0.7552	0.7777	0.1807	0	1	-1.201	5.500
Balance Sheet	0.7375	0.7543	0.1038	0.3541	1	-0.803	3.963
Income Statement	0.7075	0.7142	0.1229	0.3	0.9428	-0.575	3.266
Cash Flow	0.6707	0.6666	0.1088	0.3333	1	-0.348	4.381
Structure of Notes	0.6749	0.6956	0.1682	0.2222	1	-0.486	2.840
Miscellaneous	0.7897	0.8461	0.1684	0.2	1	-1.009	3.913

The descriptive statistics also shows the normality of the different variables data. It is noted that the cash flow statement reporting represents the maximum skewness of -0.348, while the director reporting shows the minimum skewness of -1.201. This indicates that the minimum and maximum skewness are within the normally distributed range of ±1.96 (Gujarati and Dawn 2009). While the Kurtosis of the reporting data indicate that most of the reporting data is not normally distributed. The maximum Kurtosis is shown by the director reporting of 5.50, while the minimum Kurtosis is shown by the structures of notes reporting of 2.84. With reference to the Kurtosis most of the reporting data is not normally distributed as they are out of the range of ±3 (Gujarati and Dawn 2009).

Since the data is not normally distributed, that would cast some shadows over the selected test to examine the research hypotheses applied over the entire data. Therefore, a robust analysis should be employed when testing the research hypotheses in the further analysis.

6.3.3 Descriptive Statistics for Financial Companies:

From the table 6.5, it is observed that the financial company's mean is higher than the combined and non financial company's mean mandatory reporting with all its components. In the same way, standard deviation is lower than the financial sample and combined sample. In addition, by observing minimum and maximum reporting, it can be said that financial companies disclose more mandatory information than the non financial companies. However, the financial company's data is also non normal as the kurtosis value for director reporting, income statement reporting, structuring of notes reporting and miscellaneous reporting has a value greater than three.

Table 6.5: Descriptive Statistics for Financial Companies

	Mean	Median	Std. Devi.	Minimum	Maximum	Skewness	Kurtosis
Mandatory	0.7864	0.7829	0.0609	0.6053	0.9385	-0.044	2.819
General	0.9137	0.9231	0.0585	0.7600	1	-0.277	2.382
Director	0.8244	0.8750	0.1429	0.3750	1	-0.730	3.154
Balance Sheet	0.7617	0.7708	0.0775	0.5208	0.9831	-0.239	2.998
Income Statement	0.7199	0.7143	0.0815	0.4857	0.9250	-0.066	3.200
Cash Flow	0.8283	0.8333	0.1352	0.5000	1	-0.013	1.687
Structure of Notes	0.7494	0.7647	0.1002	0.4118	0.9600	-0.424	3.129
Miscellaneous	0.8439	0.8889	0.1191	0.3846	1	-0.994	3.730

6.4 Measuring the Determinants of Mandatory Reporting:

This empirical model examines the relationship between the mandatory reporting level and the determinants of this mandatory reporting. Descriptive statistics are used to describe the basic features of the data in a study. Descriptive statistics simply describe what the data shows and easily translates results into a distribution of frequency and percents and overall averages. The determinants of the level of the mandatory reporting that are examined in this model are firm size, firm profitability measured by both ROE and ROA, leverage, audit firm size, multinational parents, industry and ownership. These determinants are divided into two equations: one for the combined sample and one for the non financial companies as mentioned in chapter 5.

6.4.1 Descriptive Statistics of Determinants for Combined Sample:

Table 6.6 shows the descriptive statistics of the mandatory reporting determinants for combined sample. As indicated in the table, the mean firm size is about 9.25 with minimum 6.428 and maximum 11.765. Also profitability measured by ROE ranges from -479 % to 2255% with average 23.4% while profitability measured by ROA average 4.070% with minimum -31.914% and maximum 55.680%. It is also notable that, only 23.50% observation audited by Big four firm and only 12.2% observation has operated by multinational parents.

Table 6.6: Descriptive Statistics of Determinants for Combined Sample

	Mean	Median	Std. Devi.	Minimum	Maximum	Skewness	Kurtosis
Firm Size	9.250	8.996	0.8789	6.428	11.765	.4590	2.530
Profitability(ROE)	.234	0.121	1.3044	-4.793	22.552	10.1779	144.687
Profitability(ROA)	4.070	2.606	6.5059	-31.914	55.680	1.4579	14.206
Audit Firm Size	0.235	0	0.4242	0	1	1.2547	2.569
Multinational Parent	0.122	0	0.3274	0	1	2.3146	6.339
Industry	0.382	0	0.4862	0	1	0.4861	1.235
Ownerships	0.459	0	0.4986	0	1	0.1658	1.027

Referred to standard skewness the data is considered not to be normally distributed as the skewness of Firm profitability(ROE) and Multinational parents exceeds the standard normality range of ± 1.96(Gujarati and Dawn 2009). In the same way, with reference to the standard kurtosis the data is also considered not to be normally distributed as Profitability(ROE), Profitability(ROA) and Multinational parents exceeds the standard normality range of ± 3(Gujarati and Dawn 2009). The figures in table 6.5 indicate that observations have some extreme figures (outliers) which need more attention during the analysis process and the interpretation of the results.

6.4.2 Descriptive Statistics of Determinants for Non Financial Sample:

Table 6.7 shows the descriptive statistics of the different determinants of the corporate mandatory reporting for the non financial sample. As indicated in the table, the mean firm size is about 8.88 with minimum 6.428 and maximum 10.40. Also profitability measured by ROE ranges from -479.30% to 2255% with average 27.06% while profitability measured by ROA average 4.278% with minimum -31.914% and maximum 55.680%. It is also notable that, only 19.17% of non financial observations are audited by Big four firms and 13.16% non financial observation have been performed by multinational parents. Regarding leverage, average debt equity ratio is 3.32 times with maximum 150.91 times and minimum -154.85 times.

The skewness of the different determinants indicates that the data of the different variables is not normally distributed. The maximum skewness of 8.2315 is represented by profitability (ROE), while the minimum skewness of -0.1205 represented by firm ownerships. The minimum and maximum skewness are not within the skewness range of ±1.96 which indicates the non normality of the variables data (Gujarati and Dawn 2009). Therefore, based on the skewness the data of the different variables is not normally distributed and so is considered to be non parametric data.

Table 6.7: Descriptive Statistics of Determinants for Non Financial Sample

	Mean	**Median**	**Std. Devi.**	**Minimum**	**Maximum**	**Skewness**	**Kurtosis**
Firm Size	8.8807	8.8604	0.6080	6.428	10.40	0.0349	3.8694
Profitability(ROE)	0.2706	0.0847	1.6353	-4.793	22.55	8.2315	93.9802
Profitability(ROA)	4.2788	2.9207	7.4223	-31.914	55.68	1.0539	10.6471
Leverage	3.3258	1.1561	15.4627	-154.854	150.91	3.1652	62.4623
Audit Firm Size	0.1917	0	0.3940	0	1	1.5632	3.4436
Multinational Parent	0.1316	0	0.3384	0	1	2.1798	5.7515
Ownerships	0.5301	1	0.4996	0	1	-0.1205	1.0145

The kurtosis shows that the minimum kurtosis of 1.0145 is represented by the firm ownerships, while the maximum kurtosis of 93.98 is represented by the Profitability (ROE). Since the minimum and maximum kurtosis are not within the range of ±3 (Gujarati and Dawn, 2009) the data is not normally distributed and the data is considered to be non parametric. As in the non financial sample, observations have some extreme figures (outliers) that need more attention during the analysis process and the interpretation of the results.

6.5 Bivariate Analysis:

Bivariate analysis provides an estimate of the degree of association between the variables. In fact, it investigates for interdependence of the variables. In this study, correlation analysis is used to discover the level of association between the dependent and independent variables. With the help of this, it is also possible to recognise the correlation among the independent variables. Moreover, it shows whether the data needs to change or whether any independent variables need to be taken out. So, before approaching the regression analysis, this study carried out correlation analysis to recognise whether all the independent variables are appropriate for the multiple regression analysis.

The correlation between the different categories of mandatory reporting and the determinants of reporting is shown for the combined sample using Spearman's correlation coefficients in the table 6.8. The Spearman correlations in table 6.8 show the significance association between the total and different categories of reporting with the different determinants of this type of reporting for combined observation. The significance association is identified using a confidence level of 99% and 95%. Referred to the correlation coefficients, there is a significant relationship (at 1 % and 5% significance levels) between total mandatory reporting and firm size, firm profitability (ROE), firm profitability (ROA), audit firm size, multinational parents and industrial categories. This suggests the stronger association between these variables and mandatory reporting. According to the results, companies with big size, high profitability (measured by both ROE and ROA), audited by big four audit firm, multinational parents and which are financial companies, disclose more mandatory information in their annual reports.

On the other hand, there is a non-significant negative association between firm ownerships and mandatory reporting. The results indicate weak or no association between mandatory reporting and firm ownerships. The results of this table agree with the research hypothesis regarding the association between mandatory reporting and the different reporting determinants.

Regarding the different categories of mandatory reporting, there is a significant positive relationship between different categories of mandatory reporting and firm size, firm profitability (ROE) and firm profitability (ROA). In addition to this, there is significant positive relationship between general reporting, director report reporting, balance sheet reporting, cash flow statement reporting, and structures of notes reporting with audit firm size. Moreover, there is significant positive relationship between general reporting, balance sheet reporting, income statement reporting, structures of notes reporting and miscellaneous reporting amongst companies with multinational parents. Also, there is significant positive relationship between general reporting, director report reporting, balance sheet reporting, cash flow statement reporting, structures of notes reporting and miscellaneous reporting with industrial categories. Finally, there is significant negative relationship between balance sheet reporting and cash flow statement reporting with firm ownerships.

Table 6.9 shows the correlation between the different categories of mandatory reporting and the determinants of reporting of the non financial sample using Spearman's correlation coefficients. The Spearman correlations in table 6.9 show the significance association between the total and different categories of reporting with the different determinants of this type of reporting for non financial observation. The significance association is also identified using a confidence level of 99% and 95%. Referred to the correlation coefficients, there is a significant relationship (at 1 % and 5% significance levels) between total mandatory reporting and firm size, firm profitability (ROE), firm profitability (ROA) audit firm size and multinational parents. This suggests the stronger association between these variables and mandatory reporting. According to the results, companies with large size, high profitability (measured by both ROE and ROA), audited by big four audit firm and multinational parents disclose more mandatory information in their annual reports.

On the other hand, firm ownership is identified as having a non-significant relationship with mandatory reporting. The results indicate weak or no association between mandatory reporting and firm ownership. While, there is a significant negative association (at 5% significance level) between leverage and mandatory reporting. This suggests that the extent of mandatory reporting in the annual reports increase with the decrease of firm leverage. The results of this table agree with the research hypotheses regarding the association between mandatory reporting and the different reporting determinants.

Table: 6.8 Combined Sample's Spearman's Correlation for Dependent and Independent Variables

Spearman's Correlations															
	Mandatory	General	Director	Balance sheet	Income statement	Cash Flow	Notes	Miscellaneous	LASST	ROE	ROA	Audit firm	Multinational	Industry	Ownerships
Mandatory	1.000														
General	.801**	1.000													
Director	.643**	.595**	1.000												
Balance sheet	.941**	.733**	.531**	1.000											
Income statement	.826**	.559**	.467**	.710**	1.000										
Cash flow	.365**	.286**	.356**	.333**	.226**	1.000									
Notes	.877**	.626**	.514**	.792**	.680**	.327**	1.000								
Miscellaneous	.793**	.694**	.569**	.695**	.567**	.189**	.688**	1.000							
Firm Size	.339**	.295**	.304**	.308**	.251**	.604**	.320**	.148**	1.000						
Profitability(ROE)	.241**	.206**	.198**	.245**	.155**	.399**	.224**	.166**	.340**	1.000					
Profitability(ROA)	.115**	.148**	.143**	.088**	.141**	.099**	.085*	.129**	-.118**	.465**	1.000				
Audit firm size	.099**	.086*	.165**	.119**	.043	.267**	.093**	.062	.335**	.325**	.168**	1.000			
Multinational	.106**	.128**	.058	.086*	.136**	.031	.067*	.136**	.140**	.163**	.206**	.413**	1.000		
Industry	.118**	.100**	.160**	.070*	.017	.534**	.147**	.116**	.472**	.247**	-.034	.129**	-.037	1.000	
Ownerships	-.057	-.055	-.029	-.093**	.008	-.193**	-.027	.026	-.178**	-.099**	.098**	.117**	.212**	-.182**	1.000

**. Correlation is significant at the 0.01 level.

*. Correlation is significant at the 0.05 level.

Table: 6.9 Non Financial Sample's Spearman's Correlation for Dependent and Independent Variables

Spearman's Correlations															
	Mandatory	General	Director	Balance sheet	Income statement	Cash Flow	Notes	Miscell-aneous	Firm Size	ROE	ROA	Leverage	Audit Firm	Multi. parent	Ownerships
Mandatory	1.000														
General	.828**	1.000													
Director	.665**	.601**	1.000												
Balance sheet	.960**	.784**	.586**	1.000											
Income statement	.869**	.634**	.518**	.776**	1.000										
Cash flow	.393**	.368**	.410**	.345**	.351**	1.000									
Notes	.918**	.700**	.558**	.859**	.761**	.305**	1.000								
Miscellaneous	.882**	.743**	.618**	.818**	.700**	.276**	.801**	1.000							
Firm Size	.199**	.223**	.281**	.143**	.240**	.306**	.166**	.130**	1.000						
Profitability(ROE)	.167**	.169**	.147**	.163**	.172**	.285**	.142**	.112**	.220**	1.000					
Profitability(ROA)	.230**	.213**	.183**	.225**	.235**	.417**	.200**	.127**	.159**	.669**	1.000				
Leverage	-.095*	-.126**	-.029	-.115**	-.124**	-.202**	-.018	-.034	.191**	-.029	-.352**	1.000			
Audit firm Size	.127**	.101*	.256**	.098*	.110*	.236**	.140**	.117**	.363**	.355**	.368**	.012	1.000		
Multinational parent	.154**	.180**	.134**	.103*	.172**	.126**	.126**	.177**	.196**	.217**	.372**	-.113**	.460**	1.000	
Ownerships	.020	-.003	.038	-.032	.063	-.009	.038	.038	-.027	-.001	.124**	.023	.153**	.144**	1.000

**. Correlation is significant at the 0.01 level.

*. Correlation is significant at the 0.05 level.

Table: 6.10 Combined Sample's Pearson's Correlation for Dependent and Independent Variables

Pearson's Correlations

	Mandatory	General	Director	Balance sheet	Income statement	Cash Flow	Notes	Miscellaneous	LASST	ROE	ROA	Audit firm	Multinational	Industry	Ownerships
Mandatory	1														
General	.794**	1													
Director	.657**	.593**	1												
Balance sheet	.949**	.738**	.554**	1											
Income statement	.865**	.578**	.483**	.763**	1										
Cash flow	.371**	.299**	.341**	.329**	.261**	1									
Notes	.909**	.654**	.533**	.829**	.741**	.306**	1								
Miscellaneous	.855**	.713**	.589**	.776**	.665**	.179**	.764**	1							
Firm Size	.312**	.287**	.266**	.278**	.227**	.641**	.292**	.128**	1						
Profitability(ROE)	.013	-.027	-.002	.000	.036	.049	.009	.028	.031	1					
Profitability(ROA)	.236**	.189**	.184**	.193**	.251**	.123**	.198**	.207**	-.076*	.104**	1				
Audit firm	.128**	.088**	.134**	.138**	.068*	.268**	.104**	.076*	.316**	.006	.223**	1			
Multinational	.134**	.132**	.060	.114**	.148**	.023	.092**	.164**	.117**	-.011	.288**	.413**	1		
Industry	.117**	.109**	.173**	.061	.032	.539**	.123**	.054	.535**	-.036	-.041	.129**	-.037	1	
Ownerships	-.053	-.043	-.019	-.091**	-.009	-.225**	-.019	.020	-.190**	-.073*	.145**	.117**	.212**	-.182**	1

**. Correlation is significant at the 0.01 level.

*. Correlation is significant at the 0.05 level.

Table: 6.11 Non Financial Sample's Pearson's Correlation for Dependent and Independent Variables

Pearson's Correlations

	Mandatory	General	Director	Balance sheet	Income statement	Cash Flow	Notes	Miscel-laneous	LASSt	ROE	ROA	Leverage	Audit firm	Multi parent	Ownerships
Mandatory	1														
General	.816**	1													
Director	.671**	.601**	1												
Balance sheet	.962**	.776**	.599**	1											
Income statement	.887**	.629**	.516**	.800**	1										
Cash flow	.402**	.372**	.373**	.353**	.368**	1									
Notes	.927**	.703**	.555**	.870**	.780**	.307**	1								
Miscellaneous	.895**	.742**	.627**	.836**	.730**	.279**	.819**	1							
Firm Size	.206**	.225**	.231**	.143**	.224**	.320**	.177**	.145**	1						
Profitability(ROE)	-.004	-.052	-.011	-.032	.045	.112**	.001	-.002	.070	1					
Profitability(ROA)	.292**	.252**	.222**	.260**	.305**	.368**	.234**	.224**	.168**	.104*	1				
Leverage	-.109*	-.122**	-.054	-.118**	-.123**	-.096*	-.065	-.048	.145**	.096*	-.077	1			
Audit firm	.148**	.102*	.211**	.116**	.123**	.238**	.145**	.128**	.337**	-.010	.390**	.127**	1		
Multinational	.156**	.178**	.132**	.104*	.168**	.122**	.126**	.172**	.203**	-.016	.452**	.158**	.460**	1	
Ownerships	.010	.007	.056	-.047	.039	-.028	.033	.040	-.036	-.089*	.178**	-.141**	.153**	.144**	1

**. Correlation is significant at the 0.01 level.

*. Correlation is significant at the 0.05 level.

Regarding the different categories of mandatory reporting, there is a significant positive relationship between different categories of mandatory reporting and firm size, firm profitability (ROE), firm profitability (ROA), audit firm size and multinational parents. On the other hand, the findings show that there is non-significant relationship between the different categories of mandatory reporting and firm ownerships. Moreover, there is significant negative relationship between general reporting, balance sheet reporting, income statement reporting and cash flow statement with firm leverage.

Table 6.10 and table 6.11 show the correlation between the different categories of mandatory reporting and the determinants of reporting of both the combined and non financial sample using Pearson's correlation coefficients respectively. The results of combined sample using Pearson's correlation do not significantly differ from the results of the combined sample using Spearman's correlation: the exception is firm profitability (ROE) which has a non-significant relationship with all categories of mandatory reporting and total mandatory reporting. Income statement reporting has a significant relationship with audit firm, and balance sheet and miscellaneous reporting has non-significant relationships with industry categories.

Similarly, the results of the non financial sample, using Pearson's correlation, do not significantly differ from the results of non financial sample using Spearman's correlation with the exception of firm profitability (ROE) which has an non-significant negative relationship with mandatory reporting, general reporting, director reporting, balance sheet reporting, and miscellaneous reporting and an non-significant positive relationship with income statement reporting and notes reporting.

6.6 Multivariate Analysis:

The result of bivariate analysis is specific, so to generalise the result of this study multivariate analysis is applied. Multivariate analysis can statistically estimate relationships between different variables, and correlate how important each one is to the final outcome and show where dependencies exist between them. Among multivariate analyses, regression analysis is one of the most common and widely used techniques in statistical analysis, especially in disclosure literature (Cooke 1998). Gujarati and Dawn (2009) also suggest that under certain assumptions, the method of least squares has some very attractive statistical properties that have made it one of the most powerful and popular methods of regression analysis. The following sections start with the regression diagnostics that represent the first step in choosing the relevant statistical method to analyse the collected data in the current study. After that follows the discussion about selecting fixed effect and random effect and finally the test of the hypothesis, the association between, the total mandatory reporting and its determinants on one side, and the association between each reporting category and the different determinants on the other side.

6.6.1 Regression Diagnostic:

Before deciding the appropriate statistical method, it is important in disclosure studies to assess the impact of distribution problems, non linearity, in addition to the problems of outliers (Cooke 1998). In general, there are several methods to estimate regression coefficients (parameters). In this study; linearity, independence and normality of error, homoscedasticity and multicollinearity has been checked to justify the regression.

6.6.1.1 Checking Linearity:

The association between the dependent and independent variables is supposed to be linear. It can be checked by the plot(s) of the residuals versus the independent variable values, and if linearity exists, there will be no obvious clustering of positive residuals or clustering of negative residuals. Linearity can also be checked effortlessly through plotting each independent variable against the dependent variable and observing how well the fitted regression line represents their relationship. The graphs for checking the linearity of each independent variable indicate that most in the model do not have an obvious linear relationship with the dependent variable (Appendix F).

This may be, either because of the presence of outliers or unusual observations, or because the linear model is not a good fit to describe the relation between the dependent variable and each independent variable. Therefore, it can be concluded that the linearity assumption is not satisfied. However, this result of non linearity is common in the majority of prior reporting studies (Cooke 1998). The study has to be able to fit this non linear data into an appropriate regression.

6.6.1.2: Checking Normality:

Normality implies that errors (residuals) should be normally distributed. Technically, normality is necessary only for hypothesis tests to be valid. Normality of residuals can be checked by two methods; graphical methods and numerical methods. Both of them; normality plots and normality tests; have been employed in the current study.

Graphical Method:

Two most common plots have been used in this study to check the normality- P-P plot (standardised normal probability plot) and Density estimate (plots the density of a variable and the normal density).

Figure 6.1: P-P plot for Mandatory Reporting

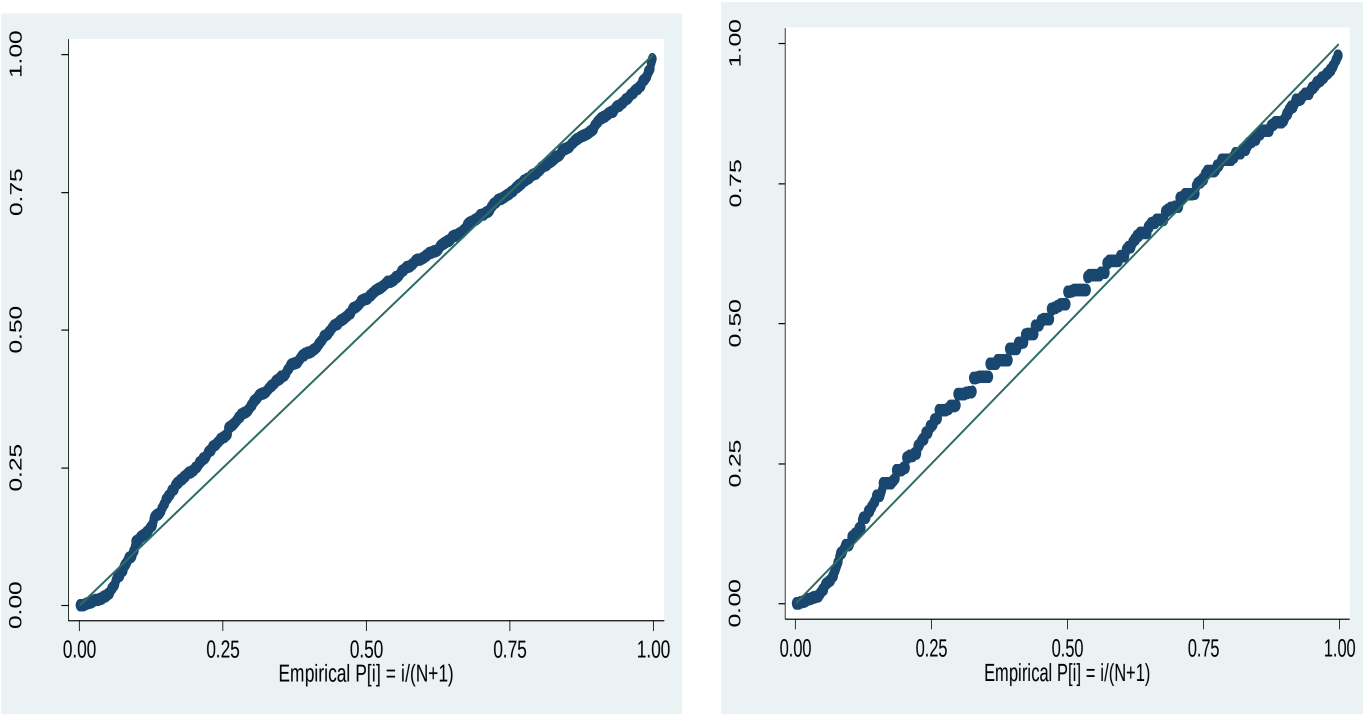
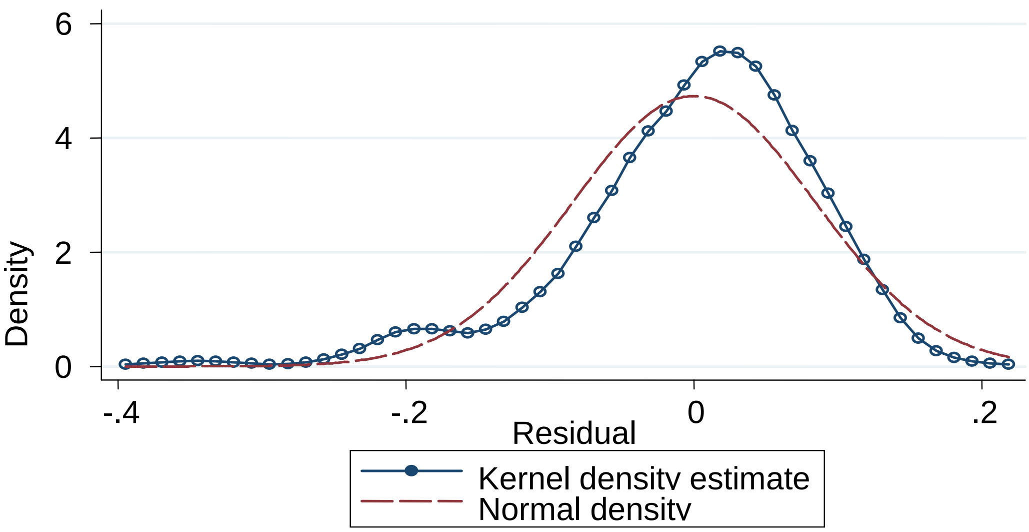


Figure 6.2: Kernel Density Estimate



Numerical Methods of Normality:

There are many numerical methods which can be used to test the assumption of normality (examples of these methods include- Kolmogorov - Smimov D statistic, skewness, and Shapiro - Wilk W statistic). Among them Shapiro - Wilk W statistic has been shown to have a good power against a wide range of non normal distribution. If the value of p is small, then the data may not be considered normally distributed.

Table 6.12: Shapiro-Wilk *W* test for Normal Data

Variables	obs	W	V	Z	Prob>Z
Residual	861	0.95029	27.356	8.144	0.0000
Total Mandatory	861	0.94976	27.649	8.17	0.0000

The two methods of normality test, graphical and numerical method, suggest the same result. It is clear from the previous results that errors and dependent variables are not normally distributed and this is mainly related to the skewness of the distribution.

6.6.1.3 Checking Homoscedasticity of Residuals:

The homoscedasticity assumption means that variance of the error terms is constant for each observation. The current study employs two numerical methods for heteroscedasticity; and Breusch-Pagan / Cook-Weisberg and White's test; and Cameron & Trivedi's decomposition of IM test.

Table 6.13: Breusch-Pagan *I* Cook-Weisberg and White's tests

Test	Chi-square	Prob>chi^2
Breusch-Pagan / Cook-Weisberg	422.07	0.0000
White's	252.06	0.0000

Table 6.14: Cameron & Trivedi's Decomposition of IM test

Source	Chi-square	df	p
Heteroskedasticity	252.06	31	0.0000
Skewness	89.17	7	0.0000
Kurtosis	11.99	1	0.0005
Total	353.22	39	0.0000

The test results point out that errors have non-constant variance (heteroscedastic), which indicate that the regression estimators will not have the minimum variance of all unbiased estimators, and also the P-values will be unreliable. In other words the current data suffers from heteroscedasticity.

6.6.1.4 Checking Multicollinearity:

According to Murray (2006), it will be difficult to differentiate the individual effects of explanatory variables and regression estimators may be biased when multicollinearity exists. This means there is a linear relationship between two or more independent variables and the estimates for a regression model cannot be uniquely computed. The two common ways to check for the presence of multicollinearity between independent variables are correlation coefficients and variance inflation factors (VIF) with tolerance values. These two ways have been used widely in the reporting literature. The current study employs both of them to check whether the explanatory variables or the model suffer from multicollinearity. Table 6.15 shows the variance inflation factor (VIF) and tolerance coefficients of each explanatory variable both for combined and non financial companies:

Table 6.15: Variable Inflation Factor

Combined Sample			**Non financial Sample**		
Variable	VIF	Tolerance (1/VIF)	Variable	VIF	Tolerance (1/VIF)
Firm Size	1.625	.615	Firm Size	1.165	.859
Profitability(ROE)	1.027	.974	Profitability(ROE)	1.044	.957
Profitability(ROA)	1.158	.864	Profitability(ROA)	1.422	.703
Audit Firm	1.370	.730	Leverage	1.107	.903
Multinational Parent	1.321	.757	Audit Firm	1.492	.670
Industry	1.439	.695	Multinational Parent	1.488	.672
Ownerships	1.130	.885	Ownerships	1.084	.922
Mean of VIF	**1.296**		**Mean of VIF**	**1.257**	

As regards the Variance Inflation Factor (VIF), it is indicated that data is normally distributed if the VIF is less than 10(Gujarati and Dawn 2009; Gaur and Gaur 2009; Neter et al. 1983; Mendenhall and Sincich 1989). However, others suggest that the value of 5 can be used as a rule of thumb (Groebner et al. 2005). From the table 6.15, it is observed that the maximum VIF is 1.625 (for the combined sample) and 1.492 (for the non financial sample) with mean VIF is 1.296 (for combined sample and 1.257 (for the non financial sample). Moreover, the lowest tolerance coefficient for the combined sample is 0.615 and for non financial sample is 0.670. As suggested by Hair et al. (2011), the tolerance value more than 0.20 may be used as a criterion for considering the data being free from the problem of multicollinearity. Therefore, based upon the rule of thumb, the results of VIF and tolerance coefficients indicate that there is not an unacceptable level of multicollinearity in the current study.

It is also commonly agreed that the correlation matrix is a powerful tool for indicating the relationship between explanatory variables but there is no agreement among researchers regarding the cut off correlation percentage (Alsaeed 2006). While, some researchers use 0.8; e.g. Hair et al. (2011); Gujarati and Dawn (2009); others suggest using 0.7; e.g. Tabachnick and Fidell (1996). Tables 6.8, 6.9, 6.10 and 6.11 present the correlation coefficients of non parametric and parametric tests and Spearman and Pearson coefficients for the combined and the non financial sample respectively. It can be noticed from the tables that correlation coefficients confirm the results of VIF. According to Spearman correlations (table 6.8 and table 6.9), the correlation coefficients of all independent variables are less or equal to 0.604 (for the combined sample) and 0.669 (for the non financial sample).

From the table 6.8, although the study has a correlation coefficient 0.941(for balance sheet), 0.826(for income statement), and 0.877(for notes to the financial statements), balance sheet, income statement and notes to the financial statement are dependent variables: furthermore, these three are categories of mandatory reporting. In the regression equation, the above are not running in the same equation with mandatory reporting. So, the correlation coefficient of balance sheet, income statement and notes to the financial statement with total mandatory reporting do not affect multicollinearity. In other words as there is no value more than 0.80 for comparing correlation between dependent and independent variable, it can be concluded that there is no potential multicollinearity problem in the current study.

Similarly in table 6.9, the study find correlation coefficients of 0.828 (general reporting), 0.960 (balance sheet reporting), 0.8699 (income statement reporting), 0.918 (notes to the financial statement) and 0.882 (miscellaneous reporting) with total mandatory reporting. As these are categories of mandatory reporting, this does not affect the multicollinearity.

The same can be concluded from Pearson's rank correlation (table 6.10 and table 6.11) which indicates that the highest coefficient is 0.641(for combined sample) and 0.460 (for non financial sample) except the correlation coefficients of categories of total mandatory reporting. Based on these results, it can be concluded that there is no potential multicollinearity problem in the current study.

6.6.2 Choosing Between Fixed and Random Effects:

When modeling group data, perhaps the first question the researcher faces is whether to account for unit effects and, if so, whether to employ so called fixed effects or random effects. Advice on this topic is plentiful (e.g., Greene 2008, Kennedy 2008, Frees 2004, Gelman 2005, Wilson and Butler 2007, Arceneaux and Nickerson 2009, Wooldridge 2010), even if sometimes confusing and contradictory (Gelman and Hill 2007, 245). However, the generally accepted way of choosing between fixed and random effects is running a Hausman test. The Hausman test checks a more efficient model against a less efficient but consistent model to make sure that the more efficient model also gives consistent results (James and Marks 2012).

Table 6.16: **Hausman Test of Dependent and Explanatory Variables**

	Combined Data Hausman random fixed		**Non Financial Data Hausman random fixed**	
	chi^2	$Prob>chi^2$	chi^2	$Prob>chi^2$
Mandatory Reporting	166.55	0.0000	28.07	0.0002
General Reporting	59.09	0.0000	26.47	0.0004
Director Report	97.09	0.0000	30.23	0.0001
Balance Sheet	137.49	0.0000	29.06	0.0001
Income statement	11.10	0.0000	35.08	0.0000
Cash flow Statement	3.12	0.0000	0.92	0.0000
Structures	13.97	0.0000	29.55	0.0001
Miscellaneous	96.29	0.0000	26.68	0.0004

According to James and Marks (2012), in cases of the Hausman random fixed, if there are non-significant $Prob>chi^2$ value, then it is safe to use random effects. From the table 6.16, as $Prob>chi^2$ is zero or non-significant in both combined data and non financial data, the current study goes for random test. If there is reason to believe that some omitted variables may be constant over time but vary between cases, and others may be fixed between cases but vary over time, then the research should include both types by using random effects.

6.6.3 Test of Hypotheses:

Regression diagnostics indicate that data set are non linear, non normal and there are heteroscedasticity in the current study. There are several reasons for this case of unequal variance, e.g. outliers and skewness. Moreover, from descriptive statistics, the current study observed that skewness and kurtosis is beyond the normal range. Ordinary Least Squares (OLS) does not make use of the information contained in the unequal variability of the dependent variable since it assigns equal weight to each observation. Generalized Least Squares (GLS) is OLS on the transformed variables that satisfy the standard least-squares assumptions. As such, GLS minimises a weighted sum of residual squares not minimizing an unweighted or equally weighted as OLS (Gujarati and Dawn 2009). Therefore, the data analysis needs to be applied using a nonparametric test that fits with this no normally distributed non parametric data. The GLS is a parametric test, so to fit with the non parametric data it needs to be employed using robust standard error.

To benefit from the advantages of panel data analysis in the current study the study employed GLS using robust standard error. The results are shown in table 6.17(for combined sample) and 6.18 (for non financial sample). The panel regression is used to differentiate between the data of years from 2004 to 2010. Therefore, seven groups are examined. As the study used the same number of companies all the year, minimum, maximum and average number of observations is 123 companies for the combined sample and 67 companies for the non financial sample per each year.

The results of table 6.17 show that mandatory reporting has positive association ($p \leq 0.01$) with firm size, firm profitability (ROA), and firm multinational parents, while it has negative association ($p \leq 0.01$) with firm ownerships, firms profitability(ROE), audit firm size and industry. The positive associations mean that mandatory reporting increases with the increase of firm size, firm profitability measured by return on assets, and firms having multinational parents. On the other, hand, the negative associations mean that mandatory reporting decrease in non profitable companies(having less ROE), audited by a non big four audit firm, in the non financial companies rather than in the financial companies and in the firm having sponsorship of more than 50%.

Table: 6.17 GLS Regression Using Robust Standard Error for Combined Sample

Random-effects GLS regression	Number of observation = 861
Group variable: year	Number of groups = 7
Observation per group: Minimum =123; Average = 123 ; Maximum = 123	

	Mandatory		General		Director		Balance Sheet		Income Statement		Cash Flow		Structure of notes		Miscellaneous	
	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z
Firm Size	0.0413***	19.65	0.0259***	9.03	0.0503***	6.79	0.041***	21.69	0.041***	13.69	0.077***	24.83	0.061***	14.93	0.019***	3.86
ROE	-0.0002	-0.09	-0.0028**	-2.13	-0.0034	-0.97	-0.001	-0.47	0.002	0.77	0.002	0.72	0.000	0.01	0.006***	4.94
ROA	0.0042***	9.55	0.0023***	7.04	0.0057***	8.34	0.004***	9.3	0.005***	6.99	0.004***	4.26	0.006***	10.8	0.006***	8.06
Audit Firm	-0.0025	-0.33	-0.0097*	-1.84	0.0127	0.79	0.014	1.47	-0.025***	-2.99	0.031***	3.92	-0.006	-0.71	-0.009	-0.84
Multi. Parent	0.0137***	2.94	0.0145***	3.43	-0.0237*	-1.7	0.007	1.46	0.028***	4.95	-0.041***	-8.68	0.002	0.34	0.075***	8.05
Industry	-0.0024	-1.1	-0.0048	-0.64	0.0223**	2.26	-0.019***	-3.41	-0.021***	-10.17	0.075***	10.76	0.020*	1.73	0.044***	8.16
Ownerships	-.0074***	-3.24	-0.0033*	-1.71	0.0054	0.63	-0.021***	-6.92	-0.001	-0.3	-0.030***	-15.56	0.006	1.23	0.006	0.77
Constant	0.3682	18.96	0.6577	23.25	0.2827	3.44	0.369	17.68	0.326	14.31	-0.020	-0.83	0.107	5.01	0.586	10.16
Adjusted R^2	0.2665		0.1753		0.1273		0.2031		0.1557		0.5157		0.2018		0.1441	

However, according to the results indicated in table 6-17, there is a significant relationship *(*p $\leq$ 0.01) between the mandatory reporting and firm size, firm profitability (ROA), multinational parents and ownerships. On the other hand, there is a non-significant relationship between mandatory reporting and firm profitability (ROE), audit firm size and industry. The adjusted R Squared of the models explains how much of the changes in the dependent variable are explained by the changes in the independent variables. The R Squared is 0.2653 indicating that 26.53% of the changes of the total mandatory reporting is explained by the changes in its examined determinants. Some of the earlier research studies, however, have reported better explanatory power using different sets of independent variables [Hossain (2008) at 53.80%, Akhtaruddin (2005) at 57.70% and Haniffa and Cooke (2002) at 58.30 %]. Addition of more explanatory variables in the regression equation can improve the explanatory power.

