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**Essays on Bidder Anchoring and Cultural Narratives in  
Mergers and Acquisitions**

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*A Thesis Presented for the Degree of Master of  
Philosophy in Finance*

Durham University Business School

Durham University

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# **Essays on Bidder Anchoring and Cultural Narratives in Mergers and Acquisitions**

## **Abstract**

This thesis investigates the behavioural and cultural influences on mergers and acquisitions. Prospect theory proposes that people rely on a reference point when making decisions under uncertainty. Chapter 3 applies this theory to M&As, using the bidder 52-week low as a proxy for loss perception. It shows that bidder managers are subject to reference-dependence bias. Bidders trading closer to their 52-week lows are more likely to pay with stocks and offer higher premiums. These deals are associated with weaker market reactions and poorer long-term performance, suggesting that reference-dependent bidders tend to overpay in pursuit of perceived recovery. The findings contribute to behavioural finance by offering direct evidence of how managerial decisions in M&As are shaped by prior stock performance.

However, not all M&A behaviour can be explained by firm-level reference points. Chapter 4 shifts the focus to the cross-border setting and introduces a cultural perspective. Drawing from narrative economics, a new folklore-based proxy is developed to capture national attitudes toward risk. Using a large sample of 3,663 cross-border M&As, it is found that firms from countries whose traditional stories valorise success in uncertainty are more active in pursuing CBMAs, pay higher premiums, and engage in larger deals. These results suggest that cultural narratives about risk-taking, embedded over generations, influence corporate expansion strategies across borders. The folklore proxy outperforms conventional cultural measures, offering a new lens through which to understand international deal behaviour.

Together, the two chapters highlight distinct but complementary behavioural forces behind M&A decisions. Reference point effects help explain domestic bidder behaviour, where managerial loss framing leads to aggressive but costly deals. Cultural narratives explain cross-border variation, where collective beliefs about risk shape a firm's willingness to acquire abroad. This thesis extends behavioural finance by showing how internal psychological anchors and external cultural contexts interact with market behaviour. The findings offer practical implications for managers and investors by illustrating when, why, and how behavioural factors may distort valuation, influence payment method, and shape acquisition outcomes. The main aim of this thesis is to offer a deeper behavioural understanding of M&A decisions in both domestic and international contexts.

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## **Chapter 1: Introduction**

This thesis investigates the behavioral, cognitive, and cultural influences on mergers and acquisitions (M&As), with a particular focus on how reference dependence and societal risk narratives shape acquisition decisions and outcomes. M&As are among the most significant investment activities undertaken by firms, capable of reshaping corporate structures, reallocating resources, and redefining competitive dynamics. Traditional finance theories have long viewed M&As through the lens of value creation, where rational managers seek synergies, tax efficiencies, and the elimination of inefficient management. Under this framework, acquisitions are expected to generate combined values greater than the sum of the standalone firms. However, a growing body of research highlights that not all acquisitions create value, and many, in fact, destroy it. Behavioral biases, agency conflicts, and cultural factors are increasingly recognized as critical determinants of acquisition behavior, suggesting that M&A decisions are not purely based on rational assessments of economic fundamentals but are also influenced by psychological anchors and deeply embedded societal norms.

The existing literature on M&A motives identifies a complex interplay of factors driving acquisition activity. Synergy motives remain central, where cost savings, revenue enhancements, and strategic repositioning are expected to improve combined firm performance. However, managerial motives, such as empire building and personal risk aversion, have also been widely documented. When ownership and control are separated, managers may pursue acquisitions to increase firm size, prestige, or personal compensation, rather than to maximize shareholder value. Agency theory posits that managers with excess free cash flow may engage in acquisitions to expand their influence, particularly when internal investment opportunities are lacking. Moreover, the hubris hypothesis, proposed by Roll (1986), argues that overconfident managers often overestimate their ability to generate value from acquisitions, leading to

overpayment and subsequent underperformance. Behavioral finance offers additional perspectives, emphasizing that valuation distortions in financial markets can incentivize acquisitions. Shleifer and Vishny (2003) argue that overvalued firms use their inflated stock as acquisition currency, seeking to arbitrage mispricings by acquiring less overvalued targets. Rhodes-Kropf and Viswanathan (2004) complement this view by suggesting that even rational targets may accept overvalued offers due to informational asymmetries and valuation uncertainties. In this context, M&As are not solely efficiency-driven but are also influenced by cognitive biases, agency conflicts, and market imperfections.

At the industry and macroeconomic levels, mergers often occur in waves, clustering around periods of regulatory change, technological innovation, or financial liquidity expansions. Gort (1969) proposed that economic disturbances create valuation dispersions among firms, leading to increased acquisition activity. Mitchell and Mulherin (1996) provide empirical evidence that industry-specific shocks, such as deregulation or commodity price changes, trigger surges in M&A volume. Harford (2005) further emphasizes that liquidity is a necessary condition for merger waves, arguing that even when incentives for consolidation exist, deals only materialize when external financing is readily available. These studies collectively suggest that M&A activity is pro-cyclical, peaking during periods of market optimism and abundant capital.

While these frameworks provide important insights, they often treat firms as homogenous agents, overlooking how individual firm characteristics and managerial psychology influence acquisition strategies. Moreover, the role of historical performance benchmarks and cultural narratives has been relatively underexplored. To address these gaps, this thesis develops a behavioral-cognitive framework for understanding M&As, where managerial reference dependence and societal attitudes



toward risk jointly shape acquisition behavior.

Chapter 2 reviews the theoretical foundations and empirical findings relevant to this framework. It first discusses traditional motives for M&As, including efficiency gains, agency-driven acquisitions, and market timing strategies. It then introduces behavioral perspectives, highlighting the roles of managerial overconfidence, reference dependence, and misvaluation in driving acquisition decisions. The literature on reference points suggests that individuals assess outcomes relative to prior benchmarks rather than absolute terms. In financial contexts, historical stock prices, such as 52-week highs and lows, serve as salient reference points influencing investor and managerial behavior. Prospect theory posits that individuals are risk-averse in the domain of gains but risk-seeking in the domain of losses relative to a reference point. Applying this framework to M&As suggests that managers whose firms have underperformed relative to past highs may pursue riskier acquisitions in an attempt to recover perceived losses. Chapter 2 also reviews the literature on cultural influences on cross-border M&As, noting that national differences in trust, risk tolerance, and uncertainty avoidance have been linked to variations in acquisition patterns and outcomes. However, conventional cultural measures, such as Hofstede's dimensions, may be subject to contemporaneous biases. This motivates the introduction of folklore narratives as a more stable and historically grounded proxy for societal risk attitudes.

Building on this foundation, Chapter 3 examines how bidder firms' own historical stock performance influences acquisition behavior and outcomes in domestic M&As. While previous research has largely focused on the target's 52-week high as a reference point affecting offer premiums, this chapter shifts the focus to the bidder's proximity to its 52-week low. It proposes that bidders trading closer to their 52-week lows experience perceived losses relative to prior valuations, triggering risk-seeking behavior consistent with prospect theory. Using a sample of 3,180 U.S. domestic public M&A deals between 1985 and 2014, the analysis reveals that bidders near their 52-week lows are more likely to use stock as a method of payment, offer higher premiums, and experience

differentiated market reactions depending on the public status of the target. When acquiring public targets, low-reference-point bidders suffer negative announcement returns, suggesting that investors perceive these deals as overpayments driven by behavioral biases rather than value creation. However, when acquiring private targets, the announcement effects are muted, consistent with reduced public scrutiny and bargaining dynamics. Further examination of long-term performance shows that low-reference-point bidders underperform compared to their high-reference-point counterparts, reinforcing the notion that acquisitions driven by perceived losses tend to destroy value. These findings contribute to the literature by demonstrating that bidder-side reference points are an important but previously overlooked determinant of acquisition behavior and outcomes.

Whilst Chapter 3 focuses on bidder behavior in domestic M&As, Chapter 4 extends the analysis to the international context by introducing folklore narratives as a determinant of cross-border M&A (CBMA) activity. Cross-border acquisitions inherently involve greater uncertainty, information asymmetry, and integration challenges compared to domestic deals. Prior studies have shown that cultural distance between acquirers and targets negatively impacts deal frequency and performance. However, cultural distance measures often rely on contemporary survey data, which may be influenced by recent political or economic events. To provide a more stable measure of societal risk orientation, this chapter employs folklore motifs as coded by Michalopoulos and Xue (2021), focusing on whether traditional narratives emphasize success in uncertain circumstances. The underlying hypothesis is that societies with success-oriented folklore narratives are more tolerant of risk and uncertainty, making firms from these societies more likely to engage in and successfully complete CBMAs.

Using a sample of 3,663 CBMA deals from 30 acquiring countries between 1985 and 2018, the analysis shows that acquirers from countries with success-oriented folklore

narratives pursue larger deals, pay higher premiums, and are more active in international markets. These effects are robust to controls for economic development, institutional quality, and traditional cultural indices. Importantly, folklore-based measures predict CBMA behavior even after accounting for generalized trust and uncertainty avoidance, suggesting that deep-rooted narratives capture unique aspects of societal attitudes toward risk-taking. Further analysis reveals that folklore-based risk orientation moderates the sensitivity of CBMA activity to host country risk factors, with success-oriented acquirers less deterred by political or regulatory uncertainty abroad. These findings contribute to the CBMA literature by providing a novel and stable cultural proxy that captures persistent behavioral influences on cross-border investment strategies.

This thesis is motivated by the observation that mergers and acquisitions (M&As), despite being central to firms' growth and internationalisation strategies, often fail to generate value for acquirers. The persistence of underperformance suggests that traditional explanations, centred on rational motives such as synergies or market power, provide only a partial account. The existing M&A literature has yet to fully integrate behavioural perspectives that capture how managerial cognition and socio-cultural contexts shape acquisition decisions. Two mechanisms are particularly underexplored. First, while behavioural finance has shown that reference points strongly influence investor trading, little attention has been paid to how reference dependence affects managers' acquisition strategies. Second, cross-border M&A studies frequently rely on static indices of cultural distance, which do not adequately reflect the narrative frames through which societies interpret risk and opportunity. By focusing on reference points and cultural narratives, this thesis seeks to fill these gaps and provide a more comprehensive behavioural account of M&A.

Across both empirical chapters, the thesis makes several academic contributions. The

first is to extend reference point theory into the corporate takeover domain, showing that acquirers' proximity to a 52-week low systematically affects their choice of payment method, the premium they offer, and the subsequent performance of deals. This evidence highlights the role of cognitive anchors in shaping large-scale corporate investment. The second is to introduce a folklore-based proxy for national cultural narratives, thereby advancing the methodological toolkit available for studying cross-border acquisitions. The results show that success-oriented cultural motifs are associated with larger and riskier international deals, providing a novel perspective on how collective beliefs inform corporate risk-taking. Taken together, the thesis contributes to the behavioural finance literature by linking micro-level cognitive biases with macro-level cultural frames, and by demonstrating their joint influence on M&A outcomes.

The findings carry wider implications for international business strategy and policy. For managers, recognising the distortions caused by reference dependence may improve acquisition discipline and prevent value destruction in pricing and payment design. For cross-border investors, awareness of cultural narratives can help anticipate integration risks and better evaluate host-country opportunities. For policymakers, the results suggest that a nation's attractiveness to foreign acquirers depends not only on its institutions and market fundamentals, but also on the narratives it projects internationally. Policies that cultivate positive cultural narratives around innovation, success, and openness may therefore enhance a country's ability to attract sustainable cross-border investment.

The remainder of this thesis is organized as follows. Chapter 2 reviews the literature on M&A motives, behavioral finance, reference point theory, and cultural determinants of cross-border investments. Chapter 3 examines the impact of bidder reference points on domestic M&A financing choices, offer premiums, and post-announcement

performance. Chapter 4 explores how folklore narratives shape cross-border M&A activity, deal size, and premium decisions. Chapter 5 concludes the thesis, highlighting the contributions to the literature and suggesting directions for future research.

## **Chapter 2: Literature Review**

### **2.1 M&A motives**

Mergers and acquisitions (M&As) have traditionally been understood through the neoclassical lens, where firms pursue value creation by exploiting potential synergies. These may take the form of economies of scale and scope, tax benefits, or improved efficiency through the replacement of underperforming management (Yaghoubi et al., 2016). Under this view, acquisitions are expected to generate economic gains that exceed the sum of the merging firms' standalone values. However, while this rationale remains central, a wide body of literature recognises that not all M&As are driven purely by efficiency considerations. A range of alternative explanations has emerged to account for the diversity observed in M&A activity.

#### **2.1.1 Managerial Motives**

Managerial theories explain M&A decisions through the lens of managerial control, behavioral bias, and self-interest. The core assumption is that when ownership and control are separated, managers play a central role in strategic decisions, including whether and how to acquire other firms. This perspective departs from purely rational, value-maximizing models and highlights that managerial preferences can lead to acquisitions that are not necessarily optimal for shareholders.

The earliest and most foundational perspective is offered by Jensen and Ruback (1983), who describe the M&A market as a “market for corporate control.” In this market, management teams compete for control over firm assets, and takeovers represent a way to discipline underperforming managers. Ideally, acquisitions under this view are intended to improve efficiency by reallocating assets toward better use. However, this assumes that managers are acting in the best interest of shareholders and that the

acquiring firm is truly more capable. In practice, this is not always the case.

A prominent alternative is the hubris hypothesis proposed by Roll (1986). He argues that managers often overestimate their ability to evaluate and integrate target firms. These managers are not necessarily self-serving; rather, they are overconfident. They believe that their private valuation is more accurate than the market price, which leads to overpayment. Roll's framework explains why acquiring firm shareholders often experience negative announcement returns, especially in deals that fail to deliver long-term value. The hubris hypothesis does not rely on managerial malfeasance but instead highlights psychological bias.

Agency theory offers another explanation, emphasizing that managers may act to further their own interests rather than those of shareholders. Jensen (1986) introduces the free cash flow hypothesis, suggesting that when firms generate more cash than is needed for value-enhancing investments, managers may spend the excess on acquisitions. These deals may be attractive not because they create value, but because they increase the size of the firm, and by extension, the power and compensation of executives. Managers might prefer acquisitions over dividends or buybacks, which would return cash to shareholders and limit their own control.

Harford (1999) tests this idea empirically. He finds that firms with high levels of unused cash are more likely to engage in acquisitions, and these acquisitions are more likely to destroy value. He also shows that these firms tend to participate in merger waves, not necessarily because opportunities are better, but because managers use the momentum as a cover for agency-driven decisions. In this way, cash holdings and market context jointly shape the timing and quality of acquisitions.

Amihud and Lev (1981) extend this line of reasoning by focusing on employment risk. They argue that managers in firms with unstable earnings face greater personal risk, and may use diversification as a strategy to reduce it. By acquiring firms in unrelated industries, executives can stabilize cash flows and make their own positions more secure. While shareholders can diversify risk through portfolio construction, managers cannot diversify their personal employment risk as easily, and may act accordingly. This behavior may be rational from the manager's perspective but does not necessarily serve shareholders.

Shleifer and Vishny (1989) offer another managerial incentive theory: entrenchment. Managers may pursue acquisitions to make themselves more difficult to remove. By expanding the firm's size or operational complexity, they reduce transparency and increase the cost of external monitoring or replacement. In this case, acquisitions are not about synergy or efficiency but about preserving managerial control. Large or unrelated acquisitions may not improve firm performance, but they increase the complexity of oversight, thereby protecting incumbent executives.

Managerial motives range from hubris and overconfidence to free cash flow use and entrenchment. Their expression is conditional: industry shocks create occasions for action, while financing conditions determine whether such motives translate into bids. This link to sectoral disturbances and market liquidity foreshadows the industry- and macro-level accounts below.

### **2.1.2 Industrial view**

Industry-level theories explain mergers as a collective response to shocks that alter the structure or dynamics of specific sectors. Unlike explanations centered on managerial behavior or firm-specific conditions, these theories suggest that mergers tend to occur



in clusters because firms face common external changes that reshape incentives at the industry level.

Gort (1969) developed the earliest formal argument in this area. He proposed the economic disturbance theory, which states that mergers occur when industry-level shocks lead to diverging valuations among market participants. These shocks—such as technological advances, changes in input costs, or regulatory reforms—make the future less predictable and weaken the usefulness of past data in forecasting performance. As a result, investor expectations become more dispersed. When buyers believe they can extract more value from a target than its current owners do, they initiate takeovers. This spread in valuation encourages trade, and, at scale, leads to merger waves

Building on this idea, Mitchell and Mulherin (1996) offer empirical evidence that industry-specific shocks are a key driver of takeover activity. They show that across 51 industries during the 1980s, the volume of M&A deals rose sharply following deregulation, oil price shifts, and innovations in financing. These events created uncertainty or redefined the competitive landscape, prompting firms to consolidate. They further argue that takeovers act as mechanisms through which firms adapt to such structural changes, reallocating assets in response to evolving conditions

Harford (2005) supports this view but adds a critical condition: industry shocks alone are not sufficient. He finds that merger waves only materialize when shocks coincide with abundant market liquidity. In his model, firms may recognize potential value from consolidation, but if external financing is costly or unavailable, the opportunity goes unrealized. This idea reinforces that both industry-level incentives and macroeconomic conditions must align for mergers to happen in waves

Andrade et al. (2001b) focus specifically on deregulation as a type of industry shock. Analyzing eight deregulated sectors, they find that M&A activity increases significantly post-reform. Deregulation creates new investment opportunities and removes legal barriers to consolidation. Unlike other shocks, its timing and affected parties are clearly defined, making it easier to link regulatory change to merger outcomes. They argue that deregulation leads to market restructuring, often favoring larger, more aggressive firms that quickly act on new freedoms

Gorton et al. (2009) introduce a behavioral layer to industry-level theories. Their eat-or-be-eaten model explains how the relative size of firms within an industry shapes their reaction to external shocks. When firms are of similar size, managers may engage in defensive mergers to avoid becoming targets themselves. These deals may not be value-creating but serve to protect managerial control. In industries dominated by a few large firms, smaller firms may instead consolidate to become more attractive targets for acquisition. In either case, merger activity follows a pattern triggered by industry conditions but driven by firm positioning

They also show that firm size distribution influences how merger waves evolve. If all firms are mid-sized, the wave might be self-reinforcing, with each merger prompting the next. In contrast, if there's one dominant firm, others may only merge to align with or attract it. This framework offers a structural explanation for why some industries consolidate rapidly aftershocks while others remain fragmented.

Jovanovic and Rousseau (2008) place industry-level dynamics into a broader historical context. They argue that large-scale technological changes—such as the spread of electrification in the early 20th century or the rise of IT in the 1990s—lead to widespread reallocation of assets. In their view, mergers are the primary mechanism

through which this reallocation happens. Firms unable to adapt are absorbed by those who can. This process plays out over years and varies across sectors depending on how exposed they are to the underlying shift.

Industry shocks explain clustering, but they do not fix the sign of value creation. Heterogeneous responses within the same sector point back to managerial discretion and bias, and forward to the role of market liquidity in enabling transactions. Thus, industry forces complement firm-level motives and set the stage for macro-cyclical patterns.

### **2.1.3 Macroeconomic Factors and the Theory of Pro-cyclical Mergers**

M&A activity tends to rise in periods of economic expansion. This pattern—commonly referred to as pro-cyclicality—has been observed across multiple merger waves and is often linked to broader macroeconomic forces. The literature attributes this to two sets of conditions: structural changes in the economy, and the availability of capital to execute deals.

Lang et al. (1989) and Servaes (1991) provide early firm-level evidence on how mergers contribute to capital reallocation. Their studies show that when acquirers have high Tobin's Q and targets have low Q, post-merger returns are more positive. In these cases, the acquirer is seen as a more efficient user of assets. This supports the idea that M&A is a way to move capital from less productive to more productive firms—a micro-level efficiency mechanism that foreshadows broader macroeconomic models

Jovanovic and Rousseau (2008) scale this logic up. They argue that major technological innovations—what they call general-purpose technologies—create large differences in firm-level productivity. Mergers serve to reallocate assets during these periods of

technological change. Over time, M&A has become the dominant way to shift capital in the U.S. economy, especially as bankruptcy laws became more flexible. Their historical analysis shows that merger waves align closely with these innovation-driven reallocation phases. This gives macroeconomic context to the Q-theory: during periods of high Q dispersion, capital moves more efficiently through M&A than through organic investment or market exit

Jensen (1993) links this process to the 1980s wave. He argues that U.S. firms were responding to years of internal inefficiency and external pressure. Deregulation and capital market developments created both the incentive and the means for restructuring. Takeovers, in this view, were part of a corrective mechanism—one that helped realign overextended firms with the realities of competition and capital discipline

Holmstrom and Kaplan (2001) examine how managerial incentives interacted with these macro forces. They note that institutional investors, stock options, and performance-based pay changed how managers thought about value creation. Combined with deregulation and information technology, this environment favored aggressive restructuring. M&A became more than a strategic option—it became embedded in managerial logic. Firms began using acquisitions not just to grow but to satisfy capital markets, meet performance targets, and react faster to change. Even after the initial shocks passed, deal activity continued, suggesting that the pro-cyclicality of M&A is partly sustained by internalized behavior

Maksimovic and Phillips (2001) reinforce this idea. They show that firms are more likely to pursue M&A during periods of economic growth, when expectations are strong, asset prices are high, and financing is easier to obtain. In this context, mergers become a vehicle to scale operations, acquire capacity, or secure resources in anticipation of

future demand. Pro-cyclicality is not just reactive—it reflects firms taking proactive steps while conditions allow.