Referring to the different categories of mandatory reporting, there is a significant relationship between, firm size and firm profitability (ROA) with all parts of reporting. There is a significant relationship between, firm profitability (ROE) and general reporting and miscellaneous reporting. Also, there is a significant relationship between, audit firm size and general reporting, income statement reporting and cash flow statement reporting. Moreover; there is a significant relationship between, multinational parents and general reporting, director reporting, income statement reporting, cash flow statement reporting and miscellaneous reporting. In addition, there is a significant relationship between, industry and director reporting, balance sheet reporting, income statement reporting, cash flow statement reporting, structures of notes reporting and miscellaneous reporting. Also, there is a significant relationship between, ownerships and general reporting, balance sheet reporting and cash flow statement reporting. The rest of the relationships between the different categories of mandatory reporting and the determinants are non-significant which supports the weak or no relationship with mandatory reporting**.**

This study also checks the effect of other determinants that are used in voluntary reporting and timeliness reporting. The main objective of this is to identify whether the factors which affect voluntary reporting and timeliness of reporting also affects mandatory reporting. For this purpose financial condition has been omitted as it has multicollinearity with board size. This additional finding, **appendix I**, indicates that mandatory reporting also has significant positive relationship with age, audit committee, percentage of independent director, role duality, industry categories and modified opinion. However, mandatory reporting has significant negative relationships with liquidity and sign of earning, while it has no or weak association with market categories, number of independent director, board size and year end.

These findings indicates that mandatory reporting also increases with the number of years passed since the company was listed, number of audit committee member, a high percentage of independent directors on the board, dual board structure, financial companies rather than non financial and modified audit opinion. Whereas, mandatory reporting decreases when a company's liquidity increases and when companies earned negative profit. However, market categories of companies, number of independent directors on the board, number of board member and company's financial year end do not affect mandatory in Bangladesh.

Firm Size: Consistent with H1, the study found a statistically significant positive relationship between mandatory reporting and firm size in both bivariate and multivariate analysis. This suggests that large companies tend to disclose more mandatory information than smaller companies in their annual reports. This may be because of a competitive cost advantage, possessing more resources, more scrutiny from analysts or because they wish to maintain their reputation in the eyes of the public and investors. Findings of the study are supported by agency theory: larger firms disclose more information as they have higher agency costs and they are more sensitive to political cost (Jensen and Meckling 1976; Leftwich et al. 1981). On the other hand the findings are supported by stakeholder theory: larger firms naturally have a large number of suppliers, customers, and analysts, which consequently increases the demand for information and as a result there is more mandatory disclosure (Wallace and Naser 1995). Moreover, the findings are supported by signalling theory: higher disclosure enables large companies to maintain their reputation in the eyes of the public and to attract investors (Camfferman and Cooke 2002). This result is in line with prior studies of Clarkson et al. 2003; Ali et al. 2004; Kamal et al. 2006; Alsaeed 2006; Hasan et al. 2008; Fekete et al. 2008; Kent and Stewart 2008; Adelopo 2010; Gialani et al. 2011 and Nandi and Ghosh 2012. However, it is contradictory to the evidence presented by Ahmed and Nicholls (1994); Ahmed (1996), Aljifri (2008), Anurag and Bhatia (2010) and Hasan et al. (2013).

Profitability: Consistent with H2, both in bivariate and multivariate analysis the study found that firm profitability measured by ROA has a statistically significant relationship with mandatory reporting. It can be explained by the fact that profitable companies release more mandatory information than poor performing company. This is also supported by signalling theory which states that management, when in possession of “good news” due to better performance, are more likely to disclose more detailed information to the stock market (Ross 1979). Supporting agency theory, it can be said that companies which disclose more mandatory information can save bonding and monitoring costs. These results are similar with the conclusions of Wallace 1987; Karim et al. 1996; Owusu-Ansah 1998; Hossain 2000; Kribat et al. 2013. However, current result is in contrast with Wallace and Naser 1995; Inchausti 1997; Chen and Jaggi 2000 who provided evidence of negative association and Wallace et al. (1994), Raffounier (1995), Meek et al. (1995) who suggest a non-significant relationship.

Audit Firm Size: Inconsistent with H4, the result of the panel regression analysis does not accept the hypothesis, audit firm size, and found a non-significant relationship with mandatory reporting although it is significant in bivariate analysis. That means the audit firm whether or not one of the Big 4 does not influence the mandatory reporting in Bangladesh. The difference between the results of bivariate and multivariate analysis may be attributable to the effect of other variables included in the model. It may due to poor regulations and low investor protection in a small and emerging market; it may be because only 23.5% of companies are audited by the big four audit firm. However, the results are in line with- Firth 1979; Benjamin et al. 1990; Hossain et al. 1994; Wallace et al. 1994; Barako et al. 2006; and Kabir et al. 2011. However, these results are inconsistent with the evidence from the prior studies of Owusu-Ansah and Yeoh (2005); Kent and Stewart (2008); Hasan et al. (2008); and Uyar (2011).

Multinational Parents: Consistent with H5, both the bivariate and multivariate analysis found that multinational parents have a statistically significant positive relationship with mandatory reporting. This hypothesis suggests that firms which have multinational parent affiliation are likely to disclose more mandatory information in their annual report. This may be due to the regulations of multiple countries, geographical separation between management and owners, various political and pressure groups and diffusion of ownership. Supporting agency theory, companies discloses more mandatory information to reduce the gap of information asymmetry due to the geographical separation between the management and owners (Bradbury 1992; Craswell and Taylor 1992). Moreover, supporting stakeholder theory, multinational parents companies provide more mandatory information as demand for information is expected to be greater from various stakeholder groups when a proportion of shares are held by foreign investors. These results of the study are supported by Wallace 1987; Ahmed and Nicholls 1994; Ali et al. 2004 and Karim and Jamal 2005.

Industry: Inconsistent with H6, the results from panel regression do not accept the hypothesis and found a non-significant relationship between mandatory reporting and industry categories while bivariate analyses also indicate a significant relationship. This suggests that the financial or non-financial status of companies does not affect mandatory reporting behavior. Some prior studies provide evidence of non-significant association between the industry type and the extent of mandatory reporting: Wallace et al. 1994; Raffournier 1995; Inchausti 1997; Naser et al. 2002; Eng and Mak 2003 and Alsaeed 2006. However, a number of studies reported evidence of a significant association between the extent of disclosure and the industry type (Meek et al. 1995; Suwaidan 1997; Camfferman and Cooke 2002; Haniffa and Cooke 2002 and Fekete et al. 2008).

Ownership: Consistent with H7, the results of multivariate GLS regression found that firm ownership has a significant negative relationship with mandatory reporting. This indicates that if 50% or more of a company is owned by to one particular group, that company discloses less mandatory information. This is consistent with agency theory: the determined ownership structure provides firms with lower incentives to disclose information to meet the needs of shareholders groups (Akther and Rouf 2011). This finding is consistent with prior research, for example, Akther and Rouf 2011; Adelopo 2010; Akhtaruddin et al. 2009, Bauwhede and Marleen 2008; Oliveira et al. 2006; Eng and Mark 2003 and Chau and Gray 2002. However, the current study results contradict with the findings of Oliveira et al. (2006); Bauwhede and Marleen (2008); and Eng and Mark (2003) reported that firms with a lower management ownership provide more information.

The results of the non financial sample are shown in table 6.18. According to table 6.18 five variables were found to have significant association, at the 1 % level, with total mandatory reporting. Firm size, firm's profitability (ROA) and multinational parents were positively significantly associated with total mandatory reporting at the 1 % level. While the leverage and firm ownerships were significant variables at the 1% level, they were found to have a negative association with total mandatory reporting. On the other hand audit firm and profitability measured by ROE did not appear to have a significant association with the dependent variable.

The significant positive associations mean that mandatory reporting affected and increases with the increase of firm size, firm profitability measured by return on assets, and firms having multinational parents. On the other hand, the negative associations mean that mandatory reporting affects, and increases in, unlevered firms, rather than levered firms, and also increases in firms having sponsorship of not more than 50% rather than having sponsorship of more than 50%. Audit firm, however, has no association or relation with mandatory reporting. The R Squared for non financial sample is 0.1723 indicating that 17.23% of the changes of the total mandatory reporting is explained by the changes its examined determinants for non financial companies.

In the case of the non financial sample, referred to the different categories of mandatory reporting, there is a significant relationship between, firm size and firm's profitability (ROA) with all parts of reporting. There is a significant negative relationship between, firm profitability (ROE) and general reporting. In addition, there is a significant relationship between, leverage and general reporting, director reporting, balance sheet reporting, income statement reporting, cash flow statement reporting, structures of notes reporting and miscellaneous reporting. Also, there is a significant relationship between, audit firm size and general reporting, director reporting, income statement reporting and cash flow statement. Moreover, there is a significant relationship between, multinational parents and general reporting, income statement reporting, cash flow statement reporting structure of notes reporting and miscellaneous reporting. Also, there is a significant negative relationship between, ownerships and general reporting, balance sheet reporting, income statement reporting and cash flow statement reporting. The rest of the relationships between the different categories of mandatory reporting and the determinants are non-significant relationship: this supports their weak or no relationship with mandatory reporting.

In the case of the non financial sample, the results of the GLS regression analysis agree with the research hypotheses concerning the existence of positive significant relationship between mandatory reporting and firm size (hypothesis 1.1), and firm profitability (ROA) (hypothesis 1.2), and multinational parents (hypothesis 1.5) and significant negative relationship with firm ownerships (hypothesis 1.7). However, the results of the panel regression analysis do not accept the audit firm size hypothesis, and found a non-significant relationship with mandatory reporting (hypothesis 1.4).

Table: 6.18 GLS Regression Using Robust Standard Error for Non Financial Sample

Random-effects GLS regression	Number of observation = 532
Group variable: year	Number of groups = 7
Observation per group: Minimum =76; Average = 76 ; Maximum = 76	

	Mandatory		**General**		**Director**		**Balance Sheet**		**Income Statement**		**Cash Flow**		**Structure of notes**		**Miscellaneous**	
	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z	Coefficient	Z
Firm Size	0.062***	13.34	0.041***	13.53	0.072***	5.36	0.048***	7.8	0.068***	11.35	0.055***	14.11	0.101***	8.15	0.084***	11.6
ROE	-0.002	-0.78	-0.003*	-1.89	-0.001	-0.36	-0.004	-1.36	0.001	0.39	0.002	1.54	-0.003	-0.65	0.002	0.39
ROA	0.005***	6.28	0.002***	6.33	0.004***	3.53	0.005***	7.07	0.005***	5.01	0.005***	5.11	0.007***	4.44	0.005***	3
Leverage	-0.001***	-3.73	-0.001***	-4.86	-0.001**	-2.18	-0.001***	-4.13	-0.002***	-2.96	-0.001***	-4.39	-0.002***	-2.69	-0.002**	-2.12
Audit firm	-0.021	-1.38	-0.030***	-3.39	0.034*	1.65	-0.014	-0.79	-0.039***	-2.73	0.028***	3.69	-0.025	-0.88	-0.040	-1.48
Multi. parent	0.037***	3.21	0.036***	3.94	0.027	1.08	0.014	1.19	0.055***	6.1	-0.030***	-4.68	0.047***	2.12	0.119***	5.2
Ownerships	-0.020***	-3.91	-0.009**	-2.01	0.007	0.93	-0.039***	-5.19	-0.012***	-3.03	-0.020***	-5.22	-0.016	-1.48	-0.012	-0.89
Constant	0.205	6.91	0.537	13.02	0.093	0.62	0.323	9.26	0.099***	2.79	0.168	5.56	-0.210	-3.51	0.058	0.54
Adjusted R^2	0.1723		0.1671		0.1175		0.1293		0.2000		0.2944		0.1312		0.0928	

Leverage: Inconsistent with H3, the results of multivariate GLS regression found a significant negative relationship between mandatory reporting and leverage. However, the results of bivariate analysis found a significant negative relationship with leverage. The results of GLS suggest that highly levered firm disclose less mandatory information in their annual report. This is due to highly levered companies tending to disclose private information to their creditors which may not be reflected in their annual reports (Nandi and Ghosh 2012). Findings of the current study are supported by Allegrini and Greco 2013; Nandi and Ghosh 2012; Zarzeski 1996; and Belkaoui and Kahl 1978. However, some previous studies found contradictory results: Aksu and Kosedag (2005), Barako et al. (2006), Adelopo (2010), and Hajji and Ghazali (2013).

6.7 Sensitivity Analysis:

The main objective of the sensitivity analysis is to examine how sensitive the results and findings are towards changes in the statistical test. The used test is fixed effect GLS regression using robust standard error, as the examined data is not normally distributed as stated before by the descriptive statistics(see also Ananchotikul and Eichengreen 2009; Sánchez-Ballesta and García-Meca 2007; Gedajlovic and Daniel 2002; Baltagi 1995). According to Greene (2008, p.183)-"…the crucial distinction between fixed and random effects is whether the unobserved individual effect embodies elements that are correlated with the regressors in the model, not whether these effects are stochastic or not".

Regarding the combined sample, the results of adjusted R square of GLS fixed were similar to the GLS random indicating that GLS fixed regression has the same strength as the main GLS random regression. GLS fixed regression also showed the similar adjusted R square with GLS random for different parts of mandatory reporting.

According to table 6.19, for both GLS random and GLS fixed regression mandatory reporting has significant positive association ($p \leq 0.01$) with firm size, firm profitability (ROA), and firm multinational parents, while it has significant negative association with firm ownerships($p \leq 0.05$). On the other hand, in both cases, there is non-significant relationship between mandatory reporting and firm profitability (ROA), audit firm and industry.

Referred to the different categories of mandatory reporting, the results of GLS random were similar to the results of GLS fixed at 5% level for firm size, firm profitability (ROE), firm profitability (ROA), audit firm size, multinational parents, industry and ownerships with the exception that firm profitability(ROE) is significant(at 5%) with general reporting in random regression while it is non-significant in fixed regression; multinational parents is significant(at 1%) with miscellaneous reporting but it is non-significant in fixed regression; industry is significant (at 1%) with balance sheet reporting but in the case of fixed it is non-significant; ownership is non-significant with miscellaneous reporting while in case of fixed it is significant at 1%.

Regarding the non financial sample, the results of adjusted R square of GLS fixed (16.35%) were similar to the GLS random (17.23%) indicating that GLS fixed regression has the same strength as the main GLS random regression. GLS fixed regression also showed the similar adjusted R square with GLS random for different parts of mandatory reporting.

According to table 6.20, for both GLS random and GLS fixed regression, mandatory reporting has significant positively association with firm size ($p \leq 0.01$), firm profitability (ROA) ($p \leq 0.01$), and firm multinational parents ($p \leq 0.05$); while it has significant negative association with firm leverage ($p \leq 0.05$), firm ownerships ($p \leq 0.05$). On the other hand, in both cases, there is non-significant relationship between mandatory reporting and firm profitability (ROA) and audit firm.

Referred to the different categories of mandatory reporting, the results of GLS random were similar to the results of GLS fixed at 10% level for firm size, firm profitability (ROE), firm profitability (ROA), leverage, audit firm size, multinational parents and ownerships with the exception that firm size, firm profitability(ROA) and leverage are non-significant with miscellaneous reporting; multinational parent is non-significant with general reporting and leverage is non-significant with director reporting.

The results of the GLS fixed regression showed that the results of the GLS random data analysis are not sensitive to changing the type of the test. Hence, the selected GLS random analysis is considered to be well matched with the examined data. Moreover, the results of this sensitivity analysis confirm the reliability of the results and findings which support the generalisation of such results.

Table 6.19: Comparison of GLS Random and GLS Fixed Regression for Combined Sample

	Mandatory		General		Director		Balance Sheet		Income Statement		Cash Flow		Structure of notes		Miscellaneous	
	Z	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**
Firm Size	19.65***	21.65***	9.03***	16.27***	6.79***	10.42***	21.69***	36.48***	13.69***	12.83***	24.83***	26.09***	14.93***	12.18***	3.86***	3.51**
ROE	-0.09	0.13	-2.13**	-1.41	-0.97	-0.58	-0.47	-0.3	0.77	0.8	0.72	0.72	0.01	0.16	4.94***	6.14***
ROA	9.55***	10.21***	7.04***	7.86***	8.34***	5.85***	9.3***	11.33***	6.99***	6.59***	4.26***	4.57***	10.8***	10.95***	8.06***	8.48***
Audit Firm	-0.33	0.35	-1.84*	-1.11	0.79	2.04*	1.47	1.89	-2.99***	-3.12**	3.92***	3.81***	-0.71	-0.42	-0.84	0.38
Multi. Parent	2.94***	3.28**	3.43***	5.2***	-1.7*	-1.41	1.46	1.61	4.95***	5.35***	-8.68***	-8.69***	0.34	0.44	8.05***	9.78
Industry	-1.1	1.39	-0.64	0.23	2.26**	4.74***	-3.41***	-3.06	-10.17***	-7.42***	10.76***	10.26***	1.73*	1.88	8.16***	16.4***
Ownerships	-3.24***	-2.94**	-1.71*	-1.39	0.63	0.78	-6.92***	-6.86**	-0.3	-0.17	-15.56***	-16.44***	1.23	1.28	0.77	0.91***
Constant	18.96	31.32	23.25	68.03	3.44	13.35	17.68	56.95	14.31	13.84	-0.83	-1.18	5.01	3.7	10.16	44.68
R square	0.2665	0.2653	0.1753	0.1753	0.1273	0.1243	0.2031	0.2023	0.1557	0.1555	0.5157	0.5157	0.2018	0.2014	0.1441	0.1400

Table 6.20: Comparison of GLS Random and GLS Fixed Regression for Non Financial Sample

	Mandatory		General		Director		Balance Sheet		Income Statement		Cash Flow		Structure of notes		Miscellaneous	
	Z	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**	**Z**	**T**
Firm Size	13.34***	3.7***	13.53***	7.93***	5.36***	4***	7.8***	2.03*	11.35***	5.2***	14.11***	12.36***	8.15***	2.85**	11.6***	1.5
ROE	-0.78	-0.25	-1.89*	-1.4	-0.36	-0.06	-1.36	-0.79	0.39	0.7	1.54	1.54	-0.65	-0.25	0.39	1.08
ROA	6.28***	4.95***	6.33***	4.39***	3.53***	2.27*	7.07***	5.75***	5.01***	4.45***	5.11***	5.26***	4.44***	3.35**	3***	1.92
Leverage	-3.73***	-3.22**	-4.86***	-4.65***	-2.18**	-1.7	-4.13***	-3.53**	-2.96***	-2.65***	-4.39***	-4.31***	-2.69***	-2.04*	-2.12**	-1.41
Audit firm	-1.38	0.13	-3.39***	-2.59**	1.65*	3.38**	-0.79	0.56	-2.73***	-2.55***	3.69***	3.78***	-0.88	0.48	-1.48	0.73
Multi. parent	3.21***	2.95**	3.94***	3.89	1.08	1.07	1.19	1.22	6.1***	5.38***	-4.68***	-4.77***	2.12***	1.96*	5.2***	4.75***
Ownerships	-3.91***	-2.94**	-2.01**	-1.6***	0.93	1.53	-5.19***	-4.63***	-3.03***	-1.77***	-5.22***	-5.29***	-1.48	-0.62	-0.89	-0.15
Constant	6.91	5.29	13.02	23.08	0.62	3.04	9.26	6.44	2.79***	3.03	5.56	4.84	-3.51	1.09	0.54	3.77
R square	0.1723	0.1635	0.1671	0.1597	0.1175	0.1118	0.1293	0.1203	0.2000	0.1967	0.2944	0.2944	0.1312	0.1225	0.0928	0.0777

6.8 Conclusion:

The chapter includes two phases of analysis. Firstly, it examines the extent of mandatory reporting over the period from 2004 to 2010 and especially before and after the corporate governance code of 2006. Finally, it scrutinises the association between mandatory reporting and the determinants; firm size, firm profitability, leverage, audit firm size, multinational parents, industry and ownerships for two group of sample, combined and non financial.

As expected in developing countries, the first part of the findings indicates that the level of total mandatory reporting in the annual reports of listed Bangladeshi companies is low. However, a gradual increase in the extent of mandatory reporting and its categories has been noticed over the period of study. Kruskal-Wallis test indicates significant differences between mandatory reporting scores over the seven years. Moreover, Wilcoxon Matched-pairs Signed Rank test indicate that there is significant difference in patterns of mandatory reporting before and after the corporate governance code. This suggests that the Bangladesh corporate governance code has had some consequences for mandatory reporting in corporate annual reports. However, caution must be taken when explaining such finding: there may well be other factors, including customer or international buyer influence, institutional reforms and different expectations which may all have influence the level of mandatory reporting.

Based on the findings of the empirical section, it is concluded that there is a significant positive relationship between mandatory reporting and firm size, firm's profitability measured by ROE and multinational parents and a significant negative relationships with firm ownerships for both combined and non financial sample. Moreover, non financial determinants and leverage have a significant negative relation; combined determinants industry has a non-significant relationship with mandatory reporting. In addition to this, firm profitability measured by ROA and audit firm size has non-significant or no relation with mandatory reporting in the annual reports of listed Bangladeshi companies over the examined period.

These results indicate the compliance gaps which need to be considered by the regulatory authorities of Bangladesh. On the other hand, the Bangladeshi business culture is still not sufficiently aware of the codes and practices of corporate governance. This chapter emphasises the different areas of mandatory reporting that need improving to raise the total of mandatory reporting to a level which satisfies the different users of the Bangladeshi annual reports, where the existence or survival of these companies is dependent on the degree of satisfaction of these stakeholders. Therefore, by offering an adequate level of information to satisfy its stakeholders the company unlocks its main source of financing, ensuring its existence and survival.

The study concludes that the determinants of mandatory reporting vary among the different categories. Only firm size and firm's profitability (ROA), can explain the total mandatory reporting and each of the seven categories. Some variables that were significant with total mandatory reporting such as multinational parents' and ownership were found to be non-significant associated with structure of notes reporting. Moreover, the explanatory power of the model varies among the different categories. These findings justify the need to analyse mandatory reporting practice based on its different categories.

Chapter Seven:
Analysis and Findings-
Corporate Voluntary Reporting

Chapter Seven: Analysis and Findings-Corporate Voluntary Reporting

7.1 Introduction:

This chapter has two main objectives: the first objective is to measure the level of voluntary corporate reporting and its different categories. The second objective is to examine the determinants of corporate voluntary reporting and to test the hypotheses of the association between these different determinants and the different categories of voluntary reporting. The findings of the empirical analysis show the contribution of each voluntary reporting category to the whole level of reporting over the seven examined years from 2004 to 2010.

Most studies on voluntary reporting look at the overall reporting levels and relate them to certain corporate characteristics (Wang and Claiborne 2008; Prado- Lorenzo et al. 2009; Uyar 2011; Samah et al. 2012; Qu et al. 2012 and Alves et al. 2012). However, to gain a better understanding of reporting policies adopted by companies, a detailed analysis of each category disclosed is desirable. That is why the second part of this chapter investigates the association between the total voluntary reporting and its determinants and at the same time the association between each reporting category and its determinants.

The chapter starts with the analysis of the extent and trend of total voluntary reporting over the period of study and then considers the different categories of voluntary reporting in section 7.2. The findings of the empirical analysis show the contribution of each voluntary reporting category to the whole level of reporting over the seven examined years and also sector wise performance. The level and determinants of voluntary reporting is given in section 7.3 and 7.4 respectively. Then the chapter examines the bivariate analysis in section 7.5. Section 7.6 represents the multivariate analysis. It starts with a discussion of the regression diagnostic to determine the regression technique. After that, an argument between fixed and random effect is developed and finally the tests of hypothesis: the association between the total voluntary reporting and its determinants from one side, and the association between each reporting category and the different determinants from the other side. A sensitivity analysis is applied to identify the effect of changing the statistical test on the results and findings of the main applied test in section 7.7 followed by the conclusion in section 7.8.

7.2 The Extent and Trend of Voluntary Reporting and its Categories:

To measure the extent of voluntary reporting in annual reports of the listed companies of Bangladesh, the study constructed a checklist of 97 items classified into eight groups. A total of 861 annual reports of 123 companies for the years of 2004 to 2010 have been analysed using this checklist. Both weighted and unweighted measures have been used to assess the extent of voluntary reporting. Weight has been taken from the questionnaire survey as indicated in Chapter 5. The percentage of awarded reporting score to the applicable score represents the extent of voluntary reporting, the dependent variable in the current study.

To start our analysis, appendix D presents the descriptive statistics of the total voluntary reporting and its categories for each year and for the seven years all together for unweighted data. Appendix D indicates that the mean of total voluntary reporting score over the seven years is about 28.56%. This average suggests a low level of voluntary reporting. The table also shows that the extent of voluntary reporting over the years has a wide range but is increasing year by year. While the minimum reporting index obtained is 7.22% for the year 2004 to 2007, the maximum is 70.10% for the year 2009 and 2010. This wide range in the level of voluntary can also be found in each year of the investigated period. The minimum score of voluntary reporting for all the years is still around 7.22%. On the other hand, the maximum score has not crossed over 70.10%. This result confirms the wide variation in the voluntary reporting practices in the annual reports of listed Bangladeshi companies. In addition, it justifies our decision to focus the current study on the extent of voluntary reporting practices.

Appendix D also indicates the variation in the level of voluntary reporting categories over the period of study. It can be seen from table that there is a gradual increase in the average score of before (2004-05, 25.19%) and after (2007-10, 30.64%) the Corporate Governance Code of 2006. However; the increasing rate differs among the categories. For example, the maximum increasing rate in the corporate environmental reporting is 169.26% (from 2.44% in 2004 to 6.57% in 2010) over the year followed by CSR reporting 113.05 %(from 11.34% in 2004 to 24.16% in 2010). On the other hand, the lowest increasing rate is in financial reporting for the same years: this is 9.452% (from 55.12% in 2004 to 60.33% in 2010). Regarding the average over the period, it is found that general information reporting scored the highest, 84.20%(maximum 93.74%, minimum 86.31%) and structures of notes reporting is the lowest, 70.34%(maximum 100%; minimum 42.86%). Corporate social responsibility average reporting over the period is 17.03% with a maximum of 88.89% and a minimum of 0%. Throughout the period the study found the minimum CSR reporting was 0%: that means that at least one company in every year did not disclose anything regarding CSR in their annual report. The highest average CSR reporting found in 2010 is 24.16% whereas the lowest average found in 2004 is 11.34% indicating a growth of 113.05% over the period. From the overall data it is clearly observed that CSR is gradually increasing over the period from 2004 to 2010 but is still not up to the desired standard as the highest average is only 24.16%.

Corporate environmental reporting (CER) is the least focused area of all the categories of voluntary reporting: here average reporting over the period is 4.21% with a maximum of 61.54% and a minimum of 0%. Throughout the period the study found the minimum CER reporting at 0%: as in CSR this means that at least one company in every year did not disclose anything regarding CER in their annual report. Highest average CER reporting found in 2010 is 6.57% whereas the lowest average found in 2004 is 2.44%, indicating a growth of 169.26% over the period. From the overall data, it is clearly observed that CER is gradually increasing over the period from 2004 to 2010 but not up to the standard as the highest average is only 6.57% and only in years 2008, 2009 and 2010 has the average crossed 5%.

Very few researchers have focused on corporate sustainability reporting in Bangladesh and the term is relatively new in the voluntary reporting family where average reporting over the period is 14.33% with maximum 53.33% and minimum 0%. Throughout the period current period found minimum sustainability reporting disclosure was 0% just like CSR and CER: again this means sustainability reporting is absent in reports by some companies in every year. Highest average sustainability reporting found in 2010 is 16.72% whereas the lowest average 11.33% was found in 2004: this indicates a growth of 47.57% over the period. From the overall data it is clearly observed that sustainability reporting is gradually increasing and over the period although this increase is inconsistent (11.33% to 16.72%).

Appendix E presents the descriptive statistics of the total voluntary reporting and its categories for each year and for the seven years all together for weighted data where the mean of total voluntary reporting score over the seven years is about 22.94%. This average suggests a low level of voluntary reporting just like the average of unweighted data. The minimum score of voluntary reporting for all the years is still around 5.7%. On the other hand, the maximum score has not crossed over 55.21%. This result also confirms the wide variation in the voluntary reporting practices in the annual reports of listed Bangladeshi companies for weighted data.

It can be seen from the appendix E that there is a gradual increasing in the average score after the Corporate Governance Code of 2006: the rate before in 2004-05 was 20.31% but after in 2007-2010 it rose to 24.56%: this was the case for weighted data also. However; the increasing rate differs among the categories. For example, the maximum increasing rate in corporate environmental reporting is 169.72 %, rising from 1.85% in 2004 to 4.99% in 2010, over the year**,** followed by CSR reporting 113.11% rising from 8.39% in 2004 to 17.88% in 2010. On the other hand, the lowest increasing rate in financial reporting for the same years is 9.14%, rising from 45.53% in 2004 to 49.69% in 2010.

CSR average reporting over the period is 12.60% with a maximum of 65.78% and a minimum of 0%, whereas corporate sustainability reporting average reporting over the period is 10.98% with a maximum of 40.96% and a minimum of 0%. On the other hand, corporate environmental reporting is the least focused area of all the categories of voluntary reporting where average reporting over the period is 3.20% with a maximum of 46.77% and a minimum of 0%.

7.2.1: Sector Wise Voluntary Reporting:

From previous discussions it is already understand that average voluntary reporting is relatively low (28.56%) in Bangladesh. In order to obtain a detailed overview, it is necessary to discuss the sector wise voluntary reporting pattern of the listed companies in Bangladesh. No previous studies in Bangladesh consider different sectors to analyse voluntary reporting performance. It will help to find out the sectors disclosing most voluntary information in their annual report and at the same time it will highlight the sectors disclosing less voluntary information.

From the table 7.1, it is observed that highest voluntary reporting over the period of time is found in Banks (Unweighted 48.05% and Weighted 38.21%) followed by Financial Institutions (Unweighted 41.14% and Weighted 32.93%). On the other hand worst voluntary reporting pattern is found in Services and Real Estate, Tannery sectors

(Unweighted 15.12% and Weighted 12.34%). In addition, voluntary reporting pattern of Ceramic, Jute, Paper and Printing and Miscellaneous sectors are all below 20%.

Table 7.1: Sector Wise Total Voluntary Reporting

Sectors	Voluntary Reporting Un Weighted	Voluntary Reporting Weighted
Bank	48.05%	38.21%
Cement	32.02%	25.87%
Ceramic	15.76%	12.96%
Engineering	23.85%	19.30%
Financial Institution	41.14%	32.93%
Food & Allied	22.15%	17.78%
Insurance	24.15%	19.44%
IT Sector	19.11%	15.51%
Jute , Paper and Printing	15.71%	12.85%
Pharmaceuticals and Chemicals	31.97%	25.63%
Services and Real Estate, Tannery	15.12%	12.34%
Textile	21.82%	17.68%
Miscellaneous	19.20%	15.53%

7.2.2 Voluntary Reporting Before and After the Code:

If the study focuses on the difference between before and after the Corporate Governance Code of 2006, table 7.2 clearly justifies its effect. It is observed that the average voluntary reporting of 2004 to 2005 is 25.19% which is lower than the 30.64% average of 2007 to 2010 indicating reporting improvement of 20% from 2004-05. This can be understood as the effect of Corporate Governance Code, issued 2006, in which year current study find reporting standing at 27.01%. This justification also is observed if the study looks the different categories of voluntary reporting.

Now, it is necessary to identify whether this difference between total voluntary reporting over the period under investigation and before and after the code is significant or not. Testing for normality is essential to determine the type of tests to be used (parametric tests or non-parametric tests). After conducting a series of statistical tests, the results indicate that voluntary reporting data are not normally distributed, so nonparametric tests are recommended. For this study, significance test has been measured by Kruskal-Wallis tests for over the period and Wilcoxon Matched-pairs Signed Rank test for before and after the code period.

Table 7.2: Average Voluntary Reporting Before and After the Code

Reporting	**2004-05**	**2006**	**2007-2010**
Voluntary Reporting	25.19%	27.01%	30.64%
General Information	76.89%	78.98%	82.96%
Corporate Strategic Information	29.68%	32.85%	42.56%
Corporate Governance Information	47.39%	48.66%	53.45%
Financial Information	55.37%	57.56%	59.56%
Financial Review Information	46.21%	47.15%	49.81%
Social Responsibility	11.86%	14.54%	20.24%
Environmental Reporting	2.57%	3.19%	5.29%
Sustainability Reporting	11.58%	13.58%	15.84%

Regarding the differences among the seven years, Kruskal-Wallis test indicate that there is significant difference between voluntary reporting over the period. Again to test the effect of corporate governance code 2006 on the extent of voluntary reporting, Wilcoxon Matched-pairs Signed Rank test indicate that there is significant difference of voluntary reporting before and after the corporate governance code.

Kruskal-Wallis test	**Wilcoxon signed-rank test**
Chi-squared = 28.700 with 6 d.f. probability = 0.0001	Ho: before = after z = -2.666 Prob > z = 0.0077
Chi-squared with ties = 28.727 with 6 d.f. probability = 0.0001	

In summary, from the descriptive analysis it is observed that extent of voluntary reporting is improving over the period and this increase is sufficient to be statistically significant especially before and after the corporate governance code.

7.3 Measuring the Level of Voluntary Corporate Reporting:

In this part of the analysis, the study used descriptive analysis to measure the extent of voluntary reporting. Descriptive statistics are used to describe the basic features of the data in a study. The strength of descriptive statistics is their ability to collect, organise and compare vast amounts of data in a more manageable form. The descriptive analysis of this model shows the average voluntary reporting and the average of different components of this voluntary reporting. This part includes two different analyses. The first one considers unweighted measurement where all components of the index have the same weight and then the study consider weighted measurement on the basis of users' responses through the questionnaire described in chapter 5.

7.3.1 Descriptive Statistics for Unweighted Voluntary Reporting:

Table 7.3 shows the descriptive statistics of total voluntary reporting level and the level of each of the voluntary reporting categories using unweighted data for year 2004-2010. The total voluntary reporting level presents 28.60% of the examined checklist items with a variant of between 7.20% and 70.10% for the least and highest Bangladeshi companies reporting respectively. Moreover, the general information represents the highest reporting level of 80.70%, while the environmental reporting disclosure presents the lowest reporting level of 4.20%. In addition, it is observed that the maximum reporting of all categories is 100% presented by general information, corporate strategic, corporate governance, financial information and financial review reporting. As found previously, for the whole categories of reporting, again the minimum reporting for any category of reporting is 0%, which means that at least one of the examined companies missed corporate strategic, financial review, social responsibility, environmental and sustainability reporting in their annual report.

Table: 7.3 Descriptive Statistics for Unweighted Voluntary Data

	N	Mean	Median	Std. Deviation	Mini-mum	Maxi-mum	Skew-ness	Kur-tosis
Voluntary Reporting	861	0.286	0.2371	0.141	0.072	0.7010	0.7938	2.672
General Information	861	0.807	0.8571	0.175	0.286	1	-0.4296	2.139
Corporate Strategic	861	0.375	0.4	0.278	0	1	0.1754	1.867
Corporate Governance	861	0.511	0.4285	0.232	0.1428	1	0.4893	2.252
Financial Information	861	0.583	0.6	0.216	0.2	1	0.1099	3.117
Financial Review	861	0.484	0.5	0.233	0	1	0.1858	2.117
Social Responsibility	861	0.17	0	0.242	0	0.8888	1.2339	3.155
Environmental	861	0.042	0	0.099	0	0.6153	2.9079	12.513
Sustainability	861	0.1430	0.10	0.1079	0	0.5333	0.7555	2.9809

Moreover, in relation to standard skewness statistics the presented data is not normally distributed. As a common rule, the standard skewness of the data needs to be within the range of ±1.96 (Gujarati and Dawn 2009). It is observed that environmental reporting is more than 1.96 evidencing that the data is not normally distributed. On the other hand, with respect to the standard kurtosis, the data is also not normally distributed. The data is said to be normally distributed if the standard kurtosis fall in the range of ±3 (Gujarati and Dawn 2009). The standard kurtosis of the total voluntary reporting and its different categories has a value more than 3, indicating that the data is not normally distributed. As a result any hypotheses test related to the entire data needs to use a robust analysis.

7.3.2 Descriptive Statistics for Weighted Voluntary Reporting:

Table 7.4 shows the descriptive statistics of the total voluntary reporting level and the level of each of the voluntary reporting categories using weighted data over the period 2004 to 2010. These results indicate that the mean total voluntary reporting is 23% which is considered a low level in comparison to unweighted voluntary reporting.

Table 7.4: Descriptive Statistics for Weighted Data

	N	Mean	Median	Std. Deviation	Mini-mum	Maxi-mum	Skew-ness	Kur-Tosis
Voluntary Reporting	861	0.230	0.194	0.110	0.057	0.552	0.764	2.635
General Information	861	0.671	0.713	0.146	0.238	0.832	-0.430	2.139
Corporate Strategic	861	0.317	0.338	0.235	0	0.846	0.175	1.867
Corporate Governance	861	0.383	0.321	0.174	0.107	0.857	0.489	2.252
Financial Information	861	0.478	0.496	0.171	0.165	.9912	-0.175	2.252
Financial Review	861	0.409	0.423	0.197	0	0.846	0.186	2.117
Social Responsibility	861	0.126	0	0.179	0	0.658	1.234	3.155
Environmental	861	0.032	0	0.075	0	0.468	2.908	12.513
Sustainability	861	0.110	0.077	0.083	0	0.410	0.755	2.981

Moreover, the general information represents the highest reporting level of 67.10%, while the environmental reporting presents the lowest reporting level of 3.20%. Again, the minimum reporting for any category is 0%: at least one of the examined companies did not disclose corporate strategic, financial review, social responsibility, environmental reporting and sustainability reporting disclosure in their annual report.

The descriptive statistics also shows the normality of the different variables data. It is noted that environmental reporting represents the maximum skewness of 2.908, while financial review reporting shows the minimum skewness of -0.430. This indicates that minimum and maximum skewness are not within the normally distributed range of ±1.96 (Gujarati and Dawn 2009) while the Kurtosis of the reporting data indicates that reporting data is not normally distributed. The maximum Kurtosis is shown by environmental reporting (12.513), while the minimum Kurtosis is shown by the corporate strategic reporting (1.867). With reference to the Kurtosis reporting data is not normally distributed as they are out of the range of ±3 (Gujarati and Dawn 2009). Since the data is not normally distributed, that would cast some shadows over the selected test to examine the research hypotheses applied over the entire data. Therefore, a robust analysis should be employed when testing the research hypotheses in the further analysis.

7.4 Measuring the Determinants of Voluntary Reporting:

This section investigates the determinants of voluntary reporting through descriptive statistics. The determinants of voluntary reporting that are examined in this model are: firm size, firm liquidity, market categories, company age, audit committee, number of independent directors, independent director percentage on the board, board structure and board size. Descriptive statistics simplify large amounts of data in a sensible way by simply describing what the data shows and easily translates results into a distribution of frequency, percentages and overall averages. Descriptive analysis, showing averages along with range, is necessary in this part to find out the extent of determinants. Also it will give an idea of whether the data set is normal or abnormal which will direct alternative analysis techniques in the next part of analysis.

Table 7.5 shows the descriptive statistics of the voluntary reporting determinants. From the table it is found that there were 861 observations which indicate the sample size. It can be also seen that there were companies that did not disclose any information under each of the categories as indicated by a minimum score of zero. The 'mean' indicates the average number of items disclosed by companies under each category.

Table 7.5: Descriptive Statistics of Voluntary Reporting Determinants

	N	Mean	Median	Std. Deviation	Mini-mum	Maxi-mum	Skew-ness	Kur-tosis
Firm Size	861	9.250	8.996	.879	6.43	11.77	.459	2.530
Liquidity	861	1.723	1.363	1.656	.02	17.00	3.775	26.345
Market Categories	861	.223	.000	.416	0	1	1.333	2.771
Company Age	861	14.518	14.000	7.951	0	44.00	.501	3.005
Audit Committee	861	.194	.143	.223	0	1.00	.896	3.088
Ind. Director(number)	861	.520	.000	.639	0	4.00	1.158	4.782
Ind. Director (%)	861	.124	.000	.176	0	1	1.256	4.615
Board Structure	861	.777	1.000	.421	0	1	-1.283	2.647
Board Size	861	10.747	9.000	6.434	3.00	37.00	1.518	5.132

As indicated in table 7.5, the mean firm size is about 9.250 with minimum 6.43 and maximum 11.77. Also liquidity measured by quick assets divided by current liabilities is 1.723: 1, which indicates that on average companies have 1.723 times of quick assets to repay its current liabilities. It is also notable that 22.30% of observations are in Z categories, the audit committee is 19.4% of the board and 77.7% observation have dual leadership structure. Regarding the presence of independent directors, nearly 50% companies do not have independent director and independent director size is only 12.4 % of the board. The average number of board of director is around 11 people. Moreover, companies in the sample observations have on average operated in the market for 15 years.

The skewness of the different determinants indicates that the data of the different variables are not normally distributed. The maximum skewness is 3.375 represented by liquidity, while the minimum skewness is -1.283 represented by board structure. The maximum skewness is not within the skewness range of ±1.96 which indicates the non normality of the data (Gujarati and Dawn 2009). Therefore, based on the skewness, the data of the different variables is not normally distributed and considered to be non parametric data.

The kurtosis shows that the minimum kurtosis is 2.530 which represented by the firm size, while the maximum kurtosis is 26.345 represented by firm liquidity. Since the minimum and maximum kurtosis are not within the range of ±3 (Gujarati and Dawn 2009).

Therefore the data is not normally distributed and the data is considered to be non parametric. So, observations have some extreme figures (outliers) which need more attention during the analysis process and the interpretation of the results.

7.5 Bivariate Analysis:

Bivariate analysis is one of the simplest forms of quantitative analysis (Babbie 2009). It provides an estimate as to the level of association between the variables. In fact, it scrutinises for interdependence of the variables. In this study, correlation analysis is used to discover the degree of association between the dependent and independent variables. With the help of this, it is also possible to recognise the correlation among the independent variables. Moreover, it will suggest whether the data needs to be modified or whether any independent variables need to be taken out. So, before approaching to the regression analysis, this study carried out correlation analysis to recognise whether all the independent variables are appropriate for the multiple regression analysis. As the data set is non-normal, non- parametric Spearman correlation is suitable for the study. However, the study used both Spearman correlation and parametric Pearson correlation to check for differences between them.

The correlation between the different categories of voluntary reporting and the determinants of reporting is shown for unweighted sample using Spearman correlation coefficients in the table 7.6. The Spearman correlations in table 7.6 show the significance association between the total and different categories of reporting with the different determinants of this type of reporting for unweighted data. The significance association is identified using a confidence level of 99% and 95%. Referred to the correlation coefficients, there is a significant positive relationship (at 1 % and 5% significance levels) between total voluntary reporting and firm size, firm liquidity, audit committee, independent director percentage, board structure and board size. This suggests the stronger association between these variables and voluntary reporting. According to the results, companies with big size, high liquidity, audit committee members in the board, high percentage of independent directors in the board, dual leadership structure and large board size disclose more voluntary information in their annual reports.

On the other hand, number of independent director in the board is identified to have a non-significant relationship with voluntary reporting. The results indicate weak or no association between voluntary reporting and number of independent directors in the board. However, there is a significant negative association between market category, company age, and voluntary reporting. This indicates companies listed in the Z category and old companies rather than new companies disclose less voluntary information in their annual reports. The results of this table agree with the research hypothesis regarding the association between voluntary reporting and the different reporting determinants.

Regarding the different categories of voluntary reporting, there is a significant positive relationship between different categories of voluntary reporting and firm size, audit committee and board leadership structure. On the other hand, the findings show that there is a significant negative relationship between the different categories of voluntary reporting and market category. Moreover, there is significant positive relationship between general reporting, corporate strategic reporting, corporate governance reporting, financial reporting, financial review reporting, corporate social reporting, and sustainability reporting with firm liquidity and Board size. Also, corporate governance reporting and financial review reporting have a significant negative association whereas corporate environmental reporting has a significant positive association with company age. In addition, there is a significant positive relationship of general reporting, corporate strategic reporting, corporate governance reporting, and significant negative relationship of financial review reporting with number of independent director. Moreover, there is significant positive relationship between general reporting, corporate strategic reporting, corporate governance reporting, financial reporting, and corporate environmental reporting with independent director percentage.

Table 7.7 shows the correlation between the different categories of voluntary reporting and the determinants of reporting for the weighted sample using Spearman's correlation coefficients. The Spearman's correlations in table 7.7 show the significance of the association between the total and different categories of reporting with the different determinants of this type of reporting for weighted data. The significance association is also identified using a confidence level of 99% and 95%. Referred to the correlation coefficients, there is a significant positive relationship (at 1 % and 5% significance levels) between total voluntary reporting and firm size, firm liquidity, audit committee, independent director percentage, board structure and board size. This suggests a stronger association between these variables and voluntary reporting. According to the results, companies with big size, high liquidity, audit committee members in the board, high percentage of independent directors in the board, dual leadership structure and large board size disclose more voluntary information in their annual reports.

On the other hand, independent director number is identified to have a non-significant relationship with voluntary reporting. The results indicate weak or no association between voluntary reporting and the number of independent director in the board. While, there is a significant negative association between market category, company age, and voluntary reporting. This indicates that companies listed in Z category and old companies rather than new companies disclose less voluntary information in their annual reports. The results of this table agree with the research hypothesis regarding the significant association between voluntary reporting and the different reporting determinants.

Regarding the different categories of voluntary reporting, there is a significant positive relationship between different categories of voluntary reporting and firm size, audit committee and board leadership structure. On the other hand, the findings show that there is a significant negative relationship between the different categories of voluntary reporting and market category. Moreover, there is a significant positive relationship between general reporting, corporate strategic reporting, corporate governance reporting, financial reporting, financial review reporting, corporate social reporting, and sustainability reporting with firm liquidity and board size. Also, corporate governance reporting and financial review reporting has a significant negative association whereas corporate environmental reporting has a significant positive association with company age. In addition, there is a significant positive relationship of general reporting, corporate strategic reporting, corporate governance reporting, and significant negative relationship of financial review reporting with the number of independent directors. Moreover, there is significant positive relationship between general reporting, corporate strategic reporting, corporate governance reporting, financial reporting, and corporate environmental reporting with independent director percentage.

Table 7.6: Spearman's Correlations of Independent and Dependent Variables for Unweighted Data

Spearman's Correlation																		
	Voluntary	General	Cor. Strat.	Cor. Gover.	Financial	Finan. review	CSR	CER	Sustainability	Size	Profitability	Market Cat.	Age	Audit Com.	Indir. Num.	Indir. %	Board Struct.	Board Size
Total Vol. reporting	1.000																	
General reporting	.769**	1.000																
Corporate Strategic	.744**	.618**	1.000															
Corporate governance	.784**	.656**	.542**	1.000														
Financial reporting	.733**	.556**	.564**	.577**	1.000													
Financial review	.801**	.500**	.516**	.533**	.585**	1.000												
Corporate Social	.837**	.542**	.635**	.630**	.617**	.649**	1.000											
Cor. Environmental	.493**	.247**	.314**	.258**	.307**	.367**	.518**	1.000										
Sustainability	.842**	.636**	.553**	.647**	.501**	.575**	.667**	.408**	1.000									
Firm Size	.683**	.556**	.564**	.617**	.540**	.556**	.656**	.257**	.534**	1.000								
Firm Liquidity	.402**	.460**	.275**	.437**	.244**	.259**	.289**	-.002	.423**	.257**	1.000							
Market Category	-.364**	-.333**	-.175**	-.331**	-.310**	-.286**	-.276**	-.115**	-.285**	-.359**	-.380**	1.000						
Company Age	-.073*	-.065	-.031	-.102**	-.050	-.151**	-.062	.081*	-.047	.065	-.208**	-.055	1.000					
Audit committee	.242**	.179**	.300**	.203**	.193**	.189**	.178**	.181**	.146**	.202**	.001	-.139**	.230**	1.000				
Ind. Dir. number	.046	.105**	.075*	.106**	.035	-.086*	-.057	.057	.010	-.030	-.019	-.152**	.262**	.540**	1.000			
Ind. Dir. Percentage.	.111**	.100**	.171**	.131**	.069*	-.009	.032	.131**	.065	.013	-.035	-.119**	.271**	.719**	.804**	1.000		
Board Structure	.301**	.303**	.182**	.353**	.225**	.150**	.223**	.069*	.319**	.258**	.216**	-.224**	-.170**	.027	.108**	.011	1.000	
Board Size	.366**	.484**	.229**	.498**	.208**	.161**	.228**	-.026	.379**	.316**	.461**	-.350**	-.224**	-.122**	.088**	-.005	.471**	1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 7.7: Spearman's Correlations of Independent and Dependent Variables for Weighted Data

Spearman's Correlation																		
	Volun. Dis.	Gene-ral	Cor. Strat.	Cor. Gover.	Fina-ncial	Fin-review	CSR	CER	Sustain ability	Size	Profit-ability	Market Cat.	Age	Audit Com..	Ind. num	Ind. %	Board Struct.	Board Size
Total Vol. reporting	1.000																	
General reporting	.770**	1.000																
Corporate Strategic	.751**	.618**	1.000															
Cor. governance	.777**	.656**	.542**	1.000														
Financial reporting	.739**	.555**	.566**	.576**	1.000													
Financial review	.811**	.500**	.516**	.533**	.593**	1.000												
Corporate Social	.836**	.542**	.635**	.630**	.622**	.649**	1.000											
Corporate Environ.	.492**	.247**	.314**	.258**	.311**	.367**	.518**	1.000										
Sustainability	.833**	.637**	.551**	.649**	.501**	.574**	.666**	.407**	1.000									
Firm Size	.685**	.556**	.564**	.617**	.545**	.556**	.656**	.257**	.537**	1.000								
Firm Liquidity	.398**	.460**	.275**	.437**	.244**	.259**	.289**	-.002	.426**	.257**	1.000							
Market Category	-.364**	-.333**	-.175**	-.331**	-.313**	-.286**	-.276**	-.115**	-.286**	-.359**	-.380**	1.000						
Company Age	-.073*	-.065	-.031	-.102**	-.046	-.151**	-.062	.081*	-.048	.065	-.208**	-.055	1.000					
Audit committee	.244**	.179**	.300**	.203**	.194**	.189**	.178**	.181**	.145**	.202**	.001	-.139**	.230**	1.000				
Ind. Dir. number	.044	.105**	.075*	.106**	.035	-.086*	-.057	.057	.013	-.030	-.019	-.152**	.262**	.540**	1.000			
Ind. Dir. Percentage.	.111**	.100**	.171**	.131**	.069*	-.009	.032	.131**	.064	.013	-.035	-.119**	.271**	.719**	.80**	1.000		
Board Structure	.298**	.302**	.183**	.353**	.226**	.150**	.225**	.073*	.323**	.259**	.217**	-.225**	-.171**	.025	.106**	.009	1.000	
Board Size	.360**	.484**	.229**	.498**	.204**	.162**	.228**	-.026	.381**	.316**	.461**	-.350**	-.224**	-.122**	.088**	-.005	.469**	1.000

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 7.8 and table 7.9 show the correlation between the different categories of voluntary reporting and the determinants of reporting of both the weighted and unweighted sample using Pearson's correlation coefficients respectively. From the table 7.8, the results of the unweighted sample using Pearson's correlation do not significantly differ from the results of the unweighted sample using Spearman's correlation with the exception of general reporting and corporate social reporting which have a significant negative relationship with company age. Corporate strategic reporting has a non-significant relationship whereas corporate environmental reporting has a significant positive relationship with independent director's number; sustainability reporting has a significant positive relationship with independent director percentage. Corporate strategic reporting and financial review reporting have a non-significant relationship, whereas corporate environmental reporting has a significant negative relationship with board size.

Similarly as indicated in table 7.9, the results of the weighted sample using Pearson's correlation do not significantly differ from the results of the weighted sample using Spearman's correlation with the exception of general reporting and corporate social reporting which have a significant negative relationship with company age; corporate strategic reporting has a non-significant relationship, whereas corporate environmental reporting has a significant positive relationship with independent director numbers; sustainability reporting has a significant positive relationship with independent director percentage and corporate strategic reporting and financial review reporting has a non-significant relationship. However, corporate environmental reporting has a significant negative relationship with board size.

Table 7.8: Pearson's Correlations of Independent and Dependent Variables for Unweighted Data

Pearson's Correlations																		
	Volun. Dis.	Gene-Ral	Cor. Strat.	Cor. Gover.	Fina-Ncial	Fin-review	CSR	CER	Sustain ability	Size	Liqui dity	Market Cat.	Age	Audit Com..	Ind. num	Ind. %	Board Struct.	Board size
Total Vol. reporting	1																	
General reporting	.711**	1																
Corporate Strategic	.753**	.607**	1															
Cor. governance	.799**	.630**	.563**	1														
Financial reporting	.675**	.551**	.542**	.564**	1													
Financial review	.789**	.506**	.525**	.549**	.539**	1												
Corporate Social	.915**	.536**	.659**	.679**	.535**	.652**	1											
Corporate Environ.	.541**	.258**	.327**	.341**	.284**	.327**	.486**	1										
Sustainability	.868**	.595**	.582**	.671**	.488**	.581**	.746**	.441**	1									
Firm Size	.763**	.560**	.611**	.648**	.520**	.599**	.755**	.253**	.605**	1								
Firm Liquidity	.211**	.249**	.119**	.243**	.087*	.142**	.155**	.006	.259**	.142**	1							
Market Category	-.333**	-.355**	-.173**	-.326**	-.296**	-.290**	-.266**	-.115**	-.279**	-.347**	-.240**	1						
Company Age	-.070*	-.068*	-.041	-.072*	-.059	-.149**	-.069*	.151**	-.032	.000	-.227**	-.026	1					
Audit committee	.165**	.126**	.223**	.142**	.142**	.146**	.118**	.170**	.081*	.141**	-.010	-.113**	.225**	1				
Ind. Dir. number	.023	.130**	.043	.128**	.050	-.096**	-.036	.109**	.035	-.055	.055	-.157**	.247**	.425**	1			
Ind. Dir. Percentage.	.105**	.113**	.152**	.147**	.098**	-.007	.051	.188**	.091**	-.013	.035	-.117**	.259**	.595**	.747**	1		
Board Structure	.303**	.290**	.187**	.347**	.228**	.157**	.264**	.082*	.311**	.273**	.133**	-.224**	-.178**	.004	.125**	.030	1	
Board Size	.185**	.372**	.059	.342**	.104**	.038	.127**	-.085*	.238**	.182**	.209**	-.266**	-.241**	-.252**	.088*	-.063	.387**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 7.9: Pearson's Correlations of Independent and Dependent Variables for Weighted Data

Pearson's Correlations																		
	Volun. Dis.	Gene-ral	Cor. Strat.	Cor. Gover.	Fina-ncial	Fin-review	CSR	CER	Sustain ability	Size	Liqui dity	Market Cat.	Age	Audit Com.	Ind. num	Ind. %	Board Struct.	Board Size
Total Vol. reporting	1																	
General reporting	.715**	1																
Corporate Strategic	.757**	.607**	1															
Cor. governance	.796**	.630**	.563**	1														
Financial reporting	.701**	.555**	.558**	.569**	1													
Financial review	.798**	.507**	.525**	.548**	.580**	1												
Corporate Social	.910**	.536**	.659**	.679**	.562**	.653**	1											
Corporate Environ.	.537**	.258**	.327**	.341**	.303**	.327**	.486**	1										
Sustainability	.864**	.596**	.581**	.672**	.500**	.580**	.746**	.441**	1									
Firm Size	.764**	.560**	.611**	.648**	.551**	.599**	.755**	.253**	.607**	1								
Firm Liquidity	.211**	.249**	.119**	.243**	.092**	.142**	.155**	.006	.261**	.142**	1							
Market Category	-.336**	-.355**	-.173**	-.326**	-.316**	-.291**	-.266**	-.115**	-.280**	-.347**	-.240**	1						
Company Age	-.070*	-.068*	-.041	-.072*	-.045	-.149**	-.069*	.151**	-.032	.000	-.227**	-.026	1					
Audit committee	.167**	.126**	.223**	.142**	.150**	.145**	.118**	.170**	.080*	.141**	-.010	-.113**	.225**	1				
Ind. Dir. number	.022	.130**	.043	.128**	.050	-.096**	-.036	.109**	.037	-.055	.055	-.157**	.247**	.425**	1			
Ind. Dir. Percentage.	.104**	.113**	.152**	.147**	.100**	-.008	.051	.188**	.090**	-.013	.035	-.117**	.259**	.595**	.747**	1		
Board Structure	.286**	.263**	.179**	.313**	.219**	.146**	.253**	.090**	.304**	.252**	.117**	-.208**	-.170**	-.010	.100**	.017	1	
Board Size	.182**	.372**	.059	.342**	.074*	.038	.127**	-.085*	.240**	.182**	.209**	-.266**	-.241**	-.252**	.088*	-.063	.337**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

7.6 Multivariate Analysis:

One of the limitations of bivariate analysis is that the results cannot be generalised. So in order to generalise the results of this study multivariate analysis is applied. Multivariate analysis can statistically estimate relationships between different variables, and correlate how important each one is to the final outcome as well as revealing where dependencies exist between them. Among multivariate analyses, regression analysis is one of the most common and widely used techniques in statistical analysis especially in disclosure literature (Cooke 1998). Gujarati and Dawn (2009) also suggest that under certain assumptions, the method of least squares has some very attractive statistical properties that have made it one of the most powerful and popular methods of regression analysis.

The following sections start with the regression diagnostics that represent the first step in choosing the relevant statistical method to analyse the collected data in this study. There follows a discussion about selecting fixed effect and random effect and finally the test of the hypothesis: the association between, the total voluntary reporting and its determinants on one side, and the association between each voluntary reporting category and the different determinants on the other side.

7.6.1 Regression Diagnostic:

In order to decide the appropriate statistical technique, it is essential in disclosure studies to evaluate the impact of distribution problems, non linearity and problems of outliers (Cooke 1998). Usually, there are numerous ways to estimate regression coefficients (parameters). The current study uses linearity, independence and normality of error, homoscedasticity and multicollinearity to justify the regression.

7.6.1.1 Checking Linearity:

The relationship between the dependent and independent variables is believed to be linear. It can be verified by the plot(s) of the residuals versus the independent variable values. If linearity exists, there will be no obvious clustering of positive residuals or a clustering of negative residuals. Linearity can also be checked through plotting each independent variable against the dependent variable and seeing how well the fitted regression line represents their association. The graphs for checking linearity of each independent indicate that most of the independent variables in the model do not have an obvious linear relationship with the dependent variable (Appendix G).

There are a number of possible causes for this: it may be due to the presence of outliers, unusual observations, or it may be that the linear model is not a good fit to describe the relation between the dependent variable and each independent variable. Therefore, it can be concluded that the linearity assumption is not satisfied. However, non linearity is common in the majority of prior reporting studies (Cooke 1998). So the current study has to fit this non linear data into an appropriate regression.

7.6.1.2 Checking Normality:

Normality entails that errors (residuals) be supposed to be normally dispersed. In principle, normality is essential only for the hypothesis tests to be legitimate. Normality of graphical methods and numerical methods are two ways to measure the normality of residuals. Both normality plots and normality tests have been used in the current study.

Graphical Method:

The two most common plots have been used in this study to check the normality- P-P plot (standardized normal probability plot), Q-Q plot (quantile quantile plot) and Density estimate (plots the density of a variable and the normal density).

Figure 7.1: P-P Plots for Voluntary Reporting

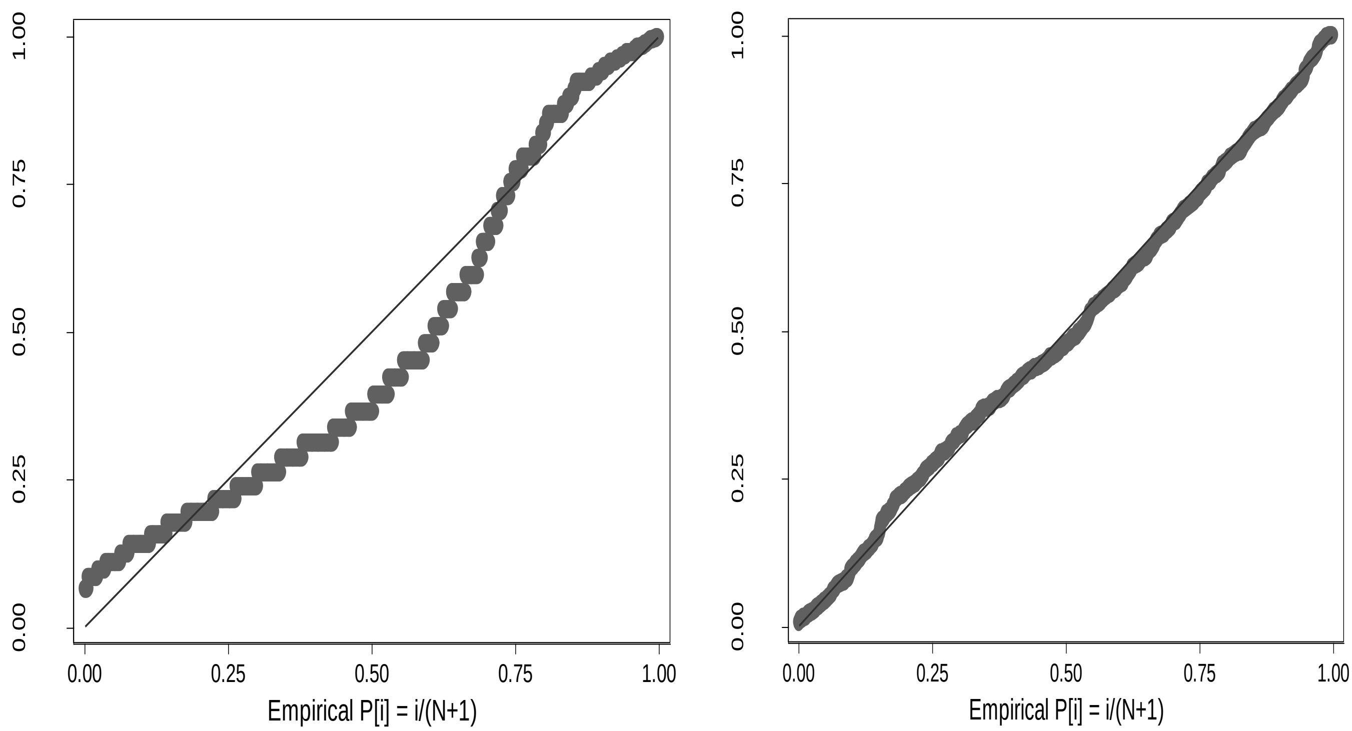


Figure 7.2 Q-Q Plots for Voluntary Reporting

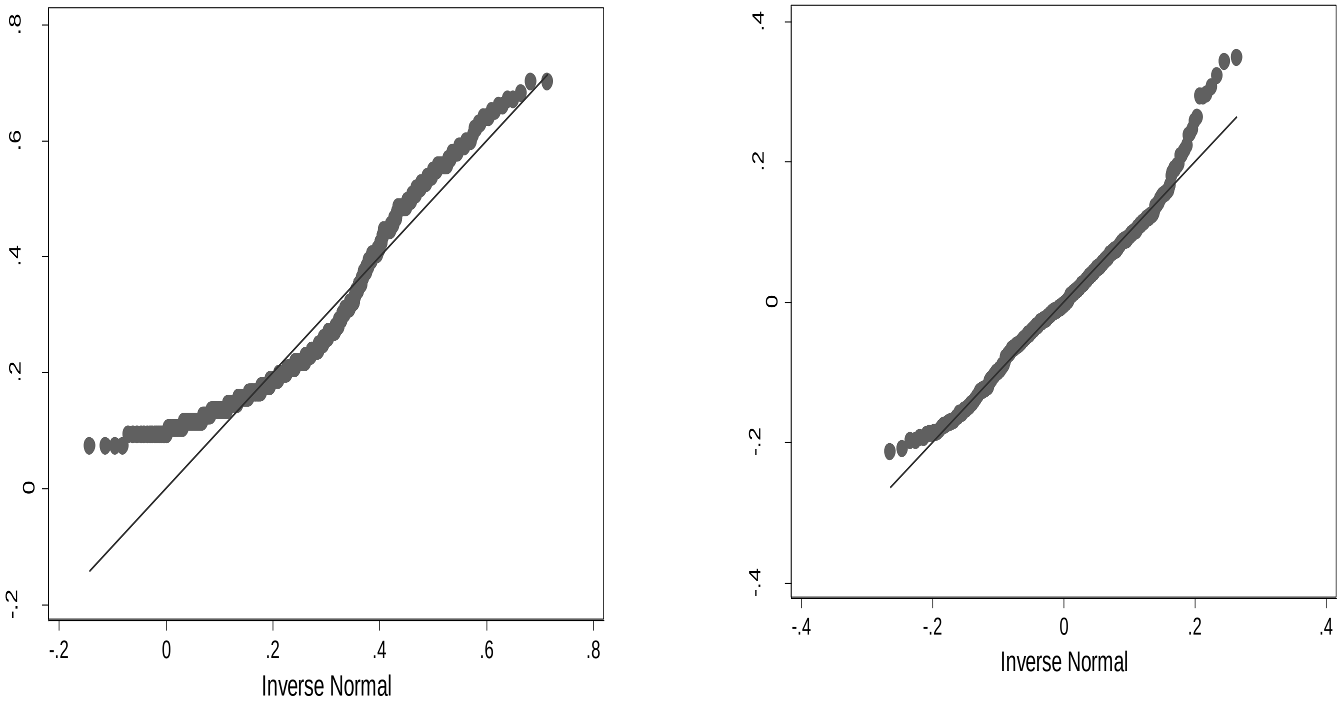
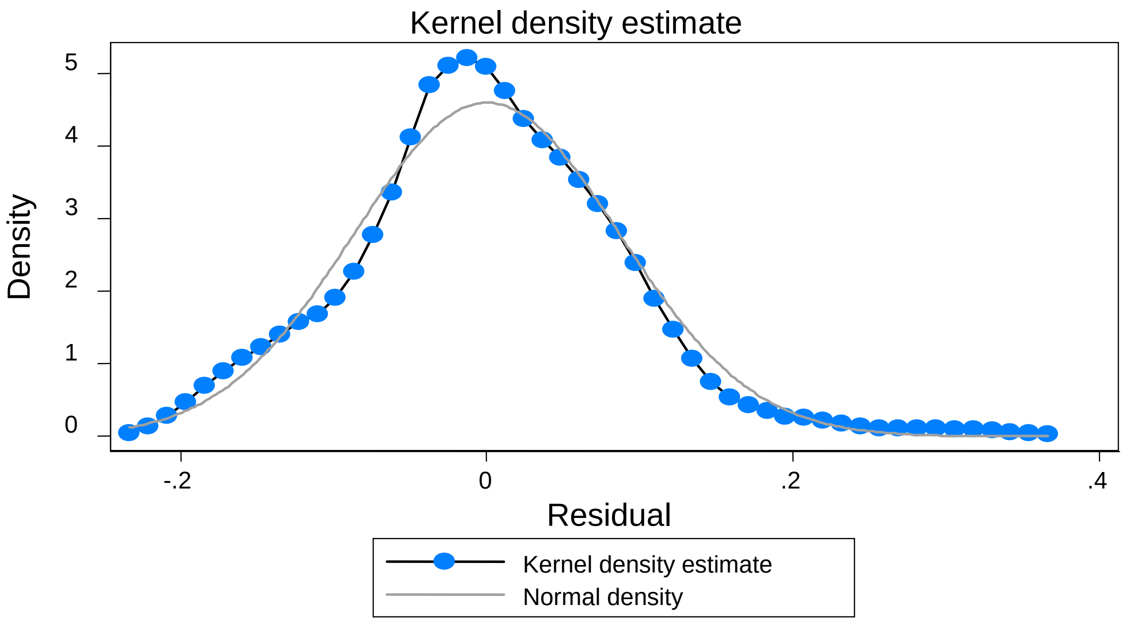


Figure 7.3: Kernel Density Estimate



Numerical Methods of Normality:

Various numerical methods can be used to test the assumption of normality(examples of these methods include- Kolmogorov - Smimov D statistic, skewness, and Shapiro - Wilk W statistic). Among them the Shapiro - Wilk W statistic has been shown to have a good power against a wide range of non normal distribution. If the value of p is small, then the data may not be considered normally distributed.

Table 7.10: Shapiro-Wilk *W* test for Normal Data

Variables	obs	W	V	Z	Prob>Z
Residual	861	0.98468	8.433	5.248	0.0000
Voluntary Disclosure	861	0.923	42.378	9.221	0.0000

The two methods of normality test, graphical and numerical, suggest the same result. It is clear from the previous figure (7.1 and 7.2) and table 7.10, that errors and dependent variables are not normally distributed and this is mainly related to the skewness of the distribution.

7.6.1.3 Checking Homoscedasticity of Residuals:

The homoscedasticity supposition indicates that variance of the error terms is constant for each observation. The current study employs two numerical methods for heteroscedasticity; and Breusch-Pagan / Cook-Weisberg and White's test; and Cameron & Trivedi's decomposition of IM test.

Table 7.11: Breusch-Pagan *I* Cook-Weisberg and White's tests

Test	Chi-square	Prob>chi^2
Breusch-Pagan / Cook-Weisberg	14.11	0.0002
White's	259.11	0.0000

Table 7.12: Cameron & Trivedi's Decomposition of IM test

Source	Chi-square	df	p
Heteroskedasticity	269.11	52	0.000
Skewness	69.32	9	0.000
Kurtosis	7.27	1	0.007
Total	345.7	62	0.000

The test results point out that errors have non-constant variance (heteroscedastic), which mean that the regression estimators will not have the minimum variance of all unbiased estimators, and also the P-values will be unreliable. In other words the current data suffer from heteroscedasticity.

7.6.1.4 Checking for Multicollinearity:

According to Murray (2006), it will be difficult to differentiate the individual effects of explanatory variables and regression estimators may be biased when multicollinearity exists. It means there is a linear relationship between two or more independent variables and the estimates for a regression model cannot be uniquely computed. The two common ways to check for the presence of multicollinearity between independent variables are correlation coefficients and variance inflation factors (VIF) with tolerance values. These two ways have been used widely in the reporting literature. The current study employs both of them to check whether the explanatory variables or the model suffer from multicollinearity. Table 7.13 shows the variance inflation factor (VIF) and tolerance coefficients of each explanatory variable:

Table 7.13: Variable Inflation Factor

Variable	VIF	Tolerance (1/VIF)
Firm Size	1.284	.779
Liquidity	1.150	.870
Market Categories	1.285	.778
Company Age	1.249	.801
Audit Committee	1.787	.560
Ind. Director(number)	2.493	.401
Ind. Director (%)	2.899	.345
Board Structure	1.220	.820
Board Size	1.433	.698
Mean of VIF	1.644	

As regards the Variance Inflation Factor (VIF), it is indicated that data is normally distributed if the VIF is less than 10(Gaur and Gaur 2009; Gujarati and Dawn 2009; Neter et al. 1983; Mendenhall and Sincich 1989). However, others suggest that the value of 5 can be used as a rule of thumb (Groebner et al. 2005). From the table 7.13, it is observed that the maximum VIF is 2.899 with mean VIF of 1.644. Moreover, the lowest tolerance coefficient is 0.345. As suggested by Hair et al. (2011), the tolerance value of more than 0.20 may be used as a criterion for considering the data being free from the problem of multicollinearity. Therefore, based upon the rule of thumb, the results of VIF and tolerance coefficients indicate that there is not an unacceptable level of multicollinearity in the current study.

It is commonly agreed that the correlation matrix is a powerful tool for indicating the relationship between explanatory variables but there is no agreement among researchers regarding the cut off correlation percentage (Alsaeed 2006). While, some researchers use 0.8; e.g. Hair et al. (2011); Gujarati and Dawn (2009); others suggest using 0.7; e.g. Tabachnick and Fidell (1996). Tables 7.6, 7.7, 7.8 and 7.9 present the correlation coefficients of nonparametric and parametric tests; Spearman and Pearson coefficients for weighted and unweighted sample respectively. It can be noticed from the tables that correlation coefficients confirm the results of VIF. According to Spearman correlations (table 7.6 and table 7.7), the correlation coefficients of all independent variables are less or equal to 0.763(for unweighted) and 0.764 (for weighted sample). Although the study found a correlation coefficient of 0.915(for CSR both weighted and unweighted data) and 0.864(for sustainability both weighted and unweighted data), CSR and sustainability are dependent variables and also these two are categories of voluntary reporting. Moreover, in the regression equation, above do not run in the same equation as voluntary reporting. Thus, the correlation coefficient of CSR and sustainability with total voluntary reporting does not affect multicollinearity. In other words as there is no value greater than 0.80 for comparing correlation between dependent and independent variables, it can be concluded that there is no potential multicollinearity problem in the current study.

The same can be concluded from Pearson's rank correlation (table 7.8 and 7.9) which indicates that the highest coefficient for independent variables is 0.80 both for unweighted and weighted data. Similarly with Spearman, the study find: the financial review coefficient (0.811 for weighted and 0.801 for unweighted data), CSR coefficient (0.83 for both data set) and sustainability coefficient (0.833 for weighted and 0.842 for unweighted) in Pearson which is more than the standard value of 0.80. But as these are categories of total voluntary reporting and also these are dependent variables, it can be concluded that, based on results, there is no potential multicollinearity between dependent and independent variables of the current study.

7.6.2 Choosing Between Fixed and Random Effects:

When modeling group data, perhaps the first question the researcher faces is whether to account for unit effects and, if so, whether to employ so called fixed effects or random effects. Advice on this topic is plentiful (e.g., Greene 2008, Kennedy 2003, Frees 2004, Gelman 2005, Wilson and Butler 2007, Arceneaux and Nickerson 2009, Wooldridge 2010), even if sometimes confusing and contradictory (Gelman and Hill 2007, 245). However, the generally accepted way of choosing between fixed and random effects is running a Hausman test. The Hausman test checks a more efficient model against a less efficient but consistent model to make sure that the more efficient model also gives consistent results (James and Marks 2012).

Table 7.14: **Hausman Test of Dependent and Explanatory Variables**

	Unweighted Data Hausman fixed random		**Weighted Data** Hausman fixed random	
	chi^2	$Prob>chi^2$	chi^2	$Prob>chi^2$
Voluntary Reporting	5.20	0.8168	5.25	0.8120
General Information	0.28	1.0000	0.29	1.0000
Corporate Strategic	12.53	0.1852	12.47	0.1882
Corporate Governance	7.60	0.5752	7.29	0.6066
Corporate Financial	1.26	0.9986	1.41	0.9978
Financial Review	1.57	0.9966	1.67	0.9957
Corporate Social	15.79	0.0714	15.91	0.0687
Corporate Environmental	0.89	0.9996	0.88	0.9997
Corporate Sustainability	8.91	0.4452	9.27	0.4125

In the case of Hausman fixed random, if the $Prob>chi^2$ value is more than 0.05 then it is safe to use random effects (James and Marks 2012). From the table 7.14, as $Prob>chi^2$ is more than 0.05 in both unweighted data and weighted data, the current study goes for random test. If there is reason to believe that some omitted variables may be constant over time but vary between cases, and others may be fixed between cases but vary over time, then it should include both types by using random effects.

7.6.3 Test of Hypotheses:

Regression diagnostics indicate that data set are non linear, non normal and there are heteroscedasticity in the current study. There are several reasons for this case of unequal variance, e.g. outliers and skewness. Ordinary Least Squares (OLS) does not make use of the information contained in the unequal variability of the dependent variable since it assigns equal weight to each observation. Generalised Least Squares (GLS) is OLS on the transformed variables that satisfy the standard least-squares assumptions. As such, GLS minimises a weighted sum of residual squares not minimising an unweighted or equally weighted as OLS (See Gujarati 2003, pp.388-398).

The descriptive statistics also showed that the data is not normally distributed. Therefore, the data analysis needs to be applied using a nonparametric test that fits with this non parametric data not normally distributed. The GLS is a parametric test, so to fit with the non parametric data it needs to be employed using robust standard error.

To benefit from the advantages of panel data analysis, the current study employed GLS using robust standard error. The results are shown in table 7.15(for unweighted data) and 7.16 (for weighted data). The panel regression is used to differentiate between the data of years from 2004 to 2010. Therefore, seven groups are examined. As the study used same number of companies in all years, the minimum, maximum and average number of observations comes from those 123 companies each year.

The results of table 7.15 show that total voluntary reporting has positive association ($p \leq 0.01$) with firm size, firm liquidity, percentage of audit committee member, percentage of independent director, board structure and board size: it is negatively associated ($p \leq 0.01$) with market categories, company age and number of independent director. The positive associations mean that voluntary reporting increases with the increase of firm size, firm liquidity, high percentage of audit committee members, high proportion of independent directors in the board, role duality of the organisation and having large number of board members. On the other, the negative associations mean that the companies that disclose less voluntary reporting are those in Z categories, old companies rather than new companies, and those having large numbers of independent directors in the board.

However, according to the results indicated in table 7.15, there is a significant relationship ($p \leq 0.01$) between voluntary reporting and firm size, firm liquidity, market categories, company age, number of independent directors, percentage of independent directors, and board structure. On the other hand, there is a non-significant relationship of voluntary reporting with audit committee, and board size. The adjusted R Squared of the models explains how much of the changes in the dependent variable are explained by the changes in the independent variables. The R Squared is 0.6217 indicating that 62.17% of the changes of the total voluntary reporting are explained by the changes in its examined determinants. The R-squared is comparable to Depoers (2000) 65%; Abdel-Fattah (2008) 63% and higher than Haniffa and Cooke (2002) 47.9% and Barako et al. (2006) 53.4%; however, it is lower than Hassan et al. (2006) 86.3%.

Referred to the different categories of voluntary reporting, there is a significant relationship between, firm size and company age with all parts of reporting. There is a significant relationship of firm liquidity with general reporting, corporate strategy reporting, financial reporting, CSR reporting and sustainability reporting. Also, there is a significant relationship of market categories with general reporting, corporate governance reporting, financial reporting, financial review reporting, and corporate environmental reporting. Moreover, there is a significant relationship of audit committee with general reporting, corporate governance reporting, financial review reporting, and corporate sustainability reporting. In addition, there is a significant relationship of the number of independent directors with corporate governance reporting, financial review reporting, CSR reporting, and corporate sustainability reporting.