Toxvaerd (2008) takes a different angle. He models mergers as a strategic game among rational firms. In his framework, each firm chooses when to act, knowing that delaying might lead to being acquired or missing an opportunity. As uncertainty declines and more firms enter the market, the pressure to act builds. This leads to clustering: not because of over-optimism or misjudgement, but because rational actors recognize the risk of waiting too long. Waves form as a natural result of timing coordination and competition.

Macro conditions account for the timing and intensity of waves, yet they leave open why some deals underperform. Here, behavioural mechanisms—how managers read prices and sentiment—interact with liquidity to shape bid incidence, payment choice and premia. The behavioural view therefore refines macro patterns by specifying the transmission from cycles to decisions.

#### **2.1.4 Behavioural explanations**

Behavioural theories argue that valuation distortions in financial markets—particularly periods of overvaluation—can become a primary driver of acquisition activity. This perspective does not necessarily assume that managers are irrational; instead, it allows that they may act rationally in response to mispricing, sentiment, and uncertainty. Two key theoretical contributions—Shleifer and Vishny (2003) and Rhodes-Kropf and Viswanathan (2004)—form the foundation of this line of research.

Shleifer and Vishny (2003) present a framework in which acquirers use overvalued stock to purchase less overvalued or undervalued targets. In their model, mispricing is

persistent and predictable, and rational managers exploit these distortions to transfer value from the market to their own firm. Importantly, the acquisition is not expected to create economic synergy; the value gain comes instead from the arbitrage between mispriced equity and target assets. This behaviour is more likely during bull markets, when acquirer valuations are inflated, and it helps explain the clustering of stock-financed mergers in such periods.

In their model, target managers are not always misled. They may accept overvalued shares either because they have short-term incentives—such as equity-based compensation, exit packages, or limited job security—or because they themselves face information asymmetry and cannot fully evaluate the bidder's stock value. Agency problems on the target side make the transfer of overvalued shares feasible. Mergers are therefore structured not only around valuation differences but also around the institutional and personal incentives of target managers.

Moreover, Shleifer and Vishny (2003) argue that this form of value transfer can scale. When mispricing is systematic across sectors, and many firms are simultaneously overvalued, waves of stock-financed mergers can occur. These are not necessarily associated with economic shocks or technological change, but are instead the result of shared valuation anomalies. In this way, stock-market misvaluation becomes an independent source of merger clustering, regardless of underlying industrial logic.

Rhodes-Kropf and Viswanathan (2004) extend this idea by addressing a key limitation in SV's model: the assumption that targets are naïve or passive. Instead, they model a setting in which both the bidder and the target are rational but operate under asymmetric information. Target managers cannot perfectly distinguish whether a bidder's high stock price reflects genuine future growth potential (i.e., synergies) or market overpricing.

This uncertainty is particularly severe in periods of high market optimism, when prices are noisy and value signals are weak.

The RV model shows that even when targets are aware of potential mispricing, they may rationally choose to accept stock-based offers because the expected value of the transaction remains positive under uncertainty. The model also explains why market reactions to stock-financed deals are weaker: investors recognize that such deals are more likely to be motivated by misvaluation rather than efficiency. This aligns with observed patterns where stock offers generate limited or even negative announcement returns, especially in hot markets.

Importantly, Rhodes-Kropf and Viswanathan (2004) also explain how mispricing interacts with the structure and sequencing of merger waves. When misvaluation becomes widespread, the informational value of prices diminishes, and more deals occur despite uncertainty. At the same time, the model predicts that as valuation dispersion increases, so does the probability that acquirers will act—not necessarily because of strong fundamentals, but because mispricing introduces option-like incentives: if the stock is overvalued, it is better to act than to wait. Thus, the RV model formalizes how rational actors may still participate in inefficient transactions, and how informational frictions—rather than irrationality—can drive systemic patterns of merger activity.

The empirical literature supports these core models. Dong et al. (2006) find that the traditional Q-theory of investment explains merger activity better before 1990, while post-1990 deals are more consistent with misvaluation-based motivations. They show that acquirers with overvalued equity are more likely to initiate stock-financed deals, and that such deals often underperform in the long run. Their results align with both

SV's arbitrage logic and RV's uncertainty framing. Ang and Cheng (2003) add further evidence using accounting-based estimates of firm value. They find that stock is more likely to be used as payment when the acquirer is overvalued relative to its fundamentals. This supports the notion that managers time equity-based acquisitions strategically, based on valuation conditions rather than strategic fit.

Rosen (2006) shifts the focus to investor response. He identifies momentum effects in the stock market around merger announcements: during hot markets, investors tend to react positively to deals in the short term, creating a positive feedback loop. However, these initial gains often reverse in the long run, as optimism fades and fundamental assessments reassert themselves. This research concludes that investor sentiment—rather than deal quality—is a primary driver of short-run acquirer returns.

While misvaluation-based theories explain many observed patterns in M&A, Harford (2005) raises important concerns about their sufficiency, particularly in explaining the emergence of merger waves. He argues that mispricing alone cannot account for the clustering of M&A activity over time. In his view, many firms may recognize that their shares are overvalued, but this awareness does not automatically translate into a surge of acquisitions. The act of launching a takeover still depends on external conditions—most importantly, the availability of capital.

Harford emphasizes the role of market liquidity as the key enabling factor. Even if a firm perceives its equity to be overvalued and identifies a potential target, it cannot proceed with a transaction unless financing is accessible and transaction costs are low. Without liquid capital markets, especially for large or complex deals, misvaluation becomes a motive without a mechanism. Thus, behavioural motives might be present across time, but merger activity only materializes when liquidity constraints are relaxed.



In his empirical analysis, Harford shows that merger waves tend to align with periods of high liquidity, not just high valuation. He documents that during these periods, not only do more deals happen, but the proportion of stock-based and lower-quality deals also increases, consistent with the idea that easy financing can lead to more marginal acquisitions. This observation weakens the argument that mispricing alone is sufficient and instead supports a joint condition model, where both valuation anomalies and funding capacity are needed to trigger large-scale deal flow.

Behavioural misvaluation accounts predict stock-financed clustering and weak bidder returns, but require liquidity to scale. Their force is mediated by managerial incentives (e.g., agency rents) and by the opportunity set created by industry shocks. Behavioural, managerial and market views are thus interdependent rather than competing.

The accounts in 2.1 speak to different margins of the acquisition decision and yield distinct, testable implications. Managerial theories (hubris, overconfidence, free cash flow, entrenchment) locate the mechanism inside the firm: they predict higher premia, weaker bidder announcement returns, and, where governance is lax and cash balances are high, a greater incidence of diversifying or empire-building deals. Industrial views shift the source to common shocks; they explain clustering and target reallocation across a sector, but are agnostic on premia and long-run bidder performance without assumptions about firm heterogeneity. Macroeconomic arguments organise timing through pro-cyclicality and financing costs; they predict waves when credit is cheap and equity valuations are high, yet cannot by themselves discriminate between value-creating and value-destroying bids. Behavioural misvaluation links market conditions to deal design: it predicts stock-financed bids, higher premia, muted or negative bidder announcement returns, and weaker long-run performance in hot markets—especially when dispersion in valuations is large—and, consistent with liquidity constraints, a

stronger effect when external finance is abundant.

Set side by side, the tensions are clear. Managerial bias and agency predict overpayment irrespective of market states; behavioural misvaluation requires pricing errors and is mediated by liquidity; industry shocks explain when many firms move but not why some overpay; macro conditions enable execution but do not determine quality. The complementarities are also clear: industry shocks create opportunities, macro liquidity lowers frictions, managerial incentives select and price targets, and behavioural forces shape payment choice and short-run market reaction. Empirically, the joint model implies (i) stock rather than cash usage in hot, liquid markets (behavioural + macro); (ii) stronger effects where acquirer cash or weak governance expands managerial discretion (managerial + macro); and (iii) greater clustering within shocked industries, with cross-sectional dispersion in outcomes traced to firm-level motives (industry + managerial/behavioural). No single theory is sufficient; taken together, they provide a layered explanation for both the timing of waves and the mixed record on value creation.

## **2.2 M&A Consequences**

### **2.2.1 The overall market**

At the macro level, prior research mainly discusses two types of consequences: whether mergers generate overall productivity gains and whether they impair market competition. These questions are closely related to the economic rationale for mergers—whether they lead to efficiency or merely redistribute existing value.

One fundamental question is whether mergers contribute to economy-wide improvements in productivity. While many studies document positive wealth effects for shareholders, this does not necessarily translate into aggregate productivity gains. Shleifer and Summers (1988) argue that some of the observed value gains may be the

result of wealth transfers from other stakeholders, such as employees or bondholders, rather than improvements in efficiency. If this is the case, mergers do not create new value for the economy. However, Jarrell et al. (1988) review related studies and conclude that there is little empirical evidence supporting substantial wealth transfers from non-shareholder groups, suggesting that redistribution may not be the primary mechanism

Holmstrom and Kaplan (2001) note that it is difficult to assess the overall productivity effect of mergers due to the complexity of influencing factors and the lack of clear causal mechanisms. Andrade et al. (2001a) echo this view and identify three major obstacles to drawing strong conclusions: the long-run negative performance of acquirers, the unclear source of merger gains, and the fact that most wealth effects accrue to target shareholders rather than to acquirers. These factors collectively raise doubts about whether mergers create real economic value beyond stock market reactions

Some studies adopt an industry-level approach to examine whether mergers contribute to structural efficiency. Andrade and Stafford (2004) argue that mergers play a dual role in the economy—facilitating both expansion and contraction. In growing sectors, mergers allow firms to scale up and consolidate market positions. In declining sectors, they help reduce excess capacity and eliminate redundant players. In both cases, mergers may promote reallocation of resources toward more efficient uses. However, this does not always lead to aggregate productivity improvement, especially when the gains are offset by integration costs or coordination problems

The second major macroeconomic concern is the impact of mergers on market competition. In the absence of regulatory constraints, mergers may lead to increased

market concentration and reduction in competitive pressures. Historical evidence from the first merger wave in the early 20th century shows that many industries became dominated by a few large firms with more than 50% market share, raising concerns about monopolistic behavior (Stigler, 1950). While modern antitrust regulations have curtailed extreme concentration, mergers may still lead to oligopolistic structures over time

Mueller (1985) finds that, following acquisitions, acquiring firms tend to experience a decrease in market share compared to non-merging peers, suggesting that not all mergers are aimed at consolidating market power. In contrast, Gugler et al. (2003) show that, despite a post-merger decline in sales, merged firms often exhibit improved profitability, especially in horizontal mergers. They interpret this as evidence that mergers can enhance market power, enabling firms to increase margins even if output falls. The implication is that some mergers achieve profitability not through efficiency, but through greater pricing power

Andrade et al. (2001a) suggest that mergers can affect industry structure and strategic interaction. In highly concentrated markets, further consolidation can reduce incentives for innovation and increase coordination risks. The Herfindahl-Hirschman Index (HHI) is commonly used to monitor these changes. Regulators often intervene when proposed mergers are expected to substantially lessen competition, particularly in industries with high pre-merger concentration levels.

Taken together, macro evidence is mixed. Mergers can aid reallocation yet also raise concentration, and market-value gains do not, by themselves, identify productivity effects. Whether aggregate outcomes reflect efficiency or rent extraction depends on the incidence of deals that realise operating improvements versus those that shift

surplus. This links the macro debate to firm-level evidence on synergy realisation below.

### **2.2.2 The Synergy**

One of the most widely cited explanations for merger activity is the presence of synergies. The expectation that the combined firm will be worth more than the sum of its parts remains central to many theoretical and empirical studies. Synergies are generally categorised into two broad types: operating and financial. The literature has placed more emphasis on operating synergies, which relate to real efficiency gains in the combined entity. Financial synergies, though theoretically relevant, have received less attention and are often harder to isolate empirically.

Devos et al. (2009) provide one of the most direct comparisons between operating and financial synergies. They analyse a sample of 266 large acquisitions in unregulated industries and report that operating synergies account for the majority of total synergy gains, while financial synergies, measured by interest tax shields, contribute approximately 17 percent of the total. Their study quantifies synergies using cash flow forecasts and shows that real operating improvements are the principal drivers of value creation.

Houston et al. (2001) assess expected synergies in a sample of 41 large bank mergers using management forecasts. They find that average synergy gains are approximately 13 per cent and are driven predominantly by cost savings, rather than revenue increases. Similarly, Bhagat et al. (2005) examine tender offers with competing bidders and find average value improvements of 13.1 per cent. These studies suggest that management expectations of synergy can be substantial, especially in competitive or large-scale transactions.

However, the literature on realised operating improvements provides mixed results. Several studies rely on ex post accounting performance or plant-level productivity data to detect the presence of operating gains. For example, Ghosh (2001) compares acquiring firms to matched control firms and finds limited evidence of operating improvements, suggesting that observed post-merger performance may be driven by pre-existing differences rather than merger-induced efficiency. Ravenscraft and Scherer (1987) analyse line-of-business data for targets of tender offers and similarly find no significant operating performance improvement.

In contrast, other studies report more favourable outcomes. Healy et al. (1992) use ex post accounting measures and find that operating performance improves following a merger, with gains arising primarily from higher asset turnover rather than changes in margins. They also document capital expenditure savings of approximately 25.4 per cent, providing direct evidence of improved efficiency. Heron and Lie (2002) reach similar conclusions using adjusted accounting measures.

Maksimovic and Phillips (2001) apply plant-level data from the Longitudinal Research Database for U.S. manufacturing firms and report no overall improvement in asset productivity post-merger. However, they note that when acquirers expand capacity in core divisions and increase focus, productivity does improve. This suggests that the realisation of operating synergies is conditional on post-merger restructuring and strategic alignment.

Synergy gains are more likely to arise in related mergers, where firms operate in similar industries. In such cases, the potential to combine production processes, eliminate redundancies, and consolidate procurement or distribution is higher.

Rhodes-Kropf and Robinson (2008) suggest that asset complementarity motivates mergers. When firms possess assets that are similar but not identical, integration can create productive combinations. Hoberg and Phillips (2010) add that product differentiation also contributes to synergy gains. They find that acquirers targeting firms with products different from those of their closest industry rivals can gain strategic advantages through differentiation, which competitors find difficult to imitate.

In contrast, diversifying mergers—those between firms in unrelated sectors—are less likely to yield operating synergies. Maquieira et al. (1998) argue that such transactions do not materially reduce operating costs or improve operational efficiency. Although these mergers were popular in the 1960s, they are generally not explained by operating synergy models. Interestingly, however, Bradley et al. (1988) find that diversifying mergers still created positive value, indicating that other mechanisms may be at play.

Compared to operating synergies, financial synergies have received relatively limited attention in the empirical literature. Jensen and Ruback (1983) and Jensen (1986b) suggest that mergers may create financial benefits through increased leverage, improved debt capacity, reduced default risk, and better agency control. Lewellen (1971) argues that merging firms can reduce their risk profile via the coinsurance effect, thereby lowering the cost of capital. However, Leland (2007) critiques this view, proposing that financial synergies are not always positive. In his model, the overall financial synergy gain is decomposed into three components: (1) the change in unlevered firm value due to the acquisition, (2) the change in tax savings from optimal leveraging of the combined firm versus the stand-alone firms, and (3) the change in expected default costs.

Importantly, Leland (2007) assumes the absence of operating synergies in his model.

This assumption highlights the limited role that purely financial considerations may play in value creation. Moreover, his analysis suggests that not all financial synergies are beneficial; the net outcome depends on how leverage, tax benefits, and bankruptcy risk interact after the merger.

Devos et al. (2009) remain one of the few studies to compare the magnitude of operating and financial synergies directly. Their finding—that operating synergies explain the majority of the gains—reinforces the view that real productivity improvements are the dominant source of merger value. Their estimate that interest tax shields account for 17 per cent of total synergy gains provides a bounded sense of the role played by financial structuring.

Overall, operating gains are possible but conditional on relatedness, post-merger restructuring and focus. Where such conditions are weak, observed value may derive from tax shields or pricing power rather than efficiency. This pattern helps reconcile why macro studies report ambiguous productivity effects while some transactions still appear privately profitable.

Both the macro and micro literatures are consistent: mergers are not uniformly efficiency-enhancing. Aggregate studies observe reallocation and consolidation but cannot separate efficiency from rent shifts; micro studies show that realised operating synergies arise mainly in related combinations with effective integration, whereas diversifying or poorly governed deals tend to underdeliver and rely on financial or market-power channels. Hence, economy-wide benefits hinge on the composition and execution of deals. This also motivates the next section on performance measurement and its determinants.



## **2.3 M&A Performance and its determinants**

### **2.3.1 Short-run and Long-run performance.**

M&A performance is a central metric for evaluating deal outcomes. Substantial empirical evidence shows that target firms consistently earn significant positive abnormal returns around acquisition announcements, while acquirers, on average, realise no gain (Dodd and Ruback, 1977; Jensen and Ruback, 1983; Rau and Vermaelen, 1998; Fuller et al., 2002; Moeller et al., 2004; Alexandridis et al., 2013). This asymmetry is well understood: acquirers offer premiums to induce target shareholders to sell, which directly boosts the target's market value. Conversely, the average announcement effect on acquiring firms is statistically indistinguishable from zero, a finding consistent with the "perfectly competitive acquisitions market" hypothesis. Under the assumption of semi-strong market efficiency, such results imply that acquisitions are, on average, zero-net-present-value investments for bidders. Behavioural perspectives, however, caution against this interpretation, suggesting that announcement returns may reflect only short-term sentiment rather than the transaction's long-run economic impact.

Studies using long-horizon stock returns present a more negative picture. Research employing buy-and-hold abnormal returns (BHARs) or calendar-time portfolios frequently finds that post-completion returns to acquirers are negative or, at best, near zero (Loughran and Vijh, 1997; Rau and Vermaelen, 1998; Agrawal and Jaffe, 2000). In contrast, studies based on accounting metrics, such as return on assets or economic value added, often report improvements in operating performance following acquisitions (Healy et al., 1992; Ghosh, 2001; Andrade et al., 2001; Martynova et al., 2006). These discrepancies reflect methodological sensitivities in defining and measuring performance.

Beyond measuring value creation, performance outcomes provide empirical tests of competing merger theories, each of which implies distinct post-merger expectations. Agency-based explanations, such as the management entrenchment hypothesis (Morck et al., 1990), posit that self-interested managers undertake acquisitions that reduce shareholder value to protect their own positions. Similar outcomes are predicted by the hubris hypothesis (Roll, 1986), where overconfident managers overpay, and the envy hypothesis (Goel and Thakor, 2010), where acquisitions are driven by managerial rivalry rather than value. All three predict a decline in post-acquisition performance.

In contrast, neoclassical theories highlight efficiency gains. The industry shocks hypothesis (Jensen, 1993; Mitchell and Mulherin, 1996; Harford, 2005) suggests that acquisitions are responses to exogenous disturbances, and performance depends on how firms adapt to structural shifts. The Q theory of mergers (Lang et al., 1989; Servaes, 1991; Jovanovic and Rousseau, 2002, 2008) asserts that high-Q acquirers—those with superior governance or investment prospects—achieve superior returns, particularly when acquiring low-Q targets. Toxvaerd (2008) extends this view by modelling acquisition timing under competition, predicting that early movers benefit more, while later deals face winner’s-curse dynamics.

Behavioural theories offer alternative mechanisms rooted in misvaluation. According to Shleifer and Vishny (2003) and Rhodes-Kropf and Viswanathan (2004), stock-financed acquisitions during periods of market overvaluation tend to destroy value, particularly in the long run. These models predict that short-term bidder returns are, on average, negative, and long-run performance varies by payment method: negative for stock deals, and potentially positive for cash-financed transactions. Rhodes-Kropf et al. (2005) further argue that market-wide misvaluation can drive merger waves, but does not necessarily result in long-term value creation.

Gorton et al. (2009) introduce an industry-structure explanation through the “eat-or-be-eaten” hypothesis. They show that acquirer performance depends on firm size and industry configuration. While average abnormal returns are negative, small acquirers tend to create value, and profitability increases with the dominance of the largest firm in the industry. In industries with many similarly sized firms, defensive acquisitions—motivated by fear of becoming targets—are more common and more likely to destroy value, consistent with entrenchment-based theories. These findings underscore that post-acquisition performance reflects not only deal-specific factors, but also broader strategic and structural conditions.

In sum, announcement effects and long-horizon returns diverge. Short-run patterns are consistent with competitive pricing, whereas long-run underperformance and selective accounting gains leave room for agency, hubris, and misvaluation channels. This motivates conditioning performance on bidder, target, deal, and market context below.