In the case of the percentage of independent director, all parts of voluntary reporting have a significant relationship with the exception of general reporting. Similarly, in the case of board structure all parts of voluntary reporting have a significant relationship except financial review reporting. In the same way all parts of voluntary reporting have significant relationships with board size, except corporate governance reporting. The rest of the relationships between the different categories of voluntary reporting and the determinants are non-significant which is supporting the weak or no relationship of voluntary reporting with them.

Regarding corporate social reporting disclosure, there is a significant relationship with firm size, firm liquidity, company age, number of independent directors, percentage of independent directors, board structure and board size. In the case of corporate environmental reporting, there is a significant relationship with firm size, market categories, company age, percentage of independent directors, board structure and board size. As regards to corporate sustainability reporting, there is a significant relationship with firm size, firm liquidity, company age, audit committee, number of independent directors, percentage of independent directors, board structure and board size.

In this part, the study determines the effect of factors that are used in mandatory reporting and timeliness of reporting. The main intention of this is to identify the association of factors with voluntary reporting which have significant or non-significant relationships with mandatory reporting and timeliness of reporting. As Spearman's correlation found that financial condition has multicollinearity with board size, it has been omitted in this part. Appendix J indicates that voluntary reporting has significant positive association with multinational parents, ownerships, industry categories and modified opinion while it has negative association with sign of earning. However, voluntary reporting has non significant or weak relationships with profitability, audit firm size and financial year end.

The positive associations indicates that voluntary reporting increases when the company has multinational parents, more than 50% ownerships of a particular group, financial companies rather than non financial and company received modified audit opinion. However, voluntary reporting decreases when the company reports negative profit in their income statement. Whereas, profitability whether measured by ROA or ROE, big or non big audit firm and companies financial year end in a particular period do not have significant power to affect voluntary reporting.

Firm Size: Consistent with H1, both bivariate and multivariate analysis found a statistically significant positive relationship between voluntary reporting and firm size. This suggests that large firms tend to disclose more voluntary information than smaller firms in their annual reports. Findings of the study, supported by stakeholder theory, show that firms are expected to have high levels of voluntary disclosure in order to be registered in the stock market: this attracts more funds at a lower cost of capital: in this case they have a greater responsibility to provide information to customers, suppliers, analysts and government (Choi 1973; Cooke 1991). Moreover, findings also support agency theory; larger firms disclose more information as they have higher agency costs (Leftwich et al. 1981). Generally, large size companies have a variety of stakeholders who are willing to have more and different information. Based on the relative power of stakeholders, managers may respond to such information needs by disclosing information beyond the minimum requirements. This result is in line with prior studies of Black et al. 2006; Ghazali and Weetman 2006; Barako et al. 2006; Alsaeed 2006; Agca and Onder 2007 and Boesso and Kumar 2007; Khanchel 2007; Da Silveira et al. 2009; Uyar 2011; Samaha et al. 2012; Alves et al. 2012; Hajji and Ghazali 2013.

Firm Liquidity: Consistent with H2, both bivariate and multivariate analysis found a statistically significant positive relationship between voluntary reporting and firm liquidity. The result indicates that companies with higher liquidity are expected to disclose more voluntary information. Findings of the study are supported by signalling theory: companies with a considerable or reasonable liquidity ratio may be more motivated to disclose information voluntarily to distinguish themselves from other companies that face liquidity problems (Abd El Salam 1999). Moreover, agency theory indicates that companies with a low liquidity ratio might disclose more to satisfy the needs of shareholders and creditors (Aly et al. 2010). In addition, supporting stakeholder theory, managers are motivated to disclose more information about liquidity (Barako et al. 2006). This result is similar to the conclusions of Wallace and Naser 1995; Camfferman and Cooke 2002; Ghosh and Nandi 2009 and Al-Akra et al. 2010. However, the results are in contrast with Wallace et al (1994) and Naser et al. (2002) who report evidence of negative association, while Barako et al. (2006) provide evidence of a non-significant association between liquidity and voluntary disclosure.

Company Age: Inconsistent with H4, the results from panel regression do not accept the hypothesis and found significant negative relationship between voluntary reporting and company age. This indicates that old companies disclose less voluntary information. It may be that younger firms exhibit better reporting quality since they need to compete with older firms to survive. In other ways, new companies disclose more voluntary information to the market to give signals about their performance. This result is in line with Lei (2006). However, the result is contradictory to the evidence presented by Owusu-Ansah (1998); Akhtaruddin (2005); Alsaeed (2006); Hossain (2008); and Nandi and Ghosh (2012).

Audit Committee: Inconsistent with H5, the results of GLS do not accept the hypothesis and found a non-significant relationship between voluntary reporting and audit committees while bivariate analysis found a significant positive relationship. The result of GLS indicates that audit committee size does not affect voluntary reporting quality. As an audit committee with at least three members is mandatory for Bangladesh, whether the number increases or not does not affect the voluntary reporting pattern of the firms. The results indicate that the number of audit committee members does not reduce information asymmetry and effectively discharge management responsibility to various stakeholders. This result is similar with the conclusions of Eng and Mak 2003; **a**nd Akhtartuddin et al. 2009.

Independent Directors: Consistent with H6, both bivariate and multivariate analysis found a statistically significant positive relationship between voluntary reporting and independent directors. That means companies which have a high proportion of independent directors in the audit committee disclose more voluntary information in the annual report. The explanation of this positive association may be based on the firm-specific knowledge on the committee; that provides a greater independent knowledge base. With such a knowledge base, independent directors help to reduce managerial leeway, thus increasing transparency and financial reporting quality; this encourages management to disclose more information voluntarily as a signal directed to the stakeholders. The result is in line with Chau and Gray 2010; Samah and Dahawy 2010; Duchin et al. 2010; Akhtaruddin et al. 2009; Cheng and Courtenay 2006; and Ho and Wong 2001. However, the results contradict with the evidence presented by with Al Shammari and Al Sultan (2010), Andres and Vallelado (2008), Barako et al. (2006), Nazli and Weetman (2006). Moreover, the results also found that the number of independent directors has a significant negative relationship with voluntary reporting, which is also supported by Eng and Mark 2003; and Gul and Leung 2004.

Board Structure: Consistent with H7, there is a statistically significant positive relationship with board structure and voluntary reporting. Result indicates that duality gives a greater understanding of the firm’s operating environment and impacts positively on the firm’s voluntary reporting. Based on agency theory, the existence of role duality would improve the board effectiveness in performing good control over the board and reporting (Eisenhardt 1989; Dahya et al. 1996; Rechner and Dalton 1991; Donaldson and Davies 1991). Moreover, according to stakeholder theory this situation does not affect the independency status and the bias as two people share power by driving two critical positions (Williams 2002). This result is similar with the conclusions of Forker 1992; Nandi and Ghosh 2012; Gao and Kling 2012.However, this result is inconsistent with Arcay and Vazquez (2005); Cheng and Courtenay (2006); Ghazali and Weetman (2006); and Barako et al (2006), who report a lack of a significant relationship between role duality and the extent of voluntary disclosure.

Board Size: Inconsistent with H8, the results of GLS do not accept the hypothesis and found a non-significant relationship between voluntary reporting and board size: bivariate analysis found a significant relationship. The findings of panel regression indicate that the number of board member does not have any influence on voluntary reporting. In this area the findings of the study suggest that large numbers of board members do not reduce information asymmetry and do not provide more information voluntarily as a signal directed to the stakeholders. This is due either to the number of inactive members on the board or the large number of family members on the board. This result is similar with the conclusions of Cheng and Courtenay (2006) and Arcay and Vazquez (2005), who found that there is no association between board size and the level of voluntary reporting. However, it is contradictory to the evidence presented by Akhtaruddin et al. (2009); Allegrini and Greco (2011); and Nadia and Ghosh (2012).

The results of weighted data are shown in table 7.16. According to table 7.16 seven variables were found to have significant association, at the 1 % level, with total voluntary reporting. Firm size, firm's liquidity, percentage of independent directors and board structures were positively significantly associated with total voluntary reporting at the 1 % level. While the market categories, company age and number of independent directors were significant variables at the 1% level, they were found to have negative association with total voluntary reporting. On the other hand audit committee and board size did not appear to have a significant association with the dependent variable.

The significant positive associations mean that voluntary reporting increases with the increase of firm size, firm liquidity, number of independent directors and the role duality of the board. On the other hand, the negative associations mean that voluntary reporting decreases in firms which are in Z categories, old companies rather than new companies and firms having large number of independent directors in the board. While the audit committee and board size has no association or relation with voluntary reporting. The adjusted R Squared for weighted data is 0.6209 indicating that 62.09% of the changes to the total voluntary reporting is explained by the changes in its examined determinants for the weighted sample.

In the case of the weighted data sample, referred to the different categories of voluntary reporting, there is a significant relationship between, firm size and company age with all parts of reporting. There is a significant relationship of firm liquidity with general reporting, corporate strategy reporting, financial reporting, CSR reporting and sustainability reporting. Also, there is a significant relationship of market categories with general reporting, corporate governance reporting, financial reporting, financial review reporting, and corporate environmental reporting. Moreover, there is a significant relationship of audit committee with general reporting, corporate governance reporting, financial review reporting and corporate sustainability reporting. In addition, there is a significant relationship of the number of independent directors with corporate governance reporting, financial review reporting, CSR reporting, and corporate sustainability reporting.

In the case of percentage of independent directors all parts of voluntary reporting have a significant relationship at the 5 % level except general reporting. Similarly, in the case of board structure all parts of voluntary reporting have a significant relationship at the 5% level except financial review reporting. In the same way all parts of voluntary reporting have significant relationships with board size at the 10% level except corporate governance reporting. The rest of the relationships between the different categories of voluntary reporting and the determinants are non-significant which is supporting the weak or no relationship with voluntary reporting with them.

Regarding corporate social reporting disclosure, there is a significant relationship with firm size, firm liquidity, company age, number of independent directors, percentage of independent directors, board structure and board size. In case of corporate environmental reporting, there is a significant relationship with firm size, market categories, company age, percentage of independent directors, board structure and board size. As regards to corporate sustainability reporting, there is a significant relationship with firm size, firm liquidity, company age, audit committee, number of independent directors, percentage of independent directors , board structure and board size.

The results of the GLS regression analysis agree with the research hypotheses concerning the existence of positive significant relationship between voluntary reporting and firm size (hypothesis1), and firm liquidity (hypothesis 2), percentage of independent directors (hypothesis 7), board leadership structure (hypothesis 7) and significant negative relationship with market categories (hypothesis 3). However, the results of the panel regression analysis does not accept the hypothesis, and found a significant negative relationship of voluntary reporting with company age (hypothesis 4), independent director number (hypothesis 6), The results also does not accept and found non-significant relationship between voluntary reporting and audit committee (hypothesis 5) and board size (hypothesis 8).

Table: 7.15 GLS Regression Using Robust Standard Error for Unweighted Sample

Random-effects GLS regression	Number of observation = 861
Group variable: year	Number of groups = 7
Observation per group: Minimum =123; Average = 123; Maximum = 123	

	Voluntary		General		Corporate Governance		Corporate Strategy		Financial		Financial Review		CSR		CER		Sustainability	
	Coeffici.	Z	Coeffici	Z	Coeffici.	Z	Coeffiici.	Z	Coeffci.	Z	Coeffci.	Z	Coeffci.	Z	Coeffci.	Z	Coeffci.	Z
Firm Size	0.115***	20.79	0.092***	30.18	0.196***	55.33	0.152***	33.13	0.118***	50.82	0.147***	56.66	0.206***	0.206	0.028***	3.53	0.067***	15.71
Liquidity	0.006***	2.98	0.011***	2.96	0.005	1.31	0.013***	3.41	-0.004*	-1.8	0.003	1.5	0.005**	0.005	0.000	-0.01	0.010***	5.94
Mkt Categories	-0.015***	-4.91	-0.033***	-4.14	0.041***	3.8	-0.008	-1	-0.071***	-7.42	-0.072***	-10.28	0.000	0.000	-0.007**	-2.2	-0.001	-0.31
Company Age	-0.001***	-4.91	-0.001**	-2.47	-0.003***	-7.78	-0.001***	-3.8	-0.003***	-5.62	-0.005***	-9.89	-0.002***	-0.002	0.001***	3.16	0.000**	2.14
Audit Committee	0.002	0.13	0.056***	2.56	0.079**	2.49	0.028	1.45	-0.001	-0.04	0.078***	5.08	-0.046	-0.046	-0.010	-0.95	-0.025**	-2.56
Ind. Dir.(num)	-0.015***	-2.99	0.016	1.55	-0.029*	-1.87	0.009	1.03	-0.001	-0.09	-0.041***	-4.9	-0.032***	-0.032	-0.006	-0.99	-0.013***	-3.01
Ind. Dir. (%)	0.139***	5.97	0.042	1.41	0.313***	7.89	0.179***	4.72	0.134***	4.42	0.082**	2.35	0.224***	0.224	0.109***	4.99	0.108***	5.75
Board Structure	0.024***	6.41	0.007***	2.64	0.013**	2.19	0.038***	3.86	0.033**	2.16	0.006	0.62	0.036***	0.036	0.018***	7.21	0.028***	16.99
Board Size	0.000	0.06	0.007***	13.91	-0.002	-1.51	0.007***	4.73	-0.003***	-4.71	-0.004***	-13.2	-0.002**	-0.002	-0.002***	-7.33	0.001*	1.71
Constant	-0.793	-14.67	-0.152	-4.62	-1.444	-39.06	-1.034	-15.81	-0.462	-14.53	-0.751	-27.2	-1.718	-1.718	-0.234	-3.72	-0.537	-12.32
Adjusted R square	0.6217		0.4326		0.4181		0.5211		0.3351		0.4176		0.5913		0.1293		0.4349	

Table: 7.16 GLS Regression Using Robust Standard Error for Weighted Sample

Random-effects GLS regression	Number of observation = 861
Group variable: year	Number of groups = 7
Observation per group: Minimum =123; Average = 123 ; Maximum = 123	

	Voluntary		General		Corporate Goverance		Corporate Strategy		Financial		Financial Review		CSR		CER		Sustainability	
	Coeffi.	Z	Coeffi.	Z	Coeffi.	Z	Coeffii.	Z	Coeff..	Z	Coeff..	Z	Coeff.	Z	Coeff.	Z	Coeff.	Z
Firm Size	0.090***	21.78	0.077***	30.87	0.166***	55.1	0.114***	33.66	0.099***	45.21	0.125***	56.15	0.152***	14.13	0.021***	3.55	0.051***	15.74
Liquidity	0.005***	2.99	0.009***	2.97	0.004	1.31	0.010***	3.49	-0.003*	-1.69	0.002	1.42	0.004**	1.96	0.000	-0.03	0.008***	5.97
Mkt Categories	-0.012***	-5.37	-0.027***	-4.15	0.035***	3.77	-0.006	-0.97	-0.061***	-8.69	-0.062***	-10.44	0.000	0.15	-0.005**	-2.22	-0.001	-0.26
Company Age	-0.001***	-4.96	0.000**	-2.43	-0.003***	-7.53	-0.001***	-3.35	-0.002***	-4.85	-0.005***	-9.69	-0.002***	-3.36	0.001***	3.14	0.000**	2.34
Audit Committee	0.003	0.23	0.046**	2.55	0.066**	2.48	0.021	1.44	-0.004	-0.18	0.066***	5.11	-0.035	-1.52	-0.007	-0.96	-0.020***	-2.58
Ind. Dir.(num)	-0.012***	-3	0.013	1.52	-0.025*	-1.87	0.007	0.98	0.000	0.03	-0.033***	-4.65	-0.024***	-2.84	-0.004	-0.97	-0.010***	-3.06
Ind. Dir. (%)	0.107***	5.96	0.035	1.41	0.265***	7.88	0.135***	4.72	0.107***	4.41	0.067**	2.26	0.166***	5.79	0.083***	4.97	0.083***	5.76
Board Structure	0.017***	6.12	0.007***	2.77	0.013**	2.1	0.029***	3.8	0.025**	2.08	-0.007	-1.15	0.027***	6.08	0.013***	7.11	0.023***	12.67
Board Size	0.000	0.01	0.006***	14.39	-0.001	-1.58	0.005***	4.79	-0.002***	-7.73	-0.003***	-11.41	-0.001**	-2.29	-0.002***	-7.29	0.001*	1.71
Constant	-0.614	-15.09	-0.126	-4.65	-1.221	-39.23	-0.775	-15.98	-0.392	-12.71	-0.638	-26.94	-1.270	-12.55	-0.178	-3.73	-0.412	-12.37
Adjusted R square	0.6209		0.4327		0.4183		0.5194		0.3445		0.4177		0.5913		0.1282		0.4360	

Table: 7.17 GLS Regression Using Robust Standard Error for Unweighted Sample

Fixed-effects GLS regression	Number of observation = 861
Group variable: year	Number of groups = 7
Observation per group: Minimum =123; Average = 123; Maximum = 123	

	Voluntary		General		Corporate. Governance		Corporate Strategy		Financial		Financial Review		CSR		CER		Sustainability	
	Coeffi.	t	Coeffi.	t	Coeffi.	t	Coeffii.	t	Coeff.	t	Coeff.	t	Coeff.	t	Coeff.	t	Coeff.	t
Firm Size	0.113***	21.26	0.092***	26.59	0.191***	47.78	0.155***	31.23	0.119***	41.08	0.145***	63.94	0.201***	14.87	0.028**	3.44	0.066***	15.54
Liquidity	0.006**	2.89	0.011**	3.03	0.004	1.15	0.014**	3.54	-0.004	-1.73	0.002	1.33	0.004	1.5	0.000	-0.06	0.010***	6.21
Mkt Categories	-0.017***	-4.94	-0.034***	-3.73	0.033**	2.93	-0.002	-0.27	-0.069***	-7.6	-0.075***	-10.21	-0.007	-1.42	-0.007*	-2.03	-0.004	-1.09
Company Age	-0.001***	-6.05	-0.001*	-2.24	-0.003***	-9.27	-0.001**	-2.93	-0.002***	-4.85	-0.005***	-10.6	-0.003***	-5.21	0.001**	3.1	0.000	1.61
Audit Committee	-0.007	-0.47	0.053*	2.24	0.049	1.66	0.050**	2.7	0.004	0.14	0.067**	3.59	-0.069	-1.87	-0.009	-0.81	-0.038***	-4.17
Ind. Dir.(num)	-0.020***	-3.7	0.015	1.26	-0.045**	-2.8	0.020	1.67	0.003	0.36	-0.046***	-5.23	-0.045**	-3.28	-0.007	-0.93	-0.018***	-4.11
Ind. Dir.(%)	0.135***	5.85	0.041	1.44	0.300***	8.03	0.186***	4.91	0.139***	4.34	0.078*	2.29	0.213***	5.17	0.107***	4.75	0.106***	5.85
Board Structure	0.024***	6.66	0.006**	2.71	0.011	1.71	0.039***	3.82	0.034*	2.17	0.005	0.56	0.034***	7.04	0.018***	6.96	0.028***	19.5
Board Size	0.000	-0.05	0.007***	13.34	-0.002	-1.69	0.007***	4.87	-0.002***	-4.68	-0.004***	-12.9	-0.002**	-2.59	-0.002***	-7.71	0.001	1.59
Constant	-0.770	-14.04	-0.148	-3.64	-1.371	-41.49	-1.085	-18.11	-0.483	-12.57	-0.726	-28.58	-1.650	-12.59	-0.229	-3.52	-0.514	-11.03
Adjusted R square	0.6203		0.4325		0.4144		0.5190		0.3347		0.4169		0.5875		0.1292		0.4320	

Table: 7.18 GLS Regression Using Robust Standard Error for Weighted Sample

Fixed-effects GLS regression	Number of observation = 861
Group variable: year	Number of groups = 7
Observation per group: Minimum =123; Average = 123 ; Maximum = 123	

	Voluntary		General		Corporate Governance		Corporate Strategy		Financial		Financial Review		CSR		CER		Sustainability	
	Coeffi.	t	Coeffi.	t	Coeffi.	T	Coeffii.	t	Coeff..	t	Coeff.	t	Coeff.	t	Coeff.	t	Coeff.	t
Firm Size	0.089***	22.27	0.076***	27.07	0.162***	47.35	0.116***	31.81	0.100***	37.39	0.124***	60.55	0.149**	14.97	0.021**	3.47	0.050***	15.58
Liquidity	0.005**	2.9	0.009**	3.03	0.003	1.15	0.011**	3.62	-0.003	-1.61	0.002	1.25	0.003	1.48	0.000	-0.08	0.008***	6.26
Mkt Categories	-0.014***	-5.36	-0.028***	-3.73	0.028**	2.92	-0.001	-0.27	-0.059***	-8.89	-0.065***	-10.47	-0.005*	-1.44	-0.006*	-2.06	-0.003	-1.08
Company Age	-0.001***	-6.02	0.000*	-2.2	-0.003***	-8.92	-0.001**	-2.44	-0.002***	-4.2	-0.005***	-10.45	-0.002**	-5.2	0.001**	3.07	0.000	1.78
Audit Committee	-0.005	-0.38	0.044*	2.23	0.041	1.66	0.037**	2.69	0.001	0.03	0.057**	3.6	-0.052	-1.88	-0.007	-0.85	-0.030***	-4.28
Ind. Dir.(num)	-0.016***	-3.75	0.012	1.24	-0.039**	-2.8	0.015	1.62	0.004	0.5	-0.038***	-4.96	-0.034	-3.3	-0.005	-0.92	-0.014***	-4.29
Ind. Dir.(%)	0.105***	5.86	0.034	1.44	0.254***	8.03	0.140***	4.9	0.111***	4.32	0.064*	2.19	0.157***	5.17	0.081***	4.73	0.082***	5.84
Board Structure	0.017***	6.37	0.007**	2.79	0.012	1.84	0.030***	3.73	0.026*	2.1	-0.008	-1.31	0.025***	6.6	0.013***	6.81	0.022***	13.57
Board Size	0.000	-0.11	0.006***	13.76	-0.002	-1.76	0.005***	4.93	-0.002***	-7.53	-0.003***	-10.98	-0.002***	-2.64	-0.002***	-7.69	0.001	1.58
Constant	-0.596	-14.4	-0.123	-3.65	-1.160	-41.84	-0.812	-18.34	-0.410	-11.41	-0.616	-28.02	-1.220	-12.65	-0.174	-3.53	-0.394	-11.08
Adjusted R square	0.6195		0.4327		0.4146		0.5174		0.3440		0.4169		0.5874		0.1282		0.4330	

7.7 Sensitivity Analysis:

The main objective of the sensitivity analysis is to examine how sensitive the results and findings are towards changing the statistical test. The test used is fixed effect GLS regression using robust standard error as the examined data is not normally distributed as stated before by the descriptive statistics (Ananchotikul and Eichengreen 2009; Sánchez-Ballesta and García-Meca 2007; Gedajlovic and Daniel 2002; Baltagi 1995). According to Greene (2008, p.183)-"…the crucial distinction between fixed and random effects is whether the unobserved individual effect embodies elements that are correlated with the regressors in the model, not whether these effects are stochastic or not".

Regarding the unweighted sample, the results of adjusted R square of GLS fixed were similar to the GLS random indicating that GLS fixed regression has the same strength as the main GLS random regression. Also, GLS fixed regression showed the similar adjusted R square with GLS random for different parts of voluntary reporting.

According to table 7.17, for both GLS random and GLS fixed regression voluntary reporting has significant positive association with firm size, firm liquidity, percentage of independent directors, and board structure, while it has significant negative association with market categories, company age and number of independent directors. On the other hand, in both cases, there is a non-significant relationship of voluntary reporting with audit committee and board size.

Referred to the different categories of voluntary reporting, the results of GLS random were similar to the results of GLS fixed for firm size, market categories, independent director number and percentage of independent directors with the exception that firm liquidity is significant with general reporting and CSR reporting: in random regression, while it is non-significant in fixed regression, company age is significant with sustainability reporting but it is non-significant in fixed regression; audit committee is significant with corporate governance reporting but in the case of fixed it is non-significant. Audit committee is non-significant with corporate strategy reporting but in the case of fixed it is significant; board structure is significant with corporate governance reporting but it is non-significant in fixed regression; board size is significant with sustainability reporting but it is non-significant in fixed regression.

Regarding CSR reporting, the results of GLS random were similar to the results of GLS fixed for all dependent variables except firm liquidity which is significant in the case of random but it is non-significant in fixed regression. As regards to corporate environmental reporting the results of GLS random were similar to the results of GLS fixed level for all dependent variables. Concerning corporate sustainability reporting both GLS random and GLS fixed are the same for all dependent variables except company age and board size which is significant in case of random but it is non-significant in fixed regression.

Regarding the weighted data sample, the results of adjusted R square of GLS fixed were similar to the GLS random indicating that GLS fixed regression has the same strength as the main GLS random regression. GLS fixed regression showed the similar adjusted R square with GLS random for different parts of voluntary reporting.

According to table 7.18, for both GLS random and GLS fixed regression voluntary reporting has significant positive association with firm size, firm liquidity, percentage of independent directors, and board structure, while it has significant negative association with market categories, company age and number of independent directors. On the other hand, in both cases, there is a non-significant relationship of voluntary reporting with audit committee and board size.

Referred to the different categories of voluntary reporting, the results of GLS random are similar to the results of GLS fixed for firm size, market categories, independent director number and percentage of independent directors; exceptions are that firm liquidity is significant with general reporting and CSR reporting in random regression while it is non-significant in fixed regression; company age is significant with sustainability reporting but it is non-significant in fixed regression; audit committee is significant with corporate governance reporting but in case of fixed it is non-significant; audit committee is non-significant with corporate strategy reporting but in case of fixed it is significant; board structure is significant with corporate governance reporting but it is non-significant in fixed regression and board size is significant with sustainability reporting but it is non-significant in fixed regression.

Regarding CSR reporting, the results of GLS random were similar to the results of GLS fixed for all dependent variables except firm liquidity which is significant in case of random but it is non-significant in fixed regression. As regards to corporate environmental reporting the results of GLS random were similar to the results of GLS fixed for all dependent variables. Concerning corporate sustainability reporting both GLS random and GLS fixed are the same for all dependent variables except company age and board size which is significant in the case of random but it is non-significant in fixed regression.

The results of the GLS fixed regression showed that the results of the GLS random data analysis are not sensitive to changing the type of the test. Hence, the selected GLS random analysis is considered to be well matched with the examined data. Moreover, the results of this sensitivity analysis confirm the reliability of the results and findings which supports the generalisation of such results.

7.8 Conclusion:

This chapter examines the extent and level of voluntary reporting in the annual report of the listed companies in Bangladesh over the period of 2004 to 2010. It also investigates the association between voluntary reporting and the determinants; firm size, firm liquidity, market categories, company age, audit committee, independent directors, board structure and board size for the two groups in the sample, weighted and unweighted data. Findings of the study also focused on CSR, CER and sustainability reporting and sector wise performance.

As expected in developing countries, the first part of findings indicates that the level of total voluntary reporting in the annual reports of listed Bangladeshi companies is low. However, a gradual increase in the extent of voluntary reporting and its categories has been noticed over the period of study. Statistical tests indicate significant differences between voluntary reporting scores over the seven years. This may be due to the indirect effect of the Corporate Governance Code, a desire to enhance corporate image and the opportunity to receive government support.

Based on the findings of the empirical section, it is concluded that there is a significant positive relationship between voluntary reporting and firm size, firm's liquidity, percentage of independent directors and board structure and significant negative relationships with market categories, company age and number of independent directors both in the weighted and the unweighted sample. In addition to this, audit committee and board size have a non-significant or no relationship with voluntary reporting in the annual reports of listed Bangladeshi companies over the examined period.

The findings of the study agree with the research hypotheses concerning the existence of positive significant relationship between voluntary reporting and firm size, firm liquidity, percentage of independent directors and a significant negative relationship with market categories. However, the results of the panel regression analysis does not accept the hypothesis, and found a significant negative relationship of voluntary reporting with company age, independent director numbers, and a significant positive relationship with board structure and an non-significant relationship with audit committee and board size.

As the study consider different categories of voluntary reporting, it is important to understand category wise, performance and lack of reporting. At the same time, it explores the factors affecting different parts of voluntary reporting which is a new area of study relating to voluntary reporting for developing country especially Bangladesh.

Chapter Eight:
Analysis and Findings-
Timeliness of Reporting

Chapter Eight: Analysis and Findings-Timeliness of Reporting

8.1 Introduction:

An accurate and timely financial statement helps many organisations accomplish their aims. Furthermore, the accuracy and availability of financial information is vital in decision making for investors and shareholders (Apodore and Marjan 2013). Timeliness enhances the usefulness of information: without it, economic value decreases. The objective in this chapter is to answer the research question: to what extent do auditors delay in giving their audit opinion and to what extent do company's management delay in disclosing financial report or holding annual general meeting. These questions are answered primarily, through a detailed analysis of the audit lag, preliminary lag and total reporting lag using descriptive analysis. Then, the study examines the determinants of timeliness of reporting and tests the hypotheses of the association between these different determinants and the different categories of timeliness of reporting: audit lag, preliminary lag and reporting lag.

The chapter starts in section 8.2 with the analysis of the extent and trend of audit lag, preliminary lag and total reporting lag. Next 8.3 analyses the determinants of timeliness through descriptive analysis. Then it examines the bivariate analysis in section 8.4. Section 8.5 presents the multivariate analysis. It starts with the discussion of the regression diagnostic to determine the regression technique. After that, an argument between fixed and random effect is developed using Hausman test to determine the appropriate model. Finally, comes the test of the hypothesis: the association between the timeliness of reporting and its different determinants. Then a sensitivity analysis is applied to identify the effect of changing the statistical test on the results and findings of the main applied test in section 8.6. Finally, section 8.7 gives the implications of the research, concluding remarks and recommendations.

8.2 The Extent and Trend of Timeliness of Reporting:

In order to determine the timeliness of reporting of the listed companies in Bangladesh, the current study uses descriptive statistics and calculates the audit lag (the interval of days between the balance sheet closing date and the signed date of the auditor’s report) preliminary lag (the interval between the balance sheet closing date and the date of notice of the AGM) and the total reporting lag (the interval of days between the balance sheet closing date and the date of the AGM) of 123 sample companies for the years of 2004 to 2010. Descriptive statistics are used to describe the basic features of the data in a study. The strength of descriptive statistics is its ability to collect, organise and compare vast amounts of data in a more manageable form. The ultimate findings from the descriptive analysis are the extent of timeliness of reporting represented in days, the dependent variable in the current study. The timeliness of reporting scored in days over the seven years provides the trend of timeliness of reporting practice in the annual reports.

The results indicated in table 8.1, are that average audit delay over the seven years is 110 days: this indicate that audit delay time is improving in Bangladesh as Ahmed (2003) found audit lag at 162 days in 1998, Karim and Jamal (2005) found the average of 175.13 days during the period 1990-2003 and Karim et al. (2006) found 156 days during 1990 to 1999. Although a direct comparison with western developed countries may not be valid due to strict reporting requirements, the audit lag in Bangladesh may be compared with other emerging and newly developed countries. Apadore and Noor (2103) found that companies took 100 days to complete their audit report in Malaysia, while Abdul Rahman (2011) discovered that on average companies took 103 days. Muhoro et al. (2009) found Kenyan companies took an average of 97.1 days. Al-Ajmi (2008) found the average audit lag period was 48 days for the Bahrain Stock Exchange. Ng and Tai (1994) and Jaggi and Tsui (1999) found that the average audit delay in Hong Kong is about 105 days, while Abdullah (1996) and Owusu-Ansah (2000) report companies in Bahrain and Zimbabwe take about two months to complete the audits following the end of the financial year.

Nevertheless, when compared with the audit report lags in other countries such as the Poland with 86 days, Czech Republic, 84 days, Romania and Hungary, 83 days (Gajevszky 2013), USA 59.36 days (Lee et al. 2009), a European emerging economies average of 83.5 days(McGee and Igoe 2008), Athens takes 97.56 days (Leventis 2005), New Zealand 87.7 days (Carslaw and Kaplan 1991), Canada 54 days (Newton and Ashton 1989), the mean period of audit lag among Bangladeshi companies seems to be longer. The reason could be due to the Companies Act 1994 and Stock exchange listing requirement. Thus the average time taken to sign the audit report is within the statutory maximum of 120 days: however, each year the maximum audit delay exceeds the statutory maximum and 41.38% companies exceed the time limit of 120 days.

Table 8.1: **Descriptive Statistics of Dependent Variables**

Year	Descriptive Statistics	Audit Lag	Preliminary Lag	Total Reporting Lag
2004	Mean	115	136	179
	Minimum	38	40	69
	Maximum	275	328	349
2005	Mean	115	136	176
	Minimum	37	38	71
	Maximum	275	328	349
2006	Mean	114	134	176
	Minimum	35	38	78
	Maximum	282	329	352
2007	Mean	108	130	174
	Minimum	34	39	64
	Maximum	239	449	497
2008	Mean	108	124	166
	Minimum	34	42	61
	Maximum	266	418	449
2009	Mean	103	116	159
	Minimum	31	34	72
	Maximum	179	238	284
2010	Mean	104	118	159
	Minimum	32	32	72
	Maximum	212	499	551
Grand Total	Mean	110	128	170
	Minimum	31	32	61
	Maximum	282	499	551

Table 8.1 also suggest that, preliminary lag, which is defined as the average difference between the balance sheet end date and the notice date of the annual general meeting, is around 128 days over the period of time with the highest, 136 days, found in 2004 and 2005 and the lowest, 118 days in 2010. That means companies took on average 18 days to issue the notice of the AGM which also a substantial improvement for Bangladesh as Karim et al (2006) found an average period of 31 days was taken to issue the notice while

Ahmed (2003) found that it took an average of 24 days. But this average is higher in comparison to other country, as Al-Ajmi (2008) found that the average interim period is 12.46 days for Bahrain Stock Exchange, with a minimum period of one day and a maximum of 79 days. There is no statutory binding to issue the date of AGM after receiving the audited report in Bangladesh. However, as preliminary time affects the total reporting lag, it is advised that company management complete it as soon as possible to reduce reporting time.

The last part of Table 8.1 shows the total reporting lag – time between the financial year end and the date of holding AGM. This lag could be compared with the statutory maximum of 270 days allowed by the Companies Act and listing regulations of DSE (as mentioned in chapter 2). As the table shows, the mean total delay is 170 days for the entire period. Maximum mean delays can be observed in 2010 (551 days), 2007 (497 days), and 2008(449 days). This shows that companies are becoming more efficient and more concerned to issue annual reports as early as possible in order to share information with public: Ahmed (2003) found the total lag 220 days and Karim et al. (2006) found the total delay 218 days. However, this finding is still unsatisfactory when compared with other countries for example A-Ajmi (2008) 60.5 days. Moreover, 3.36% of the Bangladesh sample companies are above the maximum time period of 270 days; this indicates low level of effectiveness of the regulations.

8.2.1 Sector Wise Descriptive Analysis:

In order to obtain a detailed overview of timeliness of reporting, it is necessary to discuss the sector wise performance of the listed companies in Bangladesh. The majority of the previous studies focused only on the total. No previous studies in Bangladesh consider different sectors when analysing the timeliness of reporting. It is also necessary because some sectors may have different regulations for reporting their annual reports. For example the Insurance Act of 2010 specifies that insurance companies' audited accounts, statements and abstracts together with a report on the working of the corporation during that year should be submitted to the Government and the Authority within six months from the balance sheet date (details in chapter 2). However the Companies Act requires listed companies to submit annual reports to the BSEC and the Registrar of joint stock companies within 270 days from the year ending.

The results from table 8.2 indicate that lowest average audit lag for the seven years is 69 days for financial institutions: on the other hand, the highest is 130 days for miscellaneous sectors. If the study focuses on the time frame of 120 days mentioned in the SEC rules for completion of the audit, findings indicate that Ceramic, Insurance, Jute, Paper and Printing and Miscellaneous sectors cross this maximum time frame. Preliminary lag findings are slightly different than that of audit lag. Although, financial institutions completed their audit faster than others sectors, they need more time,10 days, to announce their AGM date: this is longer than the Jute, Paper and Printing (4 days), Ceramic(5 days), IT Sector(8 days), Pharmaceuticals and Chemicals(8 days). Just in the findings of audit lag, the highest preliminary lag is 35 days for miscellaneous sector.

Table 8.2: Sector Wise Descriptive Analysis of Dependent Variable

Sectors	Audit Lag	Preliminary Lag	Reporting Lag
Bank	89	112	150
Cement	116	143`	177
Ceramic	122	127	174
Engineering	106	129	168
Financial Institution	69	79	113
Food & Allied	101	129	172
Insurance	123	142	186
IT Sector	110	118	163
Jute , Paper and Printing	122	126	177
Pharmaceuticals and Chemicals	113	121	170
Services and Real Estate, Tannery	105	119	161
Textile	119	129	174
Miscellaneous	130	165	202

Sector wise reporting lag as indicated in table 8.2, the greatest lag is again the miscellaneous sector at 202 days; the lowest is for banks (150 days). The authorities regulating insurance should focus more on reporting time as the average in the insurance sector is 186 days, higher than the maximum time allowed in Insurance Act.

8.2.2 Timeliness of Reporting Before and After the Code:

If the study focuses on the differences before and after the Corporate Governance Code of 2006, the justification of the code is seen clearly in table 8.3. It is observed that the average total lag in 2007-10 is 165 days which is lower than the average of 2004 to 2005 which stood at 178 days. In the year of the Code itself, 2006, the figure stood at 176 days. The effect of the Code is also observed if the study looks at the different categories of total lag: audit lag and preliminary lag.

Table 8.3: Timeliness of Reporting Before and After the Code

Lag	2004-05	2006	2007-10
Audit Lag	115	114	106
Preliminary Lag	136	134	122
Total Lag	178	176	165

Now, it is necessary to identify whether this difference between reporting lags over the period under investigation and before and after the code is significant or not. Testing for normality is essential to determine the type of tests to be used (parametric tests or non-parametric tests). After conducting a series of statistical tests, the results indicate that reporting lags are not normally distributed, so nonparametric tests are recommended. For this study, the significance test has been measured by Kruskal-Wallis tests across the period and Wilcoxon Matched-pairs Signed Rank test for before and after the code period.

Regarding the differences among the seven years, Kruskal-Wallis test indicate that there is a significant difference between reporting lag over the period. Again, to test the effect of the Corporate Governance Code of 2006 on the extent of timeliness of reporting, Wilcoxon Matched-pairs Signed Rank test is used: it indicates that there is a non-significant difference of reporting lags before and after the corporate governance code.

Kruskal-Wallis test	Wilcoxon signed-rank test
Chi-squared = 22.873 with 6 d.f. probability = 0.0008	Ho: before = after z = 1.602 Prob > z = 0.1088
Chi-squared with ties = 22.881 with 6 d.f. probability = 0.0008	

In summary, from the descriptive analysis it is observed that extent of timeliness of reporting is improving over the period as the lag time decreases which is statistically significant but timeliness lags before and after the corporate governance code is not statistically significant.