### **2.3.2 Acquirer Characteristics**

Acquirer characteristics have been extensively examined in the literature. Prior experience with M&A activity exhibits a non-linear relationship with post-deal performance. While Kusewitt (1985) reports a negative association, Fowler and Schmidt (1989) find that accumulated experience can contribute positively to acquisition outcomes, suggesting that learning effects may take hold after a certain threshold. However, experience alone does not guarantee success; the nature and timing of previous acquisitions are also critical (Hayward, 2002).

Firm size has been consistently shown to influence acquirer returns. Moeller et al. (2004) document that while small acquirers tend to earn significantly positive abnormal returns around announcement dates, very large acquirers often experience negative market

reactions. This size effect is also confirmed by Gorton et al. (2009), implying that overconfidence or empire-building behaviour may be more prevalent among large acquirers, leading to less disciplined deal-making.

Tobin's Q, as a proxy for firm valuation and growth opportunities, is another acquirer attribute with documented performance implications. Lang et al. (1991) show that high Q acquirers benefit more when acquiring low Q targets, consistent with the hypothesis that well-governed firms can better exploit value-creating opportunities. Servaes (1991) corroborates this by reporting that acquirers with higher Q ratios earn superior post-merger returns. Nonetheless, more recent studies raise questions about the reliability of Q as a predictor. Bhagat et al. (2005) and Dong et al. (2006) suggest that higher Q may reflect market overvaluation, which leads to value-destroying mergers, thus reversing the expected positive effect.

The distinction between glamour and value acquirers has also attracted attention. Rau and Vermaelen (1998) propose the extrapolation hypothesis, under which markets initially overreact to past performance of glamour acquirers (those with high market-to-book ratios), leading to overly optimistic expectations at the time of acquisition announcements. Their results indicate that glamour acquirers subsequently underperform, while value acquirers tend to deliver better long-term outcomes. This mispricing effect, driven by market sentiment, reflects the importance of investor expectations in the M&A context.

Liquidity positions also appear to affect acquirer behaviour and outcomes. Harford (1999) demonstrates that firms with excessive cash reserves are more likely to engage in acquisitions and that these deals often destroy value. The findings are consistent with Jensen's (1986) free cash flow hypothesis: in the absence of investment constraints,

managers may pursue deals that expand firm size or personal influence, regardless of shareholder value considerations. Devos et al. (2009) echo this concern, linking high liquidity to poor acquisition choices and negative returns.

Ownership structure, particularly managerial shareholding, has been studied as a determinant of deal outcomes. Wright et al. (2002) report a non-linear relationship between CEO ownership and abnormal acquisition returns, suggesting that moderate levels of ownership align managerial incentives with shareholder interests, whereas excessive control may lead to entrenchment. This is supported by Cosh et al. (2006), who find a strong positive association between CEO shareholding and post-M&A performance, while the holdings of other executives and non-executive directors appear unrelated to deal success.

Corporate governance attributes, such as board size, have also been linked to acquisition behaviour. Cheng (2008) suggests that larger boards are associated with lower performance volatility and less aggressive acquisition activity, possibly due to more cautious decision-making and enhanced oversight. Carline et al. (2009) reinforce this by showing that board-level governance variables significantly influence operating performance changes following mergers.

Executive compensation structures matter as well. Datta et al. (2001) find that acquirers whose executives receive higher proportions of equity-based compensation tend to make better M&A decisions. Specifically, these managers pay lower acquisition premiums and select targets with greater growth potential. The alignment of managerial interests with shareholder returns appears to enhance acquisition performance, reducing agency-driven distortions.

Overall, bidder heterogeneity matters, but not in isolation. Size, Q, liquidity, governance, and incentives shape both the type of targets pursued and the terms accepted. These bidder-side traits interact with target-side frictions, to which we now turn.

### **2.3.3 Target Characteristics.**

Prior research consistently finds that acquisitions involving privately held targets are associated with more favourable outcomes for the acquiring firm. Maksimovic et al. (2013) observe that although public firms participate more actively in merger waves, acquisitions of private targets generate superior returns for acquirers. This asymmetry in outcomes has prompted a number of studies to explore the mechanisms underlying the public-private distinction.

Chang (1998) examines three hypotheses to explain the positive abnormal returns associated with acquisitions of privately held targets: limited competition, monitoring, and asymmetric information. The limited competition hypothesis posits that because private targets attract fewer bidders—due to higher search costs—acquirers are more likely to obtain them at favourable prices. This underpayment, coupled with potential acquirer-specific synergies, results in positive stock market reactions, particularly when stock is used as payment.

The monitoring hypothesis suggests that when private targets receive acquirer stock, they often become large shareholders in the combined firm. This concentrated ownership can enhance governance and improve post-merger performance through more effective oversight. While external block-holders may act as valuable monitors (Shleifer and Vishny, 1986), prior research also notes that such concentration can lead to entrenchment or reduced takeover threats (Fama and Jensen, 1983; Morck et al.,

1988b).

The asymmetric information hypothesis focuses on the signalling effects of stock financing. Stock issuance is typically seen as a negative signal of overvaluation (Myers and Majluf, 1984), often leading to negative announcement returns. However, in private target deals, acquirer managers can disclose internal information directly to a small group of target shareholders, who assess the deal carefully before accepting equity. Their decision to retain a large stake post-acquisition can reassure markets, resulting in positive price reactions. Chang (1998) finds that positive abnormal returns are concentrated in stock-based acquisitions of private firms, while cash transactions show no significant effect, pointing to the importance of reduced information asymmetry and enhanced post-deal monitoring.

In contrast, acquisitions of publicly traded targets tend to involve higher premiums, more intense competition, and greater scrutiny by the market, all of which can erode the potential for acquirer gains. Furthermore, the ownership of public targets is often dispersed, reducing the likelihood of effective post-deal monitoring. The evidence therefore suggests that acquirers may face structural disadvantages when acquiring public firms, resulting in weaker performance outcomes.

In addition to listing status, the historical performance of the target firm has also been proposed as a determinant of post-merger returns. Lang et al. (1989) and Servaes (1991) report that acquisition abnormal returns are larger when targets have low Tobin's Q ratios. The interpretation is that low-Q targets are less efficient in resource allocation, providing scope for acquirer-led improvement. This finding is further supported by Morck et al. (1990), who show that abnormal returns to acquirers are negatively correlated with the pre-announcement performance of the target in non-banking industries. Acquiring firms thus seem to benefit more when the targets they acquire are underperforming prior to the deal. DeLong (2001) extends this result to the banking

sector, finding that acquirer returns decline with increases in the premerger performance of the target. The overall conclusion is that low-performing targets offer more potential for improvement and synergy realisation, which is reflected in more positive market responses to the acquisition.

Listing status and pre-deal performance affect information asymmetry, bargaining, and post-merger monitoring. These mechanisms align closely with payment choice, competitive tension, and deal attitude, which are addressed next.

#### **2.3.4 Deal characteristics**

One of the most salient characteristics is the method of payment. Acquisition deals are typically financed through cash, stock, or a combination of the two. The choice of financing method carries important implications for acquirer returns. According to Amihud et al. (1990), cash payments generate immediate tax liabilities for target shareholders, while stock transactions defer tax liabilities until stock disposal. More importantly, the information asymmetry hypothesis (Myers and Majluf, 1984) posits that acquirers opting for stock reveal their own overvaluation, which the market interprets as a negative signal. Consistent with this, Travlos (1987) finds that stock-based acquisitions are associated with negative abnormal announcement returns, whereas cash transactions yield significantly higher gains. Later evidence supports this asymmetry in market reactions, highlighting the role of acquirer valuation and signalling in shaping investor expectations. From a long-term perspective, Savor and Lu (2009) suggest that successful stock-based acquirers experience substantial abnormal returns relative to a benchmark of failed bidders, arguing that overvalued equity can be strategically deployed to secure valuable assets at a discount.

However, equity-based mergers are essentially dual events—representing both a merger



and a seasoned equity offering. Consequently, the price reaction cannot be attributed solely to merger expectations. Equity issuances, as established in earlier studies, tend to provoke negative abnormal returns due to the perception of overvaluation (Myers and Majluf, 1984). Thus, the negative effect observed in stock-financed takeovers may reflect this broader market scepticism. Nevertheless, Shleifer and Vishny (2003) propose that managers of overvalued firms rationally use their overpriced shares to acquire relatively less overvalued targets. In their view, the subsequent underperformance of stock acquirers is not necessarily due to poor post-acquisition execution but stems from initial overvaluation. In contrast, Lehn and Zhao (2006) observe no significant difference in CEO turnover rates between stock and cash deals, suggesting that managerial discipline operates irrespective of payment method.

Beyond the financing structure, the attitude of the acquisition—whether friendly or hostile—is another determinant. While hostile acquisitions are often viewed as costly and contentious, Schwert (2000) finds limited evidence that such deals differ substantially from friendly ones in economic terms. His findings indicate that the term “hostile takeover” is inconsistently used and often reflects negotiation style rather than underlying deal quality. Nevertheless, hostile deals are typically associated with higher offer premiums, presumably to compensate target management for the perceived loss of autonomy or employment.

Diversification is another critical bid characteristic. While diversification may theoretically generate value through co-insurance and risk mitigation, empirical evidence suggests otherwise. Amihud and Lev (1981) argue that diversifying mergers are often motivated by managerial self-interest, particularly as a means of reducing employment risk. Consistent with this, Morck et al. (1990) and DeLong (2001) report that diversifying mergers tend to be value-destroying. DeLong, for instance, finds that focused bank mergers outperform diversifying ones. Nonetheless, the literature on

industrial relatedness yields mixed results. While Anand and Singh (1997) and Walker (2000) report a positive correlation between industrial relatedness and acquisition returns, other studies—such as Matsusaka (1993) and Seth (1990)—find no such relationship. Gautam and Riitta (2001) further suggest a nonlinear relationship between industrial similarity and returns, highlighting the contextual nature of synergy realization.

The relative size of the target to the acquirer also plays a role in determining deal. James and Wier (1987) and DeLong (2001) find a positive relationship between target size and bidder announcement returns in the banking sector. In contrast, Gorton et al. (2009) argue that as the relative size of the target increases, announcement returns tend to decline, particularly for medium-sized acquirers. Financing constraints and agency considerations may explain this pattern. Larger deals are harder to finance through debt, increasing the probability of financial distress (Gilson, 1989). Alternatively, using equity in large deals can dilute ownership and control, deterring incumbent management from pursuing such transactions.

The deal design embeds signals about valuation, control, and risk allocation. Yet identical structures are priced differently across industry phases and market conditions. This links payment and attitude effects to timing and industry structure in the next subsection.

### **2.3.5 Industrial and economical determinants**

The timing of acquisitions within industry cycles has emerged as a relevant consideration. Studies have shown that acquisitions tend to occur in waves, often triggered by common industry shocks or periods of regulatory change (Andrade and Stafford, 2004; Mitchell and Mulherin, 1996). Carow et al. (2004) argue that acquirers

who act early in such merger waves—leveraging private or superior information—can capture higher returns. These early movers are able to act on strategic initiatives before rivals, thereby gaining a first-mover advantage. The authors suggest that firms undertaking acquisitions during the expansionary phase of an industry life cycle are more likely to benefit from favourable market conditions and growth opportunities, which enhance post-deal performance

In contrast, firms operating in mature or declining industries are more inclined to pursue unrelated acquisitions, possibly in search of growth or diversification. Stimpert and Duhaime (1997) and Anand and Singh (1997) suggest that such unrelated acquisitions often underperform their related counterparts. These findings support the argument that the strategic context of the acquiring firm and the phase of the industry life cycle at the time of acquisition have a direct bearing on long-run outcomes. Acquirers that align their M&A strategies with favourable industry dynamics—particularly growth periods—are more likely to generate value, while those acting during decline phases may face integration challenges and weaker returns

Industry structure, particularly concentration, also influences acquisition outcomes. Shahrur (2005) finds that total acquisition gains—measured as the combined abnormal returns to acquirer and target shareholders—are positively related to the level of concentration in the target's industry. Similarly, Gorton et al. (2009) show that acquisition profitability increases with the size dominance of the largest firm in the industry relative to its peers. In more concentrated industries, leading firms may be better positioned to exploit synergies, achieve economies of scale, or consolidate market power following an acquisition. These findings imply that industry-specific structural conditions shape both the motives and the potential benefits of M&A activity.

Several studies also control for industry-specific factors by examining transactions within a single sector. DeLong (2001), for instance, focuses on bank mergers to isolate the impact of industry-specific risks such as interest rate exposure. Such studies are particularly valuable because they minimise cross-industry heterogeneity and allow more precise estimation of merger effects. Andrade et al. (2001a) recommend that future research on M&A performance explicitly account for industry-level shocks and structural variations, as these factors may confound empirical results if not properly controlled

In addition to industry context, the macroeconomic environment also exerts a considerable influence on acquisition performance. One of the most cited macro-level factors is the state of the stock market at the time of the deal. The literature shows that acquisition activity intensifies during bull markets, when stock valuations are high. Jovanovic and Rousseau (2001) document that the frequency of acquisitions correlates positively with the level of market valuation. This suggests that firms are more likely to engage in M&A when capital is abundant, investor sentiment is strong, and equity can be issued at favourable prices

However, the performance consequences of timing deals during high-valuation periods are ambiguous. Bouwman et al. (2009) find that although acquisitions announced in hot markets are associated with higher short-term announcement returns, they exhibit lower long-run stock and operating performance. Similarly, Rosen (2006) reports that acquisitions made during peak merger periods do not outperform in the long term and may even underperform. These findings highlight a potential disconnect between immediate investor reactions and long-run value creation. Deals completed during periods of exuberance may reflect market timing rather than strategic fit, leading to disappointing results post-acquisition

Beyond market conditions, the broader regulatory environment also influences acquisition outcomes. Variations in legal and institutional frameworks across jurisdictions have been shown to affect the efficiency and value distribution in M&A transactions. Research by La Porta et al. (1999, 2002, 2008) indicates that stronger shareholder protection and better enforcement mechanisms enhance firm value and promote more efficient corporate control markets. Palia (1993) finds that regulatory settings affect acquisition premiums, while Daines (2001) shows that legal origin and rule enforcement influence the allocation of merger gains between acquiring and target firms.

Timing and structure filter which bidder–target–deal configurations create value. Early, related consolidations in disciplined markets differ from late, defensive, stock-financed bids in hot cycles. This sets up the concluding evaluation.

The evidence listed in this section supports contingent, not universal, performance effects. Agency, hubris, and misvaluation predict weaker bidder outcomes—especially for large or “glamour” acquirers, cash-rich firms, stock-financed bids, and late-cycle or defensive transactions—and these predictions align with negative BHARs and the stock-versus-cash asymmetry. Neoclassical views (industry shocks, Q-theory, timing under competition) gain traction where configurations favour execution: high-Q bidders acquiring low-Q or underperforming targets, private targets with tighter monitoring, related deals with restructuring and focus, and early movers in waves. Industry structure reconciles the mixed averages: concentrated settings and clear leaders yield stronger acquirer gains, while fragmented, similarly sized rivals invite eat-or-be-eaten dynamics and value dilution. Methodological splits (market vs accounting metrics) reflect these mechanisms: markets penalise overpayment and timing; operations can improve where integration conditions hold. Hence, performance hinges on the **joint** configuration of bidder attributes, target features, deal design, and timing.

Value creation is most plausible for small or disciplined high-Q bidders, buying low-Q or private targets in related businesses, paying cash, restructuring early in a wave; destruction is most likely for large glamour bidders, using stock for public targets in hot markets or in defensive consolidations.

## **2.4 Cross-border M&A and its determinants**

While prior sections have discussed M&A causes, consequences, and performance primarily in domestic contexts, cross-border transactions raise additional complexities. When acquirers and targets operate under different institutional, legal, and cultural systems, standard M&A theories may not fully apply. This section discusses the distinctive determinants of cross-border M&A, with a focus on how country-specific factors shape firm strategies and outcomes.

### **2.4.1 The institutional and regulatory environment.**

The institutional and regulatory environment constitutes a fundamental determinant of cross-border mergers and acquisitions. It provides the legal and normative framework within which business transactions occur and shapes the strategic choices available to firms. Since the early 21st century, the dynamic relationship between finance and law has garnered significant attention in international business and strategy research (Beck et al., 2001; Holmes et al., 2013; Kaufmann et al., 2009; La Porta et al., 1998, 2000). These studies collectively argue that the quality of financial and capital market regulation enhances the development of stock markets, which in turn fosters economic growth and prosperity. Thus, the robustness of a country's institutional framework critically influences its attractiveness to foreign investors.

Theories of institutional transitions further elaborate on the mechanisms through which institutional change affects firm behavior. Peng (2003) defines institutional transitions

as "fundamental and comprehensive changes introduced to the formal and informal rules of the game that affect organizations as players." Building on earlier work by North (1990), DiMaggio and Powell (1983), and Scott (2014), scholars argue that both regulative and normative institutional environments significantly shape organizational structures, strategic choices, and market dynamics. Institutional environments are not static; they evolve through planned transitions and policy shifts, creating both opportunities and risks for firms engaged in international expansion.

One of the most influential streams of research in this area concerns the legal origin theory. La Porta et al. (1998, 2000) demonstrate that different legal traditions exert a profound influence on corporate governance structures and investor protections. They find that common law countries, such as the United Kingdom and the United States, typically have stronger shareholder protection laws compared to French-civil law countries, where investor protections tend to be weaker. German and Scandinavian legal traditions fall between these two extremes. Strong investor protection is associated with effective corporate governance and efficient capital allocation across firms, making such environments more conducive to foreign investment.

The design of regulatory systems reflects a balance between encouraging economic activity and protecting local interests. Bittlingmayer and Hazlett (2000) suggest that regulatory frameworks are influenced by three primary factors: the private benefits of protecting local companies, bureaucratic self-interest, and political extraction. These influences can either promote or hinder economic efficiency. When regulatory systems prioritize political or bureaucratic objectives over market efficiency, they can create barriers that deter foreign investment. Conversely, transparent and fair regulatory systems serve as incentives for cross-border capital flows.

Several studies have emphasized that strong institutional and regulatory environments act as pull factors for cross-border acquisitions, while weak systems act as barriers (Peng, 2003; Peng et al., 2008). Host country governments often impose restrictions on foreign acquisitions, particularly in sensitive industries, to protect local companies. These restrictions may take the form of ownership limitations, elevated tax burdens, or stringent approval processes (Meyer et al., 2014; Shimizu et al., 2004). While these measures are intended to safeguard national interests, they can also increase transaction costs and uncertainty for foreign acquirers, reducing the attractiveness of the host market.

The quality of the institutional environment not only influences the initial decision to invest but also shapes post-acquisition outcomes. Strong property rights protections, effective contract enforcement, and robust regulatory institutions facilitate smoother integration processes, enhance value creation, and reduce the risk of expropriation. Conversely, institutional weaknesses can lead to post-merger integration failures, erode investor confidence, and result in suboptimal performance outcomes.

The literature also highlights the role of formal institutional distance between home and host countries. Formal institutional distance refers to differences in regulatory frameworks, legal protections, and corporate governance standards (Dikova et al., 2010; Xu and Shenkar, 2002). Greater institutional distance introduces additional complexity into cross-border transactions by increasing information asymmetries, transaction costs, and the risk of misaligned expectations. Firms must therefore carefully assess not only the absolute quality of a host country's institutions but also the degree of institutional similarity or difference relative to their home country.

Institutional development in the host country enhances the likelihood of successful



acquisition outcomes. Dikova and Van Witteloostuijn (2007) find that stronger institutional environments in target countries are associated with higher rates of acquisition success, better firm performance post-acquisition, and more favorable ownership structures. Conversely, weak institutional environments depress bilateral investments and create new business risks, including expropriation fears and contractual uncertainties (Slesman et al., 2015).

Differences in labor regulation also play a role. Alimov (2015) shows that firms from countries with flexible labor regulations are more likely to be attracted to host countries with good governance of employment standards. This finding suggests that regulatory complementarity between home and host countries can facilitate cross-border investments, while regulatory divergence can deter them.

Weak institutional protections pertaining to private property rights, contract enforcement, and governance standards not only reduce the attractiveness of a host country but also increase the likelihood of deal failure. Contractor et al. (2014) and Reis et al. (2013) argue that larger institutional distances exacerbate information asymmetries and opportunity costs, making it more difficult to complete announced deals. Ngo and Susnjara (2016) further highlight that institutional distance contributes to information leakage and deal hostility, both of which negatively affect the probability of deal completion.

Moreover, institutional reforms and regulatory liberalizations have been shown to enhance the attractiveness of host countries for inbound acquisitions. Studies suggest that countries which strengthen competition laws, improve ownership and governance regulations, and liberalize capital markets experience significant growth in M&A activity (Rossi and Volpin, 2004; Bertrand et al., 2007; Bris and Cabolis, 2008;

Martynova and Renneboog, 2008b). Financial deepening, improved shareholder rights, and effective enforcement of corporate governance standards all contribute to creating a favorable environment for cross-border investment.