8.3 Measuring the Determinants of Timeliness of Reporting:

This section investigates the determinants of timeliness through descriptive statistics. The determinants of the timeliness of reporting that are examined in this model are firm size, earning, financial condition, audit firm size, financial year end, company age, industry category and audit opinion. Descriptive statistics simplify large amounts of data in a sensible way by simply describing what the data shows and easily translates results into a distribution of frequency and percentages and overall averages. Descriptive analysis is necessary in this part to reveal the average and range of the determinants. Also it will give an idea of whether the data set is normal or abnormal which directs alternative analysis techniques in the next part of analysis.

Table 8.4 presents the descriptive statistics for all the explanatory variables investigated in the study. As indicated in the table, the mean firm size is about 9.25 with a minimum of 6.428 and a maximum of 11.765. The standard deviation of this variable is large though skewness and kurtosis reveal that firm size measure is normally distributed. Average earning 0.10 indicates that 10% of the sample companies had negative earnings over the sample period. ZFCINDEX indicates the financial condition, measured on the basis of Zmijewski's (1984) model. Large standard deviation statistics suggest that there are variations across the companies. The audit firm size mean at 0.235 indicates that Big 4 audit firms audit 23.50% of the sample companies. The financial year, 0.647, indicates that 64.7% of the sample companies' year closing is in the month of December. From the table it also observed that on average the sample companies have been operating for 14 years in the market. 38.2% of the samples are in the financial category and 12.7% of the sample companies received modified audit opinion.

Table 8.4: Descriptive Statistics on Explanatory Variables

	Mean	**Median**	**Std. Deviation**	**Mini-mum**	**Maxi-mum**	**Skew-ness**	**Kur-tosis**
Firm Size	9.250	8.996	0.879	6.428	11.765	0.458	2.530
Earning	0.100	0.000	0.300	0.000	1.000	2.669	8.123
Financial Condition	-18.479	-12.917	32.542	-249.537	160.236	-0.992	11.411
Audit Firm Size	0.235	0.000	0.424	0.000	1.000	1.253	2.569
Financial Year	0.647	1	0.478	0.000	1	-0.615	1.378
Company Age	14.518	14.000	7.951	0.000	44.000	0.500	3.005
Industry	0.382	0.000	0.486	0.000	1.000	0.485	1.235
Audit Opinion	0.127	0.000	0.333	0.000	1.000	2.246	6.044

Referred to the standard skewness the data is considered not to be normally distributed. As a common rule, the standard skewness of the data needs to be within the range of ±1.96 (Gujarati and Dawn 2009). It is observed that earning and audit opinion skewness exceeds the standard normality range of ±1.96 evidencing that the data is not normally distributed. On the other hand, with respect to the standard kurtosis, the data is also not normally distributed. The data is said to be normally distributed if the standard kurtosis fall in the range of ±3 (Gujarati and Dawn 2009). The standard kurtosis of earning, financial condition, company age and audit opinion are more than 3 indicating that the data is not normally distributed. The figures in table 8.4 indicate that the observations have some extreme figures, outliers, which need more attention during the analysis process and the interpretation of the results. As a result any hypotheses test related to the entire data needs to use a robust analysis.

8.4 Bivariate Analysis:

According to Babbie (2009), one of the simplest forms of quantitative analysis is bivariate analysis. It provides an estimate as to the level of association between the variables. In fact, it scrutinises for interdependence of the variables. In this study, correlation analysis is used to discover the degree of association between the dependent and independent variables. With the help of this, it is also possible to recognise the correlation among the independent variables. Moreover, it reveals whether the data needs to be modified or whether any independent variables need to be taken out. So, before approaching the regression analysis, this study carried out a correlation analysis to recognize whether all the independent variables are appropriate for the multiple regression analysis. As the data set are non normal, non- parametric Spearman correlation is suitable for the study. However, the study used both Spearman correlation and parametric Pearson correlation to check if there is any difference between the results.

The correlation between the different categories of timeliness of reporting and the determinants of timeliness using Spearman correlation coefficients is shown in the table 8.5. The Spearman correlations in table 8.5 show the significant association of audit lag, preliminary lag and reporting lag with the different determinants of timeliness of reporting. The significance association is identified using a confidence level of 99% and 95%.

Referred to the correlation coefficients, there is a significant positive relationship (at 1 % and 5% significance levels) of audit lag with earning and financial condition. This suggests the stronger association between these variables and audit lag. According to the results, companies with negative earning and a weak financial condition need more time to disclose their audit report. On the other hand, company age and audit opinion is identified as having a non-significant relationship with audit lag. The results indicate weak or no association of audit lag with the number of years operating in the market and types of audit opinion given. While, there is a significant negative association between firm size, audit firm size, financial year ending and industry categories with audit lag. This indicates big firms, companies audited by the Big 4 audit firm, companies whose financial year ends in busy season and financial companies need less time to publish their audit report.

In the case of preliminary audit lag the correlation coefficient represents a significant positive association with earning, financial condition and audit opinion. On the other hand, company age is identified to have a non-significant relationship with preliminary lag. While, there is a significant negative association between firm sizes, audit firm size, financial year ending and industry categories. Regarding total reporting lag, the correlation coefficient represents a significant positive association with earnings, financial condition and audit opinion. On the other hand, company age is identified as having a non-significant relationship with reporting lag. While, there is a significant negative association between firm sizes, audit firm size, financial year ending and industry categories with it.

Table 8.5: Spearman's Correlations of Dependent and Independent Variables.

Spearman's Correlations											
	Audit lag	**Preliminary Lag**	**Reporting lag**	**Firm Size**	**Earning**	**Financial Condition**	**Audit size**	**Financial Year**	**Company Age**	**Industry**	**Modified Opinion**
Audit lag	1.000										
Preliminary lag	.788**	1.000									
Reporting lag	.761**	.840**	1.000								
Firm Size	-.294**	-.216**	-.279**	1.000							
Earning	.135**	.111**	.122**	-.106**	1.000						
Financial Condition	.099**	.096**	.097**	.052	.457**	1.000					
Audit Firm Size	-.208**	-.198**	-.193**	.335**	-.102**	-.164**	1.000				
Financial Year	-.204**	-.135**	-.102**	.442**	-.159**	-.216**	.312**	1.000			
Company Age	.025	-.048	.035	.065	.006	-.086*	.159**	-.049	1.000		
Industry	-.195**	-.101**	-.105**	.472**	-.190**	-.026	.129**	.567**	-.291**	1.000	
Audit Opinion	.024	.100**	.084*	.012	.129**	.107**	.061	.146**	.003	.132**	1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 8.6: Pearson's Correlation of Dependent and Independent Variables.

Pearson's Correlations											
	Audit lag	**Preliminary Lag**	**Total lag**	**Firm Size**	**Earning**	**Financial Condition**	**Audit Size**	**Financial Year**	**Company Age**	**Industry**	**Modified Opinion**
Audit lag	1										
Preliminary lag	.742**	1									
Reporting lag	.749**	.936**	1								
Firm Size	-.252**	-.154**	-.191**	1							
Earning	.106**	.148**	.170**	-.112**	1						
Financial Condition	.117**	.128**	.113**	.054	.413**	1					
Audit Firm Size	-.154**	-.120**	-.144**	.316**	-.102**	-.195**	1				
Financial Year	-.092**	-..092**	-.080*	.454**	-.159**	-.195**	.312**	1			
Company Age	.044	.083*	.148**	.000	.042	-.105**	.172**	-.033	1		
Industry	-.165**	-.080*	-.110**	.535**	-.190**	.004	.129**	.555**	-.304**	1	
Audit Opinion	.022	.113**	.087*	.031	.129**	.099**	.061	.149**	.009	.132**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Regarding the different categories of the lag, there is a significant positive relationship between different categories of lag and earning and financial condition. On the other hand, the findings show that there is significant negative relationship between the different categories of lag with firm size, financial year and industry categories. There is a significant negative relationship between the different categories of lag with company age. From the table 8.5, it is clear that audit opinion is non-significant for audit lag but positively significant for preliminary lag and total reporting lag. That means that when the company received any modified opinion, other than standard unqualified audit opinion, it will take more time to issue the notice of and to arrange the AGM. It may that the management need more time to justify or explain their work. The results of this table agree with the research hypothesis regarding the association between timeliness of reporting and the different disclosure's determinants.

Table 8.6 shows the correlation between the different categories of lag and the determinants of timeliness of reporting using Pearson's correlation coefficients. The results of association using Pearson's correlation do not significantly differ from the results of association using Spearman's correlation: exceptions are that company age has significant relationship with preliminary lag and total reporting lag.

8.5 Multivariate Analysis:

In order to generalise the results of this study multivariate analysis is applied. Multivariate analysis can statistically estimate relationships between different variables, and correlate how important each one is to the final outcome and reveal where dependencies exist between them. Among multivariate analyses, regression analysis is one of the most common and widely used techniques in statistical analysis especially in disclosure literature (Cooke 1998). Gujarati and Dawn (2009) also suggest that under certain assumptions, the method of least squares has some very attractive statistical properties that have made it one of the most powerful and popular methods of regression analysis.

The following section starts with the regression diagnostics that represent the first step in choosing the relevant statistical method to analyse the collected data in this study. After that a discussion about selecting fixed effect and random effect is provided and finally the test of hypothesis, the association between the timeliness of reporting and its different determinants, is presented.

8.5.1 Regression Diagnostic:

In order to determine the appropriate statistical method, it is important to assess the impact of distribution problems, non linearity, in addition to the problems of outliers (Cooke 1998). Ordinarily, there are several methods to estimate regression coefficients (parameters). The current study checked linearity, independence and normality of error, homoscedasticity and multicollinearity to justify the regression.

8.5.1.1 Checking Linearity:

The association between the dependent and independent variables is supposed to be linear. It can be checked by the plot(s) of the residuals versus the independent variable values, and if linearity exists, there will be no obvious clustering of positive residuals or a clustering of negative residuals. Linearity can also be checked effortlessly through plotting each independent variable against the dependent variable and noting how well it fits the regression line representing their relationship. The graphs for checking linearity of each independent variable indicate that most of the independent variables in the model do not have an obvious linear relationship with the dependent variables (Appendix H).

It may be either because of the presence of outliers or unusual observations, or the linear model is not a good fit to describe the relation between the dependent variable and each independent variable. Therefore, it can be concluded that the linearity assumption is not satisfied. However, this result of non linearity is common in the majority of prior reporting studies (Cooke 1998). So, the study has to fit this non-linear data into appropriate regression.

8.5.1.2: Checking Normality:

Normality implies that errors (residuals) should be normally distributed. Technically, normality is necessary only for the hypothesis tests to be valid. Normality of residuals can be checked by two methods; graphical methods and numerical methods. Both of them; normality plots and normality tests; have been employed in the current study.

Graphical Method:

Two most common plots have been used in this study to check the normality- P-P plot (standardized normal probability plot) and Density estimate (plots the density of a variable and the normal density).

Figure 8.1: P-P Plots for Timeliness of Reporting

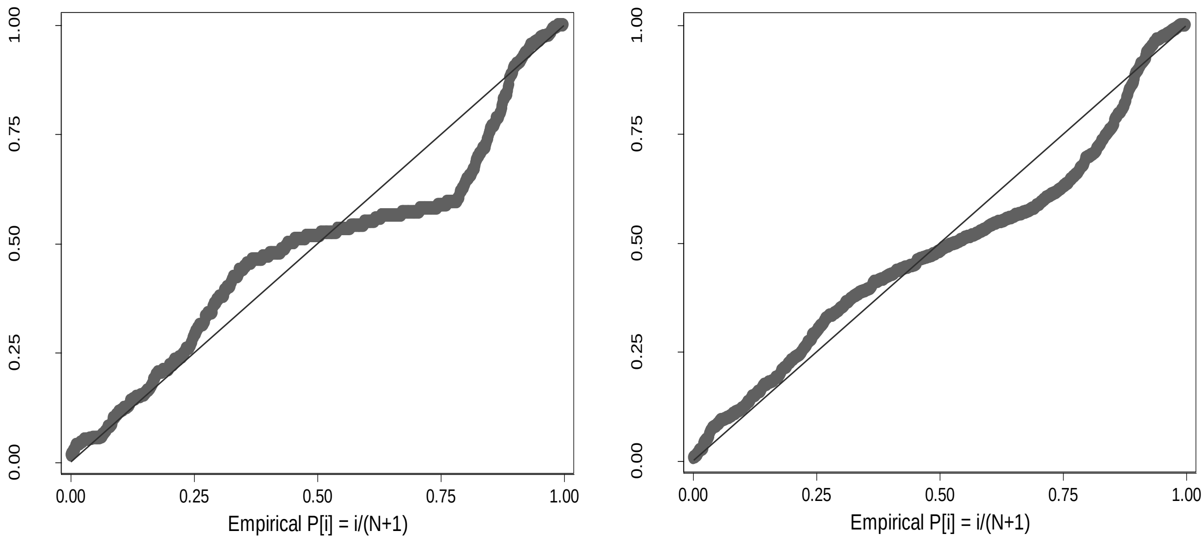
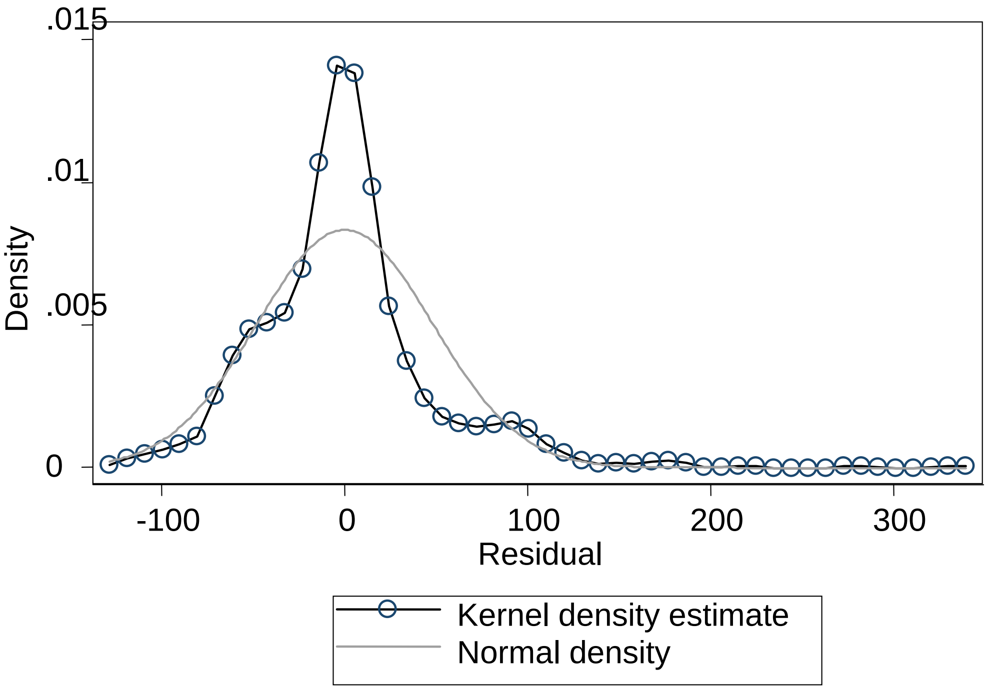


Figure 8.2: Kernel Density Estimate



Numerical Methods of Normality:

There are many numerical methods that can be used to test the assumption of normality: examples of these methods include- Kolmogorov - Smimov D statistic, skewness, and Shapiro - Wilk W statistic. Among them Shapiro - Wilk W statistic has been shown to have a good power against a wide range of non normal distribution. If the value of p is small, then the data may not be considered normally distributed.

Table 8.7: Shapiro-Wilk *W* tests for Normal Data

Variables	obs	W	V	Z	Prob>Z
Residual	861	0.92015	43.946	9.311	0.0000
Total Reporting Lag	861	0.89247	59.179	10.043	0.0000

The two methods of normality test, graphical and numerical method, suggest the same result. It is clear from the previous results that errors and dependent variables are not normally distributed and this is mainly related to the skewness of the distribution.

8.5.1.3 Checking Homoscedasticity of Residuals:

The homoscedasticity assumption means that variance of the error terms is constant for each observation. The current study employs two numerical methods for heteroscedasticity; and Breusch-Pagan / Cook-Weisberg and White's test; and Cameron & Trivedi's decomposition of IM test.

Table 8.8: Breusch-Pagan *I* Cook-Weisberg and White's tests

Test	Chi-square	Prob>chi^2
Breusch-Pagan / Cook-Weisberg	58.24	0.0000
White's	248.27	0.0000

Table 8.9: Cameron & Trivedi's Decomposition of IM test

Source	Chi-square	df	p
Heteroskedasticity	248.27	38	0.0000
Skewness	65.64	8	0.0000
Kurtosis	3.86	1	0.0495
Total	317.77	47	0.0000

The test results point out that errors have a non-constant variance (heteroscedastic), which indicate that the regression estimators will not have the minimum variance of all unbiased estimators, and also the P-values will be unreliable. In other words the current data suffer from heteroscedasticity.

8.5.1.4 Checking for Multicollinearity:

When multicollinearity exists, it will be complicated to differentiate the individual effects of explanatory variables and regression estimators may be biased (Murray 2006). It means there is a linear relationship between two or more independent variables and the estimates for a regression model cannot be uniquely computed. The two common ways to check for the presence of multicollinearity between independent variables are correlation coefficients and variance inflation factors (VIF) with tolerance values. These two ways have been widely used in disclosure literature. The current study employs both of them to check whether the explanatory variables or the model suffer from multicollinearity. Table 8.10 shows the variance inflation factor (VIF) and tolerance coefficients of each explanatory variable:

Table 8.10: Variable Inflation Factor of Dependent Variables

Variable	VIF	Tolerance(1/VIF)
Firm Size	1.646	.608
Earning	1.290	.775
Financial Condition	1.343	.745
Audit Firm Size	1.258	.795
Financial Year	1.694	.590
Company Age	1.207	.828
Industry	2.084	.480
Audit Opinion	1.071	.934
Mean of VIF	1.449	

As regards the Variance Inflation Factor (VIF), it is indicated that data is normally distributed if the VIF is less than 10(Gaur and Gaur 2009; Gujarati and Dawn 2009; Neter et al. 1983; Mendenhall and Sincich 1989). However, others suggest that the value of 5 can be used as a rule of thumb (Groebner et al. 2005). From the table, it is observed that the maximum VIF is 2.084 with means VIF is 1.449. Moreover, the lowest tolerance coefficient is 0.480. As suggested by Hair et al. (2011), the tolerance value of more than 0.20 may be used as a criterion for considering the data being free from the problem of multicollinearity. Therefore, based upon the rule of thumb, the results of VIF and tolerance coefficients indicate that there is no unacceptable level of multicollinearity in the current study.

Also, it is commonly agreed that the correlation matrix is a powerful tool for indicating the relationship between explanatory variables but there is no agreement among researchers regarding the cut off correlation percentage (Alsaeed 2006). While, some researchers use

0.8; e.g. Hair et al, (2011); Gujarati and Dawn (2009); others suggest using 0.7; e.g. Tabachnick and Fidell (1996). Tables 8.5 and 8.6 present the correlation coefficients of nonparametric and parametric tests; Spearman and Pearson coefficients respectively. It can be noticed from the tables that correlation coefficients confirm the results of VIF. According to Spearman correlations (table 8.5), the correlation coefficients of all independent variables are less or equal to 0.567. Although the study find correlation coefficient of 0.840 for preliminary lag, because preliminary lag is a dependent variable and also is a part of total reporting lag time, the correlation coefficient of preliminary lag with total reporting lag does not affect multicollinearity. Moreover, in the regression equation, these are not running in the same equation with total reporting lag. Thus, as there is no value more than 0.80 for comparing correlation between dependent and independent variable, it can be concluded that there is no potential multicollinearity problem in the current study.

The same can be concluded from Pearson's rank correlation (table 8.6) which indicates that the highest coefficient for all independent variables is 0.555. Similarly in Spearman, the study has a correlation coefficient of 0.936, for preliminary lag, in Pearson it is more than the standard value 0.80. However, as preliminary lag is a part of total reporting lag and also a dependent variable, it can be concluded that, based on results, there is no potential multicollinearity between dependent and independent variables of the current study.

8.5.2 Choosing Between Fixed and Random Effects:

When modeling group data, perhaps the first question the researcher faces is whether to account for unit effects and, if so, whether to employ so called fixed effects or random effects. Advice on this topic is plentiful (e.g., Greene 2008, Kennedy 2003, Frees 2004, Gelman 2005, Wilson and Butler 2007, Arceneaux and Nickerson 2009, Wooldridge 2010)**,** even if sometimes confusing and contradictory (Gelman and Hill 2007,p.245). However, the generally accepted way of choosing between fixed and random effects is running a Hausman test. The Hausman test checks a more efficient model against a less efficient but consistent model, to make sure that the more efficient model also gives consistent results (James and Marks 2012).

Table 8.11: **Hausman Test of Dependent and Explanatory Variables**

Dependent Variables	Hausman fixed random	
	chi2(8)	Prob>chi2(8)
Audit Lag	38.43	0.0000
Preliminary lag	28.68	0.0002
Total Reporting lag	24.90	0.0008

According to James and Marks (2012), in case of Hausman fixed random, if Prob>chi2 less than 0.05 then it is safe to use fixed effects. From the table 8.11, as Prob>chi2 is less than 0.05, the study used a fixed test. Fixed effects regression is the model to use when it is necessary to control omitted variables that differ between cases but are constant over time. It allows the use of changes in the variables over time to estimate the effects of the independent variables on the dependent variable.

8.5.3 Test of Hypotheses:

Regression diagnostics indicate that data set are non linear, non normal and there are heteroscedasticity in the current study. There are several reasons for this case of unequal variance, the most probable being outliers and skewness. Ordinary Least Squares (OLS) does not make use of the information contained in the unequal variability of the dependent variable since it assigns equal weight to each observation. Generalised Least Squares (GLS) is OLS on the transformed variables that satisfy the standard least-squares assumptions. As such, GLS minimises a weighted sum of residual squares not minimising an unweighted or equally weighted as in OLS (Gujarati and Dawn 2009).

The descriptive statistics also showed that the data is not normally distributed. Therefore, the data analysis needs to be applied using a nonparametric test that fits with this non-parametric data which is not normally distributed. The GLS is a parametric test, so to fit with the non parametric data it needs to be employed using robust standard error.

To benefit from the advantages of panel data analysis, the current study employs GLS using robust standard error. The results are shown in table 8.12. The panel regression is used to differentiate between the data of years 2004 to 2010. Therefore, seven groups are examined. As the study uses the same number of companies for each year, there are minimum, maximum and average numbers of observations for 123 companies each year.

The results of table 8.12 show that audit lag has significant positive association with financial condition, while it has significant negative association with firm size. The positive associations mean that audit lag time increases with the increase propensity of failure for the firm. On the other, the negative association means that audit lag time decreases for big size firms. Moreover, earning, audit firm size, financial year, company age, industry categories and audit opinion type has weak or non-significant association with audit lag time: this indicates that these factors have no power to increase or decrease audit lag time.

Table 8.12 reveals that preliminary lag has significant positive association with earning, financial condition, company age, industry classification and audit opinion. The positive associations mean that preliminary lag time increases when a company has negative earning, high propensity to fail, in old companies rather than new, financial companies rather than non financial manufacturing companies, and has modified opinion or other than standard unqualified audit opinion in its audit.. However, firm size has significant negative association with preliminary lag which indicate that big firms need less time for preliminary reporting. In addition, audit firm size has weak or non-significant association with preliminary lag time which indicates that audit firm size does not affect preliminary lag time.

Finally, the total reporting lag time data present in table 8.12 showed that reporting lag time has positive association with earning, financial condition, company's age and industry classification, while it has negative association with firm size and audit firm size. The positive associations mean that total reporting lag time increases when the company has negative earning, high propensity to fail, in old companies rather than new and financial companies rather than non financial manufacturing companies. On the other hand, the negative associations mean that reporting lag time decreases for big firms and firms which are audited by the Big 4 audit firm. Moreover, audit opinion type has weak or non-significant association with total reporting lag time which indicates audit opinion does not have any power to increase or decrease total reporting lag time.

Table 8.12: Fixed-effect GLS Regression using Robust Standard Error

Fixed-effects GLS regression			Number of observation = 861			
Group variable: year			Number of groups = 7			
Observation per group: Minimum =123; Average = 123 ; Maximum = 123						
Determinants	**Audit Lag**		**Preliminary Lag**		**Reporting Lag**	
	Coefficient	**t**	**Coefficient**	**t**	**Coefficient**	**t**
Firm Size	-10.827***	-7.91	-11.045***	-7.6	-12.978***	-10.98
Earning	0.958	0.43	11.881*	2.12	16.607**	2.65
Financial Condition	0.155**	2.73	0.174**	2.64	0.143*	2.27
Audit Firm Size	-4.863	-1.81	-6.554	-1.26	-9.932*	-2.38
Financial Year	1.014	1.75				
Company Age	0.034	0.39	0.478*	2.19	0.968***	4.73
Industry	-3.944	-1.01	5.496*	2.43	8.034*	2.64
Audit Opinion	1.395	0.42	14.539*	2.24	10.135	1.36
Constant	204.318	16.97	222.562	16.36	274.692	25.99
Adjusted R^2	0.0885		0.0703		0.1014	

The adjusted R Squared of the models explains how much of the changes in the dependent variable are explained by the changes in the independent variables. The adjusted R Squared is 0.1014 indicating that 10.14 % of the changes of the timeliness of reporting is explained by the changes its examined determinants. The R-squared is comparable to Reheul et al. (2013) 8%, Apadore and Noor (2013) 11%, Mohamad–Nor et al. (2010) 16%, Ahmad and Kamarudin (2003) 14%, Ahmed (2003), Bangladesh (1%), India (8%), Pakistan (23%) and Henderson and Kaplan (2000) 13%. This difference can be explained by different variables and the time period taken by different researchers.

As financial condition measurement (Zmijewski's model) includes financial leverage, the study also crosschecks the effects of financial condition for non financial firms and financial firms. Using fixed effects GLS regression for 532 non financial firms, the study found the same effects as observed in the total sample: financial condition is positively significant with audit lag, preliminary lag and total reporting lag which indicates that a high propensity to fail increases audit lag, preliminary lag and total reporting lag. On the other hand, using fixed effects GLS regression for 329 financial firms the study found the same effects for non financial firms and total firms. So, the findings indicate that financial condition is not case sensitive.

This part the study determines the effect of factors that are used in mandatory reporting and voluntary reporting. The main intention of this is to identify the association of factors with timeliness of reporting which have significant or non-significant relationships with mandatory reporting and voluntary reporting. As Spearman's correlation found that financial condition has multicollinearity with board size, it has been omitted in this part. These additional findings given in **appendix K** indicate that timeliness of reporting also has a significant positive relationship with market categories, age of the company and board size while it has a significant negative relationship with multinational parents, ownership structure and industry categories. However, timeliness of reporting also has a non-significant or weak association with profitability, liquidity, audit committee, independent directors and board structure.

These findings indicate that reporting lag also increases when the company is in Z categories, is an old company rather than new and there is an increase in the number of members on the board. Whereas, reporting lag time also decreases when the company has multinational parents and has more than 50% ownership by a particular group of sponsor. However, high profitability or low, highly liquid firm or not, number of audit committee member, percentage and number of independent director in the board and dual board structure do not affect timeliness of reporting in Bangladesh.

Firm Size: Consistent with H1, the study observes a statistically significant negative relationship of firm size with audit lag, preliminary lag and total reporting lag both in bivariate and multivariate analysis. The negative coefficient of reporting lag signifies that larger companies are more prompt reporters than smaller companies. These results could be because large companies in Bangladesh are affiliated with multinational corporations, and so they tend to have access to modern technology and are able to produce their accounts on a timely basis. Another explanation is that large companies tend to have strong internal control systems and efficient audit committees, and as result auditors spend less time in conducting compliance and substantive tests (Owusu-Ansah 2000). It may also be due to better resources and the use of a continuous audit (Ahmed 2003). This result is in line with prior studies of Jaggi and Tsui (1999); Afify (2009); Mohamad-Nor et al.

(2010); Hashim and Abdul Rahman (2011) and Apadore and Noor (2013). However, the results contrast with the evidence presented by Simnett et al. 1995; Abdulla 1996; Leventis and Weetman 2004; and Owusu-Ansah and Leventis 2006.

Earning: Consistent with H2, the results of GLS multivariate regression found that the sign of earnings has a significant positive relationship with preliminary lag and total reporting lag. This suggests that successful companies, those with good news, report more promptly relative to their counterparts with poor operating results, those with bad news. This result is not surprising given the tendency of stock markets to reward profitable companies more than they reward unprofitable ones. Profitable companies, therefore, have the incentive to signal the public about their superior performance by releasing their annual reports quickly (Owusu-Ansah, 2000). This result is in line with prior studies Owusu-Ansah (2000); Ahmed (2003); Ismail and Chandler (2004); and Afify (2009). Although the sign of earnings is not statistically significant in audit lag time, the positive coefficient indicates that negative earning also increase the audit lag time. However, the results disagree with the evidence presented by Annaert et al. (2002) who reported a non-significant association between reporting lag and either good or bad news and profit or loss.

Financial Condition: Consistent with H3, both bivariate and multivariate analysis found that financial condition is statistically significant with audit lag, preliminary lag and total reporting lag. This result indicates that a firm's financial condition is a determinant of reporting lag in Bangladesh. Results indicate that the higher the value of the index, the higher the propensity to fail and the weaker the financial condition, the greater will be the increase in reporting lag time. In other words, firms with a weak financial condition pose a greater audit risk, which in turn increases lag time to review the accounts (Jaggi and Tsui 1999). In the same way, taking a long time to review accounts provides a signal of weak financial condition to the market and at the same time increases information asymmetry. This finding is in line with Jaggi and Tsui (1999) who found that financial condition is highly significant in Hong Kong. However, the findings contradict results obtained by Ahmed (2003) who suggested that a firm’s financial condition is not a determinant of audit reporting lag in South Asia.

Audit Firm Size: Consistent with H4, audit firm size is negatively significant with total reporting lag both in bivariate and multivariate analysis indicating that companies audited by large audit firms take less time to report. This hypothesis suggests that larger audit firms are more efficient because they have better resources and access to modern technology due to their affiliation with international accounting firms and the experience gained through auditing more firms (Ahmed 2003).The statistical results support the theoretical argument of signalling theory. Companies may prefer to be audited by one of the big four audit firms to distinguish themselves. At the same time big audit firms complete audits more efficiently and in less time and provide a signal of its own quality and reputation. The findings of this study are in line with Ahmed (2003), Owusu and Leventis (2006) and Afify (2009). However, some studies found no difference in audit delay between big and non-big audit firms (Garsombke 1981; Carslaw and Kaplan 1991; Ng and Tai 1994; Al-Ajmi 2008; Affify 2009).

Financial Year End: Inconsistent with H5, the result of multivariate GLS regression found that financial year-end is non-significant with audit lag time. The study assumed that financial year- end will have an effect on timeliness because during the busy season more time is needed for scheduling and completing the audit of company accounts. Because of this, the current study only checks this hypothesis for audit lag time. This result is inconsistent with the arguments: it may be because audit firms employ more audit staff and pay overtime to complete audits on time or it may be the recent trend to employ auditors to undertake a continuous audit rather than a year-end audit. However, the results of bivariate analysis found significant negative association of financial year end with audit lag, preliminary lag and reporting lag.

Company Age: Inconsistent with the H6, the results of multivariate GLS regression found that company age has a positive significant association with preliminary lag and total reporting lag. However, the result of bivariate analysis found that company age has a non-significant relationship with audit lag, preliminary lag and reporting lag. This indicates that the number of years a company has been operating in the market positively affects the reporting lag**.** That means old companies need more time to disclose their annual reports. This hypothesis is supported by Owusu-Ansah (2000), who employs a two-stage least square regression model and found age as significant determinants of reporting lags, and Musa et al. (2013), who found age appears to exert a positive influence on reporting. However, Courtis (1976) did not find age as a significant attribute in his study. It also disproved that the older the firms, the more likely they are to have strong internal control procedures while younger firms are more prone to failure and have less experience with accounting controls (Hope and Langli 2008).

Industry: Consistent with the H7, multivariate GLS regression found that industry has a significant positive association with preliminary lag and total reporting lag. This indicates that non financial companies need more time to disclose their annual report. Interestingly, industry is non-significant for audit lag but provides a negative sign, which indicates financial companies need more time to publish their audit report. It may be because financial companies are large in size, and have high investment and capital, or it may be due to the regulatory differences between financial and non financial companies. In addition, it may due to financial companies having large number of stakeholders: management wishes to signal to them about their performance as early as possible. Moreover, the results of bivariate analysis indicate that industry has significant negative association with audit lag, preliminary lag and total reporting lag. This finding of GLS is in line with Courtis (1976), Ashton et al. (1989), Carslaw and Kaplan (1991) and Ng and Tai (1994).

Audit Opinion: Inconsistent with the H8, the results of multivariate GLS regression found that audit opinion is non-significant with audit lag and reporting lag, while significant with preliminary lag. However, the results of bivariate analysis found that audit opinion is significant with preliminary lag and reporting lag, while non-significant with audit lag. The findings of GLS provide evidence that companies with other than standard unqualified audit opinion do not influence auditors to perform more extensive audit work. However, when the company has a modified audit opinion, they generally need more time to announce their date of AGM. It may because management needs some extra time to develop arguments to justify the audit opinion. The findings of the study is supported in line with Soltani (2002); Reheul et al. (2013).

8.6 Sensitivity Analysis:

According to the Hausman test in table 8.11, the study has fixed effect GLS regression using robust standard error analysis is our main test. For sensitivity, the current study used random effect GLS regression using robust standard error. The main objective of the sensitivity analysis is to examine how sensitive the results and findings are towards changing the statistical test. Regarding the timeliness of reporting, the results of adjusted R square of GLS random were the same as the GLS fixed, indicating that GLS random regression has the same strength as the main GLS fixed regression. Also, GLS random regression showed the similar adjusted R square with GLS fixed for audit lag and preliminary lag.

Table: 8.13: Random-effects GLS Regression using Robust Standard Error

Random-effects GLS regression		Number of observation = 861			
Group variable: year		Number of groups = 7			
Observation per group: Minimum =123; Average = 123 ; Maximum = 123					
	Audit Lag		**Preliminary Lag**		**Reporting Lag**	
	Coefficient	Z	Coefficient	Z	Coefficient	Z
Firm Size	-9.272***	-7.03	-9.06***	-4.73	-11.12***	-6.75
Earning	1.831	0.89	13.08**	2.31	17.67***	2.8
Financial Condition	0.132**	2.29	0.14**	2.17	0.11*	1.79
Audit Firm Size	-6.543**	-2.38	-9.27*	-1.72	-12.55***	-2.74
Financial Year	0.854	1.48				
Company Age	0.247**	2.04	0.75***	3.26	1.22***	5.17
Industry	-3.586	-0.89	5.40**	2.43	7.92***	2.67
Audit Opinion	1.600	0.49	14.60**	2.28	10.22	1.4
Constant	188.14	15.77	200.14	10.05	253.80	15.52
Adjusted R^2	0.0931		0.0731		0.1040	

According to table 8.13, for both GLS random and GLS fixed regression, total reporting has significant positive association with earning, financial condition, company age and industry categories, while it has significant negative association with firm size and audit firm size. On the other hand, in both cases, there is a non-significant relationship of the total reporting lag with audit opinion. In respect of preliminary lag, the results of GLS random were similar to the results of GLS fixed for all dependent variables except audit firm size which is significant negatively associated in case of random but it is non-significant in fixed regression. In the same way in audit lag, audit firm size which is significant negative in the case of random but it is non-significant in fixed regression. Company age, which is significant positively in the case of random, is non-significant in fixed regression.

The results of the GLS random regression showed that the results of the GLS fixed data analysis are not sensitive to changing the type of the test. Hence, the selected GLS fixed analysis is considered to be well matched with the examined data. Moreover, the results of this sensitivity analysis confirm the reliability of the results and findings and support the generalisation of such results.

8.7 Conclusion:

One measure of financial reporting quality is the timeliness of reporting. Thus this study provides empirical evidence relating to reporting lag of 123 companies listed on Dhaka Stock Exchange from the year 2004 to 2010. The study also investigated the factors that influenced timely reporting of these companies. Three measures of timeliness (reporting lags) have been used. These are: the length of time between the reporting year-end and audit signature date, audit lag, date of notice of the AGM, preliminary lag, and the time of actually holding the AGM, total reporting lag. This study shows that it took about 110 days to complete the audit process. On average, shareholders in Bangladesh had waited about 170 days to discuss the performance of their companies with the management at the AGM.

Through regression analysis, the outcomes show that audit lag time is influenced by firm size and the financial condition of the company. While firm size, earning, financial condition, company age, industry categories and audit opinion affected how quickly a sample company announced its preliminary earnings. Moreover, firm size, earning, financial condition, audit firm size, company age and industry categories influenced the timeliness by which a sample company released its annual report to the AGM. The results of regression with robust standard errors indicate that firm size and financial condition are significant predictors of timely reporting in Bangladesh, regardless of how timeliness is measured.

The above findings and conclusions are subject to a number of limitations. This study did not consider all relevant factors that might affect timeliness in reporting which is why statistical analyses carried out in this study may suffer from omitted explanatory variables problems. The model's low explanatory power is an indication of such problems underlying the model development. Moreover, like most prior studies (Ahmed 2003; Karim et al. 2006; Apadore and Noor 2013; Reheul et al. 2013), this research adopts a single mechanism focus in that it investigates the time taken to release the published annual corporate reports. Other timely information sources such as publication of web-based annual reports are not considered. In recent years, some large firms in South Asia have begun releasing abridged annual reports through the web prior to holding the annual general meeting. These factors merit exploration in further research work on timeliness. Also, the functional form of models examining the relationship between timeliness and its determinants warrants further investigation. It is not likely that the relationship will always be linear. Future research studies may consider non-linear models. Finally, financial reporting lags have received a great deal of attention in for profit settings, the issue remains unexplored in non profit settings: this may provide an interesting avenue for future research.

Apart from its contribution to the literature on financial reporting and auditing, the current study adds to the recent and rapidly growing literature by examining the audit lag, preliminary lag and reporting lag using longitudinal analysis among the sample of listed companies in Bangladesh. Specifically, the study extend prior research on developing economies, by providing important empirical evidence, on the role of financial reporting and auditing in improving the quality of reporting. The findings also contradict Karim et al. (2006) and found that regulatory changes have not totally failed to bring about improvement in the quality of financial reporting in Bangladesh with respect to timeliness.