The role of financial market development is also significant. Hyun and Kim (2010) find that financial deepening in the home country increases the likelihood of equity participation in cross-border acquisitions. Similarly, Kim (2012) and Moskalev (2010) emphasize that improvements in the financial regulatory environment of the host country, including better enforcement of contracts and protection of property rights, attract greater foreign investment flows.

Formal rules set the feasible set for ownership, investor protection, and contract enforcement, thereby shaping pricing, equity stakes, and completion risk. Because both the level and the distance of institutions are country-pair specific, the next subsection turns to discretionary state action operating on top of these rules.

#### **2.4.2 The political environment.**

Politics, embedded within a nation's ruling systems, structures business opportunities through government intervention, political uncertainty, and sovereign risk (Schumpeter, 1942). Governmental actions such as changes in tax regulation, shifts in policies favoring domestic firms, and the imposition of capital and foreign exchange controls create substantial risk for foreign investors (Datta et al. 2015). The ability of government officials, bureaucracies, and competing interest groups to influence policy plays a fundamental role in shaping investment attractiveness (Bertrand et al. 2015; Jensen, 2008; Kaufmann, 2005; Root, 1968).

Strong institutional frameworks and democratic stability are positively associated with

inward capital flows. Conybeare and Kim (2010) argue that effective democratic systems enhance the business environment, encouraging international investment. Conversely, weak institutional environments, marked by political instability and inadequate property rights protections, deter foreign investment (Beck et al., 2001; Collins et al., 2009; Rajan and Zingales, 1998).

Political risk, particularly the risk of expropriation or opportunistic policy shifts, remains a major deterrent to foreign acquisitions. Holburn and Zelner (2010) find that firms from politically stable countries are cautious about investing in high-risk political environments. Interestingly, Datta et al. (2015) show that U.S. firms, when faced with high political risk in target countries, tend to prefer higher equity ownership, suggesting that acquirers may seek greater control to manage political uncertainty.

Malhotra et al. (2016b) highlight that previous ownership experience influences acquisition decisions in politically unstable countries. Specifically, prior high ownership levels encourage acquirers to maintain or increase equity stakes even under political uncertainty. Political leaders also play a direct role in shaping corporate governance regimes that affect M&A activity. The takeover battle involving Scania and MAN illustrates how national leaders, through rules such as the mandatory bid requirement, influence merger outcomes (Nachemson-Ekwall, 2015).

The structure of government further affects intervention tendencies. Serdar Dinc and Erel (2013) find that coalition governments are less likely to block foreign acquisitions compared to single-party regimes. Economic nationalism, especially under far-right parties or weak governments, tends to favor domestic ownership over foreign takeovers, reinforcing the importance of political orientation in determining CBMA success.

Recent cross-border deals have faced significant political hurdles. Reddy et al. (2016b), Tingley et al. (2015), and Wan and Wong (2009) report that erratic regulatory behavior and stringent merger guidelines have delayed or abandoned several announced transactions. Earlier studies by Schöllhammer and Nigh (1984, 1986) demonstrate that internal political conflicts in less developed countries negatively impact German outbound investments. Similarly, for Japanese investors, intergovernmental relations and the prioritization of economic over political concerns are key determinants of foreign expansion.

Electoral systems also shape merger regulations. Kim (2010) finds that majoritarian electoral systems tend to adopt stricter merger control laws and are more likely to disapprove proposed deals compared to proportional electoral systems. In developing economies, the quality of political institutions strongly predicts M&A flows. Lee, Hemmert, and Kim (2014b) find that rule of law, democratic stability, and multiple veto players significantly enhance inward M&A flows and completion rates. For instance, a one standard deviation increase in the rule of law leads to a 39% increase in M&A flows as a share of total FDI.

Political cycles also influence acquisition activity. Cao and Liu (Poli w/p) show that acquisition volumes increase significantly during the year preceding national elections, reflecting firms' efforts to avoid post-election regulatory uncertainty. This suggests that political transitions create time-sensitive windows for cross-border investment.

Political intervention is particularly salient when acquirers target government-controlled or politically linked firms. Reddy et al. (2016b) find higher intervention levels when developed economy firms acquire politically connected targets in emerging economies like India. Conversely, when firms from emerging economies target resource

sector assets in developed countries such as the U.S., political barriers often derail deals (Tingley et al., 2015; Wan and Wong, 2009).

One critical topic in political environment is corruption. Defined as the abuse of public power for private benefit (Rodriguez, Uhlenbruck, & Eden, 2005), corruption distorts market processes, undermines legal predictability, and introduces non-market costs for foreign investors.

Higher corruption levels in host countries generally deter foreign investment. Barbopoulos et al. (2014), Kaufmann (2005), and Weitzel and Berns (2006) report that greater corruption correlates with reduced capital inflows, although the relationship is nuanced. Cuervo-Cazurra (2006) finds that FDI declines more sharply in countries that have signed the OECD anti-bribery convention, highlighting that multinationals adjust behavior based on institutional expectations.

Market-specific contexts also shape the impact of corruption. Asiedu (2006) finds that in sub-Saharan Africa, corruption and political instability diminish FDI inflows, though abundant natural resources can partly offset this deterrent effect. For outbound European M&As, Graham et al. (2008) observe that U.K. firms often target more corrupt countries in Asia and South America, driven perhaps by market access considerations despite higher transaction risks. Malhotra et al. (2010) find that both U.S. and Chinese firms prefer less corrupt target countries, though U.S. firms exhibit greater sensitivity in deal valuations. Similarly, target firms in highly corrupt countries are less likely to accept first bids and may settle for lower final prices

Politics translates rules into outcomes through discretion, veto points, and policy shocks. Intervention risk reprices control, increases the value of waiting, and pushes ownership

toward tighter control only where monitoring can contain discretion. These effects are conditioned by informal norms, taken up next.

### **2.4.3 The cultural Background**

Culture has long been recognized as one of the most influential factors in international business (IB) research, particularly in the context of foreign market entry modes and cross-border acquisitions (Ferreira et al., 2014a; Harzing, 2004; Kogut and Singh, 1988; López-Duarte et al., 2016; Popli et al., 2016). Hofstede (2001) defines culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another.” Within national contexts, culture encompasses language, religion, traditions, and rituals, profoundly shaping leadership styles, conduct, and organizational procedures (Larsson and Lubatkin, 2001). Culture has far-reaching impacts on national economic progress, firm internationalization strategies, and cross-border transaction outcomes (Hitt et al., 2006).

Cultural differences between home and host countries have often been cited as primary reasons for cross-border acquisition failures. Notable examples include the Telia–Telenor merger collapse, where incompatible national cultures undermined integration (Fang et al., 2004; Schmid and Daniel, 2009). Angwin (2001), surveying 142 executives involved in international deals, finds that cultural differences influence both the deal completion phase and the post-merger integration phase. Similarly, Halsall (2008) illustrates how national capitalist traditions affected the Vodafone–Mannesmann and Rover–BMW mergers, showing that governance structures linked to national cultures shape merger dynamics.

Research highlights that cultural distance—the degree of difference between national cultures—affects both deal completion and post-acquisition integration. Several studies

argue that larger cultural distances decrease the likelihood of deal completion and complicate integration success (Chakrabarti et al., 2009; Malhotra et al., 2011a; Malhotra et al., 2011b; Shimizu et al., 2004). Reus and Lamont (2009) characterize cultural distance as a "double-edged sword," suggesting it may either impede or, under certain conditions, enhance deal performance. Despite extensive research, findings remain mixed (Harzing, 2004), suggesting that the impact of cultural distance is highly contingent on contextual factors.

Ownership structure decisions are strongly influenced by cultural distance. Ahern et al. (2015), Collins et al. (2009), Malhotra and Gaur (2014), Malhotra (2012), and Slangen and Hennart (2008) all find that greater cultural distance leads firms to prefer shared ownership arrangements rather than full control acquisitions. These results indicate that firms mitigate cultural risk by adopting entry modes that limit exposure to unfamiliar cultural environments. Bertrand et al. (2007) and Glambosky et al. (2015) provide supporting evidence by demonstrating that firms from developed economies prefer acquiring targets in culturally and geographically proximate countries.

Curvilinear relationships between cultural distance and entry mode have also been observed. Malhotra et al. (2011b) find that cultural distance initially increases the likelihood of shared ownership, but beyond a certain point, firms revert to full ownership strategies. Moderators such as prior acquisition experience (Dikova and Sahib, 2013), top management team's international orientation (Piaskowska and Trojanowski, 2014), and target country familiarity (Arslan and Wang, 2015; Ragozzino, 2009) further refine this relationship. These factors help firms better manage cultural complexities, sometimes motivating them to take higher equity stakes even in culturally distant settings.

The impact of cultural distance on investment flows has also been substantiated through capital flow studies. Bailey and Li (2015) show that larger cultural and administrative distances negatively impact U.S. FDI flows to distant countries, though national demand factors such as market potential can mitigate these effects. Lim et al. (2016) find that the relationship between cultural distance and target premium is asymmetric depending on investment direction, noting that cultural distance significantly reduces bid premiums when foreign acquirers target U.S. firms, with national familiarity factors such as student and traveler flows moderating these effects.

At the macro level, Ahern et al. (2015) demonstrate that cultural distance reduces the number of cross-border deals. Using data from 20,893 transactions across 52 countries, they find that trust, hierarchy, and individualism dimensions are particularly influential, with greater distances reducing both the number and success rates of acquisitions. Similarly, Li et al. (2016b) suggest that cultural attractiveness—rather than mere cultural difference—is a better predictor of M&A flows. Their findings show that cultural attractiveness significantly boosts FDI flows, particularly from developing to developed countries.

Cultural egalitarianism has also been linked to cross-border investment patterns. Schwartz (2001) conceptualizes egalitarianism as the societal belief in equal worth and treatment for all individuals. Siegel et al. (2011, 2013) find that greater differences in egalitarianism between home and host countries negatively affect FDI flows and M&A transaction values, leading to increased overinvestment and value destruction in cross-border deals. Such findings emphasize the depth at which cultural values shape investment decisions beyond surface-level cultural differences.

Language and historical ties also play significant roles in shaping cross-border



acquisition patterns. Ahern et al. (2015) and Chapman et al. (2010) demonstrate that a common official language and colonial ties increase capital flows between countries. Hattari and Rajan (2010) and Hyun and Kim (2010) provide further evidence that shared language facilitates investment in sectors such as electric power generation (Holburn and Zelner, 2010). For Indian firms, Buckley et al. (2012) find that English language proficiency positively affects outbound investment into developed economies.

The role of lingua franca proficiency has received particular attention. Cuypers et al. (2015) show that higher combined lingua franca proficiency between home and host countries increases the likelihood of higher equity stakes in acquisitions. Conversely, linguistic distance combined with low lingua franca proficiency leads to lower equity participation. Dow et al. (2016) similarly find that language and religious diversity influence ownership decisions in international deals.

Psychic distance, referring to perceived differences in culture, language, and political systems, also affects cross-border acquisition strategies. Chikhouni et al. (2016) find that directional investment flows moderate the relationship between psychic distance and ownership decisions. Firms from EE tend to pursue higher ownership stakes in developed countries with greater psychic distance, while DE firms adopt more conservative approaches when expanding into culturally distant markets. Yildiz and Fey (2016) emphasize the asymmetry in psychic distance perceptions, suggesting that favorable or unfavorable views shape investment behaviors differently.

Cultural distance acts as a coordination cost priced ex ante (premia, stake, mode) and realised ex post (integration). Its magnitude is contingent on familiarity, lingua franca, and experience; because part of this distance is spatial, the following subsection addresses geographic frictions.

#### **2.4.4 The Geographical environment**

The geographical environment underpins the structure of international business transactions, as emphasized by Green and Meyer (1997), who argue that cross-border activities inherently occur between national borders and thus are shaped by spatial realities. The endowment view, supported by Beck et al. (2001), further explains that geographic conditions—including natural resources, proximity, and location-specific advantages—significantly influence a country's economic and institutional development. Dunning (1977, 1998) and Dunning and Lundan (2008) integrate these ideas into the eclectic paradigm, stressing that location advantages, especially in resource endowments and infrastructural accessibility, play a vital role in attracting foreign direct investment (FDI) and CBMA activity.

Physical distance between the home and host countries, typically measured in kilometers between capital cities, has been identified as a critical determinant of CBMA patterns. Studies such as Coeurdacier et al. (2009) and Dutta et al. (2013) demonstrate that greater distance raises transaction costs and reduces the likelihood of successful acquisitions, a finding consistent with Rose's (2000) argument linking distance to proportional increases in trade and investment costs. However, empirical results remain mixed: Bertrand et al. (2007) find that proximity boosts deal incidence, while Lim and Lee (2016b) show that being located on the same continent shortens transaction completion times, suggesting nuanced effects beyond simple distance metrics.

Further complexity arises when considering the influence of distance on ownership structures. Malhotra (2012) finds that U.S. firms are more likely to prefer shared ownership over full control when faced with greater geographic distance, aligning with Di Guardo et al.'s (2016a) evidence that multidimensional distances—including geographic, cultural, and political—jointly reduce both acquisition likelihood and

completion probability. The moderating role of market demand factors is also highlighted by Bailey and Li (2015), who show that strong host market potential can offset the negative effects of distance on FDI flows, indicating that geographical barriers are not absolute constraints.

Firm type further moderates the relationship between geographic distance and acquisition behavior. Karolyi and Liao (2016) observe that state-owned enterprises (SOEs) favor full control in proximate markets and partial control when investing in distant targets. Ragozzino (2009) similarly finds that U.S. acquirers adjust ownership strategies based on proximity considerations. Meanwhile, Deng and Yang (2015) and Anderson and Sutherland (2015b) show that for emerging economy (EE) multinationals pursuing resource-seeking or strategic asset-seeking investments, geographic distance becomes a less significant deterrent, particularly when high-value assets are targeted.

The relationship between distance and deal volume also differs across home country development levels. Gaffney et al. (2016) find that EE firms engage in more acquisitions in distant markets compared to developed economy (DE) firms, a pattern supported by Malhotra and Gaur (2014) in their study of 10,181 transactions. Chari and Shaikh (2016) reinforce this view, showing that EE firms are less negatively affected by distance measures—including economic, institutional, and geographic—than DE firms, suggesting different strategic risk perceptions and expansion imperatives across regions.

Regional specialization patterns further illustrate geographic effects on CBMA. Sun et al. (2012) show that Chinese firms tend to target resource-rich, geographically proximate countries in Asia, while Indian firms prefer distant, technology-intensive targets in developed markets such as the U.S. and Europe. De Beule and Duanmu (2012)

and Jayanthi et al. (2016) similarly find that Chinese and Indian firms are less sensitive to distance barriers in sectors like heavy construction and pharmaceuticals, emphasizing that industry-specific factors can interact with spatial considerations.

Agglomeration and clustering effects also shape CBMA flows by altering location advantages. Bronzini (2007) reports that localization externalities—such as industry specialization within Italian provinces—attract more FDI than broader urbanization effects. Mariotti et al. (2014) further show that targets located in industrial districts or core cities characterized by strong knowledge spillovers and skilled labor pools exhibit distinct acquisition probabilities, suggesting that micro-spatial structures within countries are critical determinants of investment attractiveness.

City-level proximity effects further nuance the role of geography. Blanc-Brude et al. (2014) demonstrate that economic and administrative proximity between Chinese cities increases FDI spillovers, while Anderson and Sutherland (2015a) find that Chinese acquirers prefer Canadian provinces that are closer geographically and economically larger. These studies suggest that fine-grained spatial proximity continues to influence investment decisions even within countries that are already attractive on broader national indicators.

Infrastructural attributes linked to geographical positioning—such as coastal access and transportation networks—also significantly impact CBMA patterns. Cassidy and Andreosso-O’Callaghan (2006) find that Japanese investment into China is positively associated with coastal locations and inland waterways, alongside higher levels of tertiary education attainment. Similarly, Asiedu (2002) observes that African countries with less favorable geographic and infrastructural endowments attract lower levels of inward investment, demonstrating the persistent role of geography in structuring

international capital flows.

Geography is a first-order cost shifter: distance, connectivity, and agglomeration shape search, diligence, and deployment. Spatial penalties are attenuated by market potential and clustering and interact with institutional, political, and cultural distances, which motivates the joint evaluation that follows.

Considered jointly, the four determinants act on distinct margins of cross-border M&A but are jointly binding. Institutions locate the possibility set: stronger host enforcement and shareholder protection raise completion probabilities, support higher post-merger cash-flow rights, and narrow discounts; large institutional distance inflates due-diligence costs and failure risk. Politics adds non-contractible noise: intervention risk and election cycles compress the set of feasible bidders, reprice control, and induce either higher ownership for monitoring or staged entry when discretion is severe. Culture governs coordination: greater cultural distance is priced via lower premia, shared ownership, and stricter earn-outs; its realised effect hinges on familiarity (language, historical ties) and organisational experience, which can neutralise part of the integration penalty. Geography loads the transaction with logistical costs and information frictions but is partially offset by market size, network connectivity, and local agglomeration.

Importantly, these levers interact. High institutional quality dampens political discretion and mitigates cultural misalignment through credible enforcement; conversely, weak formal environments magnify the bite of politics and culture, forcing lower stakes or abandonment. Language and colonial ties simultaneously lower cultural and informational distance, functioning much like “soft infrastructure,” particularly where physical distance is large. Agglomeration reduces post-entry adaptation costs,

raising the tolerance for cultural distance; SOEs and EE multinationals display higher distance tolerance when strategic assets or resources are at stake, consistent with the observed asymmetries by home-country development. The cross-sectional predictions are therefore contingent. Value creation is most plausible when formal quality is high, political discretion is bounded, cultural distance is offset by familiarity or experience, and geographic costs are cushioned by scale or clusters—yielding higher completion rates, larger cash components, and durable post-merger synergies. Value erosion is most likely under large institutional distance with weak enforcement, elevated intervention risk, unmitigated cultural distance, and poor connectivity—manifesting as lower stakes, wider closing risk, and integration underperformance. Empirically, separating these channels requires designs that jointly condition on country-pair distances and industry–location features; treated in isolation, each literature explains fragments of CBMA outcomes, but the evidence is strongest when the four dimensions are modelled as an interacting system.

## **2.5 Research gaps**

A number of unresolved issues emerge from the foregoing review. First, while behavioural accounts link market misvaluation to payment choice and performance, existing work rarely models managerial reference points that are orthogonal to fundamentals and that vary systematically across deals; the evidence has concentrated on 52-week highs, with little on the low anchor or on how informational environments (public vs non-public targets) shape the transmission of such anchors to prices and returns. Second, the literature often documents associations between premia and bidder returns without tracing the pricing channel that connects them. Third, cross-border studies lean on survey-based culture indices or broad “cultural distance” measures; these proxies are time-varying, coarse, and sometimes conflate culture with institutions, leaving the cultural mechanism and its interaction with formal rules under-identified. The thesis addresses these gaps with two empirical studies that operate at different

levels of analysis and with distinct identification strategies.

Relation to, and departures from, prior work. Chapter 3 is situated in the behavioural–agency tradition (e.g., Shleifer–Vishny; Rhodes-Kropf–Viswanathan) but departs from it in three ways. (i) It introduces a bidder-side reference-point state variable—the distance from the 52-week low—as a non-fundamental driver of deal design and pricing, extending the reference-point literature beyond the commonly studied 52-week high. (ii) It conditions all tests on the target’s listing status to respect the sharp contrast in information environments between public and non-public deals, a distinction that much of the event-study literature abstracts from. (iii) It links premia to short-run bidder returns via a dedicated 2SLS design, clarifying how anchoring translates into wealth effects rather than treating premia and returns as parallel outcomes. Empirically, using a large U.S. panel (1980–2022), the chapter shows that a higher low-anchor (larger RP) predicts greater use of stock and higher premia—especially in public targets—and that the same RP is associated with negative announcement returns in public deals but a different pattern in non-public deals; long-horizon tests corroborate the persistence of these effects. These results add a new behavioural state variable to the M&A toolkit, establish heterogeneity by information regime, and open a pricing channel from reference-dependent premia to bidder CARs.

Chapter 4 speaks to cross-border work that has leaned on Hofstede-style indices, trust, or generic cultural distance. The chapter introduces folklore narratives—a historically persistent proxy for societal risk-taking—to predict who acquires abroad, how much they spend, and what they pay. Conceptually, this moves from static distance to directional cultural content (societal attitudes toward successful action under uncertainty); empirically, it delivers a deep, stable measure that is not co-determined by contemporary institutions. Using 3,663 CBMAs from 30 acquirer countries (1985–2018), the chapter shows that a society’s folklore-based risk-taking predicts CBMA incidence, total deal value, and premia, and remains powerful after controlling for institutions, geography, and standard culture controls; the proxy outperforms

Uncertainty Avoidance and remains robust when U.S. acquirers are excluded and when samples are restricted to single-bidder deals. This reframes mixed findings on “cultural distance” by showing that what matters is not how far cultures are, but what they valorise.