However, although the age-old problem of chronic publication delay in corporate reporting has been reduced by a few days, as the results show, it could not said to be satisfactory when the study compare with other developing countries or other South Asian countries. The regulatory provisions are partly responsible for these long reporting delays because the Companies Acts and listing rules allow listed companies nine months to hold the AGM of shareholders. Further, that 3.36% companies have failed to call the meeting within the prescribed time also reflects a lack of effectiveness of the regulatory authorities. The lack of timeliness creates uncertainty among investors, resulting in less than optimum investment. In particular, companies seeking overseas investment will miss out most since investors in developed countries are used to receiving information on a timely basis and will be reluctant to invest if uncertainty is created due to a lack of prompt information. Thus the Securities and Exchange authorities along with company legislators should look into this matter and consider improving monitoring mechanisms and aligning provisions consistent with developed countries.

Chapter Nine:
Conclusions and Recommendations

Chapter Nine: Conclusions and Recommendations

9.1 Introduction:

The purpose of this chapter is to summaries and discuss the analysis and findings of chapter six, seven and eight with respect to the research objectives stated in chapter one. In order to do so, the findings of the present research are related to previous literature in chapter three in order to identify the contribution of this thesis, with its focus on the quality of corporate reporting of the listed companies in Bangladesh. These findings are used to make academic conclusions as well as recommendations about the possible future development of reporting quality in Bangladesh. The limitations of the study and suggestions for further research in relation to quality of reporting are discussed at the end of this chapter.

9.2 Research Questions and Methodology:

The main objective of the study is to evaluate the quality of reporting through quality of mandatory reporting, quality of voluntary reporting and timeliness of reporting of the listed companies in Bangladesh. The period of study covers the seven years from 2004 to 2010. The final sample consists of 123 companies listed in the Dhaka Stock Exchange in Bangladesh with 861 firm year observations.

The current research argument is based on the agency theory, stakeholder theory and signalling theory. The objectivist ontological and positivist epistemological position fits with this research. Based on ontological and epistemological positions, a nomothetic methodology has been appropriate for the study. Referred to the research philosophy discussion, objectivism is the current research philosophical assumption. Therefore, a functionalist paradigm and deductive approach fits with the current research nature and philosophy. With reference to the objective ontological position of the current research, the quantitative research and survey technique was appropriate to test the developed hypotheses.

The first three questions mentioned in chapter one have been answered by applying a descriptive analysis of mandatory reporting, voluntary reporting, timeliness of reporting and its categories in the annual reports of the listed companies over the period of the study. The results of the checklist, the research instrument, have been analysed by different categories, in total and sector wise. To find out the answer to the fourth question, the study formulated a number of hypotheses based on agency theory, stakeholder theory and signalling theory, evidence from prior studies and on the basis of the legal framework of Bangladesh as discussed in chapter two. These hypotheses have been tested in the empirical section using GLS regression. For research question five, the results have been analysed year by year to outline how mandatory reporting, voluntary reporting and timeliness of reporting practices evolved over time, and to highlight any significant difference using the Kruskal-Wallis test and Wilcoxon Matched-pairs Signed Rank test.

9.3 Contribution to the Knowledge:

The thesis is expected to contribute to corporate reporting from different perspectives. The study used panel data set to determine the quality of reporting which is very rare in previous literature and this is the first in the context of Bangladesh. In order to determine the extent and trend of reporting, the current study used self-structured checklists and measured the performance in total, category wise and sector wise. The study also identifies three different sets of determinants for three models and examined the determinants not just for the total, but for every single category over the examined period of time. The mandatory corporate reporting data set is classified in two categories, the total data set named as combined data and non financial data to examine the effects of determinants. Moreover, in voluntary reporting, the current study applied weighted and unweighted method of disclosure index. The study determined the timeliness of reporting through calculating audit lag, preliminary lag and total reporting lag from annual reports over the period of time.

The thesis provides a comprehensive view of the previous studies that have discussed mandatory, voluntary and timeliness of reporting in developed and developing countries and especially in Bangladesh**.** It identifies different methods that are believed to contribute to the reduction of this existing gap in the literature relating to developing as well as developed countries.

The study highlights the importance of employing a wider theoretical framework; by encompassing several disclosure theories; to obtain a fuller explanation of mandatory reporting, voluntary reporting and timeliness. In addition it supports the notion of looking for theoretical explanations that are considered relevant to the topic being studied.

The study provides evidence that companies' reporting policies change over time along with the regulatory changes. There was a significant increase in the level of reporting over time among the seven years and before and after the introduction of the Corporate Governance Code.

The current study also provides evidence that explanatory variables vary among the categories of mandatory, voluntary and timeliness of reporting.

The study provides a checklist of mandatory and voluntary reporting items in the context of Bangladesh, which can be used by interested parties to rank companies or assess their reporting practices.

The results of the study can be generalised especially to other South Asian countries; emerging capital markets; countries which have voluntary reporting of social, environmental and sustainability information; countries which have similar institutional, legal and cultural factors; and with other panel data studies.

9.4 Findings and Results:

The study measures the quality of corporate financial reporting through mandatory reporting, voluntary reporting and timeliness of reporting. To determine the quality of reporting, the current study measures the extent of reporting as well as factors affecting such reporting practice. The examination of the extent and trend of mandatory disclosure level reveals that the total mandatory reporting level presents at 76.42% of the examined checklist items. These results also indicate that non-financial companies mean mandatory reporting is 75.03% which is considered a low level in comparison to the combined sample. The minimum score of mandatory reporting for all the years is still under 42.29%. On the other hand, the maximum score has not exceeded 93.85%. Moreover, the average mandatory reporting before the Corporate Governance Code was 72.86%, which is lower than the average after the Code which stands at 78.62%. It is also observed that highest mandatory reporting over the period of time was in the pharmaceuticals and chemical sectors followed by banks. On the other hand worst reporting pattern was found in the food & allied sector.

The investigation of the extent and trend of voluntary reporting level reveals that the total voluntary reporting score over the seven years is about 28.56% (for un-weighted) and

22.94% (weighted) while the minimum reporting index obtained is 7.22% for the year 2004 to 2007, and the maximum is 70.10% for the year 2009 and 2010. While there is a gradual increase in the average score after the Corporate Governance Code of 2006, this average suggests a low level of voluntary reporting. However, the increasing rate differs among the categories. Corporate social responsibility average reporting over the period is 17.03% whereas corporate sustainability average reporting over the period is 14.33%. However, corporate environmental reporting is the least focused area of all the categories of voluntary reporting: here average reporting over the period is 4.21%.The highest voluntary reporting over the period of time is found in banks followed by financial institutions. On the other hand the worst voluntary reporting pattern is found in services and real estate, and tannery sectors.

In case of timeliness, the extent and trend of reporting reveals that the average audit delay over the seven years is 110 days. This indicates that audit delay time is improving in Bangladesh which also applies to preliminary lag: around 128 days over the period of time. In the case of total reporting, the average lag is 170 days for the entire period with maximum mean delays observed in 2010 (551 days), 2007 (497 days), and 2008(449 days). However, 3.36% of the sample companies are above the maximum time period of 270 days; this indicates a low level of effectiveness of the regulations. The lowest average audit lag for the seven years is 69 days for financial institutions: the highest is 130 days for miscellaneous sectors. Total reporting lag is also highest in the miscellaneous sector and is lowest in the banking sector.

Finally, the study identified the determinants of reporting through bivariate and multivariate analysis. In this study, correlation analysis is used to discover the degree of association between the dependent and independent variables. The correlation coefficient of both the Spearman correlation and the Pearson correlation, showed that the level of mandatory disclosure has a significant positive relationship with firm size, firm profitability (ROE), firm profitability (ROA) audit firm size and multinational parents: there is a significant negative association between leverage and mandatory reporting. On the other hand, firm ownership is identified as having a non-significant relationship with mandatory reporting.

Regarding voluntary disclosure, there is a significant positive relationship between total voluntary reporting and firm size, firm liquidity, audit committee, independent director percentage, board structure and board size. On the other hand, the number of independent directors in the board is identified as having a non-significant relationship with voluntary reporting. However, there is a significant negative association between market category, company age, and voluntary reporting.

In the case of timeliness, there is a significant positive relationship of audit lag with earning and financial condition while, there is a significant negative association with firm size, audit firm size, financial year ending and industry categories. On the other hand, company age and audit opinion is identified as having a non-significant relationship with audit lag. In the case of preliminary audit lag the correlation coefficient represents a significant positive association with earning, financial condition and audit opinion. On the other hand, company age is identified to have a non-significant relationship with preliminary lag. There is a significant negative association between firm size, audit firm size, financial year ending and industry categories. Regarding total reporting lag, the correlation coefficient represents a significant positive association with earnings, financial condition and audit opinion. On the other hand, company age is identified as having a non-significant relationship with reporting lag. However, there is a significant negative association between firm sizes, audit firm size, financial year ending and industry categories.

In order to generalise the results of this study multivariate analysis was applied. The result of multivariate analysis, using GLS random effect with robust standard error, differed slightly from correlation analysis which revealed that the level of mandatory reporting has significant positive association with firm size, firm profitability (ROA), and firms' multinational parents, while it has a significant negative association with firm ownership. However, there is a non-significant relationship between mandatory reporting and firm profitability (ROE), audit firm and industry category.

Regarding voluntary reporting, using both weighted and unweighted data, total voluntary reporting has significant positive association with firm size, firm liquidity, percentage of independent directors and board structure, while it has significant negative association with market categories, company age and the number of independent directors. However, there is a non-significant relationship of voluntary reporting with audit committee, and board size.

In the case of timeliness, total reporting lag time has a significant positive association with earning, financial condition, company's age and industry classification, while it has a significant negative association with firm size and audit firm size. However, audit opinion type has a weak or non-significant association with total reporting lag time. Moreover, audit lag has significant positive association with financial condition, while it has negative association with firm size. In addition, earnings, audit firm size, financial year, company age, industry categories and audit opinion have weak or non-significant association with audit lag. In addition, preliminary lag has significant positive association with earnings, financial condition, company age, industry classification and audit opinion; whereas, firm size has significant negative association. However, audit firm size has weak or non-significant association with preliminary lag time.

9.5 Recommendations for Improving Reporting Quality:

Based on the current reporting practice and research outcomes, some recommendations are suggested in relation to corporate reporting and disclosure practices in general, and within the Bangladeshi context in particular. These recommendations include:

A new Company Act is supposed to be drafted and passed into law as part of broader reform to make the legal framework for corporate reporting more coherent and effective. It should draw on experience from the recent revision of the UK Companies Act, Acts in other countries, including Australia and India, as well as current SEC regulations. It also should make mandatory CSR, CFR and sustainability disclosure; it should make explicit, directors' duties and responsibilities and improve shareholders' rights; finally, it needs to revise the penalties for non compliance.

The Registrar of Joint Stock should undergo comprehensive reform to fulfill its legal obligations. The independence and professionalism of boards should be enhanced. Current efforts to improve accounting and auditing should be accelerated, and the disclosure of corporate control improved. A number of steps should be taken to raise audit quality. Regular reviews of audits performed for listed companies should be introduced. This may be through reasonable limits placed on auditors performing non-audit services for their clients; a Financial Reporting Commission should also be established.

For better protection of investors, provisions on related party transaction should be significantly reinforced. The potential operations in which related parties are involved should be disclosed before they take place, together with the opinion of the audit committee on the operation.

To improve the accounting profession's status and reporting practices, and to provide guidance for companies in disclosing financial and non financial information, professional bodies in Bangladesh and the BSEC should develop, adopt and update the standard for accounting and auditing which are suitable for Bangladesh. This standard should be in the Companies Act, SEC listing regulation or other legislation that organises businesses in Bangladesh and should include the requirement to ensure the quality of reporting by Bangladeshi companies.

It is time to make it mandatory for all companies to publish corporate social reporting, environmental reporting and sustainability reporting. In this regard BSEC can circulate guidelines which may be easily updated from time to time. Disclosure should also be improved for directors' and key executive remuneration, material risks and risk management policy, human resources and other material issues related to stakeholders.

More company information, especially the contents of annual reports, should be available to investors online. One website—either the BSEC, Registrar of Joint Stock, one or both of the exchanges, or a newly created website—should have extensive information for all listed companies. BSEC or stock exchanges should also keep listed companies full annual reports either as a hard or soft copy, year by year for future use. A government task force should be constituted comprising of members from the concerned government agencies and the corporate sector, the accountancy profession and regulatory bodies, to propose and effect necessary legislative amendments for harmonisation of legal, fiscal and financial reporting practices.

Corporate reporting and disclosure practices should be included in accounting education and accounting techniques. Accounting education in Bangladesh should take into consideration the country's economic, social and political objectives. Moreover, the accounting program of Bangladeshi universities and colleges should be adapted in a way that includes the different role of accounting, different categories of reporting and disclosure in Bangladesh. The academics in the accounting field who work in Bangladeshi universities and colleges can also affect the corporate reporting and disclosure practices in a country by carrying out research and entering into a dialogue with practitioners and official concerned.

Many Asian countries have adopted governance guidelines and codes of best practice. Like these countries, Bangladesh has a Corporate Governance Code but now the government must take initiatives to implement it by necessary changes in the Companies Act. Bangladesh Securities and Exchange Commission (BSEC) needs to be strengthened so that it can devise and enforce a code for good CG. Strict implementation of accounting and auditing standards are very important. Government should introduce measures, or enhance existing measures, to provide non-controlling shareholders with adequate protection from exploitation by controlling shareholders through strengthening disclosure requirements, ensuring that regulators have the capacity to monitor companies and clarifying and strengthening the fiduciary duty of directors to act in the interest of the company and all of its shareholders.

Public and private sector institutions should continue to raise awareness among companies, directors, shareholders and other interested parties of the value of good corporate reporting. Bangladesh has made little progress in raising awareness of the value of good corporate reporting. To achieving the desired framework in Bangladesh, requires not only a strong national commitment to corporate reporting, but one that is also broad based. Professional accountancy bodies like the ICAB should organize seminars and conferences on IAS/IFRS and ISA on a regular basis, for developing user and market awareness and familiarisation with the practical implementation aspects of these highly conceptualized standards.

In Bangladesh, quality of financial reporting needs to be improved. This requires a robust regulatory regime and effective enforcement of the accounting and auditing standards. Bangladesh has taken important steps to improve corporate governance over the past few years. However, fully tapping the potential of capital markets and professionalising boards and management will require continued and sustained reform.

9.6 Limitations of the Study:

Like all studies, the current study has some limitations that need to be acknowledged and addressed when assessing the findings of the study. This section summarises these limitations.

The study focuses on the mandatory reporting, voluntary reporting and timeliness of reporting practices in corporate annual reports. But, corporate disclosure can be done through other media such as corporate website and press release. Therefore the findings of this study must be interpreted in light of this limitation. One of the important justifications of choosing the annual report in the current study is related to the time horizon of the study. In Bangladesh website reporting is very limited and only in few cases is it possible to find previous years' data. The study is considered to be longitudinal since it seeks to assess the reporting over the years: this is only possible through annual reports.

The study developed a self constructed checklist to measure the extent of mandatory and voluntary reporting using the disclosure index technique. While a number of steps have been followed to lessen subjectivity in selecting information items to be included in the checklist (see section 5.6.1.1), it cannot be argued that the study is free from subjectivity. Further more, the study covers only seven years, and any conclusions drawn regarding long term trends must be viewed with caution. However, this period of time is better than most other studies, which tend to address only a single period.

In this study an unweighted index has been used for mandatory reporting which implies equal importance of the selected information items. However, an unweighted approach seems to be appropriate and justified in this study for mandatory reporting as the study focuses on the annual report which has a general purpose, addresses all stakeholders not a specific type of information or user groups, and covers more than one year.

On the basis of theory and the literature review, the study uses three different set of determinant of company characteristics, board characteristics and corporate governance characteristics for three models. However, other variables have been excluded from the current study due to data availability, for example, the qualification of accountants.

The results and findings are based on one category of content analysis, dichotomous approach (0 and 1). Therefore, the same study could be applied using other types of content analysis, number of pages, number of sentences and number of words. However, a dichotomous approach is more reliable and most of the previous study used this approach, which encourages the current study to use it.

9.7 Scope of Future Research:

The findings and the limitations of the study recommend some research opportunities related to disclosure literature. The following paragraphs present some scope for future research.

Future research can investigate by adding more variables such as family members and foreign members of the board, cross listing, block holder ownerships, accountant quality, and cross directorship. Moreover, the relationship between voluntary and mandatory disclosure could be addressed.

Future research can consider other media of reporting such as corporate web site advertising, promotional leaflets, press releases, discussions and meetings with financial analysts and journalists, and separate reports as well. In this regard the relationship of reporting between corporate annual reports and corporate websites would be examined. It may be interesting to investigate if both media have the same explanatory variables.

A comparative study with developed and other developing countries in the South Asian region would be fruitful. Moreover, similar studies might be carried out in the context of other developing countries in order to identify both similarities and differences when compared with this study. It would be interesting if the study could compare between listed and non listed companies.

A comprehensive longitudinal investigation over a longer time period might establish the trends of quality of reporting in Bangladesh using TOBIT, LOGIT and other data analysis. At the very least, though, future research can use the findings of this study as a baseline in order to judge trends.

9.8 Conclusion:

This chapter has discussed the findings of this study with respect to the research aims. Overall, the thesis has made a contribution in the area of corporate reporting and disclosure especially in mandatory reporting, voluntary reporting and the timeliness of reporting. The work has achieved its aims, has made policy recommendations and has identified issues for future research in the area.

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Appendices

Appendix A: Mandatory Disclosure Checklist Items and their Source(s)

S.N.	General Disclosures	Source(s)
1	A brief description of the nature and principal activities of the company and its subsidiaries	BAS 1(26); CA 1994, U/S 185, Schedule XI(I)
2	The country of incorporation and the address of the registered office	BAS 1
3	Legal form of the enterprise.	BAS 1
4	Significant change in the nature of the entity's operations	BAS 1; CG Code 2006
5	Names of the top employees, lines of authority and their remuneration	CA 1994, U/S 36; SEC 1987, U/S 7
6	Audited financial statements (balance sheet and profit and loss account)	CA 1994, U/S 183(3)
7	Auditor's report.	CA 1994, U/S 183(3)
8	Report of the chairman or CEO	CA 1994, U/S 184
9	Balance Sheet	CA 1994, U/S 183(1); SEC 1987, U/S 87(5); BAS 1
10	Profit and Loss Account	CA 1994, U/S 183(1); SEC 1987, U/S 87(5);BAS 1
11	Statement of cash flows	SEC 1987, U/S 12; BAS 1
12	Retained Earnings Statement	CA 1994, U/S 185, Schedule XI(I); BAS 1
13	Gross profit for the year.	CA 1994, U/S 185, Schedule XI(II)
14	Net profit for the year.	CA 1994, U/S 185, Schedule XI(II)
15	Names and size of holdings of largest shareholders	CA 1994, U/S 185, Schedule X
16	Significant changes in the company's or its subsidiaries' fixed assets	SEC 1987, U/S 12 Schedule (II)
17	Fundamental accounting assumptions.	CA 1994, U/S 185, Schedule XI(I)
18	The date when the financial statements were authorized for issue and who gave that	BAS 10; SEC 1987, U/S 12 Schedule (II)

	authorization	
19	Post-balance-sheet events	SEC 1987, U/S 12(II)
20	Discussion of major events which will influence next year’s results	BAS 1
21	A significant acquisition or disposal	BAS 1; SEC 1996, U/S 36(2)
22	Forecast of company performance	BAS 1
23	Review of its financial statements	BAS 1
24	Comparative information shall be disclosed in respect of the previous period	BAS 1; SEC 1987, U/S 12 Schedule (II)
25	Comparative balance sheet for two years	SEC 1987, U/S 12 Schedule (II)
26	Method used to account for foreign currency transactions.	BAS 21; SEC 1987, U/S 12 Schedule (II)
27	The period covered by the financial statements;	BAS 1, CA 1994, U/S 183(4)
	Director’s Report	
28	The state of the company’s affairs	CA 1994, U/S 184(1)
29	Amount proposed to carry to any reserve	CA 1994, U/S 184(1)
30	Recommended dividend	CA 1994, U/S 184(1); CG Code 2006
31	Material changes and commitment affecting the financial position of the company	CA 1994, U/S 184(1)
32	Changes in the nature of the company’s business during the year	CA 1994, U/S 184(2)
33	Changes in the company’s subsidiaries or in the nature of their business	CA 1994, U/S 184(2)
34	Changes in the classes of business in which the company has an interest	CA 1994, U/S 184(2)
35	Explanation and information of every reservation, qualification, or adverse remark in the auditor’s report	CA 1994, U/S 184(3)
36	Number of Board Meeting and attendance	CG Code 2006

	Balance Sheet Items	
37	The total carrying amount of inventories	BAS 2; CA 1994, U/S 185, Schedule XI(I);
38	Classification of Inventories	BAS 1
39	Inventory valuation method.	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
40	Inventories carried at net-realizable value	CA 1994, U/S 185, Schedule XI(I);
41	Cash and cash equivalents	BAS 1; SEC 1987, U/S 12 Schedule (II)
42	The components of cash and cash equivalents should be disclosed and a reconciliation of the amounts.	SEC 1987, U/S 12 Schedule (II)
43	Trade and other receivables	BAS 1; SEC 1987, U/S 12 Schedule (II); CA 1994, U/S 185, Schedule XI(I)
44	Receivables analyzed by trade customers, members of the group, and related parties.	BAS 1
45	Additions/disposals/acquisitions/impairment losses of carrying amount of inventory	BAS 2
46	Advances and loans to staff or directors	CA 1994, U/S 185, Schedule XI(I)
47	Advances recoverable in cash or in kind or for value to be received.	CA 1994, U/S 185, Schedule XI(I)
48	Interest accrued on investment	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
49	Provision for provident fund scheme	CA 1994, U/S 185, Schedule XI(I)
50	Secured short-term and long term borrowings	CA 1994, U/S 185, Schedule XI(I)
51	Unsecured short-term and long term borrowings	CA 1994, U/S 185, Schedule XI(I)
52	Unpaid dividends	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12

		Schedule (II)
53	Provision for doubtful debts	BAS 1, SEC 1987, U/S 12 Schedule (II)
54	Trade and other payables	BAS 1
55	A brief description of the nature and amount of the contingent assets/liabilities	BAS 18; CA 1994, U/S 185, Schedule XI(I)
56	Provision for taxation	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
57	Provision for proposed dividends	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
58	Provision for gratuity	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
59	Provision for contingencies	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
60	Provision for insurance, pension, and similar staff-benefit schemes	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
61	Provision for liabilities	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
62	Deferred tax liabilities	BAS 1
63	Classification of assets and liabilities	BAS 1; CA 1994, U/S 185, Schedule XI(I)
64	Aggregate value of intangible assets	BAS 38; SEC 1987, U/S 12 Schedule (II)
65	Breakup of intangible assets	BAS 38; SEC 1987, U/S 12 Schedule (II)
66	Aggregate amount of investments	BAS 1; CA 1994, U/S 185, Schedule XI(I)

67	Investment in subsidiary companies/associated companies/shares in other group/government securities	CA 1994, U/S 185, Schedule XI(I); SEC 1996, U/S 37
68	Amount of accumulated depreciation on property, plant and equipment at the end of the period.	CA 1994, U/S 185, Schedule XI(I)
69	Current liabilities and its composition.	CA 1994, U/S 185, Schedule XI(I)
70	Total fixed assets and its composition.	CA 1994, U/S 185, Schedule XI(I)
71	Carrying amount of property plant and equipment individually and total	BAS 16
72	Measurement bases used for determining the gross carrying amount of property, plant, and equipment	BAS 16
73	Amount of the leasehold property	BAS 17
74	Expenditure upon development of property	BAS 16
75	Information about patents, trade marks, and designs	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
76	Original cost of each fixed asset.	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
77	Additions to fixed assets during the year.	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
78	Current assets and its composition.	CA 1994, U/S 185, Schedule XI(I)
79	Details of advance and prepayments made.	CA 1994, U/S 185, Schedule XI(I);
80	Details of bank overdraft (amount and bank).	CA 1994, U/S 185, Schedule XI(I);
81	Terms of repayment of long term debt.	SEC 1987, U/S 12 Schedule (II)

82	The rate of interest on long term loan	SEC 1987, U/S 12 Schedule (II)
83	The amount of commitments for the acquisition of property, plant and equipment	BAS 16, SEC 1987, U/S 12 Schedule (II)
84	The amount of goodwill/negative goodwill arising on the acquisition	IFRS 3; CA 1994, U/S 185, Schedule XI(I)
85	The gross amount of depreciable assets and the related accumulated depreciation	CA 1994, U/S 185, Schedule XI(I)
86	Non-current interest-bearing liabilities	CA 1994, U/S 185, Schedule XI(I)
87	Long-term liabilities: secured loans, unsecured loans, inter-company loans, and loans from associated companies	SEC 1987, U/S 12 Schedule (II)
88	The amount of borrowing costs capitalized during the period	BAS 23
89	The capitalized rate used to determine the amount of borrowing costs eligible for capitalization	BAS 23
90	Share capital: authorized, issued, subscribed, called up and paid up	BAS 1; CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
91	Assets acquired on hire purchase	CA 1994, U/S 185, Schedule XI(I)
92	Debts due to associated companies	CA 1994, U/S 185, Schedule XI(I)
93	maximum of debt due by directors or officers of the company	CA 1994, U/S 185, Schedule XI(I); SEC 1987, U/S 12 Schedule (II)
94	Debts due in less than 6 months and due in months or more	CA 1994, U/S 185, Schedule XI(I)
95	Restricted cash (Cash which is not available for use)	CA 1994, U/S 185, Schedule XI(I)
	Income Statement	
96	Sales/revenue, aggregate amount	BAS 1; CA 1994, U/S 185, Schedule XI(II)
97	Amount of revenue in each significant category of revenue	CA 1994, U/S 185, Schedule XI(II)

98	The cost of inventories sold during the period.	CA 1994, U/S 185, Schedule XI(II)
99	Quantities of sales for each class of goods	CA 1994, U/S 185, Schedule XI(II)
100	Raw materials consumed	CA 1994, U/S 185, Schedule XI(II)
101	Finance costs	BAS 1
102	Share of results of jointly controlled entity and associates	BAS 1
103	Profit or loss from ordinary activities	CA 1994, U/S 185, Schedule XI(II)
104	Any exceptional or unusual credits or charges	CA 1994, U/S 185, Schedule XI(II)
105	Profit or loss arising from sale or disposal of fixed assets	SEC 1987, U/S 12 Schedule (II)
106	Break up of income from investments	CA 1994, U/S 185, Schedule XI(II); SEC 1987, U/S 12 Schedule (II)
107	Remuneration paid to directors.	CA 1994, U/S 185, Schedule XI(II); SEC 1987, U/S 12 Schedule (II)
108	Remuneration paid to Managing Director.	CA 1994, U/S 185, Schedule XI(II); SEC 1987, U/S 12 Schedule (II)
109	Amount paid to auditors for audit services	CA 1994, U/S 185, Schedule XI(II); SEC 1987, U/S 12 Schedule (II)
110	Recognition and depreciation/amortization of tangible assets	BAS 1
111	Recognition and depreciation/amortization of intangible assets	B AS 1
112	The amount adjusted to net profit or loss due to change in accounting policy	CA 1994, U/S 185, Schedule XI(II)
113	The amount of the correction recognized in net profit or loss for the current period	CA 1994, U/S 185, Schedule XI(II)
114	The tax expense (income) related to profit or loss from ordinary activities	BAS 1; CA 1994, U/S 185, Schedule XI(II); BAS 12

115	The major components of tax expense (income) should be disclosed separately	BAS 12
116	Tax expense relating to extraordinary items	BAS 12
117	Brokerage and discount on sales other than the usual trade discounts	CA 1994, U/S 185, Schedule XI(II)
118	Amount set aside or provisions made for meeting specific liability, contingency, or commitment	CA 1994, U/S 185, Schedule XI(II)
119	Workmen and staff welfare expenses	CA 1994, U/S 185, Schedule XI(II)
120	Separate disclosure of staff remuneration not less than Tk. 36,000	CA 1994, U/S 185, Schedule XI(II)
121	Commission or other remuneration payable separately to a managing agent or his associate	CA 1994, U/S 185, Schedule XI(II)
122	Disclosure of pension costs	CA 1994, U/S 185, Schedule XI(II)
123	Payment for gratuity	CA 1994, U/S 185, Schedule XI(II)
124	Expenditure in foreign currency on account for royalty, know-how professional consultation fees, interest, and other matters	CA 1994, U/S 185, Schedule XI(II)
125	Value of percentage of all imported and local raw materials, spare parts, and components consumed	CA 1994, U/S 185, Schedule XI(II)
126	Advertisement expenditure	SEC 1987, U/S 12 Schedule (II)
127	Social security costs	SEC 1987, U/S 12 Schedule (II)
128	Pension costs contribution plan	CA 1994, U/S 185, Schedule XI(II)
129	Contributions in excess of Tk. 50,000 made to government approved charities or other charities	SEC 1996, U/S 37
130	Basic and Diluted earnings per share	BAS 33

131	Amount of depreciation for the current year.	CA 1994, U/S 185, Schedule XI(II)
132	Interest on loans paid during the year.	CA 1994, U/S 185, Schedule XI(II); SEC 1987, U/S 12 Schedule (II)
133	Amount of foreign exchange earned on FOB basis	CA 1994, U/S 185, Schedule XI(II)
134	Spent in foreign exchange to procure management advisory services	CA 1994, U/S 185, Schedule XI(II)
135	Value of imports on CIF basis	CA 1994, U/S 185, Schedule XI(II)
	Cash Flow Statement	
136	Presents its cash flows from operating, investing and financing activities	BAS 7; SEC 1987, U/S 12 Schedule (II)
137	Cash flows arising from interest and dividends received and paid	BAS 7; SEC 1987, U/S 12 Schedule (II)
138	Cash flows arising from taxes on income.	BAS 7; SEC 1987, U/S 12 Schedule (II)
139	The aggregate cash flows arising from acquisitions and from disposals of subsidiaries	BAS 7; SEC 1987, U/S 12 Schedule (II)
140	Disclose the components of cash and cash equivalents	BAS 7; SEC 1987, U/S 12 Schedule (II)
141	Present a reconciliation of the amounts for cash and cash equivalents in its cash flow statement with the equivalent items reported in the B/S.	BAS 7; SEC 1987, U/S 12 Schedule (II)
	Structure of notes	
142	Basis of preparation of the financial statements and the accounting policies used	BAS 1 ; CA 1994, U/S 185, Schedule XI(I)
143	Mode of valuation of fixed assets.	SEC 1987, U/S 12 Schedule (II)
144	A summary of significant accounting policies	BAS 1 , CA 1994, U/S 185, Schedule XI(I)
145	The reason and nature of a change in an accounting policy and estimates	BAS 8 , CA 1994, U/S 185, Schedule XI(I)
146	Statement of compliance with approved IASs	BAS 1, CG Code 2006
147	Basis of consolidation	BAS 27

148	Accounting policies adopted in measuring inventories, including cost formula used.	BAS 2
149	The accounting policies adopted for the recognition of revenues	BAS 18
150	Disclose firm policy for foreign currency risk management	BAS 21
151	Method of valuing goodwill	SEC 1987, U/S 12 Schedule (II)
152	The methods used to account for investments in associates	SEC 1987, U/S 12 Schedule (II)
153	Accounting policy for borrowing costs	BAS 23
154	Accounting policy for actuarial gains and losses	BAS 19
155	Method of depreciation.	BAS 16; CA 1994, U/S 185, Schedule XI(I)
156	Treatment of retirement benefits	BAS 19
157	Treatment of preliminary expenses	SEC 1987, U/S 12 Schedule (II)
158	Methods of advance payments	SEC 1987, U/S 12 Schedule (II)
159	Purchase policy	SEC 1987, U/S 12 Schedule (II)
160	Sales policy	SEC 1987, U/S 12 Schedule (II)
161	Deferred taxation system	BAS 12
162	Conversion or translation of foreign currencies	BAS 21
163	Treatment of contingent liabilities	CA 1994, U/S 185, Schedule XI(I)
164	Revaluation: basis; firm's policy and the effective date	CA 1994, U/S 185, Schedule XI(II), SEC 1987, U/S 12 Schedule (II)
165	A description of the nature and purpose of each reserve	BAS 1
166	A description of the investment policies.	BAS 26; SEC 1987, U/S 12 Schedule (II)
	Others	

167	Number of shares hold by directors and members	CG Code 2006; CA 1994, U/S 36
168	A reconciliation of the number of shares outstanding at the beginning and at the end of the year	BAS 1
169	Par value per share, or that the share have no par value	BAS 1
170	The rights, preferences, and restrictions for each class of share including restrictions on dividends and the repayment of capital	BAS 1; SEC 1987, U/S 12 Schedule (II)
171	Shares in the enterprise held by the enterprise itself or by subsidiaries or associates of the enterprise	BAS 1; SEC 1987, U/S 12 Schedule (II)
172	If any shares or debentures have been issued, the number, class, and consideration received and the reason for the issue	SEC 1996, U/S 37
173	Information regarding the licensed capacity, installed capacity, and actual production	CA 1994, U/S 185, Schedule XI(II); SEC 1987, U/S 12 Schedule (II)
174	Management structure and its system of internal financial reporting to the board of directors	CG Code 2006
175	Material changes and commitments, if any, that occurred after balance sheet date	BAS 10; SEC 1996; U/S 37
176	Number of nonresident shareholders	SEC 1987
177	Reconciliation between the carrying amount of each class of contributed equity and reserves at the beginning and end of period.	BAS 1
178	A distribution schedule of each class of equity security	SEC 1996; U/S 37
179	Information concerning provident fund/ gratuity fund/ superannuation benefits.	BAS 19, CA 1994, U/S 185, Schedule XI(II); SEC 1987, U/S 12 Schedule (II).

Appendix B: **Voluntary Disclosure Checklist Items and their Source(s)**

S.N.	**A. General Corporate Information**	**Examples of disclosure studies/Sources**
1	Corporate vision/mission /goal/objective	ACCA (2005), Sobhani et al. (2012).
2	Brief history of the company	Gray et al (1995), Chau and Gray (2002), Barako et al. (2006), Hossain (2008).
3	Corporate structure / chart	Hossain et al. (1994), Meek et al. (1995); Chau and Gray (2002); Eng and Mak (2003); Leventis and Weetman (2004), Barako et al. (2006), Patelli and Prencipe (2007), Lim et al. (2007) and Abdel- Fatah (2008).
4	Description of major goods/services produced	Hossain et al. (1994), Suwaidan (1997), Ho and Wang (2001), Eng and Mak (2003), Leventis and Weetman (2004), Ghazali and Weetman (2006), Barako et al. (2006), Abdel- Fatah (2008).
5	Information about company listed.	Rouf (2011).
6	Company's contribution to the national economy	GRI (2006), Barako et al. (2006), Sobhani et al.(2012).
7	Review of current financial results and discussion of major factors underlying performance.	GRI (2006).
	B. Corporate Strategic Information	
8	Statement of corporate strategy and objectives – general and social	Chow and Wong - Boren (1987), Ferguson et al.(2002), Chau and Gray (2002), Haniffa and Cooke (2002), Eng and Mak (2003), Leventis and Wetman (2004), Ghazali and Weetman (2006), Barako et al. (2006), Abdel- Fatah (2008).
9	Impact of strategy on current performance	Gray et al. (1995), Hossain (2008).
10	Market share analysis	Haniffa and Cooke (2002), Leventis and Weetman (2004), Barako et al.(2006), Abdel-Fatah (2008)

11	Corporate policy and strategy for sustainable development	ACCA (2005), Sobhani et al. (2012).
12	Managing risks and uncertainties	Hossain et al. (1994), Haniffa and Cooke (2002), Ghazali and Weetman (2006), Tsamenyi et al. (2007), Abdel- Fatah (2008).
	C. Corporate Governance/Directors Information	
13	Name of principal shareholders	Leventis and Weetman (2004), ACCA (2005), Hassan et al. (2006), Abdel-Fatah (2008).
14	List of Directors	Hossain et al. (1994), Barako et al. (2006), Hassan et al. (2006), GRI (2006), UNEP-FI (2006), Tsamenyi et al. (2007), Abdel Fatah(2008).
15	Outside affiliations of the directors	Hossain (2008).
16	Educational qualifications and experience of the directors	Hossain et al. (1994), Haniffa and Cooke (2002), Barako et al. (2006), Tsamenyi et al. (2007), Abdel Fatah (2008).
17	Position or office held by executive directors	GRI (2006) , Sobhani et al.(2012).
18	Other directorship held by executive directors	Gray et al. (1995).
19	Compensation policy of the directors	Leventis and Weetman (2004), Tsamenyi et al. (2007), Abdel- Fatah (2008).
	D. Financial Information	
20	Sources(country/region) of revenue and their amount	GRI (2006) ; Rouf (2011)
21	Dividend payout policy	Meek et al. (1995), Chau and Gray (2002), Leventis and Weetman (2004),Abdel-Fatah(2008), Sobhani et al.(2012)
22	Retained earnings/Owners equity policy	GRI (2006).
23	Foreign currency information/ policies	Rouf(2011)

24	Intangible assets break-down and its amortization	Rouf(2011)
	E. Financial Review Information	
25	Liquidity ratios	Cooke (1989), Hossain et al. (1994), Suwaidan (1997), Ho and Wang (2001), Ferguson et al. (2002), Eng and Mak (2003), Ghazali and Weetman (2006), Barako et al. (2006), Hassan et al. (2006), Tsamenyi et al. (2007), Abdel- Fatah (2008).
26	Debt / equity ratio	Cooke (1989), Hossain et al. (1994), Suwaidan (1997), Ho and Wang (2001), Ferguson et al. (2002), Eng and Mak (2003), Ghazali and Weetman (2006), Barako et al. (2006), Hassan et al. (2006), Tsamenyi et al. (2007), Abdel- Fatah (2008).
27	Return on capital employed	Cooke (1989), Hossain et al. (1994), Suwaidan (1997), Ho and Wang (2001), Ferguson et al. (2002), Eng and Mak (2003), Ghazali and Weetman (2006), Barako et al. (2006), Hassan et al. (2006), Tsamenyi et al. (2007), Abdel- Fatah (2008).
28	Return on shareholders‘ equity	Cooke (1989), Hossain et al. (1994), Suwaidan (1997), Ho and Wang (2001), Ferguson et al. (2002), Eng and Mak (2003), Ghazali and Weetman (2006), Barako et al. (2006), Hassan et al. (2006), Tsamenyi et al. (2007), Abdel- Fatah (2008).
29	Return on assets	Cooke (1989), Hossain et al. (1994), Suwaidan (1997), Ho and Wang (2001), Ferguson et al. (2002), Eng and Mak (2003), Ghazali and Weetman (2006), Barako et al. (2006), Hassan et al. (2006), Tsamenyi et al. (2007), Abdel- Fatah (2008).
30	Net tangible assets per share	Cooke (1989), Hossain et al. (1994), Suwaidan (1997), Ho and Wang (2001), Ferguson et al. (2002), Eng and Mak (2003), Ghazali and Weetman (2006), Barako et al. (2006), Hassan et al. (2006), Tsamenyi et al. (2007), Abdel- Fatah (2008).
31	Dividend per ordinary share for the period	Rouf (2011), Hassan et al. (2006).

32	Effects of inflation on future operations- qualitative	Gray et al. (1995).
33	Comparative financial growth with previous years	Hossain et al. (1994), Chau and Gray (2002), Haniffa and Cooke (2002), Eng and Mak (2003), Leventis and Weetman (2004), Ghazali and Weetman (2006), Tsamenyi et al (2007), Abdel- Fatah (2008).
34	Infrastructural and institutional development	GRI (2006), Sobhani et al.(2012).
35	Graphic presentation of non- financial information	Leventis and Weetman (2004), Abdel- Fatah (2008), Rouf (2011).
36	Graphic presentation of financial information	Leventis and Weetman (2004), Abdel- Fatah (2008), Rouf (2011).
	F. Social Responsibility Information	
37	Information about employee welfare information	GRI (2006).
38	Information on safety measures	Meek et al. (1995), Gray et al. (1995), Chau and Gray (2002), Ghazali and Weetman (2006), Abdel-Fatah(2008).
39	Information on community services	Hossain et al. (1994), Meek et al. (1995), Ferguson et al. (2002), Chau and Gray (2002), Haniffa and Cooke (2002), Leventis and Weetman (2004), Ghazali and Weetman (2006), GRI (2006), Abdel Fatah(2008), Sobhani et al.(2012).
40	Information about employee appreciation	SAI (2002).
41	Amount spent for CSR activities	GRI (2006) Ref. EN30, Sobhani et al.(2012).
42	Commitment to societal development	GRI (2006) Ref. SO1, Sobhani et al.(2012).
43	Formation of separate body for CSR activities	Sobhani et al. (2012).
44	Poverty alleviation programs	GRI (2006), Sobhani et al. (2012).
45	Rural development programs	Sobhani et al.(2012).
46	Financial assistance for poor women and children	Sobhani et al.(2012).

47	Sponsoring sports and cultural functions	Meek et al. (1995), Gray et al.(1995), Ferguson et al. (2002), Chau and Gray (2002), Haniffa and Cooke (2002), Leventis and Weetman (2004), Ghazali and Weetman (2006), Abdel-Fatah (2008), Sobhani et al.(2012).
48	Patronizing religious functions and activities	Sobhani et al. (2012).
49	Sponsoring Education and health	Meek et al. (1995), Gray et al. (1995), Ferguson et al. (2002),SAI(2002), Chau and Gray (2002), Haniffa and Cooke (2002), Leventis and Weetman (2004), Ghazali and Weetman (2006), Abdel-Fatah(2008), Azim et al.(2011), Sobhani et al.(2012).
50	Social awareness programs	UNEP-FI(2006), Sobhani et al.(2012)
51	Donation and subscription	Meek et al. (1995), Gray et al. (1995), Ferguson et al. (2002), Chau and Gray (2002), Haniffa and Cooke (2002), Leventis and Weetman (2004), Ghazali and Weetman (2006), Abdel-Fatah(2008).
52	Employment and Advancement of minorities	Azim et al. (2011).
53	Employment of women	Azim et al. (2011).
54	Overtime provision with due benefits	Sobhani et al. (2012).
	G. Environmental Information	
55	Investing in energy projects and renewable energy	GRI (2006), Sobhani et al. (2012).
56	Information concerning energy consumption	GRI (2006), Sobhani et al. (2012).
57	Corporate environmental policies	EPFI (2006), Sobhani et al. (2012).
58	Investing in waste recycling/treatment plant	GRI (2006), Sobhani et al. (2012).
59	Tree plantation programs	GRI (2006), Sobhani et al. (2012).
60	Environmental cost saving operations	GRI (2006), Sobhani et al. (2012).

61	Issues concerning climate change	GRI (2006), Sobhani et al. (2012).
62	Environmental protection programs	EPFI (2006), GRI (2006), Sobhani et al. (2012).
63	Information concerning pollution control	EPFI (2006), GRI (2006), Azim et al. (2011), Sobhani et al. (2012).
64	Conservation of natural resources	Hossain et al. (2006).
65	Energy efficiency of products/services	Azim et al. (2011).
66	Environment friendly measures	GRI (2006), Sobhani et al. (2012).
67	Amount spent for environmental activities	GRI (2006).
	H. Sustainability Information	
68	Category of employees by sex	GRI (2006), Sobhani et al.(2012)
69	Average compensation per employee	GRI (2006).
70	Number of employees trained	Hossain et al. (1994), Ferguson et al. (2002), Chau and Gray (2002), Haniffa and Cooke (2002), Leventis and Weetman (2004), Ghazali and Weetman (2006), Abdel-Fatah(2008)
71	Competitor analysis- quantitative/qualitative	Hossain et al. (1994), Haniffa and Cooke (2002), Barako et al. (2006), GRI (2006), Lim et al. (2007), Abdel-Fatah (2008).
72	HRD plans and policies	Hossain et al. (1994), Ferguson et al.(2002), Chau and Gray (2002), Haniffa and Cooke (2002), Leventis and Weetman (2004), Ghazali and Weetman (2006), Abdel- Fatah(2008), GRI (2006) Ref. LA11, Sobhani et al.(2012).
73	Training employees through in-house programs	GRI (2006), Hossain et al. (2006), Sobhani et al.(2012)
74	Information about employee turnover/growth	Sobhani et al. (2012).
75	Appreciating employees for their efforts	SA1(2002), Sobhani et al.(2012)
76	Healthy and safe workplace for staff	GRI (2006), Meek et al. (1995), Gray et al. (1995), Chau and Gray (2002), Ghazali and

		Weetman (2006), Abdel- Fatah(2008), Azim et al.(2011).
77	Healthcare facilities for the employees	Meek et al. (1995), Gray et al. (1995), Chau and Gray (2002), Ghazali and Weetman (2006), Abdel- Fatah(2008), GRI (2006), Sobhani et al.(2012).
78	Disclosing accident statistics	GRI (2006), Sobhani et al. (2012).
79	Provisions for maternity and paternity leaves	GRI (2006), Sobhani et al. (2012).
80	Disclosure on child labor or free from child labor	SAI (2002), GRI (2006), Sobhani et al.(2012).
81	Appreciating customers for their support	GRI (2006), Sobhani et al.(2012).
82	Policy on Employee training	Hossain et al. (1994), Ferguson et al. (2002), Chau and Gray (2002), Haniffa and Cooke (2002), Leventis and Weetman (2004), Ghazali and Weetman (2006), Abdel- Fatah(2008).
83	Future Forecast Information	Barako et al. (2006).
84	Market share forecast	Gul and Leung (2004), Lim et al. (2007), Abdel-Fatah(2008), Rouf (2011).
85	Future cash flow forecast	SAI (2002), Gul and Leung (2004), Lim et al. (2007), Abdel-Fatah(2008), Rouf (2011).
86	Revenue forecast	Gul and Leung (2004), GRI (2006), Lim et al. (2007), Abdel- Fatah(2008), Rouf (2011).
87	Profit forecast	Gray et al. (1995), Barako et al. (2006), GRI (2006), Rouf (2011).
88	Earnings per share forecast	Barako et al. (2006),
89	Factors that may affect future performance	Barako et al. (2006),
90	Planned capital expenditure	Gul and Leung (2004), GRI (2006), Barako et al. (2006), Abdel-Fatah(2008).
91	Planned advertising and publicity expenditure	Rouf (2011).
92	Operating income changes and explanations	Rouf (2011).
93	Gross profit changes and explanations	Rouf (2011).
94	Accounts receivables changes and explanations	Rouf (2011).

95	Inventory changes and explanations	Rouf (2011).
96	Sales amount changes and explanations	Rouf (2011).
97	Amount spent for sustainability activities	GRI (2006), Sobhani et al. (2012).

Appendix C: Descriptive Statistics of Total Mandatory Reporting and it Categories of 2004 to 2010

		Mandatory	General	Director	Balance Sheet	Income Statement	Cash Flow	Structure	Miscellaneous
2004	Mean	0.7264	0.8631	0.6951	0.7114	0.6859	0.7154	0.6628	0.7389
	Minimum	0.4122	0.68	0	0.3542	0.3143	0.3333	0.2353	0.2222
	Maximum	0.9189	1	1	0.9583	0.9429	1	1	1
2005	Mean	0.7307	0.8654	0.7063	0.7154	0.6885	0.7168	0.6705	0.7471
	Minimum	0.4122	0.68	0	0.3542	0.3143	0.3333	0.2353	0.2222
	Maximum	0.9257	1	1	0.9583	0.9429	1	1	1
2006	Mean	0.7473	0.884	0.7543	0.7312	0.7034	0.7263	0.6626	0.7805
	Minimum	0.4145	0.6923	0	0.375	0.3143	0.3333	0.2222	0.2
	Maximum	0.9276	1	1	1	0.9429	1	1	1
2007	Mean	0.7708	0.9097	0.8031	0.7565	0.7091	0.7344	0.7116	0.8336
	Minimum	0.4229	0.7037	0	0.4035	0.3	0.3333	0.2609	0.2308
	Maximum	0.92	1	1	0.8947	0.925	1	0.9565	1
2008	Mean	0.7875	0.9226	0.8284	0.7699	0.7262	0.7385	0.7402	0.8505
	Minimum	0.4229	0.7407	0	0.4035	0.3	0.3333	0.2609	0.2308
	Maximum	0.9371	1	1	0.9123	0.925	1	1	1
2009	Mean	0.7963	0.9338	0.841	0.7781	0.7341	0.7425	0.7494	0.8593
	Minimum	0.4229	0.7778	0	0.4035	0.3	0.3333	0.2609	0.2308
	Maximum	0.9371	1	1	0.9474	0.925	1	1	1
2010	Mean	0.7901	0.9374	0.8437	0.7652	0.7384	0.7425	0.7265	0.863
	Minimum	0.4134	0.7778	0	0.3898	0.3	0.3333	0.24	0.2308
	Maximum	0.9385	1	1	0.9831	0.925	1	0.96	1
Grand Total	Mean	0.7642	0.9023	0.7817	0.7468	0.7122	0.7309	0.7034	0.8104
	Minimum	0.4122	0.68	0	0.3542	0.3	0.3333	0.2222	0.2
	Maximum	0.9385	1	1	1	0.9429	1	1	1

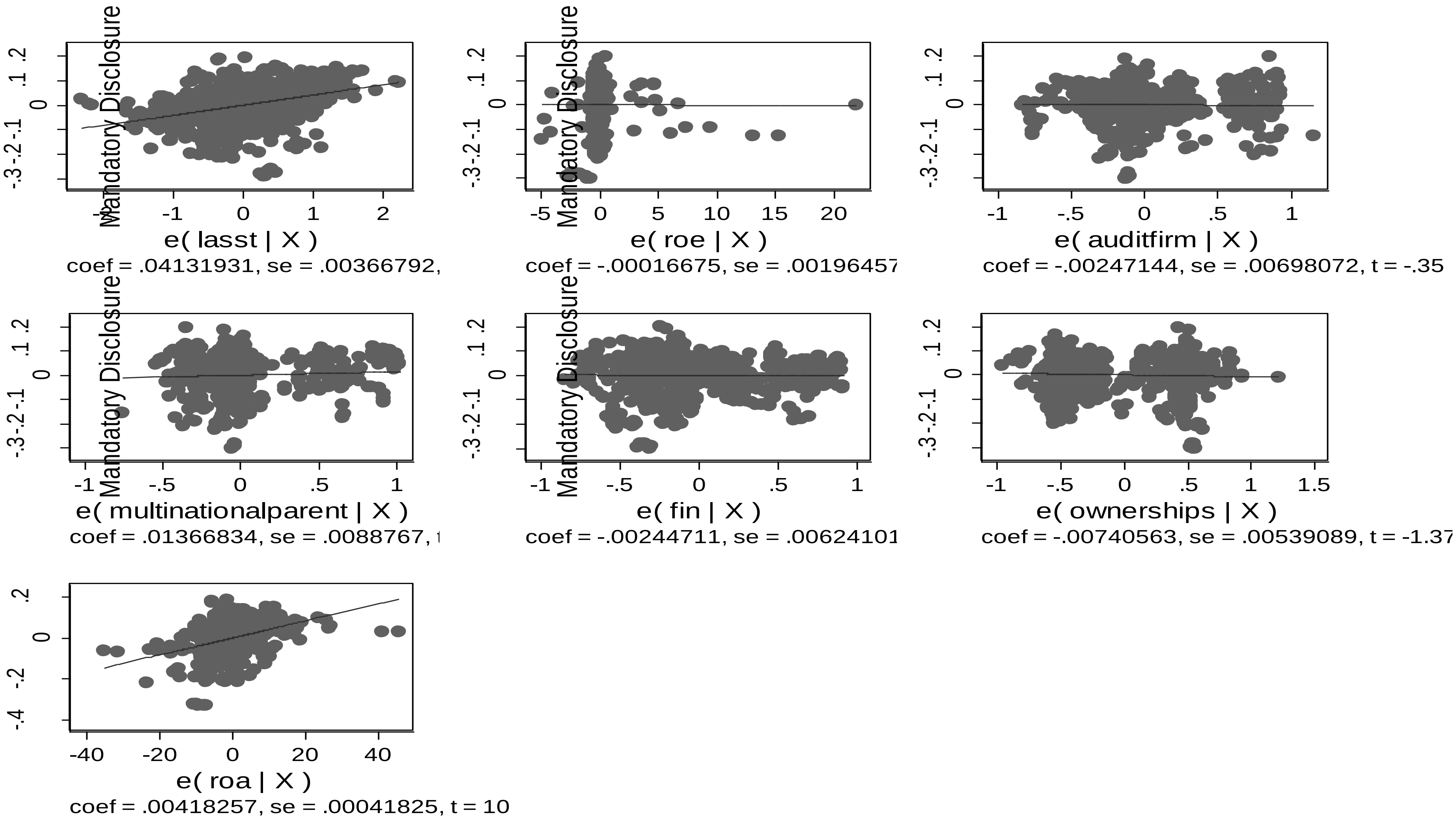
Appendix D: Descriptive Statistics of Voluntary Reporting and its Categories for Unweighted Data.

Year	Descriptive Statistics	Voluntary	General	Corporate Strategic	Corporate Governance	Financial	Financial Review	Social Responsibility	Environ-mental	Sustain-ability
2010	Mean	0.3227	0.8420	0.4472	0.5528	0.6033	0.5054	0.2416	0.0657	0.1672
	Minimum	0.0928	0.4286	0	0.1429	0.2000	0.0833	0	0	0
	Maximum	0.7010	1	1	1	1.4000	1	0.8889	0.6154	0.5333
2009	Mean	0.3151	0.8386	0.4455	0.5470	0.6000	0.5047	0.2200	0.0575	0.1623
	Minimum	0.0928	0.4286	0	0.1429	0.2000	0.0833	0	0	0
	Maximum	0.7010	1	1	1	1	1	0.8889	0.6154	0.5333
2008	Mean	0.3022	0.8293	0.4260	0.5296	0.5935	0.4973	0.1879	0.0513	0.1561
	Minimum	0.0928	0.4286	0	0.1429	0.2000	0.0833	0	0	0
	Maximum	0.6598	1	1	1	1.4000	1	0.8333	0.6154	0.4667
2007	Mean	0.2854	0.8084	0.3837	0.5087	0.5854	0.4851	0.1599	0.0369	0.1480
	Minimum	0.0722	0.2857	0	0.1429	0.2000	0	0	0	0
	Maximum	0.6289	1	1	1	1.0000	1	0.8333	0.6154	0.4667
2006	Mean	0.2701	0.7898	0.3285	0.4866	0.5756	0.4715	0.1454	0.0319	0.1358
	Minimum	0.0722	0.2857	0	0.1429	0.2000	0	0	0	0
	Maximum	0.5773	1	1	1	1.0000	1	0.7778	0.5385	0.4000
2005	Mean	0.2546	0.7712	0.2992	0.4762	0.5561	0.4641	0.1238	0.0269	0.1182
	Minimum	0.0722	0.2857	0	0.1429	0.2000	0	0	0	0
	Maximum	0.5464	1	0.8000	1	1	1	0.7778	0.5385	0.3667
2004	Mean	0.2492	0.7666	0.2943	0.4715	0.5512	0.4600	0.1134	0.0244	0.1133
	Minimum	0.0722	0.2857	0	0.1429	0.2000	0	0	0	0
	Maximum	0.5361	1	0.800	1	1	1	0.7222	0.5385	0.3333
Grand Total	Mean	0.2856	0.8065	0.3749	0.5104	0.5803	0.4840	0.1703	0.0421	0.1430
	Minimum	0.0722	0.2857	0	0.1429	0.2000	0	0	0	0
	Maximum	0.7010	1	1	1	1.0000	1	0.8889	0.6154	0.5333

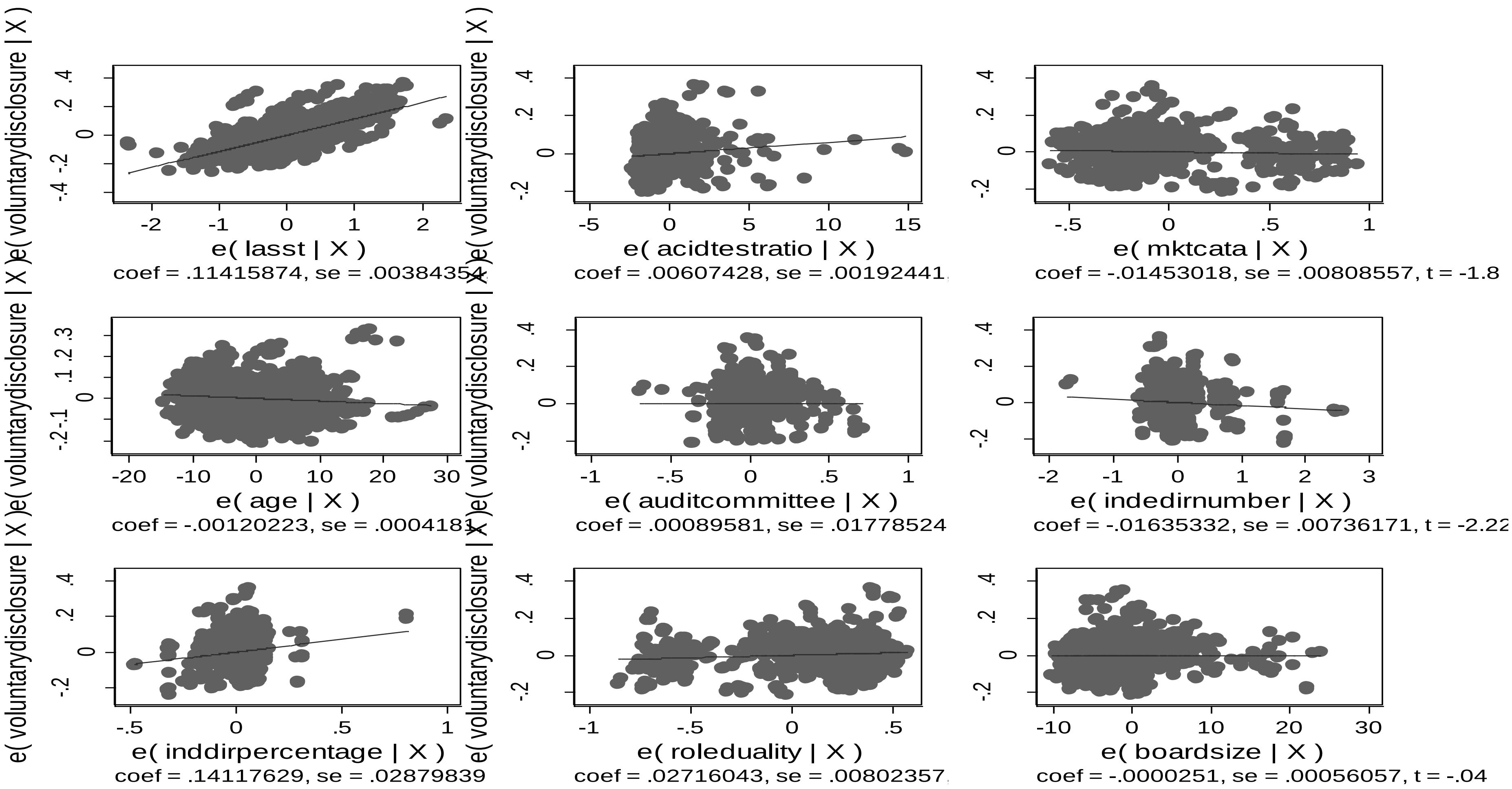
Appendix E: Descriptive Statistics of Voluntary Reporting and its Categories for Weighted Data.

Year	Descriptive Statistics	Voluntary	General	Corporate Strategic	Corporate Governance	Financial	Financial Review	Social Responsibility	Environ-mental	Sustain-ability
2010	Mean	0.2581	0.7006	0.3783	0.4155	0.4969	0.4276	0.1788	0.0499	0.1284
	Minimum	0.0767	0.3566	0	0.1071	0.1652	0.0705	0	0	0.0512
	Maximum	0.5521	0.8320	0.8460	0.8571	0.8260	0.8460	0.6578	.4677	0.4096
2009	Mean	0.2524	0.6977	0.3769	0.4130	0.4969	0.4270	0.1628	0.0437	0.1247
	Minimum	0.0767	0.3566	0	0.1071	0.1652	0.0705	0	0	0
	Maximum	0.5521	0.8320	0.8460	0.7500	0.9912	.8460	0.6578	0.4677	..4096
2008	Mean	0.2424	0.6900	0.3604	0.3972	0.4889	0.4207	0.1390	0.0390	0.11199
	Minimum	0.0757	0.3566	0	0.1071	0.1652	0	0	0	0
	Maximum	0.5211	0.8320	0.8460	0.7500	0.8260	0.8460	0.6167	0.4677	0.3584
2007	Mean	0.2293	0.6726	0.3246	0.3815	0.4822	0.4104	0.1183	0.0280	0.1136
	Minimum	0.0570	0.2377	0	0.1071	0.1652	0	0	0	0
	Maximum	0.4974	0.8320	0.8460	0.7500	0.8260	0.8460	0.6167	0.4677	0.3584
2006	Mean	0.2172	0.6571	0.2779	0.3650	0.4714	0.3689	0.1076	0.0242	0.1043
	Minimum	0.0570	0.2377	0	0.1071	0.1652	0	0	0	0
	Maximum	0.4584	0.8320	0.8460	0.7500	0.8260	0.8460	0.5756	0.4092	0.3072
2005	Mean	0.2052	0.6416	0.2531	0.3571	0.4593	0.3926	0.0916	0.0204	0.0970
	Minimum	0.0570	0.2377	0	0.1071	0.1652	0	0	0	0
	Maximum	0.4316	0.8320	0.6768	0.7500	0.8260	0.8460	0.5756	0.4092	0.2816
2004	Mean	0.2010	0.6378	0.2490	0.3537	0.4553	0.3892	0.0839	0.0185	0.870
	Minimum	0.0570	0.2377	0	0.1071	0.1652	0	0	0	0
	Maximum	0.4250	0.8320	0.6768	0.7500	0.7500	0.8460	0.5344	0.4092	0.2560
Grand Total	Mean	0.2295	0.6710	0.3172	0.3829	0.478	0.4095	0.1260	0.320	0.1098
	Minimum	0.0570	0.2377	0	0.1071	0.1652	0	0	0	0
	Maximum	0.5521	0.8320	0.8460	0.8571	0.9912	0.8460	0.6578	0.4677	0.4096

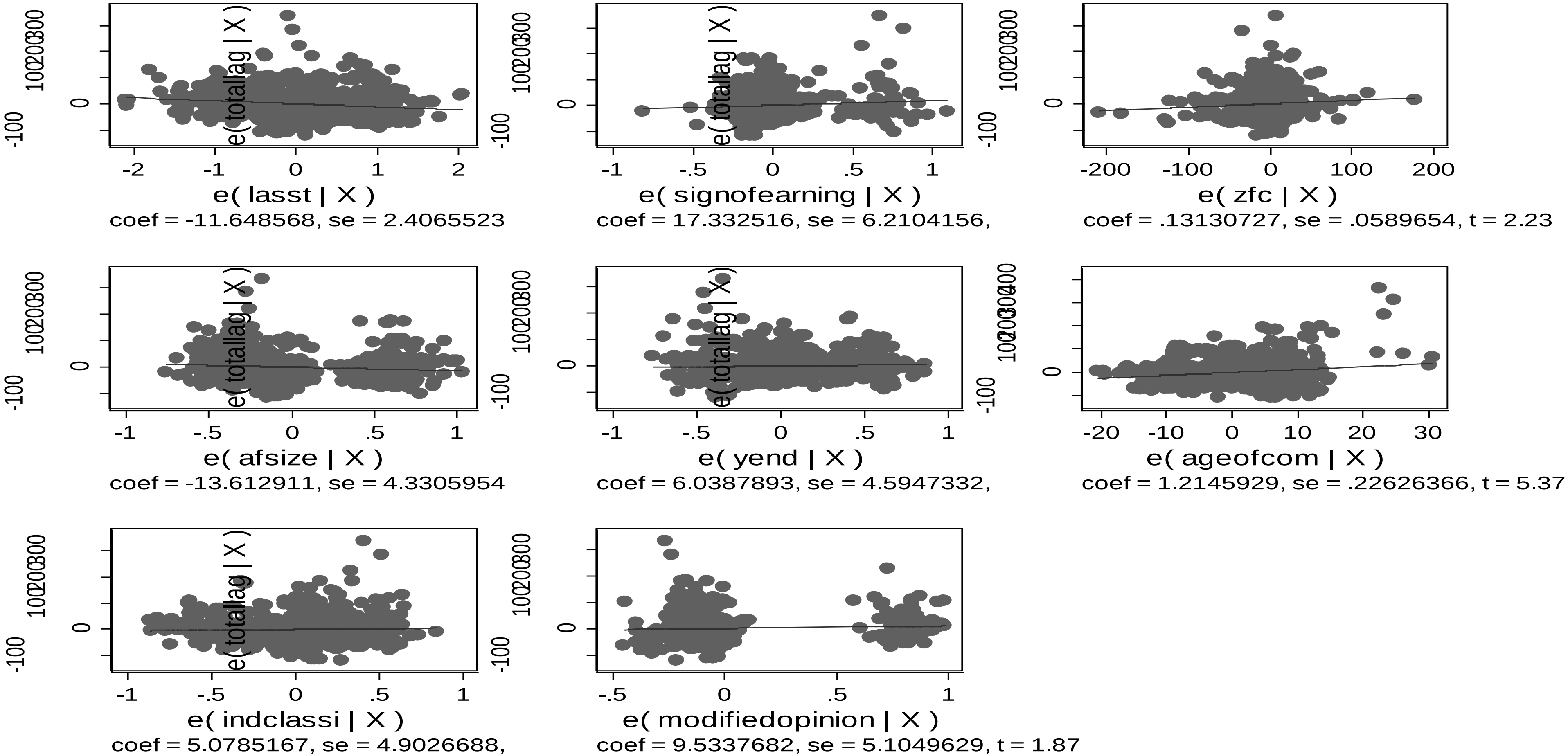
Appendix F: Mandatory Scatter Plots



Appendix G: Voluntary Scatter Plots



Appendix H: Timeliness Scatter Plots



Appendix I: GLS Regression Using Robust Standard Error for Mandatory Reporting

Random-effects GLS regression	Number of observation = 861
Group variable: year	Number of groups = 7
Observation per group: Minimum =123; Average = 123 ; Maximum = 123	

	Coefficient	**Robust Std. Err.**	**Z**	**P>|z|**
lasst	0.032609	.0038437	8.48	0.000
roe	-0.00206	.0027593	-0.75	0.456
roa	0.002042	.000299	6.83	0.000
auditfirm	-0.00824	.0057445	-1.43	0.151
multinatio~t	0.011124	.0038453	2.89	0.004
ownerships	-0.00591	.0021868	-2.70	0.007
acidtestra~o	-0.00187	.0010325	-1.81	0.070
mktcata	-0.0115	.0095606	-1.20	0.229
age	0.000693	.0001333	5.20	0.000
auditcommi~e	0.067768	.0096248	7.04	0.000
indedirnum~r	0.005509	.0051433	1.07	0.284
inddirperc~e	0.050446	.0172881	2.92	0.004
roleduality	0.008251	.0016055	5.14	0.000
boardsize	-0.0000289	.0006221	-0.05	0.963
signofearn~g	-0.05432	.0124074	-4.38	0.000
yend	-0.00269	.0033295	-0.81	0.418
indclassi	0.006322	.0025388	2.49	0.013
modifiedop~n	0.019467	.00518	3.76	0.000
_cons	0.427519	.0416291	10.27	0.000

R-sq: within = 0.3216
between = 0.9680
overall = 0.3793

Appendix J: GLS Regression Using Robust Standard Error for Voluntary Reporting

Random-effects GLS regression	Number of observation = 861
Group variable: year	Number of groups = 7
Observation per group: Minimum =123; Average = 123 ; Maximum = 123	

	Coefficient	**Robust Std. Err.**	**Z**	**P>|z|**
lasst	0.099067	0.0053564	18.50	0.000
roe	0.00282	0.0018018	1.56	0.169
roa	0.000898	0.0006463	1.39	0.214
auditfirm	-0.00709	0.0055842	-1.27	0.251
multinatio~t	0.086554	0.0039789	21.75	0.000
ownerships	0.006403	0.0025363	2.52	0.045
acidtestra~o	0.002336	0.0019764	1.18	0.282
mktcata	-0.0037	0.0036763	-1.01	0.354
age	-0.00141	0.0000966	-14.63	0.000
auditcommi~e	-0.04081	0.0195487	-2.09	0.082
indedirnum~r	-0.03383	0.0059484	-5.69	0.001
inddirperc~e	0.145752	0.0227583	6.40	0.001
roleduality	0.008315	0.0018599	4.47	0.004
boardsize	-0.0021	0.0005554	-3.78	0.009
signofearn~g	-0.03698	0.0103504	-3.57	0.012
yend	0.012135	0.0094093	1.29	0.245
indclassi	0.049628	0.0039093	12.69	0.000
modifiedop~n	0.017424	0.0088448	1.97	0.096
_cons	-0.63149	0.0456445	-13.83	0.000

R-sq:	within = 0.6675
	between = 0.8713
	overall = 0.6621

Appendix K: GLS Regression Using Robust Standard Error for Timeliness Reporting

Fixed-effects GLS regression	Number of observation = 861
Group variable: year	Number of groups = 7
Observation per group: Minimum =123; Average = 123 ; Maximum = 123	

	Coefficient	**Robust Std. Err.**	**t**	**P>|t|**
lasst	-6.299	1.675	-3.76	0.009
roe	1.856	1.623	1.14	0.296
roa	-0.388	0.389	-1	0.357
auditfirm	0.264	3.519	0.07	0.943
multinatio~t	-16.849	3.022	-5.58	0.001
ownerships	-6.121	1.519	-4.03	0.007
acidtestra~o	-0.545	0.715	-0.76	0.475
mktcata	22.912	4.027	5.69	0.001
age	1.007	0.187	5.37	0.002
auditcommi~e	-11.834	7.023	-1.69	0.143
indedirnum~r	-0.779	2.126	-0.37	0.727
inddirperc~e	-7.306	12.307	-0.59	0.574
roleduality	0.616	2.349	0.26	0.802
boardsize	2.422	0.318	7.61	0
signofearn~g	12.263	6.973	1.76	0.129
yend	6.139	5.419	1.13	0.3
indclassi	-22.296	6.726	-3.32	0.016
modifiedop~n	4.259885	6.282	0.69	0.493
_cons	165.4166	15.961	10.34	0.000

R-sq:	within = 0.1924
	between = 0.8987
	overall = 0.1776

Appendix L: Name of the Sample Companies

Serial	Name of the Company	Serial	Name of the Company
1	AB Bank Limited	36	Bangladesh lamps
2	Al Arafah Bank	37	BD Thai Aluminium
3	Bank Asia	38	Kay and Kue
4	The city Bank	39	National Polymer
5	Dhaka Bank	40	National Tubes
6	Dutch Bangla Bank	41	Quasem Drycell
7	Eastern Bank	42	Rangpur Foundry Ltd
8	EXIM bank	43	Singer Bangladesh
9	ICB Bank	44	IDLC
10	IFIC Bank	45	United Leasing
11	Mercantile Bank ltd	46	Uttara Finance
12	Mutual Trust Bank	47	AMCL pran
13	National Bank Ltd	48	Apex Foods
14	NCC bank	49	BATBC
15	One Bank Ltd	50	Gemini Sea Food
16	Prime Bank Ltd	51	National Tea
17	Pubali Bank	52	Rahima Food
18	Rupali Bank LtD	53	Shyampur Sugar Mills
19	Shahajalal Islami Bank	54	Alpha Tobaco Man. Ltd
20	Social Investment Bank ltd	55	BOC
21	Southeast Bank Ltd	56	Agrani Insurance Co. Ltd.
22	Standard Bank Ltd	57	BGIC
23	Trust Bank Ltd	58	Central Insurance
24	United Commercial Bank Ltd	59	Eastern Insurance
25	Aramit Cement	60	Eastland Insurance
26	Confidence Cement	61	Federal Insurance
27	Hidelberg Cement	62	Green Delta Insurance
28	Lafarge Surma cement	63	Janata Insurance
29	Megna Cement	64	Mercantile Insurance Ltd
30	Fu-wang Ceramic	65	National Life Insurance
31	Monno Ceramic	66	Peoples Insurance
32	Standard Ceramic Ltd	67	Phoenix Insurance
33	Abtab Automobiles	68	Poineer Insurance
34	Anwar Galvanizing Limited	69	Pragati Insurance
35	Aziz pipes	70	Prime Insurance
71	Purabi Insurance	98	Bata Shoe
72	Reliance Insurance	99	Samata leather
73	Rupali Insurance Ltd	100	Alltex industries
74	Sandhani Life Insurance	101	Anlima Yarn Dying
75	United Insurance	102	Apex Spinning and Knitting

76	Agni System	103	Bextex
77	Bd com Online	104	Delta Spinners
78	Intech Online	105	Desh Garments
79	Information Service Network	106	Dulamiya Cotton
80	Jute Spinners	107	HR Textiles
81	Northern Jute	108	Metro Spinning Mills
82	Hakkani Pulp & Paper	109	Mithun Knitting and Dyeing
83	ACI Limited	110	Rahim Textile
84	Ambee Pharma	111	Safko Spinning
85	Beximco pharmaceuticals	112	Saiham Textile
86	Beximco Synthetics	113	Square Textiles
87	Glaxo Smithkline	114	Stayle Craft
88	IBN Sina Pharma	115	Tallu Spinning
89	Immam Button	116	Bangladesh Services Ltd
90	Libra Infusion	117	Aramit Limited
91	Reckitt Benckiser	118	BEXIMCO
92	Renata Limited	119	Bangladesh Shipping Corporation
93	Square Pharma	120	GQ Ball pen
94	Eastern Housing Ltd	121	Miracle Industries
95	Samorita Hospital	122	Savar Refactories
96	Apex Adelchi Footwear Ltd.	123	Sinobangla Industries
97	Apex Tannery		

Appendix M: Penalty for Non Compliance over the Period

Non compliance	Categories	Year						
		2010-11	2009-10	2008-09	2007-08	2006-07	2005-06	2004-05
Penalty	Failure to submit the audited financial statements	4	25	9				1
	Failure to submit the half-yearly financial statements	9	16	13			7	4
	Failure to comply with securities related laws	12	6	1	42	32		8
	Non-submission of Capital & Shareholding Position	14	16	25				
	Non-compliance of Directive/Notification/Order	3	5	3				1
	Accurate and transparent information not reflected in the audited financial statements	3	17	1				
Warning	Failure to submit the audited financial statements	4	3	25				
	Failure to submit the half-yearly financial statements	2	22	7	68	117	18	36
	Failure to comply with securities related laws	18	31	24				
	Non-compliance of Directive/Notification/Order	9	5	5				
	Total	78	146	113	108	149	25	60

Sources: Complied from SEC annual report from 2004/05 to 2010/2011.