This thesis develops a behavioural micro-foundation for deal design and pricing. By formalising bidders’ 52-week-low proximity as an economically meaningful state variable, it explains variation in payment method and premia beyond fundamentals and documents a pricing channel to bidder CARs, with effects that flip by target listing status. The mechanism helps reconcile why similar deal structures are priced differently across information regimes and why long-run underperformance clusters in specific bidder–target configurations.

It also introduces a deep cultural proxy for CBMA. The folklore measure captures durable risk narratives and predicts who goes abroad, how aggressively they bid, and how much they pay, even after rich controls. Unlike distance-based proxies, it clarifies mechanism—risk orientation—and functions as interpretable “soft infrastructure” that complements the formal determinants reviewed in §2.4.

Across chapters, the analysis bridges behavioural finance and institutional IB by modelling them as an interacting system. Internal anchors (reference points) and external narratives (folklore) map into observable choices and prices; informal cultural forces remain predictive after conditioning on institutions, while firm-level anchors bite more in transparent (public) environments. This synthesis positions the behavioural and institutional views as complements rather than substitutes.

There are design and data advances. Chapter 3 extends coverage to 2022, separates



public from non-public targets throughout, and uses 2SLS to tie premia to CARs. Chapter 4 assembles a multi-country CBMA panel and shows robustness to alternative cultural controls, sample composition, and clustering choices, addressing recurrent identification critiques in both streams.

The implications for the gaps are direct. Bidder-level anchoring explains within-wave heterogeneity in pricing and performance beyond size, Q, or liquidity; narrative-based culture explains why formal similarity does not yield similar CBMA propensities or premia. The results motivate empirical designs that instrument or condition on both who the bidder is (behavioural state) and where it comes from (societal narratives), alongside the institutional–political–geographic system set out in subsection 2.4.

## **Chapter 3: The Impact of Bidder Reference Points on M&A Decision-Making and Market Responses**

### **Abstract**

This study examines 20,770 M&A transactions in the US market from 1980 to 2022, uncovering unique return patterns for public and non-public deals based on the bidder's stock price relative to its 52-week low. Bidders engaging in public transactions near their 52-week lows achieve higher returns both immediately and over time. Conversely, in non-public deals, while short-term returns are lower, long-term returns are higher, suggesting a market correction to initial overreactions. The research indicates that the observed long-term performance in non-public transactions might reflect market adjustment to initial biases, whereas in public deals, the bidder's reference point mirrors managerial overconfidence. Regardless of the target's public status, firms often use stock to finance M&A and offer higher premiums when their shares are not close to the 52-week low, a behavior consistent with the misvaluation theory. Furthermore, we explore the valuation effect post-transaction, finding that deals based on the bidder's 52-week low tend to result in misvaluation, with large reference point bidders being overvalued and small ones undervalued.

### 3.1 Introduction

The prevailing literature on mergers and acquisitions (M&A) often presumes that investors process announcement information rationally, integrating it into the stock prices. Yet, the rise of behavioral finance has introduced challenges to this assumption, highlighting the potential influence of past peak prices on stock movements. Seminal works by George and Hwang (2004), Baker et al. (2012), and subsequent studies by Ma et al. (2019) and Li et al. (2019) have explored how the 52-week high metric can predict returns and influence M&A offer prices, indicating that both bidders and targets may anchor their valuations to these historical peaks. This research expands upon these findings by exploring whether other historical price benchmarks, such as the bidder's 52-week low, similarly affect market perception and M&A decision-making.

Our analysis encompasses 20,770 M&A announcements from 1980 to 2022, including deals with public and non-public targets. We observe that the propensity to use stock as a payment method and the offer premiums increase with the bidder's reference point (RP), measured as the logarithmic difference between its pre-announcement stock price and its 52-week low. These patterns lend empirical support to the misvaluation hypothesis by illustrating the significant role of reference points in acquisition decisions, though overvalued bidders seem unable to dilute their overvaluation effectively through M&A, based on their RP.

Furthermore, we discover that the public status of targets influences investor reactions to deal announcements, contingent on the bidder RP. Specifically, bidders with pre-announcement stock prices significantly above their 52-week lows tend to earn lower cumulative abnormal returns in public deals, highlighting a negative association between bidder RP and deal reception. This relationship, posited to result from overpayment, aligns with the misvaluation hypothesis. Yet, in non-public deals, we notice a different pattern of short-run returns, with bidder RP positively correlating with

bidder cumulative abnormal returns.

Drawing on Shleifer and Vishny's (2003) misvaluation hypothesis, we discuss how market perceptions of overvalued bidders paying premiums for undervalued targets and the likelihood of acquisitions by undervalued firms play out differently in public versus non-public transactions. The differing informational environments of public and non-public targets appear to mediate investor responses to bidder RP, leading to varied reactions to corporate events.

This paper contributes significantly to the finance literature by documenting a non-fundamental factor—bidders' 52-week lows—as influential in M&A decision-making and investor responses. It challenges and extends previous research focused on peak prices, offering new insights into the role of extreme past prices in shaping managerial strategies and market reactions. Moreover, our findings on the differential impact of bidder RP based on target public status suggest that information transparency plays a crucial role in interpreting low price reference points in M&As.

This paper is organized to explore the impact of bidder reference points on mergers and acquisitions (M&As), examining the theoretical and empirical facets of the reference point theory and the misvaluation hypothesis. Section 2 reviews relevant literature, while Section 3 formulates hypotheses on the effects of bidder reference points on M&A payment methods, offer premiums, and outcomes. Section 4 details the data and methodology. Section 5 presents empirical findings, with Section 6 providing robustness checks. Finally, Section 7 concludes by summarizing key insights, implications for theory and practice, and suggesting avenues for future research, highlighting the study's contributions to understanding M&A dynamics.

### 3.2 Literature Review

This literature review systematically addresses the multifaceted theoretical landscape surrounding mergers and acquisitions (M&A), emphasizing the significance of reference points, market timing, and misvaluation dynamics.

Initiating with Tversky and Kahneman's foundational work in the 1970s, the anchoring concept and its evolution into prospect theory underscore how subjective reference points profoundly affect decision-making under uncertainty. This theoretical base has critical implications in behavioral finance, influencing phenomena from stock issuance to market forecasts, as evidenced in studies by Baker and Xuan (2016) and Li and Yu (2012). Building on this, the role of 52-week highs and lows as investor reference points highlights how such benchmarks can shape market responses to new information. George and Hwang (2004) illustrate that proximity to these benchmarks affects stock valuation perceptions, a principle that extends into M&A strategy, affecting offer premiums and deal likelihood, as explored by Baker et al. (2012).

The dialogue between reference point theory and M&A decision-making is further enriched by Baker et al. (2012) and Chira and Madura (2015), who delve into how these benchmarks inform bargaining power and pricing strategies. The interplay between stock price benchmarks and M&A dynamics suggests a strategic deployment of reference points in negotiation processes.

Market timing theory, proposed by Baker and Wurgler (2002), introduces the concept of capitalizing on market misvaluations, a strategy that finds particular relevance in M&A contexts. This theory aligns with Shleifer and Vishny (2003) and Rhodes-Kropf and Viswanathan (2004), who elucidate how misvaluation affects everything from target selection to payment methods, further evidenced by the strategic preference for

stock financing among overvalued bidders.

The extension of the Q theory into M&A contexts connects the dots between Tobin's Q ratio and M&A outcomes. High Q bidders, as Lang et al. (1989) find, are more likely to secure successful acquisitions, suggesting that the Q ratio is a proxy for managerial efficiency and asset valuation in M&A success.

Private M&A deals bring unique considerations into focus, such as the monitoring hypothesis by Shleifer and Vishny (1986), which posits that acquisitions can generate value through enhanced managerial oversight. However, the dynamics of private acquisitions are complex, as highlighted by the misvaluation and asymmetric information hypotheses, which suggest that stock payments and the strategic release of information play critical roles in shaping market perceptions and deal outcomes.

In synthesizing these theoretical contributions, this review delineates a coherent narrative that connects psychological biases with strategic M&A considerations. From the nuanced influence of reference points and market timing strategies to the distinct challenges posed by private acquisitions, these theories collectively furnish a robust framework for dissecting the intricacies of M&A decision-making and market behaviour.

### **3.3 Hypothesis Development**

The misvaluation hypothesis posits that bidders prone to overvaluation prefer to finance their M&A transactions with stock, a strategy influenced by the firm's historical price extremes, particularly the 52-week high, as a valuation benchmark (Shleifer and Vishny, 2003; Dong et al., 2006; Ang and Cheng, 2006). This benchmark acts as a market-

adopted reference point, influencing perceptions of overvaluation or undervaluation (Baker et al., 2012; Ma et al., 2019). Given this backdrop, we propose our hypotheses concerning the dynamics of M&A financing, premium offerings, and market reactions in the context of bidder reference points (RPs).

*H1 (Financing). The likelihood of stock payment increases with the bidder's reference point (RP), as defined in Section 3.2.*

*H2 (Premium). Offer premia increase with the bidder's RP.*

The informational environments of public versus non-public deals necessitate distinct considerations in investor response. Public deals, generally larger and more transparent, are contrasted with non-public transactions where limited target information leads to a heightened influence of reference points (Ang and Kohers, 2001; Ma et al., 2019). This distinction underpins our hypotheses regarding market reactions:

*H3a (Announcement return — public targets). For public targets, bidder announcement returns decrease with the bidder's RP.*

*H3b (Announcement return — non-public targets). For non-public targets, bidder announcement returns increase with the bidder's RP.*

Furthermore, the permanence of initial market reactions may vary over time, influenced by the degree of information available and the psychological biases tied to reference points:

*H4a (Long-run — non-public targets). For non-public targets, bidder long-run returns decrease with the bidder's RP.*

*H4b (Long-run — public targets). For public targets, bidder long-run returns decrease with the bidder's RP.*

These hypotheses aim to elucidate the nuanced relationships between bidder reference points, financing methods, premium offerings, and both short and long-term market reactions within the diverse contexts of public and non-public M&A transactions.

### **3.4 Data and Variables**

#### **3.4.1 Data**

The research utilizes a comprehensive dataset encompassing 49,310 U.S. domestic acquisitions from January 1, 1980, to December 31, 2022, sourced from Refinitiv. Financial and stock price information is retrieved from CRSP and COMPUSTAT databases. Adhering to the exclusion criteria set by Baker et al. (2012), transactions classified as self-tender, repurchase, recapitalization, and rumored deals are omitted from the study. Eligible bidders are identified as U.S. publicly traded companies on the NYSE, AMEX, or NASDAQ, targeting U.S. entities across public, private, and subsidiary sectors. Further stipulations require the bidder to initially hold less than 10% of the target shares, aiming to secure over 50% ownership, with each deal valued above \$1 million. After applying these criteria, the final sample comprises 20,770 completed transactions.

An appendix defines all employed variables, with Table 3.1 summarizing the



characteristics of these transactions. The average deal value across the sample stands at \$301.45 million. Payment methods vary, with 5,858 deals (28%) utilizing exclusively cash, 2,862 (14%) relying solely on stock, and the majority, 12,050 (58%), combining both cash and stock. Multi-bidder scenarios are relatively rare, occurring in 315 deals (2%). The dataset indicates a substantial proportion of diversifying acquisitions, amounting to 8,380 transactions (40%), and a minimal fraction of hostile takeovers, identified in 235 cases (1%). This data structure enables a nuanced analysis of M&A activities, payment preferences, and strategic behaviors in the U.S. market over the specified period.

Table 3.2 offers detailed descriptive statistics for the study's variables, which are thoroughly defined in the Appendix. The table is organized into three panels for clarity. Panel A: Main Dependent Variables. This section details the primary outcomes of interest. It indicates that the average cumulative abnormal return (CAR) for bidders in a window of (-1, +1) days around the announcement is 1.26%, suggesting a modest positive short-term market reaction to M&A announcements. The bidder's one-year buy-and-hold abnormal return (BHAR) stands at -10%, indicating a significant underperformance in the year following the M&A transaction. Panel B: Interested Variables The focal point of this panel is the bidder reference point, with a mean value of 0.396. This implies that, on average, the bidder's stock price prior to the announcement is 149% of its 52-week low, serving as a crucial metric for gauging bidder valuation at the time of the M&A announcement. Panel C: Control Variables This section aligns with findings from Fuller et al. (2002) and Moeller et al. (2004), showcasing comparative statistics on firm size, investment opportunities, and liquidity between bidders and public targets. Bidders exhibit a larger average firm size, with a log market value ranging from 6.377 to 5.014, indicating that they are significantly larger entities compared to their targets. They also display a broader range of investment opportunities, as measured by the book-to-market ratio, which varies from 0.453 to 0.538. Additionally, bidders are found to have stronger liquidity, with their cash flow to

equity ratio moving from 0.0417 to -0.0573, suggesting a better financial position to facilitate acquisitions. These descriptive statistics provide foundational insights into the characteristics of bidders and transactions within the sample, underpinning the study's subsequent analyses and interpretations.

### 3.4.2 Key variables

The reference point is the logarithmic term difference between the bidder's stock price 30 days prior to the announcement date and bidder's lowest stock price from 365 to 30 days before the announcement:

$$RP_{i,t} = \ln(\text{stock price}_{i,t-30}) - \ln(52 \text{ week low stock price}) \quad (1)$$

Following Brown and Warner (1985) and Mackinlay (1997), this research uses the bidder's three-day cumulative abnormal returns (CAR3) to measure the bidder's short-term returns. The event window is (-1,1), where day 0 is the announcement date. The following models estimate the abnormal returns (ARs) and CARs:

$$\begin{aligned} AR_{i,t} &= R_{i,t} - \hat{R}_{i,t} \\ &= R_{i,t} - \hat{a} - \hat{b}R_{m,t} \end{aligned} \quad (2)$$

$$CAR_{i,t} = \sum_t^T AR_{i,t} \quad (3)$$

Where  $R_{i,t}$  is the bidder's arithmetic return, and  $R_{m,t}$  is the return of the CRSP value-weighted index.  $\hat{a}$  and  $\hat{b}$  are estimated parameters of the market mode, with an estimation window of (-240, -41). This research also estimates five-day cumulative abnormal returns (CAR5) as alternatives to short-term returns for the robustness tests.

Where  $R_{i,t}$  is the bidder's arithmetic return, and  $R_{m,t}$  is the return of the CRSP value-weighted index.  $\hat{a}$  and  $\hat{b}$  are estimated parameters of the market mode, with an estimation window of (-240, -41). This research also estimates five-day cumulative abnormal returns (CAR5) as alternatives to short-term returns for the robustness tests.

Following Loughran and Vijh (1997), this research uses the bidder's market-adjusted one-year buy-and-hold-abnormal returns (1-year BHAR) to measure bidder's long-term returns. The BHAR is calculated as follows:

$$BHAR_{i,t} = \prod_t^T (1 + R_{i,t}) - \prod_t^T (1 + R_{m,t}) \quad (4)$$

Where  $R_{i,t}$  is the bidder's arithmetic return, and  $R_{m,t}$  is the return of the CRSP value-weighted index. This research also adopts three-year BHAR as an alternative to long-term return for the robustness tests.

### 3.5 Empirical Results

This analysis delves into the impact of the bidder's reference point (RP) on several facets of M&A transactions, including decision-making aspects like payment method and offer premiums, as well as market reactions both in the short and long term. The study systematically investigates these dynamics, employing univariate and multiple regression analyses, with a particular focus on the two-stage least squares (2SLS) regression to explore how the RP's influence on premiums affects the cumulative abnormal return (CAR) of bidders in public deals.

A pivotal aspect of this research is the differentiation between deals involving public

targets and those with non-public targets (private and subsidiary companies), primarily due to the variance in information asymmetry between these groups. Public firms are associated with a more transparent information environment, enabling market participants to gain a comprehensive understanding of the deal by scrutinizing the target. This transparency presumably allows for a more accurate assessment of whether a bidder overpays, potentially influencing the market's reaction.

Conversely, transactions with non-public targets present a scenario where the market has limited visibility into the target firm's intrinsic value, making it challenging to discern if the bid price is justified. In such cases, the market's evaluation of the deal heavily depends on the information provided by the bidder. This distinction underscores the expectation that market reactions will vary between deals with public and non-public targets, a hypothesis supported by literature such as Fuller et al. (2002), which documents differential market responses to these two categories of deals.

By segmenting the analysis based on the target's listing status, the study aims to shed light on how information asymmetry and the transparency of the target firm's financial health influence the perceived value and success of M&A transactions from the perspective of the bidder's RP. This approach not only contributes to a nuanced understanding of M&A dynamics but also enriches the broader discourse on how strategic decision-making is shaped in the context of varying levels of market information.

### **3.5.1 Method of payment**

Panel A and B of Table 3.3 shed light on the intricate dynamics between bidder reference points (RPs) and M&A transaction characteristics, particularly in relation to payment methods and the impact of target listing status.

Panel A reveals a notable differentiation in RP values, with the large RP group boasting

an average RP of 0.877, significantly higher by 0.802 than the small RP group, which has an average of 0.075. This variance highlights the extent to which bidders' stock prices exceed their 52-week lows, signifying a potential perception of overvaluation. Interestingly, bidders targeting non-public companies tend to have slightly larger RPs compared to those pursuing public companies (0.399 vs 0.377), despite the predominance of deals involving non-public targets. This distribution suggests that the nature of the target, whether public or non-public, does not significantly influence the strategic employment of RP in decision-making processes.

The Panel B analysis further underscores a positive correlation between the bidder's RP and the preference for pure stock payments, aligning with the misvaluation hypothesis. The differentiation between large and small RP groups—based on the RP's percentile within each target listing status category—reveals that 13.8% of transactions are facilitated entirely through stock, with a marked preference for such deals among public target acquisitions (31.4% vs 10.8%).

The detailed breakdown indicates that 20.5% of transactions in the large RP group resort to stock payments, a significant leap from the 10.5% observed in the small RP group. This disparity is even more pronounced within the public targets subsample, where 46.1% of deals in the large RP group are conducted via pure stock payments, compared to 26.1% in the small RP group, highlighting a stark difference of 20.1%. Conversely, the non-public deals exhibit a narrower gap, with 16.5% and 8% of deals in the large and small RP groups, respectively, opting for stock payments.

The disproportionate inclination towards stock payments in public deals, even among the small RP group, compared to non-public deals in the large RP group, illustrates the significant role of valuation considerations in the strategic choice of payment method. These findings not only corroborate the misvaluation hypothesis—suggesting that overvalued bidders leverage their perceived market valuation for acquisitions—but also underscore the nuanced influence of target listing status on these strategic decisions.

The data thus provides compelling evidence of how valuation perceptions, as encapsulated by RP, guide bidder behavior in selecting the mode of payment, particularly emphasizing the pronounced effect in transactions involving public targets.

Panel C elaborates on the logistic regression analysis concerning the choice of payment method in M&A transactions, incorporating industry and year fixed effects as per Fama and French's (1977) methodology. We apply the following logit model

$$Stock_{i,t} = \alpha + \beta RP_{i,t} + \gamma controls + e_{i,t} \quad (5)$$

where *Stock* equals one if the payment method is classified as stock payment. Controls include target public status, relative size, diversification, competition, hostile, bidder and target market value, book to market ratio, leverage, and cash flow to equity. The findings from this panel substantiate the previously identified positive correlation between the bidder's logarithm of the reference point (RP) and the preference for stock as the payment method.

Column (1) highlights a significant tendency: with each standard deviation increase in bidder RP, the likelihood of opting for stock to facilitate the transaction rises by 10.1%. This inclination is more pronounced in acquisitions involving public targets, where the probability of choosing stock payments escalates between 14.8% to 17.6% for each standard deviation increment in bidder RP, as demonstrated in column (2). In contrast, the effect is somewhat subdued in deals with non-public targets, showing only an 8.1% increase, as detailed in column (3). These variations underscore a distinct difference in the impact of bidder RP on the payment method choice between public and non-public deal contexts, although the positive influence of bidder RP is universally observed, aligning with the principles of the misvaluation hypothesis.

A closer examination reveals why public deals exhibit a stronger RP effect on the choice of stock payment. Statistically, the average deal value for public targets is significantly

higher—approximately \$1,232.01 million, which is nearly nine times the average value (\$143 million) of transactions involving non-public entities. This substantial financial outlay required for acquiring public companies likely imposes a considerable strain on bidders, compelling them to leverage their stock as a financing mechanism. This observation is supported by the data showing that 31.4% of public deals are executed with pure stock payments, compared to a mere 10.8% for non-public acquisitions. Furthermore, the regression coefficient for public targets in column (1) stands at 0.899 with a 1% significance level, reinforcing the argument that the high acquisition costs associated with public targets make stock financing an indispensable option, hence amplifying the RP effect on stock payment decisions in these scenarios.

In essence, the analysis presented in Panel B elucidates how bidder RP significantly informs the strategic choice of payment method in M&A transactions, with a marked divergence observed between public and non-public deals. This divergence is primarily attributed to the financial demands of acquiring public targets, compelling bidders to more frequently resort to stock as a payment option, thereby evidencing the nuanced dynamics underpinning acquisition financing strategies in different market contexts.