Appendix N: Basic Information about Respondents

Gender		
Serial No.	**Categories**	**Percentage**
1	Male	65%
2	Female	35%
	Total	100%
Highest Educational Qualification		
Serial No.	**Categories**	**Percentage**
1	Less than Bachelor Degree	3%
2	Bachelor Degree	12%
3	Masters Degree	47%
4	PhD(or equivalent)	12%
5	Professional Qualification	15%
6	Others, please specify	12%
	Total	100%
Age Range		
Serial No.	**Categories**	**Percentage**
1	20 to 30 Years	44%
2	30 to 40 Years	50%
3	40 to 50 Years	3%
4	Above 50 Years	3%
	Total	100%
Work Experience		
Serial No.	**Categories**	**Percentage**
1	Less than 5 Years	52%
2	5 to 10 Years	32%
3	10 to 15 Years	9%
4	15 to 20 Years	4%
5	Above 20 Years	3%
	Total	100%
Profession		
Serial No.	**Categories**	**Percentage**
1	Accountant	18%
2	Financial Analyst	3%
3	Researchers	6%
4	Academician	26%
5	Students	29%
6	Other Users	18%
	Total	100%

Appendix O: Voluntary Disclosure Checklist Items and their weight

S.N.	**A. General Corporate Information**	**Weight**
1	Corporate vision/mission /goal/objective	0.8588
2	Brief history of the company	0.8000
3	Corporate structure / chart	0.7806
4	Description of major goods/services produced	0.8606
5	Information about company listed.	0.8182
6	Company's contribution to the national economy	0.8121
7	Review of current financial results and discussion of major factors underlying performance.	0.9000
	B. Corporate Strategic Information	
8	Statement of corporate strategy and objectives –general and social	0.8000
9	Impact of strategy on current performance	0.8727
10	Market share analysis	0.8471
11	Corporate policy and strategy for sustainable development	0.8471
12	Managing risks and uncertainties	0.8606
	C. Corporate Governance/Directors Information	
13	Name of principal shareholders	0.7333
14	List of Directors	0.7939
15	Outside affiliations of the directors	0.7273
16	Educational qualifications and experience of the directors	0.7818
17	Position or office held by executive directors	0.7813
18	Other directorship held by executive directors	0.7125
19	Compensation policy of the directors	0.7250
	D. Financial Information	
20	Sources(country/region) of revenue and their amount	0.9000
21	Dividend payout policy	0.8824
22	Retained earnings/Owners equity policy	0.8444
23	Foreign currency information/ policies	0.7611
24	Intangible assets break-down and its amortization	0.7421
	E. Financial Review Information	
25	Liquidity ratios	0.9235
26	Debt / equity ratio	0.9152

27	Return on capital employed	0.8941
28	Return on shareholders‘ equity	0.8824
29	Return on assets	0.9000
30	Net tangible assets per share	0.8313
31	Dividend per ordinary share for the period	0.8882
32	Effects of inflation on future operations- qualitative	0.8118
33	Comparative financial growth with previous years	0.8765
34	Infrastructural and institutional development	0.7706
35	Graphic presentation of non- financial information	0.7097
36	Graphic presentation of financial information	0.7515
	F. Social Responsibility Information	
37	Information about employee welfare information	0.7818
38	Information on safety measures	0.8294
39	Information on community services	0.7118
40	Information about employee appreciation	0.6824
41	Amount spent for CSR activities	0.8294
42	Commitment to societal development	0.7765
43	Formation of separate body for CSR activities	0.7235
44	Poverty alleviation programs	0.7294
45	Rural development programs	0.7235
46	Financial assistance for poor women and children	0.7235
47	Sponsoring sports and cultural functions	0.6848
48	Patronizing religious functions and activities	0.6606
49	Sponsoring Education and health	0.7706
50	Social awareness programs	0.7706
51	Donation and subscription	0.7176
52	Employment and Advancement of minorities	0.7118
53	Employment of women	0.7500
54	Overtime provision with due benefits	0.7500
	G. Environmental Information	
55	Investing in energy projects and renewable energy	0.7939
56	Information concerning energy consumption	0.7500

57	Corporate environmental policies	0.8063
58	Investing in waste recycling/treatment plant	0.7697
59	Tree plantation programs	0.7063
60	Environmental cost saving operations	0.7333
61	Issues concerning climate change	0.7697
62	Environmental protection programs	0.7818
63	Information concerning pollution control	0.7879
64	Conservation of natural resources	0.7212
65	Energy efficiency of products/services	0.7273
66	Environment friendly measures	0.7939
67	Amount spent for environmental activities	0.7313
	H. Sustainability Information	
68	Category of employees by sex	0.5133
69	Average compensation per employee	0.6813
70	Number of employees trained	0.7235
71	Competitor analysis- quantitative/qualitative	0.7438
72	HRD plans and policies	0.7353
73	Training employees through in-house programs	0.6882
74	Information about employee turnover/growth	0.7576
75	Appreciating employees for their efforts	0.7118
76	Healthy and safe workplace for staff	0.7697
77	Healthcare facilities for the employees	0.7576
78	Disclosing accident statistics	0.6500
79	Provisions for maternity and paternity leaves	0.7438
80	Disclosure on child labor or free from child labor	0.8125
81	Appreciating customers for their support	0.7375
82	Policy on Employee training	0.6970
83	Future Forecast Information	0.7879
84	Market share forecast	0.8727
85	Future cash flow forecast	0.8424
86	Revenue forecast	0.8688
87	Profit forecast	0.8848

88	Earnings per share forecast	0.8727
89	Factors that may affect future performance	0.8303
90	Planned capital expenditure	0.8182
91	Planned advertising and publicity expenditure	0.7212
92	Operating income changes and explanations	0.8000
93	Gross profit changes and explanations	0.8061
94	Accounts receivables changes and explanations	0.8061
95	Inventory changes and explanations	0.7879
96	Sales amount changes and explanations	0.8118
97	Amount spent for sustainability activities	0.7879

Appendix P: Questionnaire Survey of Voluntary Reporting

Questionnaire Survey

Quality of Corporate Financial Reporting:
A Longitudinal Study of the Listed Companies in Bangladesh

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Durham University Business School
Elvet Hill Road
Durham DH1 3LB, UK

Date: January, 2013

Dear Sir

Quality of Corporate Financial Reporting: A Longitudinal Study of the Listed Companies in Bangladesh

I am writing to ask for your help with a research study I am carrying out for my PhD degree at the University of Durham, UK. You have been selected as a member of the sample to receive a copy of the questionnaire that is an important part of my research. Your prompt responds of the questionnaire, which should take only 10-15 minutes to complete, would be greatly appreciated.

I would like to assure you that all responses will be kept confidential and used only for academic purposes. If you have any questions about the research, please do not hesitate to contact me or my supervisors, Professor Rob Dixon and Dr. Amir Michael.

Thank you very much in advance for your assistance and kind co-operation. I am looking forward to receiving your highly valued responses and comments.

Yours faithfully

Mr. Sumon Das
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Part One: Voluntary Disclosure Items in the Annual Reports

Please give your opinion on how important you think the following items in the annual report. To answer the question in this part, please tick (only one in each row) the number that indicate your answer. The objective is to obtain your opinion on the importance of these items in general which Bangladeshi listed companies should disclose for producing annual financial reports.

1 = Very Little Important, 2 = Little Important, 3 = Moderate Important, 4 = Important, 5 = Very Important.

N/R=Not Relevant, If you think any of the following voluntary disclosure is not relevant to Bangladesh.

S.N.	**A. General Corporate Information**	**1**	**2**	**3**	**4**	**5**	**N/R**
1	Corporate sustainability vision/mission /goal/objective						
2	Brief history of the company						
3	Corporate structure / chart						
4	Description of major goods/services produced						
5	Stock exchanges on which company listed						
6	Company's contribution to the national economy						
7	Review of current financial results and discussion of major factors underlying performance.						
	B. Corporate Strategic Information	**1**	**2**	**3**	**4**	**5**	**N/R**
8	Statement of corporate strategy and objectives –general and social						
9	Impact of strategy on current performance						
10	Market share analysis						
11	Corporate policy and strategy for sustainable development						
12	Managing risks and uncertainties						
	C. Corporate Governance/Directors Information	**1**	**2**	**3**	**4**	**5**	**N/R**
13	Name of principal shareholders						
14	List of Directors						
15	Outside affiliations of the directors						
16	Educational qualifications and experience of the directors						
17	Position or office held by executive directors						
18	Other directorship held by executive directors						

19	Compensation policy of the directors						
	D. Financial Information	**1**	**2**	**3**	**4**	**5**	**N/R**
20	Amount and sources of revenue						
21	Dividend payout policy						
22	Retained earnings						
23	Foreign currency information						
24	Intangible assets break-down and its amortization policies						
	E. Financial Review Information	**1**	**2**	**3**	**4**	**5**	**N/R**
25	Liquidity ratios						
26	Debt / equity ratio						
27	Return on capital employed						
28	Return on shareholders‛ equity						
29	Return on assets						
30	Net tangible assets per share						
31	Dividend per ordinary share for the period						
32	Effects of inflation on future operations- qualitative						
33	Comparative financial growth with previous years						
34	Infrastructural and institutional development						
35	Graphic presentation of non- financial information						
36	Graphic presentation of financial information						
	F. Social Responsibility Information	**1**	**2**	**3**	**4**	**5**	**N/R**
37	Information about employee welfare information						
38	Information on safety measures						
39	Information on community services						
40	Information about employee appreciation						
41	Amount spent for CSR activities						
42	Commitment to societal development						
43	Contribution of separate body to CSR activities						
44	Poverty alleviation programs						
45	Rural development programs						
46	Financial assistance for poor women and children						
47	Sponsoring sports and cultural functions						
48	Patronizing religious functions and activities						
49	Sponsoring Education and Health						
50	Social awareness programs						

51	Donation and subscription						
52	Employment and Advancement of minorities						
53	Employment of women						
54	Overtime provision with due benefits						
	G. Environmental Information						
55	Investing in energy projects and renewable energy						
56	Information concerning energy consumption						
57	Corporate environmental policies						
58	Investing in waste recycling/treatment plant						
59	Tree plantation programs						
60	Environmental cost saving operations						
61	Issues concerning climate change						
62	Environmental protection programs						
63	Information concerning pollution control						
64	Conservation of natural resources						
65	Energy efficiency of products/services						
66	Environment friendly measures						
67	Amount spent for environmental activities						
	H. Sustainability Information	**1**	**2**	**3**	**4**	**5**	**N/R**
68	Category of employees by sex						
69	Average compensation per employee						
70	Number of employees trained						
71	Competitor analysis- quantitative/qualitative						
72	HRD plans and policies						
73	Training employees through in-house programs						
74	Information about employee turnover/growth						
75	Appreciating employees for their efforts						
76	Healthy and safe workplace for staff						
77	Healthcare facilities for the employees						
78	Disclosing accident statistics						
79	Provisions for maternity and paternity leaves						
80	Disclosure on child labor or free from child labor						
81	Appreciating customers for their support						
82	Policy on Employee training						
83	Future Forecast Information						

84	Market share forecast						
85	Future cash flow forecast						
86	Revenue forecast						
87	Profit forecast						
88	Earnings per share forecast						
89	Factors that may affect future performance						
90	Planned capital expenditure						
91	Planned advertising and publicity expenditure						
92	Operating income changes and explanations						
93	Gross profit changes and explanations						
94	Accounts receivables changes and explanations						
95	Inventory changes and explanations						
96	Sales amount changes and explanations						
97	Amount spent for sustainability activities						

Part Two: To answer the relevant questions in this part, please tick or circle the numbers that indicate your answer, or write in the appropriate answer.

1. Gender: Male ☐ Female ☐

2. Highest educational qualification:

a) Less than bachelor degree ☐

b) Bachelor degree ☐

c) Masters degree ☐

d) PhD (or equivalent) ☐

e) Professional Qualification ☐

f) Other, please specify ……………………….................

3. Age Range:

a) 20 - Below 30 ☐

b) 30 - Below 40 ☐

c) 40 - Below 50 ☐

d) Above 50 ☐

4. Work Experience:

a) None ☐

b) Below 5 years ☐

c) 5-10 years ☐

d)10 - 15 years ☐

☐

e) 15 - 20 years

f) Above 20 years ☐

5) Profession:

a) Accountant ☐

b) Financial Analyst ☐

c) Researchers ☐

d) Academician ☐

e) Students ☐

f) Others ☐

Thank you for taking the time to complete the questionnaire. If you have any comments you think might be appropriate to this questionnaire, please do not hesitate to add them here:

………
………
………
………
………
………
………
………………….

Appendix Q: Summary Table of Literature Review

Summary of Mandatory Reporting in Developed Countries					
Author(s)	**Country**	**Sample Size**	**Dependent Variable**	**Independent Variable**	**Findings**
Cerf (1961)	United States	527 companies.	Disclosure Index, 31 items.	Corporate size, listing status, profitability.	Corporate size and listing status has positive association with reporting but not with profitability.
Wallace et al. (1994)	Spain	50 non financial firms, 1991.	Unweighted (equal weight/dichotomous) disclosure index.	Company size, profitability, listing status, industry, liquidity, audit firm, gearing ratio and earning ratio.	Firm size and stock exchange listing has positive significant while liquidity has significant negative association. The remaining five firm characteristics were found not to be associated significantly.
Glaum and Street (2003)	Germany	100 firms, 2000.	Unweighted (equal weight/dichotomous) disclosure Index.	Company size, industry type, profitability, multinational, domicile, maturity, growth, growth options, choice, ownership structure, country and listing.	Average compliance level is significantly lower for companies that apply IAS as compared to companies applying US GAAP. Level of compliance with IAS and US GAAP disclosures is positively related to firms being audited by Big 5 auditing firms, audit opinion and to cross-listings on US exchanges.
Owusu-Ansah and Yeoh (2005)	New Zealand.	1992-93 and 1996-1997, 200	Mandatory disclosure compliance level.	Size, age, liquidity, profitability, management equity holding, auditor	The findings indicate that corporate compliance levels in the post-FRA period are statistically higher than those in the pre-FRA period.

		observations		type, industry type.	
Fekete et al. (2008)	Hungary	17 companies, 2006	IFRS disclosure requirements, IFRS 3, IAS 27, IAS 28 and IAS 31.	Corporate size, industry, profitability, leverage, auditor type, listing status, international visibility and industry.	Corporate size and industry type are statistically associated with the extent of compliance with IFRS disclosure requirements.
Kent and Stewart (2008)	Australia	965 companies, 2004.	Disclosure and corporate governance quality.	Board independence, audit committee, size, intangible asset, tax losses, geographical segments and industry.	Corporate disclosure quality is positively related to board size and audit firm size; on the other hand, there is no relation between board committee independence and corporate mandatory disclosure.
Apostolos and Nanopoulos (2009)	Greece	All listed manufacturing and construction companies, 2004.	Company characteristics and corporate governance.	Board of Directors, profitability and number of common shares.	The key factors associated with the levels of compliance with IAS's include the composition of the board of directors, profitability and the number of common shares.
Galani et al. (2011)	Greek	43 listed companies, 2009.	Firm Characteristics and Mandatory Disclosure.	Size, age, profitability, and industry type.	The findings also indicate that firm size was significant positively associated with the level of mandatory disclosure while age, profitability,

					industry type were found to be non-significant.
Matocsy et al. (2012)	Australia	450 firms, 2006-2007.	Corporate mandatory disclosure and board composition.	Board Characteristics.	They find that there is no relationship between board composition and different types of continuous disclosure.
Summary of Mandatory Reporting in Developing Countries					
Author(s)	**Country**	**Sample Size**	**Dependent Variable**	**Independent Variable**	**Findings**
Wallace (1988)	Nigeria	47 companies 1982 - 1986.	Extent and level of reporting.	!85 items of disclosure index. Weighted and un-weighted disclosure index.	Poor compliance with the disclosure requirements of Nigerian reporting, and the relatively low importance attached to the needs of the users.
Benjamin et al. (1990)	Hong Kong	76 companies.	Compliance of mandatory items.	10 items of disclosure index.	They found a significant association between the extent of size, non-compliance and company size, and no relationship with the size of company's audit firms and business type.
Wallace and Naser (1995)	Hong Kong	80 companies, Between 1988 and 1992.	Comprehensiveness of the mandatory information.	Foreign registration, profit margin, earnings return, liquidity, market capitalization, proportion of equity shares and leverage.	Total assets, profit margin, type of independent auditor, and scope of business contributed in variation of disclosure where as market capitalization, liquidity ratios, earnings return on equity, and outside shareholders' interests are less useful.

Xiao (1999)	China	13 listed companies.	Corporate disclosure compliance.	Descriptive analysis of 10 categories information.	The general level of compliance is satisfactory in the sample.
Samuel Sejjaaka (2003)	Uganda	43, Financial institutions, 2001	IAS disclosure requirements compliance.	Auditor type, size, age, MNC status, leverage, return on equity, and liquidity.	The findings showed that there is a significant correlation between relative mandatory scores and auditor type, MNC status, size and age while leverage, return on equity and liquidity is found not to be significant.
Ali et al. (2004)	India, Pakistan and Bangladesh	566 non financial companies, 1998	level of compliance with disclosure requirements.	Size, financial leverage, MNC, corporation, size of audit firm, and firm's profitability.	Compliance levels are found to be positively related to company size, profitability and multinational-company status, and unrelated to leverage and the quality of external auditors.
Hassan et al. (2006)	Egypt	77 non-financial companies, 1995-2002.	Extent and determinants of disclosure.	Firm size, gearing, profitability, stock activity.	More profitable companies disclose more information than less profitable ones. Results for firm size, gearing and stock activity are mixed.
Aljifri (2008)	UAE	31 listed firms, 2003.	Extent of disclosure in annual reports.	Size, debt equity ratio, and profitability.	Significant differences are found among sectors; however, the size, the debt equity ratio, and the profitability were found to have insignificant association with the level of disclosure.
Al-Akra et al.	Jordan	80 matched	Mandatory disclosure	Market capitalisation,	Mandatory disclosure compliance has

(2010)		pairs of non - financial companies, 1996 and 2004.	compliance.	leverage, auditor type, audit committee, size of the board, liquidity, ownership, non executive director and gearing ratio.	significantly increased through the time period of the study. Two company attributes appeared to influence disclosure compliance: market capitalization and long-term leverage.
Gao and Kling (2012)	China	8864 observations, 2001-07.	Corporate governance and audit on compliance to mandatory disclosure.	Board size, CEO salary, CEO duality and external governance.	Size of audit firm and role of the external governance does not influence mandatory disclosure while ownership concentration enhances mandatory disclosure.
Agyei-Mensah (2013)	Ghana	35 listed firms, 2006 and 2008.	Disclosure before and after IFRS adoption.	Firm size, profitability, debt equity ratio, liquidity and audit firm size.	Quality of financial information disclosure mean of 76.80% (pre adoption) and 87.09% (post adoption) indicate that the quality of financial reports has improved significantly after adopting IFRS's.
Summary of Voluntary Reporting in Developed Countries					
Author(s)	**Country**	**Sample Size**	**Focus**	**Independent Variable**	**Findings**
Firth (l979)	United Kingdom	180 companies, 1976.	Voluntary Disclosure, 48 items.	Firm size, listing status and auditor type.	The firm size and listing status were found to be positively associated with the level of voluntary reporting whereas audit firm is not associated significantly.

Firth (1980)	United Kingdom	274 companies,	Weighted and un-weighted disclosure index, 48 items.	Voluntary disclosure levels between the new issue and rights issue group and the control groups.	The study concluded that the levels of voluntary disclosure by smaller sized companies increase when raising new stock market finance, via new issues and right issues.
McNally et al. (1982)	New Zealand	103 annual reports, 1979.	Voluntary disclosure, 41 items.	Size, profitability, growth, audit firm and industry.	Firm size is associated positively and significantly with voluntary reporting while the other characteristics were found non significant.
Cooke (1989)	Sweden	90 non-financial companies, 1985.	Voluntary disclosure, 146 items.	Quotation status, parent company relationship, company size, total asset size, number of shareholders.	Listing status and firm size are positively associated with voluntary reporting. The results also suggested that trading companies disclose information less than companies in manufacturing and service sectors.
Cooke(1991)	Japan	48 companies, 1988.	Voluntary disclosure.	Firm size, listing status and industry type.	The study employs stepwise regression and concluded that firm size is the best explanatory variable followed by listing status.
Craswell and Taylor (1992)	Australia	86 companies.	Specific item of disclosure.	Firm size, leverage, cash flow risk, proportion of share and ownerships and audit firm.	Audit firm is associated positively with the disclosure decision, while there is weak support for the effect of each of leverage, firm size, cash flow risk and the proportion of shares held by

					the top 20 shareholders.
Raffournier (1995)	Sweden	161 listed companies, 1991.	Voluntary reporting and firm characteristics.	Size, leverage, profitability, audit firm, industry, fixed assets, internationality level, and ownership structure.	Firm size and internationality play a major role in the disclosure policy of firms.
Hossain et al. (1995)	New Zealand	55 non-financial companies.	Voluntary reporting and firm characteristics.	Firm size, leverage, assets in place, type of auditors, and foreign listing status.	Firm size, leverage, and foreign listing status have significant association with the level of information voluntarily disclosed in the annual reports.
Walden and Schwartz (1997)	Alaska	53 firms, 1988, 1989, and 1990.	Environmental disclosure.	Levels of environmental disclosure between years.	Significant positive differences in the levels of environmental disclosures from year 1988 to 1989 and from year 1989 to 1990.
Bewley and Li (2000)	Canada	188 manufacturing firms, 1993.	Environmental disclosure.	Environmental exposure, corporate pollution propensity, firm size, Financial performance, and auditor quality.	Firms with more news media coverage of their environmental exposure, higher pollution propensity, and more political exposure are more likely to disclose general environmental information.
Deegan et al. (2000)	Australia	41 companies, 5 incidents.	Social and environmental	Total incidents, positive incident, BHP disclosure.	After the incidents, sample firms operating in the affected industries provided more

			disclosures.		environmental information than they did earlier.
Depoers (2000)	France	102 listed companies, 1995.	Extent of voluntary disclosure.	Firm size, foreign activity, ownership structure, leverage ,auditor size, proprietary costs and labor pressure.	The results of multiple regressions based on stepwise procedure indicate that firm size, foreign activity and proprietary costs have significant association with the extent of voluntary disclosure.
Visser(2002)	South Africa	184 companies, 17 standalone public reports.	Sustainability reporting.	Extent of Sustainability reporting.	Disclosure on sustainability issues continues to improve, on average 57% of the top companies are reporting on these issues. On the other hand, around 10% of South Africa’s top 100 companies are issuing environmental and social reports.
Hedberg and Malmborg (2003)	Sweden	10 Companies, 2001.	Corporate sustainability reporting.	Qualitative interviews with representatives from each company.	GRI guidelines would have the potential for gaining visibility and control of the triple bottom line on a corporate level, but they are in need of further development, not least in relation to the issue of verification.
Idowu and Towler (2004)	United Kingdom	17 companies.	Corporate social reporting.	CSR of different companies. telephone interview.	Some companies issue separate reports for their CSR activities whilst others devote a section in their annual reports. UK CSR reports disclose

					information about environment, community, marketplace and workplace.
O'Dwyer et al. (2005)	Ireland	5 environmental NGOs and 3 social NGOs.	Corporate social reporting.	Eight in-depth semi-structured interviews.	Active corporate resistance to discursive dialogue, corporate resistance to voluntary reporting, and compliant political elite unwilling to confront the corporate sector on social and environmental issues.
Frost et al. (2005)	Australia	25 companies, 2004.	Sustainability reporting.	Benchmarked against GRI.	The discrete report and website provide greater levels of information on sustainability, however the overall levels of information is generally low.
Michelon (2007)	Dow Jones Global Index	57 companies.	Sustainability reporting.	Strategic, financial, environmental and social information.	The empirical research provided evidence that reputation does affect the extent of sustainability disclosure.
Silberhorn and Warren (2007)	German and UK	40 companies.	Corporate social reporting.	Qualitative content analysis and interviews with senior managers.	Companies focus on how they interact with stakeholders and how business activities impact on society. Most CSR policies addressed community, employee, customer issues and quality of life.
Gruning	Germany	60 annual	Corporate reporting.	Firm size, cross listing,	Four characteristics have interrelated factors that

(2007)	and Poland	reports		industry, and home country.	affect corporate disclosure quality. The firm size was found to have only an indirect effect on corporate disclosure.
Clarkson et al.(2008)	USA	191 firms, 2003.	Environmental reporting.	Firm size, leverage, return on assets, stock price volatility, Tobin Q, assets newness, and capital intensity.	Positive association between environmental performance and the level of discretionary environmental disclosures.
Wang and Claiborne (2008)	China	110 Listed companies, 2005.	Voluntary reporting.	State ownership, foreign ownership, firm performance, reputation of the engaged auditor, leverage and cost of debt capital.	Level of voluntary reporting is positively related to the proportion of state ownership, foreign ownership, firm performance measured by return on equity, and reputation of the engaged auditor while no relation with cost of debt capital.
Prado-Lorenzo et al. (2009)	Spain	99 non financial firms.	Corporate Social Reporting.	Financial institution, dominant shareholder and independent board.	Presence of stockholders whose personal image and social reputation are strongly associated with the evolution of the company notably fosters the development of these disclosure practices. On the contrary, the investors with a reduced stake in the firm's capital show only a

					limited interest in this area.
Tang and Geling (2010)	China	82 firms, 2008.	Environmental Reporting.	Firm size, profitability, capital structure, independent directors, shareholder equity ratio, proportion of shares, and industry type.	Firm size and capital structure have significant impact on environmental reporting while others are not significant.
Alves et al. (2012)	Portugal and Spain	140 listed companies.	Voluntary disclosure.	Firm size, growth, organizational performance, board compensation, large shareholder, marketing category, human capital category and board characteristics.	Firm size, growth opportunities, organizational performance, board compensation and the presence of a large shareholder are main determinants of corporate voluntary disclosure.
Skouloudis et al.(2014)	Greek	Top 100 companies, 2011.	Social and environmental Responsibility.	Size, business sector, profitability, ownership identity internationalization, consumer proximity,	Noticeable variation across sectors regarding their propensity to disclose non-financial information. Large group of leading Greek firms still tend to treat business-and society dialogue superficially and in an imprecise manner.

				environmental sensitivity, and subscription to CSR.	
Summary of Voluntary Reporting in Developing Countries					
Author(s)	**Country**	**Sample Size**	**Focus**	**Independent Variable**	**Findings**
Hossain et al. (1994)	Malaysia	67 non-financial companies, 1991.	Voluntary Reporting, 78 items.	Firm size, ownership structure, gearing, assets-in place, audit firm, and foreign listing status.	Firm size and ownership structure have significant association with the level of voluntary disclosure in corporate annual reports.
Thompson and Zakaria (2004)	Malaysia	257 largest companies, 2000.	Social responsibility reporting.	Content analysis: number of sentence, measured pages and derived pages.	CSR reporting in their infancy compeering with other developed countries. Lack of government and public pressure, lack of perceived benefits and widely held view that companies do not significantly impact on the environments.
Abreu et al. (2005)	Portugal	Top ten, 2002.	Corporate Social Responsibility.	Values and transparency, workplace, environment, suppliers, consumers and customers, community, government and society.	The preliminary analysis generated three components of CSR: the external influence , the market influence and the operative influence of the enterprises in Portugal.
Naser et al. (2006)	Qatar	21 companies out of 22.	Corporate Social Responsibility.	Size, leverage, corporate growth, government	Variations in corporate social disclosure by the sampled companies are associated with the firm

				ownership, Individual shareholders, institutional ownerships, dividend payout, and majority shareholders.	size, business risk and corporate growth.
Ratanajongkol et al. (2006)	Thailand	40 companies , 1997, 1999 and 2001.	Corporate Social Responsibility.	Amount of disclosure, theme, quality of disclosure.	Level of corporate social reporting is increasing with Thai companies reporting more on human resources.
Alsaeed (2006)	Saudi Arabia.	40 Firms, 2003.	Voluntary disclosure.	Firm size, debt, ownership dispersion, firm age, profit margin, return on equity, liquidity, industry type and audit firm size.	Mean of the disclosure index was lower than average. Also, it was found that firm size was significantly positively associated with the level of disclosure.
Barako et al. (2006)	Kenya	43 companies, 1992- 2001.	Voluntary Disclosure.	Audit committee, non-executive directors, institutional and foreign ownership, board leadership structure, liquidity, profitability and audit firm.	There is an increase in the level of information voluntary disclosed. The extent of voluntary disclosure is influenced by a firm’s corporate governance attributes, ownership structure and company characteristics.

Sumiani et al. (2007)	Malaysia	50 public companies, 2003.	Environmental Reporting.	Financial factors, litigation, pollution abatement, environmental preservation, and environmental initiatives.	Extent of environmental information reported in Malaysian corporate annual reports is rather low. All ISO companies made some form of environmental disclosures in their annual reports.
Gunawan, 2007	Indonesia	68 annual report 2003, 2004, and 2005.	Corporate Social Responsibility	Company's type, size, age, financial performances, influence of creditors, and influence of auditors.	There are three main motives for the Indonesian listed companies in conducting CSD: "to create positive image", to "act accountability" and to "comply with stakeholders' needs".
Ghazali (2007)	Indonesia	87 companies, 2001.	Corporate Social Responsibility.	Ownership concentration, director ownership, government ownership, company size, and industry.	Companies in which have a higher proportion of equity shares disclosed significantly less CSR information, while companies in which the government is a substantial shareholder disclosed significantly more CSR information.
Dincer and Dincer (2007)	Turkey	324 consumers, 5 firms, 2007.	Corporate Social Responsibility.	Structured questionnaire.	The most appreciated companies on CSR have a pro-active approach.
Narwal (2007)	India	33 public-private sector banks.	Corporate Social Responsibility.	Survey questionnaire.	Banks have an objective view-point about CSR concentrating on education, balanced growth, health, environmental marketing and customer satisfaction.

Rizk et al. (2008)	Egypt	60 annual reports, 2002.	Social and environmental reporting.	Content analysis, disclosure index 34 items.	Significant differences in reporting practices among the members of the nine industry segments surveyed. Ownership structure has significance on the reporting decision.
Akhtaruddin et al. (2009)	Malaysia	105 listed firms, 2002.	Voluntary disclosure.	Board size, independent non-executive directors, share ownership, family control, and audit committee members.	Voluntary disclosure has positive association with board size and proportion of independent director while negatively related to family control. Audit committee member is not related to voluntary disclosure.
Pratten and Mashat, (2009)	Libya	56 companies, 1999-2002.	Corporate Social Responsibility.	Content analysis, questionnaire survey.	The results suggest that the emphasis on CSR disclosure in Libya is different from that to be found in the west.
Mitchell and Trevor (2009)	South Africa	51 companies from 17 segments.	Corporate social and environmental.	Structured questionnaire survey.	Implementation of a comprehensive and externally controlled and certified standard would not only reduce environmental impacts, but facilitate increased CSR.
Potluri et al (2010)	Kazakhstan	50 companies.	Corporate social responsibility.	Structured questionnaires and informal personal interviews.	Kazakhstan companies conveyed a difference of opinion in almost every stakeholder area because of the present day economic crunch.
Akhtaruddin	Malaysia	124 public	Voluntary reporting.	Expert members on the	Board ownership is associated with lower levels

and Haron (2010)		listed companies.		AC, independent non-executive directors.	of corporate voluntary disclosures.
Al Shammari and Al Sultan (2010)	Kuwait	170 companies, 2007.	Voluntary reporting.	Non-executive directors, family members, role duality; and audit committee.	Existence of a voluntary audit committee is significantly and positively related to the extent of corporate voluntary disclosure.
Samaha and Dahawy (2010)	Egypt	30 actively traded companies.	Voluntary reporting.	Number of Shareholder, ownership categories, independent directors, audit committees, size, profitability, industry, leverage, liquidity, auditor type and internationality.	Introduction of a new corporate governance code has not improved information symmetry as the overall level of voluntary disclosure is very low at just 19.38%.
Uyar (2011)	Turky	72 Companies , 2006.	Voluntary Disclosure	Auditor size, ownership structure, firm performance (profitability), and firm size.	Firm size and auditor size have significant positive association with voluntary disclosure level of graphs. However profitability and ownership structure do not have any significant association.
Samaha et al. (2012)	Egypt	100 companies, 2009.	Corporate governance voluntary	Board composition, board size, CEO duality, director	CG is lower for companies with duality in position and higher ownership concentration as

			Disclosure.	ownership, block holder ownership, audit committee, leverage, size, profitability and industry types.	measured by block holder ownerships and increases with the proportion of independent directors on the board and firm size.
Francis et al. (2012)	Ghana	20 listed companies, 2003-07.	Corporate Reporting.	Corporate governance characteristics.	Significant positive relationship between the presence of accounting/finance expert(s) on the audit committees and corporate disclosure practices.
Qu et al. (2012)	China	297 listed companies, 1995-2006	Voluntary Reporting.	Market pressure and regulatory pressure.	They find that over the study period, listed companies have gradually increased their voluntary disclosure.
Haji(2013)	Malaysia	85 companies, 2006 and 2009.	Corporate Social Responsibility.	Director ownership, government ownership, board characteristics, profitability, leverage and company size.	Director ownership, government ownership, board size and company size were found to be significant in explaining both the extent and quality of CSR disclosures.
Haji and Ghazali (2013)	Malaysia	76 selected firms, 2009.	Voluntary Reporting.	Board size, company size, leverage and government ownership.	Board size, company size, leverage, government ownership is significant in explaining the quality of corporate voluntary disclosure

De Villiers and Alexander (2014)	South Africa and Australia	18 from each country, 2007.	Corporate Social Responsibility.	GRI guideline categories and the disclosure items suggested by GRI.	Overall characteristics of CSRR patterns or report structures, specific examples of CSRR, and the CSRR management structures of mining companies found to be similar.
Summary of Timeliness of Reporting in Developed Countries					
Author(s)	**Country**	**Sample Size**	**Focus**	**Independent Variable**	**Findings**
Ashton et al. (1987)	United States	488 clients of Peat, Marwick, Mitchell and Co, 1981- 82.	Multivariate relations between audit delay.	Total revenue; industry classification; public or nonpublic classification; month of fiscal year-end; quality of internal controls; operational, reporting, financial, and electronic data-processing complexity; relative of audit work performed at interim and final dates; number of years; current-year net income; ratio of net income or loss to total	Study found significant association of revenue, quality of internal controls, operation complexity, relative of audit work performed at interim and final dates, and public or nonpublic classification. The developed model explains 26.5% of cross-sectional audit delay.

				assets; and type of audit opinion.	
Ashton et al. (1989)	Canada	465 public Canadian companies, 1977-82.	Descriptive Model, Audit Delay.	Company size, industry, audit opinion, extraordinary items, signs of profit, contingency and earning per share.	Client industry, type of audit opinion, reporting of extraordinary items, and the sign of net profit had significant association with audit delay while weak significance with disclosure of contingency and no significant relationship with earning per share.
Carslaw and Kaplan (1991)	New Zealand	245 firms for 1987 and 206 firms for 1988.	Audit Delay	Company size, income, debt proportion, company ownership, extraordinary item, and industry classification.	Company size and income (loss) significantly affected audit delay across both years.
Ng and Tai (1994)	Hong Kong	292 companies for 1991 and 260 companies for 1990.	Audit Delay	Seven variables were taken from the Ashton et al. study (1989), and three variables—degree of diversification, change of auditor, and principal subsidiaries/joint ventures	Company size and degree of diversification—tested as significant over a period of two years. Extraordinary items and month of year-end—tested as significant in one year.

				were added.	
Simnett et al. (1995)	Australia	1981 to 1989.	Audit delay	Audit complexity, debt/equity position, extraordinary items, audit technology, Big Eight–non-Big Eight auditor, profit, audit opinion and timing of year.	Three variables: profit, audit opinion, and timing of the year-end were found to be significant for from 3 to 6 years.
Jaggi and Tsui (1999)	Hong Kong	393 companies, 1991–1993.	Audit delay and auditor business risk and audit-firm technology.	Financial condition, family owned and controlled companies as measures for auditor business risk.	A positive relationship between audit delay and financial risk index. Family owned and controlled companies have shorter audit delays and companies audited by audit firms using the structured audit approach have longer audit delays.
Leventis et al. (2005)	Greece	171 companies, 2000.	Audit report lag.	Type of auditor, number of remark, Audit fee, extraordinary items, size, ownership concentration, profitability gearing, number of subsidiaries,	A statistically significant association is found between audit report lag and type of auditor, audit fees, number of remarks in the audit report, the presence of extraordinary items, and an expression of uncertainty in the audit report. Mean audit report lag is 98 days.

				uncertainty in the audit report, other auditor, auditor change.	
Al-Ghanem and Hegazy (2011)	Kuwait	149 and 177 listed companies, 2006 and 2007 respectively.	Audit Lag	Company size, industry classification, leverage, percentage change in earning per share, type of auditors, and liquidity.	Company size is the only variable that negatively correlates with audit delay in the period tested.
A.-M. Reheul et al. (2013)	Belgium	2266 Non Profit Organization year observation, 2006 to 2008.	Audit Lag	Client size, degree of reliance upon donations and/or grants, industry, year, auditor industry expertise, profitability, liquidity, leverage, audit opinion, extraordinary items, total assets, audit fee.	Average audit lag is 133 days. The degree of reliance upon donations and grants and its industry to which the non profit organisation belongs are significantly related to the audit report lag.
Summary of Timeliness of Reporting in Developing Countries					
Author(s)	**Country**	**Sample Size**	**Focus**	**Independent Variable**	**Findings**
Hossain and	Pakistan	103 non	Audit delay and	Size of company, Debt	The audit delay ranged from a minimum interval

Taylor(1998)		financial companies. 1993.	company characteristics.	equity ratio, Profitability, Subsidiaries of multinational companies, Audit firm size.	of 30 days to a maximum interval of 249 days. Subsidiaries of multinational companies had a significant negative effect on audit delay.
Owusu-Ansah(2000)	Zimbabwe	47 non-financial companies.	Timeliness through Audit Lag, Preliminary lag, Total reporting Lag.	Extraordinary and/ or contingent items, the month of financial year-end and the complexity of a company's operations, size, profitability, gearing and company age.	98% of the companies in the sample reported promptly to the public. Regression identified company size, profitability and company age as statistically significant explanators of the differences in the timeliness of annual reports issued by the sample companies.
Ahmad and Kamarudin (2003)	Malaysia	100 companies, 1996-2000.	Audit Delay.	Company size, industry classification, sign of income, extraordinary item, audit opinion, auditor, year-end and risk.	Audit delay is significantly longer for company that listed non-financial industry, receive other than unqualified audit opinion, financial year-end other than December 31, audited by a non–Big Five firm, negative earnings, and have higher risk.
Owusu-Ansah and Leventis (2006)	Greece	95 non-financial companies.	Financial reporting	Size of the company, extraordinary items, number of remarks in	A descriptive analysis indicates that 92% of the companies reported early. The result also show that size of company and audited by big-5 audit

				annual report, and type of auditor.	firm will have shorter audit report lag.
Prabandari and Rustiana (2007)	Indonesia	111 financial companies, 2002-2004.	Audit delay	Total revenue, debt to assets ratio, gains or losses, audit opinion, and characteristic's of accounting firms.	The result show that the differences of audit delay in total revenue and profit or loss announcement but, no differences of audit delay in audit opinion and characteristic's accounting firms.
Che-Ahmad and Abidin (2008)	Malaysia	All publicly held companies, 1993.	Audit delay	Size, industry, director shareholdings, total assets, subsidiaries, audit firms type, audit opinion, leverage, ratio of inventory proportion of debt, change of auditor and return on equity.	Mean audit delay of Malaysian companies to be much longer than the Western countries. Moreover, director shareholdings, total assets, number of subsidiaries, type of audit firms, audit opinion and return on equity to be important determinants of audit delay.
Al-Ajmi (2008)	Bahrain	231 financial and non-financial, 1992–2006.	Timeliness through audit lags, interim period, total period.	Company size, profitability leverage, accountancy complexity, good and bad news, audit type, auditor's size and leverage.	Using multivariate analysis, he found that three variables: company size, profitability and leverage had significant effects on audit delay.

Tauringana et al. (2008)	Kenya	36 companies listed, 2005 and 2006.	Association of corporate governance and dual language with timeliness.	Company size, gearing, profitability and industry.	Result showed that the finance expert on audit committee and frequency of board meeting significantly affect the timely reporting whereas board independence is not an influencing factor.
Afify (2009)	Egypt	85 companies.	Audit Lag	Board independence, duality of chief executive officer, existence of an audit committee, ownerships concentration.	The board independence, duality of CEO, and existence of an audit committee significantly affect audit lag where as ownership concentration has insignificant affect. Control variables: company size, industry and profitability significantly affect audit lag.
Mohamad Naimi et al. (2010)	Malaysia	628 listed companies, 2002.	Audit report lag.	Audit committee characteristics, board characteristics, audit firm quality, busy period, client complexity, client business risk and client size.	They found that the minimum audit report lag was 19 days and the maximum was 332 days. The study provides that more members in the audit committee and more frequent audit committee meetings are more likely to produce audit reports timely whereas that board characteristics do not contribute to reduce of reporting lag.
Hashim and Abdul	Malaysia	288 companies, 2007-09.	Audit report lag.	Board diligence, board independence, board	The results show that audit report lag for the listed companies in Malaysia ranges from 36

Rahman, (2011)				expertise and CEO duality.	days to 184 days for the three year period. There are significant negative relationships between board diligence and audit report lag.
Iyoha (2012)	Nigeria	61 companies, 1999-2008.	Reporting Lag.	Company size, profitability, company age, size of audit firm and company financial year-end.	AGE is significant in determining timeliness whereas company size, profitability, size of audit firm and financial year end do not appear to have any adverse bearing on reporting lag.
Apadore and Marjan(2013)	Malaysia	180 companies, 2009 and 2010.	Audit report lag.	Board independence, ownership concentration, audit committee independence, expertise, meeting, size, internal audit and investment.	Audit committee size, ownership concentration, organization size and profitability significantly associated with audit report lag. However, audit committee independence, meetings, expertise and types of auditors found to have insignificant relationship with audit report lag.