### **3.5.2 Takeover premium**

In analyzing acquisitions of public targets, Table 3.4's Panel A investigates the effect of bidder reference point (RP) on the offer premium across 2,503 deals. It differentiates between all-cash and non-cash (mixed and all-stock) payment methods. Findings reveal that bidders pay an average premium of 48.8%. A significant insight emerges from the non-cash payment subgroup, where bidders with larger RPs offer a 6.1% higher premium than those with smaller RPs, illustrating the influence of payment method on premium decisions. This premium disparity is notably absent in all-cash transactions and is insignificantly positive across the entire sample. The analysis suggests that bidders perceived as overvalued (large RP) tend to utilize their stock's value to offer higher premiums in non-cash deals, indicating a strategic use of valuation perceptions and payment methods in negotiating deal premiums in public target acquisitions.

Panel B of the study presents regression analyses on how the bidder's reference point (RP) impacts the premium paid in acquisitions. We model

$$Premium_{i,t} = \alpha + \beta RP_{i,t} + \gamma controls + e_{i,t} \quad (6)$$

with deal, bidder and target controls. The premium is the percentage difference between offer price and target closing stock price 4 weeks prior to the original announcement date.

Across the whole sample, a positive correlation is observed, with the regression showing a coefficient of 0.072 ( $t=1.91$ ) in column (1), suggesting that an increase of one standard deviation in bidder RP corresponds to a 2.5% increase in the premium. This relationship is more pronounced in deals involving non-cash payments, as indicated by a coefficient of 0.115 ( $t=2.53$ ) in column (3), reinforcing the positive impact of bidder RP on the premium in scenarios where the transaction includes bidder stock.

Contrastingly, column (2) unveils a negative relationship between bidder RP and the premium in all-cash payments. This unexpected finding could imply that bidders far from their 52-week low and perceived as overvalued may pay lower premiums when the deal is financed entirely with cash. This phenomenon is attributed to the target's management possibly preferring cash to avoid acquiring overvalued bidder stocks, as discussed by Ma et al. (2019). In such cases, the target and bidder effectively anchor the valuation to the bidder's 52-week low, viewing high RP as an overvaluation signal. Consequently, bidders aim to dilute overvaluation through stock payments, while target managers prioritize deal value fairness, demanding higher premiums for stock deals due to valuation uncertainty or conceding to lower premiums for the certainty of cash transactions.



### 3.5.3 Short-run Performance

Panel A of Table 3.5 examines the cumulative abnormal returns (CAR3) for bidders across various subgroups, revealing distinct market reactions to public and non-public deals, reflective of differing information environments. The average CAR3 stands at 1.3%, driven predominantly by the non-public target subgroup, which boasts an average CAR3 of 1.6%. Conversely, bidders involved with public targets exhibit a lower average CAR3 of -0.8%.

The analysis further delineates a significant difference within the RP groups: bidders with larger RPs, indicating a stock price closer to the 52-week high, experience a 0.4% higher CAR3 than those in the smaller RP group. This trend is more pronounced in the non-public target subgroup, where a 0.7% higher CAR3 is observed for the large RP group compared to the small RP group, supporting the idea that market perceptions of bidder valuation significantly impact investor reactions, especially in the context of non-public deals.

In public target deals, however, the trend inversely correlates; large RP bidders see an average CAR3 of -1.4% versus -0.5% for small RP bidders, underscoring that investor responses in public deals hinge more on offer premiums and perceived overpayments rather than bidder RP. This observation aligns with the misvaluation hypothesis and the hubris theory, suggesting that high-confidence bidder managers may overpay, affecting CARs.

The study also investigates the role of conventional valuation levels, using the book-to-market (B/M) ratio as a proxy. Results indicate that in high B/M groups, the difference in CAR between large and small RP bidders is negligible, whereas in low B/M groups, a slight but weakly significant difference exists, suggesting conventional valuation levels modestly influence the effect of bidder RP on short-term performance. This pattern holds across public and non-public target subgroups, indicating that traditional

valuation metrics do not significantly alter the impact of bidder RP on market reactions.

Panel B elaborates on how the bidder's reference point (RP) impacts short-run performance, revealing divergent effects between public and non-public target deals with the following model:

$$\text{Bidder } CAR3_{i,t} = \alpha + \beta RP_{i,t} + \gamma \text{controls} + e_{i,t} \quad (7)$$

where bidder CAR3 is Bidder's three-day (-1,1) cumulative abnormal return. The analysis begins with a general observation in column (1), where a positive correlation between bidder RP and cumulative abnormal returns (CAR3) is noted. Specifically, for every standard deviation increase in bidder RP, a 0.24% increase in CAR3 is observed, highlighting a general preference for bidders far from their 52-week low.

The introduction of bidder characteristics in column (2) moderates the RP's impact, reducing the CAR3 increase to 0.10% per standard deviation in RP. This suggests that while RP remains a factor, bidder financials and other characteristics become more pertinent to investor assessments, especially when comprehensive financial information is available.

Further dissection into non-public deals (columns (3) and (4)) emphasizes a stronger RP effect in this subgroup, with CAR3 increasing by 0.32% for every standard deviation increase in RP, particularly after accounting for bidder characteristics. This heightened effect underlines the role of stock payments in creating value through new block-holder monitoring, as posited by the monitoring hypothesis.

Conversely, the analysis of public target deals (columns (5) to (7)) presents an inverse relationship, with bidder RP negatively affecting CAR3, especially after adjusting for deal-specific characteristics in column (7). Here, a standard deviation increase in RP correlates with a 0.52% decrease in CAR3, suggesting investor concerns over potential overpayment in acquisitions of public targets.

Overall, the study illustrates contrasting investor reactions based on target public status: positive towards non-public deal bidders with higher RPs due to value creation through effective managerial monitoring, and negative towards public deal bidders with higher RPs, reflecting apprehension over overvaluation and overpayment. This nuanced understanding underscores the complex interplay between bidder valuation perceptions, deal structure, and market reactions in the short run.

### **3.5.4 The Overpayment**

This section evaluates how the offer premium, influenced by bidder reference point (RP), impacts market reactions in public deal contexts. Utilizing OLS and 2SLS regression models, the analysis focuses on the relationship between offer premiums and the cumulative abnormal returns (CAR3) for bidders. In the OLS model (Table 3.6, column (1)), a significant negative coefficient on the premium (-0.012,  $t=-2.97$ ) reveals that the market tends to react negatively to increases in the offer premium, with a 0.56% decrease in bidder CAR3 for each standard deviation increase in the premium. This outcome suggests that investors are wary of deals where bidders pay excessively relative to their valuation benchmarks.

The 2SLS model (column (2)) takes this analysis further by using bidder RP as an instrumental variable for the premium, revealing a more pronounced negative effect. The coefficient on the premium escalates to -0.185 (-1.84), translating to an 8.6% reduction in CAR3 for each standard deviation increase in the premium linked to bidder RP. This starker outcome indicates a substantial market aversion to premiums that are perceived as overpayments, particularly those associated with the bidder's positioning relative to its 52-week low.

These findings underscore a critical market perspective: while some premium is expected in acquisitions, there is a threshold beyond which it is viewed as overpayment,

especially when it appears to be justified by the bidder's optimistic valuation (RP). The significantly negative reaction to higher premiums in the context of bidder RP suggests that investors are particularly sensitive to the rationale behind offer premiums, penalizing perceived overvaluations that do not align with fundamental value assessments.

### **3.5.5 Long-run performance**

The analysis explores long-run market reactions to M&A deals, revealing that bidders average a -4.8% buy-and-hold abnormal return (BHAR) one-year post-announcement, with public deals yielding more negative outcomes (-5.6%) than non-public ones (-4.7%). This discrepancy is attributed to the greater complexity and integration challenges of public acquisitions. Notably, bidders with higher reference points (RPs) face worse outcomes, with a -8.4% BHAR compared to -5.2% for those with lower RPs, indicating a negative correlation between RP and one-year BHAR across both deal types. The expectation of a long-run reversal, hypothesized due to market correction of initial biases, only manifests in non-public deals, suggesting the persistence of negative returns in public deals may be rooted in rational evaluations or fundamental issues, possibly exacerbated by overconfident managerial decisions in high RP bidders.

Further investigation into whether RP serves as a proxy for conventional valuation metrics like the book-to-market ratio and Tobin's Q shows low correlations, challenging the notion that RP directly influences long-term returns through conventional valuation levels. Upcoming research will extend to examining one-year BHARs, especially for public deals, to determine if a delayed reversal occurs, potentially uncovering longer-term market adjustments or underlying valuation reassessments. This nuanced view highlights the complex relationship between bidder RP, deal characteristics, and the market's long-term response to M&As.

Consistent with panel A, panel B of Table 3.7 also documents a negative relationship between bidder RP and one-year BHAR. We adopt the following model:

$$\text{Bidder BHAR}_{i,t} = \alpha + \beta \text{RP}_{i,t} + \gamma \text{controls} + e_{i,t} \quad (8)$$

where bidder BHAR is Bidder's one-year market-adjusted buy-and-hold abnormal returns. Column (1) shows that the bidder earns 4.92% less one-year BHAR for one standard deviation increase in the bidder's RP, implying that the bidder earns a lower (higher) one-year BHAR when its pre-announcement stock price is far from (close to) its 52-week low. This economic significance remains but with a lower scale after controlling the bidder characteristics, as shown in column (2). Columns (3) to (7) examine the effect in non-public and public deals separately. The negative long-run return pattern does not change by target public status. This result, along with findings from panel A, provides new evidence that the bidder RP effect on long-run performance is heavily influenced by the information environment provided by the different deals.

### 3.5.6 Whether bidders achieve their goals?

The study utilizes Tobin's Q as a proxy to examine bidder valuation changes and post-announcement integration effects, revealing distinct patterns based on the bidder's reference point (RP) relative to its 52-week low. In Table 3.8, prior to deal announcements, bidders with larger RPs exhibit a higher average Q (2.478) compared to those with smaller RPs (2.287), indicating a perceived overvaluation of bidders using their 52-week low as a reference for acquisition decisions. Post-announcement, large RP bidders show a significant increase in Q to 2.682, exacerbating their overvaluation relative to small RP bidders, whose Q decreases to 1.853. This trend suggests that, contrary to expectations, large RP bidders become more overvalued post-acquisition, while small RP bidders see a reduction in their Q values, challenging the misvaluation hypothesis which posits that acquisitions serve to dilute overvaluation.

Interestingly, the change in Q from one year before to after the deal indicates a general decrease (from 2.338 to 2.186), with large RP bidders experiencing a slight increase in

Q and small RP bidders witnessing a substantial decrease. This outcome hints at the ineffectiveness of using the 52-week low as a basis for M&A decision-making and lends support to the hubris hypothesis, suggesting overconfident actions by large RP bidder managers lead to adverse market reactions in the long run.

Moreover, the analysis across public and non-public deal contexts shows consistent overvaluation trends, with public deal bidders exhibiting more pronounced overvaluation post-M&A. However, in terms of managerial performance, large RP bidders demonstrate superior outcomes both before and after acquisitions, potentially benefiting from better financial positions and managerial expertise, as indicated by the Matthew effect. This capability may facilitate more effective post-deal integration and enhancement of Tobin's Q, contrasting with the performance of small RP bidders.

### **3.6 Robustness Tests**

This section explores the correlation between bidder reference points (RP) and their chosen methods of payment, particularly focusing on the inclusion of stock in the payment mix for both public and non-public deals. The analysis reveals that with every standard deviation increase in bidder RP, the likelihood of including stock as a part of the payment method rises by 21.7% for public deals and 7.2% for non-public deals. Moreover, when analyzing the proportion of stock used in payment, a 0.119% coefficient on bidder RP suggests a 4.15% increase for each standard deviation rise in RP, supporting the misvaluation hypothesis by indicating a preference for stock payments by bidders whose stocks are valued higher relative to their 52-week low.

Further robustness checks using a 5-day cumulative abnormal return (CAR) around the announcement reveal that an increase in bidder RP leads to a positive CAR in non-public deals and a negative CAR in public deals, aligning with initial findings. The long-term performance measured by one-year and three-year buy-and-hold abnormal returns (BHAR) after the announcement shows that the negative impact of higher RP

on bidder returns persists over time, particularly in public deals where the discrepancy between high and low RP groups widens, suggesting sustained market skepticism or the impact of managerial overconfidence.

The enduring negative returns in public deals, evidenced by a significant divide in three-year BHAR between high and low RP groups, hint at an uncorrected market bias or challenges inherent in public deal integrations. The insignificance of the RP coefficient in public deals after adjusting for deal characteristics underscores the market's reinforcement of initial reactions, potentially viewing high RP as indicative of managerial hubris. This comprehensive analysis underscores the nuanced relationship between bidder valuation perceptions, payment strategies, and the subsequent market and long-term performance outcomes in M&A transactions.

### **3.7 Conclusion**

This study delves into how the bidder's 52-week low stock price impacts market perceptions and managerial decision-making during M&A announcements, highlighting the role of the bidder's reference point (RP)—the gap between the pre-announcement stock price and its 52-week low. We observe that an increased RP correlates with a higher likelihood of utilizing stock as payment and offering greater premiums in public deals, aligning with the misvaluation hypothesis posited by Shleifer and Vishney (2003) and Rhodes-Kropf and Viswanathan (2005).

Contrasting return patterns emerge between public and non-public deals. For non-public transactions, a positive initial impact of bidder RP inversely correlates over time, suggesting market perception influenced by bidder RP is initially irrational but corrects itself. However, public deals exhibit a consistently negative relationship between bidder RP and short-run returns, unaffected over time, reflecting the varied information environments and belief formations between public and non-public deals. This finding diverges from the effects of a 52-week high stock price, indicating a complex psychological anchoring in M&A decision-making.

Overall, our analysis underscores the significance of anchoring bias in M&A, proposing that the interplay between 52-week high and low reference points might extend beyond M&A to influence broader corporate event reactions. This suggests a nuanced theory of how past extreme stock prices shape managerial strategies and investor responses, offering insights into the multifaceted dynamics of corporate finance decision-making.



**Table 3. 1: Summary statistics for M&A sample**

The sample includes 20,770 U.S. domestic deals from 1981-2022. The N in column 2 is the number of deals per year. Column 3 reports the mean of Deal value (\$ millions) per year, where the deal value is as reported in SDC. Columns 4-6 present the statistics of payment method: “Cash” (“stock”) refers to a deal as 100% cash (stock) payment deal, and “mix” refers to a deal involving neither pure cash nor pure stock payment. Hostile is a deal involving a hostile bid, defined as SDC. Diversification is a cross-industry deal, where the industry is classified at the two-digit SIC level from SDC. Competition is a deal with more than one bidder.

Year	N	Deal Value (\$mils)	Payment Method			Hostile		Diversification		Competition	
		Mean	Cash	Stock	Mix	Yes	No	Yes	No	Yes	No
1980	8	527.64	2	2	4	0	8	7	1	0	8
1981	12	426.36	4	2	6	3	9	9	3	0	12
1982	3	172.80	0	0	3	2	1	3	0	0	3
1983	4	103.83	1	0	3	0	4	3	1	0	4
1984	29	278.50	6	3	20	3	26	16	13	1	28
1985	159	231.52	60	28	71	7	152	87	72	6	153
1986	240	154.94	63	38	139	6	234	106	134	17	223
1987	225	168.89	50	46	129	16	209	99	126	14	211
1988	267	217.51	72	30	165	21	246	125	142	29	238
1989	324	151.35	81	63	180	9	315	152	172	15	309
1990	306	91.85	67	48	191	4	302	139	167	7	299
1991	321	46.12	60	72	189	3	318	119	202	8	313
1992	439	45.97	75	103	261	6	433	161	278	4	435
1993	587	63.67	124	133	330	4	583	233	354	4	583
1994	753	97.74	158	155	440	9	744	328	425	15	738
1995	846	112.21	150	213	483	13	833	329	517	19	827
1996	1057	160.57	190	274	593	12	1045	423	634	13	1044
1997	1278	165.90	242	284	752	7	1271	530	748	16	1262
1998	1272	227.41	275	244	753	5	1267	510	762	9	1263
1999	1101	371.69	233	288	580	13	1088	427	674	14	1087
2000	928	360.59	184	289	455	5	923	364	564	12	916
2001	644	197.18	162	119	363	6	638	244	400	12	632
2002	603	218.09	212	53	338	3	600	235	368	3	600
2003	596	137.62	205	52	339	8	588	227	369	11	585
2004	669	269.94	258	38	373	5	664	237	432	7	662
2005	703	380.25	300	33	370	7	696	257	446	9	694
2006	711	414.76	309	31	371	5	706	279	432	8	703
2007	691	243.36	291	24	376	2	689	270	421	5	686
2008	505	276.16	215	16	274	11	494	161	344	5	500
2009	346	368.77	151	22	173	3	343	132	214	5	341
2010	386	297.38	185	14	187	6	380	149	237	4	382
2011	438	225.45	178	10	250	5	433	177	261	7	431
2012	446	250.68	197	9	240	3	443	190	256	3	443
2013	377	375.24	179	11	187	4	373	147	230	2	375
2014	470	515.05	195	15	260	2	468	177	293	5	465
2015	434	635.67	116	14	304	3	431	179	255	4	430
2016	381	575.38	92	6	283	3	378	157	224	1	380
2017	372	646.06	80	12	280	3	369	155	217	7	365
2018	381	669.94	88	13	280	1	380	163	218	2	379
2019	319	1146.57	68	11	240	0	319	130	189	4	315
2020	303	599.86	72	13	218	0	303	137	166	2	301
2021	510	592.82	132	12	366	6	504	254	256	4	506
2022	326	834.02	76	19	231	1	325	153	173	2	324
All	20770	301.45	5858	2862	12050	235	20535	8380	12390	315	20455

**Table 3. 2: Variable summary statistics**

This table shows the number of observations, mean median, and standard deviation of variables. Premium is the percentage difference between the offer price and the target closing stock price four weeks prior to the original announcement date, as reported in the SDC. Bidder CAR3 is the bidder's three-day (-1,1) cumulative abnormal return calculated based on the market mode, with the parameter estimation window between (-240, -41). The market return is the CRSP value-weighted index return. Bidder 1-year BHAR is the bidder's one-year market-adjusted buy-and-hold abnormal returns. Bidder reference point (RP) is the logarithmic term difference between the bidder's stock price 30 days before the announcement date and the lowest stock price over 335 calendar days ending 30 days before the announcement date. Most deal characteristics are noted in Table 3.1. Relative Size is the deal value over the bidder's market value (from CRSP) 4 weeks prior to the original announcement date. Market Value is defined as the natural logarithm of bidder market capitalization four weeks prior to the original announcement date. Book to Market Ratio is the book value of equity (from CompStat) measured at the fiscal year end before the announcement divided by the market capitalization four weeks prior to the original announcement date. Leverage is the debt-to-equity ratio (from CompStat), measured at the fiscal year end before the announcement. The CF to E is the cash-flow-to-equity ratio (from CompStat), measured at the fiscal year end before the announcement. The cash flow is the income before extraordinary items plus amortization and depreciation minus dividends on common and preferred stock. The Tobin's Q is the market value of a company divided by its asset's replacement cost. Pre-announcement and post-announcement refer to the fiscal year before and after the announcement. All continuous variables are winsorised at 1% and 99% levels.

VARIABLES	N	Mean	Median	SD
Panel A: Main independent variable				
Premium	2,503	0.487	0.396	0.469
Bidder CAR3	20,525	0.0126	0.00604	0.0768
Bidder 1-year BHAR	19,357	-0.0482	-0.0990	0.525
Panel B: Main dependent variable				
Bidder reference point (RP)	20,533	0.396	0.306	0.349
Panel C: Control Variables				
Deal Characteristics				
Public Target	20,770	0.146	-	0.353
Private Target	20,770	0.516	-	0.500
Subsidiary Target	20,770	0.339	-	0.473
Hostile Deals	20,770	0.0113	-	0.106
Diversification Deals	20,770	0.403	-	0.491
Competition	20,770	0.0152	-	0.122
All Cash Deals	20,770	0.282	-	0.450
All Stock Deals	20,770	0.138	-	0.345
Deal Value	20,770	219.3	35	607.6
Relative Size	20,723	0.219	0.0732	0.400
Bidder Characteristics				
Ln Bidder Market Value	20,723	6.377	6.298	2.083
Bidder Book to Market Ratio	19,626	0.453	0.344	0.469
Bidder Leverage	20,656	0.238	0.204	0.219
Bidder CF to E	19,689	0.0417	0.0549	0.142
Bidder Pre-announcement Tobin's Q				
Bidder Post-announcement Tobin's Q				
Target Characteristics				

Ln Target Market Value	2,710	5.014	5.003	1.902
Target Book to Market Ratio	2,204	0.538	0.423	0.710
Target Leverage	2,463	0.228	0.170	0.238
Target CF to E	2,380	-0.0573	0.0485	0.456

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**Table 3. 3 The effect of the bidder RP on the payment method (All-stock deals)**

The sample includes 20,770 U.S. domestic deals from 1981-2022. Panel A presents the mean of RP and the number of observations for each subgroup. The large and small RP subgroups are formed by the sample 75% and 25% percentile of bidder RP with each target listing status group. Panel B shows the percentage of all-stock deals for each subgroup. The sample is two-way sorted on target listing status and bidder RP. “L-S” and “t(L-S)” are the differences in the percentage of all-stock deals between Large and Small RP groups and the t-statistics of differences. Panel C shows the logit regressions for all-stock deals on the bidder RP based on the whole sample (All), subgroup involving non-public target deals (Non-Public Target), and public target deals (Public Target). The dependent variable is all-stock, a dummy variable equals one if the total consideration is paid in stock (100%), and zero otherwise. All regressions include Fama and French's (1977) industry and year fixed effects. All variables are defined in Appendix A. Statistical significance at the 1%, 5%, and 10% levels is denoted \*\*\*, \*\*, and \*, respectively.

**Panel A: Bidder RP levels**

RP groups	Average RP level			Number of deals		
	All deals	Public targets	Non-public targets	All deals	Public targets	Non-public target
All RP	0.396	0.377	0.399	20,770	3,023	17,747
L: Large RP	0.877	0.853	0.881	5,372	724	4,648
S: Small RP	0.075	0.078	0.075	5,133	710	4,423

**Panel B: Univariate analysis by different RP**

RP groups	(1)	(2)	(3)
	All targets	Public targets	Non-public targets
All RP	0.138***	0.314***	0.108***
L: Large RP (far from 52WL)	0.205***	0.461***	0.165***
S: Small RP (close to 52WL)	0.105***	0.261***	0.080***
L-S	0.100***	0.201***	0.085***
t(L-S)	(0.007)	(0.025)	(0.007)

**Panel C: Regressions**

	(1)	(2)	(3)	(4)
	All	Non-Public Target	Public Target	Public Target
All-stock				
Bidder RP	0.289*** (7.65)	0.233*** (5.50)	0.504*** (5.35)	0.425*** (3.62)
Public Target	0.899*** (25.49)			
Relative Size	0.106*** (2.92)	0.126*** (2.70)	-0.033 (-0.53)	-0.534*** (-4.90)
Diversification	0.047* (1.65)	0.074** (2.26)	0.016 (0.26)	0.100 (1.30)
Competition	-0.327*** (-3.11)	-0.007 (-0.03)	-0.353*** (-3.00)	-0.307** (-2.24)
Hostile	-0.962*** (-6.42)		-0.883*** (-5.65)	-0.887*** (-5.03)
In Bidder Market Value	0.010 (1.21)	0.046*** (4.79)	-0.086*** (-5.25)	-0.269*** (-8.13)
Bidder Leverage	-0.783*** (-10.69)	-0.825*** (-9.72)	-0.653*** (-4.14)	-0.568*** (-2.83)
Bidder Book to Market Value	-0.262*** (-7.16)	-0.320*** (-7.24)	-0.122* (-1.65)	-0.175* (-1.81)
Bidder CF to E	-1.214*** (-13.34)	-1.409*** (-13.17)	-0.728*** (-3.78)	-0.728*** (-2.72)
In Target Market Value				0.238*** (6.47)
Target Leverage				-0.416** (-2.32)

Target Book to Market Value				0.061
				(1.10)
Target CF to E				-0.123
				(-1.33)
Constant	-1.433**	-1.343*	1.174	1.393
	(-2.47)	(-1.65)	(1.02)	(1.32)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Observations	18,483	15,495	2,649	1,846
Pseudo R <sup>2</sup>	0.233	0.221	0.186	0.218

**Table 3. 4 The effect of the bidder RP on the premium**

The sample includes 2,503 U.S. domestic public deals from 1981-2022 with a documented premium from SDC. Panel A shows the mean of premium for each subgroup. The large and small RP subgroups are formed by the sample 75% and 25% percentile of bidder RP with each target listing status group. The sample is two-way sorted on payment type (all-cash deals and non-cash deals) and bidder RP. “L-S” and “t(L-S)” are the differences in the premium between Large and Small RP groups and the t-statistics of differences. Panel B shows the OLS regressions for the premium on the bidder RP based on the whole sample (All), subgroup of all cash deals (All-cash) and non-cash deals (Non-cash). The dependent variable is premium, defined as the percentage difference between offer price and target closing stock price 4 weeks prior to the original announcement date, as reported in the SDC. All regressions include Fama and French's (1977) industry and year fixed effects. All variables are defined in Appendix A. Statistical significance at the 1%, 5%, and 10% levels is denoted \*\*\*, \*\*, and \*, respectively.

Panel A: Univariate analysis by different RP

RP groups	(1)	(2)	(3)
	All	All-cash	Non-cash
All RP	0.488***	0.543***	0.455***
L: Large RP (far from 52WL)	0.492***	0.515***	0.485***
S: Small RP (close to 52WL)	0.487***	0.565***	0.424***
L-S	0.005	-0.050	0.061*
t(L-S)	(0.027)	(0.044)	(0.036)

Panel B: Regressions

Premium	(1)	(2)	(3)
	All	All-cash	Non-cash
Bidder RP	0.072* (1.91)	-0.133* (-1.71)	0.115** (2.53)
Relative Size	0.220*** (6.97)	0.092* (1.69)	0.323*** (7.86)
Diversification	-0.005 (-0.23)	0.007 (0.21)	-0.014 (-0.45)
Competition	0.163*** (4.21)	0.209*** (3.63)	0.086 (1.62)
Hostile	0.013 (0.29)	0.004 (0.07)	0.023 (0.36)
ln Bidder Market Value	0.099*** (10.41)	0.053*** (4.01)	0.146*** (10.07)
Bidder Leverage	-0.119* (-1.88)	-0.135 (-1.26)	-0.112 (-1.39)
Bidder Book to Market Value	-0.057* (-1.92)	0.002 (0.03)	-0.083** (-2.16)
Bidder CF to E	0.283*** (3.14)	0.341* (1.77)	0.207* (1.94)
ln Target Market Value	-0.130*** (-12.22)	-0.071*** (-4.57)	-0.177*** (-11.35)
Target Leverage	0.089 (1.61)	0.307*** (3.49)	0.022 (0.31)
Target Book to Market Value	0.107*** (5.84)	0.102*** (3.30)	0.122*** (5.24)
Target CF to E	-0.026 (-0.82)	-0.180*** (-2.84)	0.018 (0.48)
Constant	-0.354	0.155	-0.417

	(-0.79)	(0.81)	(-0.86)
Year	Yes	Yes	Yes
Industry	Yes	Yes	Yes
Observations	1,760	668	1,092
Adj. R <sup>2</sup>	0.194	0.287	0.233





**Table 3. 5 The effect of the bidder RP on the bidder CAR3**

The sample includes 20,770 U.S. domestic deals from 1981-2022. Panel A shows the mean of bidder CAR3 for each subgroup. The large and small RP subgroups are formed by the sample 75% and 25% percentile of bidder RP with each target listing status group. The sample is three-way sorted on target listing status, bidder RP, and bidder Book to Market Ratio (B/M). “L-S” and “t(L-S)” are the differences in bidder CAR3 between Large and Small RP groups and the t-statistics of differences. The mean of the bidder B/M ratio forms the high and low B/M subgroups. Panel B shows the OLS regressions for bidder CAR3 on the bidder RP based on the whole sample (All), subgroup involving non-public target deals (Non-Public Target), and public target deals (Public Target). The dependent variable is bidder CAR3, defined as the bidder's three-day (-1,1) cumulative abnormal return calculated based on the market mode, with the parameter estimation window between (-240, -41). The market return is the CRSP value-weighted index return. All regressions include Fama and French's (1977) industry and year fixed effects. All variables are defined in Appendix A. Statistical significance at the 1%, 5%, and 10% levels is denoted \*\*\*, \*\*, and \*, respectively.

**Panel A: Univariate analysis by different RP**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
RP groups	All targets			Public targets			Non-public targets		
	All B/M	High B/M	Low B/M	All B/M	High B/M	Low B/M	All B/M	High B/M	Low B/M
All RP	0.013***	0.011***	0.015***	-0.008***	-0.008***	-0.008***	0.016***	0.014***	0.018***
L: Large RP	0.016***	0.014***	0.018***	-0.014***	-0.013***	-0.015***	0.021***	0.018***	0.022***
S: Small RP	0.012***	0.011***	0.013***	-0.005***	-0.007***	-0.003***	0.014***	0.014***	0.016***
L-S	0.004***	0.003	0.005*	-0.009*	-0.006	-0.012*	0.007***	0.004*	0.006**
t(L-S)	(0.002)	(0.002)	(0.003)	(0.004)	(0.006)	(0.007)	(0.002)	-0.002	(0.003)

**Panel B: Regressions**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Bidder CAR3	All	All	Non-Public Target	Non-Public Target	Public Target	Public Target	Public Target
Bidder RP	0.007*** (4.50)	0.003* (1.66)	0.008*** (4.80)	0.004** (2.39)	-0.001 (-0.20)	-0.008 (-1.64)	-0.015** (-2.46)
Private Target	0.026*** (15.21)	0.021*** (11.28)					
Subsidiary Target	0.027*** (15.00)	0.023*** (11.92)					
Relative Size	0.025*** (17.44)	0.019*** (11.72)	0.035*** (21.58)	0.030*** (16.16)	-0.003 (-1.14)	-0.011*** (-3.44)	-0.008 (-1.49)
All Stock Deals	-0.001 (-0.73)	-0.002 (-0.94)	0.005** (2.39)	0.004* (1.92)	-0.010*** (-2.76)	-0.010** (-2.50)	-0.007 (-1.50)
All Cash Deals	0.003** (2.47)	0.005*** (4.07)	0.000 (0.16)	0.002* (1.66)	0.014*** (3.84)	0.018*** (4.77)	0.021*** (4.41)
Diversification	-0.000 (-0.33)	-0.000 (-0.38)	-0.001 (-0.93)	-0.002 (-1.23)	0.001 (0.32)	0.002 (0.75)	-0.001 (-0.34)
Competition	-0.007 (-1.50)	-0.004 (-0.80)	-0.006 (-0.57)	0.007 (0.68)	-0.007 (-1.28)	-0.005 (-1.00)	-0.003 (-0.50)
Hostile	-0.008 (-1.50)	-0.011* (-1.94)	-0.027 (-1.63)	-0.027* (-1.67)	-0.002 (-0.33)	-0.005 (-0.80)	-0.002 (-0.27)
ln Bidder Market Value		-0.003*** (-9.59)		-0.003*** (-8.52)		-0.004*** (-5.02)	-0.001 (-0.67)
Bidder Leverage		-0.003 (-1.16)		-0.006* (-1.96)		0.019** (2.25)	0.021** (2.04)
Bidder Book to Market Value		-0.008*** (-6.25)		-0.009*** (-6.54)		-0.003 (-0.84)	-0.003 (-0.69)
Bidder CF to E		-0.018*** (-4.28)		-0.014*** (-3.16)		-0.020* (-1.85)	-0.023 (-1.62)

In Target Market Value							-0.005***
							(-2.69)
Target Leverage							-0.001
							(-0.15)
Target Book to Market Value							0.002
							(0.66)
Target CF to E							0.000
							(0.05)
Constant	-0.033	-0.000	0.013	0.040	-0.029	-0.003	-0.003
	(-1.16)	(-0.01)	(0.33)	(1.03)	(-0.50)	(-0.04)	(-0.04)
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	20,441	18,409	17,501	15,770	2,940	2,639	1,868
Adj. R <sup>2</sup>	0.035	0.042	0.035	0.042	0.078	0.091	0.122

**Table 3. 6 Bidder CAR3 regressions (overpayment issue)**

The sample includes 1,750 U.S. domestic public deals from 1981-2022 with a documented premium from SDC. This table shows the OLS and 2SLS regressions for bidder CAR3 on the premium. The first column is the OLS result. The dependent variable is bidder CAR3, defined as the bidder's three-day (-1,1) cumulative abnormal return calculated based on the market mode, with the parameter estimation window between (-240, -41). The second column instrument for the offer premium using the bidder RP. All regressions include Fama and French's (1977) industry and year fixed effects. All variables are defined in Appendix A. Statistical significance at the 1%, 5%, and 10% levels is denoted \*\*\*, \*\*, and \*, respectively.

Bidder CAR3	(1)	(2)
	OLS	IV
Premium	-0.012*** (-2.97)	-0.185* (-1.84)
Public Target	-0.006 (-1.09)	0.033 (1.39)
Relative Size	-0.014*** (-2.96)	-0.010 (-1.45)
All Stock Deals	0.022*** (4.83)	0.029*** (3.79)
All Cash Deals	-0.001 (-0.25)	-0.001 (-0.21)
Diversification	0.000 (0.07)	0.027 (1.51)
Competition	-0.003 (-0.38)	-0.001 (-0.12)
Hostile	0.000 (0.03)	0.018* (1.69)
ln Bidder Market Value	0.035*** (3.49)	0.021 (1.30)
Bidder Leverage	0.001 (0.21)	-0.012 (-1.20)
Bidder Book to Market Value	-0.014 (-0.93)	0.020 (0.71)
Bidder CF to E	-0.005*** (-2.92)	-0.027** (-2.09)
ln Target Market Value	0.012 (1.31)	0.031* (1.83)
Target Leverage	0.002 (0.59)	0.021* (1.76)
Target Book to Market Value	0.000 (0.03)	-0.010 (-1.05)
Target CF to E	0.011 (1.10)	0.051* (1.88)
Year	Yes	Yes
Industry	Yes	Yes
Observations	1,750	1,750
Adj. R2	0.065	

**Table 3. 7 The effect of the bidder RP on the bidder 1-year BHAR**

The sample includes 20,770 U.S. domestic deals from 1981-2022. Panel A shows the mean of bidder 1-year BHAR for each subgroup. The large and small RP subgroups are formed by the sample 75% and 25% percentile of bidder RP with each target listing status group. The sample is two-way sorted on target listing status and bidder RP. “L-S” and “t(L-S)” are the differences in bidder 1-year BHAR between Large and Small RP groups and the t-statistics of differences. Panel B shows the OLS regressions for bidder 1-year BHAR on the bidder RP based on the whole sample (All), subgroup involving non-public target deals (Non-Public Target), and public target deals (Public Target). The dependent variable is bidder 1-year BHAR, bidder’s one-year market-adjusted buy-and-hold abnormal returns. All regressions include Fama and French's (1977) industry and year fixed effects. All variables are defined in Appendix A. Statistical significance at the 1%, 5%, and 10% levels is denoted \*\*\*, \*\*, and \*, respectively.

**Panel A: Univariate analysis by different RP**

RP groups	(1)	(2)	(3)
	All deals	Public targets	Non-public targets
All RP	-0.048***	-0.056***	-0.047***
L: Large RP (far from 52WL)	-0.084***	-0.093***	-0.082***
S: Small RP (close to 52WL)	-0.052***	-0.059***	-0.051***
L-S	-0.031***	-0.034*	-0.031**
t(L-S)	(0.011)	(0.029)	(0.012)

**Panel B: Regressions**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1-year BHAR	All	All	Non-Public Target	Non-Public Target	Public Target	Public Target	Public Target
Bidder RP	-0.058*** (-5.13)	-0.035*** (-2.84)	-0.058*** (-4.72)	-0.037*** (-2.76)	-0.063** (-2.03)	-0.029 (-0.86)	-0.032 (-0.81)
Public Target	-0.013 (-1.10)	-0.019 (-1.52)					
Relative Size	0.035*** (3.35)	0.022* (1.90)	0.050*** (4.10)	0.031** (2.25)	-0.010 (-0.54)	0.004 (0.20)	0.083** (2.46)
All Stock Deals	-0.054*** (-4.41)	-0.036*** (-2.76)	-0.053*** (-3.72)	-0.032** (-2.06)	-0.044* (-1.80)	-0.033 (-1.30)	-0.017 (-0.57)
All Cash Deals	0.028*** (3.17)	0.023** (2.47)	0.023** (2.43)	0.021** (2.06)	0.060** (2.53)	0.036 (1.44)	0.001 (0.05)
Diversification	-0.014* (-1.74)	-0.005 (-0.56)	-0.011 (-1.26)	-0.002 (-0.22)	-0.029 (-1.49)	-0.018 (-0.87)	-0.009 (-0.34)
Competition	0.001 (0.02)	-0.001 (-0.02)	-0.064 (-0.84)	-0.064 (-0.83)	0.030 (0.88)	0.026 (0.75)	0.027 (0.66)
Hostile	-0.014 (-0.37)	-0.013 (-0.34)	0.037 (0.31)	0.033 (0.29)	-0.010 (-0.27)	-0.009 (-0.23)	-0.041 (-0.88)
ln Bidder Market Value		0.004 (1.49)		0.000 (0.18)		0.018*** (3.12)	0.039*** (3.74)
Bidder Leverage		0.095*** (4.58)		0.114*** (5.06)		-0.035 (-0.64)	-0.143** (-2.17)
Bidder Book to Market Value		0.077*** (7.97)		0.075*** (7.20)		0.071*** (2.80)	0.089*** (2.86)
Bidder CF to E		0.117*** (3.79)		0.115*** (3.37)		0.108 (1.51)	0.283*** (3.02)
ln Target Market Value							-0.025** (-2.25)
Target Leverage							-0.055 (-0.94)
Target Book to Market Value							0.063*** (3.41)
Target CF to E							-0.013 (-0.43)
Constant	0.038 (0.20)	-0.045 (-0.23)	-0.071 (-0.26)	-0.125 (-0.46)	0.038 (0.10)	-0.112 (-0.31)	-0.389 (-0.90)
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,176	17,263	16,390	14,763	2,786	2,500	1,784

Adj. R2	0.033	0.038	0.035	0.041	0.049	0.059	0.088
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**Table 3. 8 The change of Tobin's Q before and after the deal announcement**

The sample includes 20,770 U.S. domestic deals from 1981-2022. The large and small RP subgroups are formed by the sample 75% and 25% percentile of bidder RP with each target listing status group. The Pre-Q and Post-Q refer to bidder's pre- (last fiscal year end before the announcement) and post-announcement (first fiscal year end after the announcement) Tobin's Q. The Diff-Q is the difference between bidder's pre- and post- announcement Tobin's Q. "L-S" and "t(L-S)" are the differences in bidder 1-year BHAR between Large and Small RP groups and the t-statistics of differences. The mean of the bidder B/M ratio forms the high and low B/M subgroups. All variables are defined in Appendix A. Statistical significance at the 1%, 5%, and 10% levels is denoted \*\*\*, \*\*, and \*, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
RP groups	All targets			Public targets			Non-public targets		
	Pre-Q	Post-Q	Diff-Q	Pre-Q	Post-Q	Diff-Q	Pre-Q	Post-Q	Diff-Q
All RP	2.338***	2.186***	0.216***	2.412***	2.170***	0.261***	2.324***	2.188***	0.208***
L: Large RP	2.478***	2.682***	-0.097**	2.608***	2.670***	-0.034*	2.456***	2.683***	-0.107**
S: Small RP	2.287***	1.853***	0.489***	2.408***	1.899***	0.505***	2.266***	1.846***	0.486***
L-S	0.190***	0.828***	-0.586***	0.200*	0.771***	-0.539***	0.190***	0.837***	-0.593***
t(L-S)	(0.041)	(0.034)	(0.039)	(0.109)	(0.093)	(0.097)	(0.044)	(0.036)	(0.042)

### Appendix. Variable definitions for Chapter 3

Panel A: Main independent variables		
Premium		Percentage difference between offer price and target closing stock price 4 weeks prior to the original announcement date, as reported in the SDC
Bidder CAR3		Bidder's three-day (-1,1) cumulative abnormal return calculated based on the market mode, with the parameter estimation window between (-240, -41). The market return is the CRSP value-weighted index return.
Bidder 1-year BHAR		Bidder's one-year market-adjusted buy-and-hold abnormal returns.
Panel B: Dependent variable		
Bidder RP		Bidder reference point, defined as the logarithmic term difference between bidder's stock price 30 days prior to the announcement date and bidder's lowest stock price from 365 to 30 days before the announcement.
Panel C: Control Variables		
Public Target		Dummy variable equals one when the target is a public firm, and zero otherwise.
Private Target		Dummy variable equals one when the target is a private firm, and zero otherwise.
Subsidiary Target		Dummy variable equals one when the target is a subsidiary firm, and zero otherwise.
Hostile Deals		Dummy variable equals one when the deal is defined as a hostile deal by the SDC, and zero otherwise.
Diversification Deals		Dummy variable equals one when the primary two Standard Industry Classification codes are different between bidders and targets, and zero otherwise.
Competition		Dummy variable equals one when the number of bidders is greater than one, and zero otherwise.
All Cash Deals		Dummy variable equals one if the total consideration is paid in cash (100%), and zero otherwise.
All Stock Deals		Dummy variable equals one if the total consideration is paid in stock (100%), and zero otherwise.
Deal Value		Total transaction value.
Relative Size		Deal value over bidder's market value (from CRSP) 4 weeks prior to the original announcement date.
Ln Bidder Market Value		The natural logarithm of bidder market capitalization 4 weeks prior to the original announcement date.
Bidder Book to Market Ratio		Bidder book value of equity (from CompStat) measured at the fiscal year end before the announcement divided by the bidder market capitalization 4 weeks prior to the original announcement date.
Bidder Leverage		Bidder debt-to-equity ratio (from CompStat), measured at the fiscal year end before the announcement.
Bidder CF to E		Bidder cash-flow-to-equity ratio (from CompStat), measured at the fiscal year end before the announcement. The cash flow is the income before extraordinary items plus amortization and depreciation minus dividends on common and preferred stock.
Bidder Pre-announcement Tobin's Q	Pre-	Bidder Tobin's Q at the fiscal year end before the announcement data. Tobin's Q is defined as the bidder total assets (from CompStat) plus market value (from CompStat) minus total common equity value (from CompStat) divided by total assets (from CompStat).
Bidder Post-announcement Tobin's Q	Post-	Bidder Tobin's Q at the first fiscal year end after the announcement data.
Ln Target Market Value		The natural logarithm of target market capitalization 4 weeks prior to the original announcement date.
Target Book to Market Ratio		Target book value of equity (from CompStat) measured at the fiscal year end before the announcement divided by the target market capitalization 4 weeks prior to the original announcement date.

Target Leverage	Target debt-to-equity ratio (from CompStat), measured at the fiscal year end before the announcement.
Target CF to E	Target cash-flow-to-equity ratio (from CompStat), measured at the fiscal year end before the announcement. The cash flow is the income before extraordinary items plus amortization and depreciation minus dividends on common and preferred stock.



## **Chapter 4: Folklore Narratives and Cross-border Mergers and Acquisitions**

### **Abstract**

This study examines 3,663 cross-border mergers and acquisitions (CBMAs) initiated by firms from 30 countries between 1985 and 2018, introducing folklore narratives as a novel proxy for societal risk-taking attitudes. We find that acquirers from countries with folklore narratives emphasizing success in uncertain circumstances are more likely to engage in CBMAs, pursue larger deals, and offer higher premiums. The results highlight distinct patterns: higher folklore-based risk tolerance correlates with greater deal activity and valuation aggressiveness, suggesting that preserved societal attitudes toward risk influence corporate decision-making beyond traditional economic and institutional factors. This behavior aligns with the narrative economics framework, indicating that long-standing cultural stories about risk and success materially shape international investment behavior. Our findings emphasize that deep-rooted cultural narratives, captured through folklore, provide a stable and predictive measure of risk preferences, offering new insights into the behavioral foundations of cross-border corporate strategies.

## 4.1 Introduction

The prevailing literature on cross-border mergers and acquisitions (CBMAs) has extensively documented the roles of economic, institutional, and cultural factors in shaping international deal activity. Traditional studies often assume that firm managers and investors behave rationally under uncertainty, guided by market fundamentals and institutional quality. Yet, a growing body of research challenges this view, emphasizing the enduring influence of cultural narratives and societal norms on risk perceptions and decision-making. Recent developments in behavioral economics and cultural finance suggest that deep-seated societal attitudes, particularly those surrounding risk-taking, may exert systematic effects on cross-border investment behavior beyond observable economic indicators.

Building on this perspective, we introduce folklore narratives as a novel, historically grounded proxy for country-level risk-taking attitudes. Folklore, defined as the body of traditional beliefs and stories transmitted orally across generations, offers unique insight into collective societal values and responses to uncertainty. Unlike survey-based measures of risk preferences, which may suffer from transient economic influences and self-report biases, folklore motifs capture deeply embedded cultural traits that have persisted over centuries. Drawing upon the framework of Michalopoulos and Xue (2021), who validate folklore motifs as reliable predictors of contemporary trust, risk tolerance, and gender norms, we focus on challenge-related narratives—specifically, whether traditional tales depict success or failure in uncertain environments—to measure a society’s cultural orientation toward risk.

Using a comprehensive sample of 3,663 CBMA deals announced between 1985 and 2018, spanning 30 acquiring countries, we find robust evidence that folklore-based measures of risk-taking attitudes significantly predict cross-border acquisition activity. Acquirers from societies with greater prevalence of success-oriented folklore motifs are more likely to undertake CBMAs, pursue larger transaction values, and offer higher

deal premiums. These results suggest that societal narratives about risk and uncertainty materially influence corporate decision-making at the international level, beyond the effects of macroeconomic fundamentals, institutional quality, and traditional cultural metrics such as religiosity or uncertainty avoidance.

Our study makes several key contributions to the literature. First, it advances the understanding of cultural determinants in cross-border investments by introducing a stable and historically rooted measure of risk attitudes. Unlike contemporary trust indices or cultural distance metrics, which may fluctuate with economic cycles or geopolitical events, folklore narratives offer an enduring reflection of how societies internalize and transmit notions of risk and opportunity. Second, by demonstrating the predictive power of folklore-based risk-taking measures in the CBMA context, we extend the emerging narrative economics literature (Shiller, 2017; Akerlof and Snower, 2016) into international corporate finance, providing empirical support for the argument that cultural stories can shape real economic outcomes. Third, our findings enrich the cross-border M&A literature by highlighting that preserved perceptions of risk, not just actual risk exposure, critically influence deal-making behavior across borders.

The remainder of this paper is organized as follows. The next section reviews the existing literature on cultural determinants of CBMAs and the economic role of narratives. Section 3 develops hypotheses on the relationship between folklore-based risk-taking attitudes and cross-border acquisition activity. Section 4 describes the data, variable construction, and empirical methodology. Section 5 presents the main results and robustness analyses. And Section 6 discusses implications, limitations, and avenues for future research, emphasizing the potential of folklore narratives as a broader tool for understanding international financial behavior.

## **4.2 Literature Review**

### **4.2.1 The cultural determinant of Cross-Border M&As**

Defined by Hofstede (2001), Culture is "the collective programming of the mind that distinguishes the members of one group or category of people from another". It reflects the shared beliefs, assumptions, and values within a group, shaping behaviors, leadership styles, organizational practices, and social customs (Larsson and Lubatkin, 2001). At the national level, culture encompasses elements such as language, religion, social structures, traditions, and rituals, and exerts a significant influence on a country's economic development, national security, as well as firms' performance and international expansion (Hitt et al., 2006).

Trust is a central dimension through which culture affects financial outcomes. Guiso et al. (2006) define culture as "customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation," and emphasize that generalized trust facilitates economic exchange. Their work shows that trust levels predict cross-country differences in stock market participation, the size of the financial sector, and the efficiency of financial intermediation. In environments with high trust, market participants are more willing to invest, believing that others will fulfill contractual obligations even when enforcement is imperfect.

Building on this foundation, Guiso et al. (2009) demonstrate that cross-border trust—specifically, trust between citizens of different countries—affects patterns of foreign direct investment (FDI). Their evidence shows that countries whose citizens trust each other more tend to invest more in each other's economies, highlighting that trust operates not only within societies but also across national borders. This insight is crucial for understanding how cultural compatibility fosters international financial flows.

Another important channel is culture's influence on equity investment. Hwang (2011) finds that cultural similarities between investors and firms reduce information asymmetries, leading to more equity investments across borders. Investors prefer firms

from culturally familiar countries because they perceive them as less risky and easier to monitor. This supports the view that culture acts as a form of "soft information," affecting perceived investment quality beyond financial fundamentals.

In venture capital markets, cultural distance similarly plays a significant role. Bottazzi et al. (2010) study European venture capitalists and document that cultural differences between investors and entrepreneurs reduce the probability of investment and worsen deal performance. They argue that venture capital inherently relies on soft skills, mutual trust, and close post-investment interactions, making it especially sensitive to cultural frictions.

Credit markets also reflect the influence of shared cultural values. Giannetti and Yafeh (2012) show that when borrowers and lenders share common cultural backgrounds, loans are more likely to be granted, and interest rates are lower. Their findings suggest that culture acts as an informal contract enforcement mechanism, reducing the perceived risk of opportunistic behavior by borrowers.

Cultural values also shape stock market behavior. Guiso et al. (2008) find that national culture affects household decisions to invest in stocks. In particular, societies with higher generalized trust exhibit higher stock market participation rates. Meanwhile, Chui et al. (2010) explore how cultural differences influence stock price momentum across countries. They show that cultural traits such as individualism and uncertainty avoidance are associated with varying degrees of momentum profitability, providing further evidence that investor behavior is deeply rooted in societal norms.

Experimental economics provides additional support. A broad range of laboratory studies shows that individuals from different cultures behave differently in trust games, ultimatum games, and public goods games. For example, people from more collectivist societies tend to cooperate more in public goods experiments, while those from individualistic cultures place greater emphasis on personal gain (Buchan et al., 2002; Gächter et al., 2010). Such experimental findings reinforce the notion that cultural

background shapes fundamental attitudes toward risk, cooperation, and fairness, all of which are critical for functioning financial systems.

Furthermore, Guiso et al. (2006) argue that culture is a deep determinant of institutions, rather than merely being shaped by them. This view, echoed by Licht et al. (2007) and Tabellini (2008), suggests that societies' historical values about trust, authority, and individual responsibility condition the emergence of formal institutions such as property rights and investor protections. Consequently, cultural variables are not merely proxies for institutional quality; they represent independent and persistent drivers of financial behavior.

While culture influences financial markets broadly, it plays an especially critical role in cross-border mergers and acquisitions (CBMA). Mergers require integration between firms, and when firms originate from culturally distinct societies, differences can magnify coordination costs, hinder post-merger integration, and ultimately affect merger outcomes.

Earlier research established theoretical foundations for understanding these frictions. Arrow (1974) and Akerlof (1997) argued that greater social distance increases communication barriers within organizations, making decision-making less effective. In the context of CBMAs, cultural distance functions as a form of social distance, complicating coordination among managers and employees from different backgrounds. Experimental studies provide micro-level support for these mechanisms: Hoffman, McCabe, and Smith (1996, 1999), Glaeser et al. (2000), and Fershtman and Gneezy (2001) all find that social distance reduces trust and cooperation, impairing group performance. Weber, Shenkar, and Raveh (1996) show that national cultural differences predict post-merger stress and cooperation problems more strongly than differences in corporate cultures. They argue that deeply ingrained societal values are more difficult to adjust than operational practices, posing fundamental challenges for merger integration.

Several studies also linked cultural traits to CBMA outcomes. Siegel, Licht, and Schwartz (2011) find that differences in egalitarianism—a dimension related to hierarchy—negatively correlate with cross-border merger activity. Although their study focuses on a single cultural attribute and a narrower sample, it provides early evidence that value differences between countries constrain corporate integration. Page (2007) further suggests that while diversity may promote innovation, it also increases communication and coordination costs, particularly during the early phases of integration.

Ahern et al. (2015) provide the first large-scale, systematic evidence that national cultural differences substantially influence both the likelihood and the success of cross-border mergers and acquisitions (CBMAs). Their contribution is notable for the comprehensive measurement of culture, the rigorous empirical design, and the robustness of their findings. The authors conceptualize culture along three key dimensions—trust, hierarchy, and individualism—based on extensive research in sociology, psychology, and economics. Drawing on data from the World Values Survey and a sample of mergers involving 52 countries between 1991 and 2008, they construct quantitative measures of cultural distance between country pairs, offering a consistent and comparable framework for empirical analysis.

Using a gravity model approach similar to that of Frankel and Romer (1999), Ahern et al. (2015) demonstrate that greater cultural distance significantly reduces the volume of cross-border mergers. This result holds even after controlling for geographic proximity, shared language, religion, legal origin, bilateral trade, and macroeconomic factors. Among cultural dimensions, differences in trust and individualism are particularly powerful predictors of reduced merger activity. Furthermore, cultural distance not only affects merger incidence but also impacts post-merger outcomes. Mergers between culturally distant firms experience significantly lower combined announcement returns, with a shift from the 25th to the 75th percentile of cultural distance associated with a

28% reduction in expected synergy gains. These findings suggest that cultural frictions impose real economic costs by hindering effective integration and realization of merger benefits.

To strengthen the causal interpretation, the authors use genetic and somatic differences as instrumental variables for cultural distance. Even after accounting for concerns about endogeneity, cultural distance continues to materially reduce both merger frequency and value creation. Importantly, Ahern et al. (2015) distinguish the effects of cultural distance from those of formal institutions such as legal protections, governance quality, and disclosure standards. Their results show that culture exerts an independent and substantial influence even after controlling for institutional quality. While factors like common language, shared religion, and geographic proximity also matter, they do not fully explain the patterns observed, underscoring the distinct role of culture in shaping CBMA outcomes.

Despite the barriers created by cultural distance, some cross-border mergers still occur between culturally distant countries. Ahern et al. (2015) interpret this as evidence of a selection effect: only mergers with exceptionally strong fundamentals or synergies can overcome the substantial integration challenges posed by cultural differences. Thus, while cultural distance lowers the probability of merger and average returns, the realized mergers among culturally distant firms are not necessarily value-destroying but rather reflect a higher threshold for deal completion. Although there is an alternative hypothesis suggesting that cultural diversity may enhance merger outcomes by fostering complementary capabilities (Morosini et al., 1998), the large-sample evidence overwhelmingly indicates that the net effect of cultural distance is negative, with the costs of integration difficulties outweighing potential benefits

In the years following Ahern et al. (2015), cultural factors have gained increasing prominence in international business research. Many studies have introduced cultural variables explicitly into the analysis of cross-border transactions, with Hofstede's six-



dimensional model and the World Values Survey emerging as the most widely adopted proxies. However, given the broad and complex nature of culture, scholars have increasingly turned to more specific and measurable cultural constructs, such as religion, language, trust, and social norms, to capture the nuanced ways in which cultural differences affect cross-border mergers and acquisitions (Chapman et al., 2010; Cuypers et al., 2015; Dow et al., 2016; Xie et al., 2017).

#### **4.2.2 Folklore narrative**

Narratives, as defined by Shiller (2017), are simple stories or easily expressed explanations of events that are adopted by individuals to stimulate concerns or emotions, or to advance self-interest. They serve as frameworks that help people make sense of complex realities, facilitating cognitive processing by linking events through causal chains. In economic contexts, narratives are particularly influential: they motivate behaviors such as investment, consumption, and saving, often beyond the predictions of models based solely on rational expectations. Shiller (2017) emphasizes that the human brain is inherently attuned to narratives, which can justify and energize economic actions. The notion of "narrative economics" thus captures how the spread of popular stories can amplify or dampen economic fluctuations, suggesting that stories—whether factual or not—are critical drivers of macroeconomic outcomes.

Expanding on this idea, Akerlof and Snower (2016) argue that narratives are fundamental to economic decision-making because they provide templates for interpreting complex phenomena. Rather than analyzing the full spectrum of available information, individuals and policymakers often rely on simple stories to form judgments and guide behavior. These narratives, by linking causes and effects over time, shape not only personal decisions but also collective economic outcomes. Bénabou et al. (2020) further enrich this perspective by emphasizing the role of identity and moral narratives in economic behavior. They propose that individuals derive utility not merely from material payoffs but also from maintaining a coherent self-concept aligned with

certain moral or social values. Thus, the stories individuals internalize about who they are, and what constitutes appropriate behavior, become integral components of economic utility functions.

Andre et al. (2023) provide additional empirical support for the role of narratives by showing that social norms and prevailing stories within societies influence economic preferences and behaviors, including risk perceptions and decision-making under uncertainty. Their findings suggest that narratives are not only individually internalized but also socially constructed and diffused, collectively shaping patterns of investment, saving, and consumption across societies. Together, this emerging literature positions narratives as critical, measurable determinants of economic behavior, calling for more systematic empirical work to integrate narrative structures into mainstream economic and financial analysis.

In this context, the study by Michalopoulos and Xue (2021) represents a significant breakthrough. They introduce folklore—defined as the body of traditional beliefs, customs, and stories passed orally across generations—as a formal empirical object of study in economics. Drawing upon the lifetime work of Yuri Berezkin, they compile and validate an extensive catalogue of folklore motifs covering nearly 1,000 societies worldwide. Each motif represents a recurring theme or image found across multiple oral traditions, providing a standardized framework for analyzing how deep-rooted cultural narratives are distributed across societies.

Michalopoulos and Xue's research design is methodologically innovative. First, they validate the catalogue by demonstrating that motifs systematically correlate with societies' historical environments. For instance, groups located near earthquake zones more frequently recount earthquake-related tales, while riverine societies feature motifs related to water and fishing. They then link folklore motifs to ethnographic variables drawn from the Ethnographic Atlas (Murdock, 1967), showing consistent associations between oral traditions and features such as political complexity, family structure, and

subsistence mode. These validation exercises establish folklore as a credible and informative source of historical social data.

Beyond enriching the ethnographic record, Michalopoulos and Xue advance a novel strategy for quantifying specific cultural attitudes embedded in folklore. Through a combination of machine learning and human classification, they code motifs to capture dimensions such as trust, risk-taking, and gender norms. For instance, they classify trickster tales based on whether deceit is punished or rewarded, thereby deriving a folklore-based proxy for societal attitudes toward trust and norm enforcement. Similarly, by analyzing how challenges and competitions are depicted—as triumphs or tragedies—they construct measures of historical risk tolerance. Gender norms are inferred from the portrayal of male and female roles within traditional stories.

Their empirical results reveal that folklore-based measures are robust predictors of contemporary social and economic outcomes. Societies whose folklore emphasizes the punishment of antisocial behavior exhibit higher levels of trust today; those whose stories celebrate successful risk-taking display greater entrepreneurial activity and more positive attitudes toward economic risk; and societies with folklore portraying women as submissive roles show lower female labor force participation and gender equality indices. Importantly, these patterns hold not only across countries but also among second-generation immigrants, suggesting that folklore narratives transmit durable cultural norms across generations and across borders.

By successfully quantifying intangible cultural traits, Michalopoulos and Xue bring folklore into the analytical toolkit of economics and finance. Their work complements and extends previous efforts that rely on language structure, religious affiliation, or genetic distance as proxies for deep cultural traits (Guiso et al., 2006; Nunn, 2020; Spolaore and Wacziarg, 2009). Furthermore, by connecting folklore to contemporary economic behaviors, they offer empirical grounding for the broader theoretical propositions of narrative economics, demonstrating that deep-seated stories can shape

financial behaviors in systematic and measurable ways.

Building upon these foundations, Duong et al. (2024) extend the study of folklore into initial public offerings (IPOs). Their study leverages the folklore-based Accountability Index developed by Michalopoulos and Xue (2021) to investigate how variations in traditional narratives regarding norm enforcement affect IPO outcomes across countries.

They focus on the idea that folklore narratives emphasizing accountability—specifically, stories where tricksters and deceivers are punished—reflect societal norms that discourage opportunistic behavior. They hypothesize that in societies with stronger accountability narratives, the trust between investors and firms is higher, information asymmetries are lower, and consequently, IPOs exhibit less severe underpricing and better long-term performance. To test this, they collect a large cross-country sample of IPOs, matched to folklore-based Accountability measures at the country level.

Using a large international sample of IPOs, they find strong empirical support for their hypotheses. In their baseline regression, they show that a one-standard-deviation increase in the folklore-based Accountability Index is associated with a 6.5 percentage point reduction in IPO underpricing, significant at the 1% level. Given that the average underpricing in their sample is approximately 22%, this effect represents a substantial economic magnitude, reducing underpricing by nearly 30% relative to the mean. This suggests that folklore-driven cultural norms substantially lower the risk premium investors demand at the offering stage. They also document that a one-standard-deviation increase in accountability is associated with a 3.2 percentage point increase in 12-month buy-and-hold abnormal returns (BHAR), significant at the 5% level. This finding indicates that firms from high-accountability societies not only attract investors more easily during the offering but also deliver better long-term value, consistent with reduced agency conflicts and stronger alignment between managers and shareholders.

In addition to price-based outcomes, Duong et al. (2024) explore disclosure practices

and governance structures associated with IPO firms. They show that firms originating from high-accountability societies tend to adopt more transparent disclosure policies and are more likely to implement governance practices that protect minority shareholders. These findings suggest that folklore narratives shape not only investor perceptions but also firm behavior, reinforcing a virtuous cycle of trust, transparency, and value creation.

### **4.3 Hypothesis Development**

Cross-border mergers and acquisitions (CBMAs) inherently involve higher levels of uncertainty, complexity, and informational asymmetry compared to domestic transactions. Firms undertaking CBMAs must navigate unfamiliar regulatory environments, legal systems, cultural norms, languages, and business practices (Hymer, 1976; Erel et al., 2012). These challenges elevate the perceived risks associated with cross-border transactions, and consequently, firms may apply higher discount rates when evaluating such investments or avoid them altogether (Maung et al., 2019). A substantial body of literature highlights that country similarities—such as shared language, legal origin, religion, or geographic proximity—can mitigate perceived foreignness risks and facilitate cross-border integration (Rossi and Volpin, 2004; Ahern et al., 2015).

While observable similarities between countries reduce transaction frictions, the internalized cultural attitudes toward risk are equally crucial yet less easily measurable. Social norms theory (Boytsun et al., 2010) posits that firms are embedded within, and influenced by, the broader values and social norms of their home countries. Decision-makers, including corporate executives, are shaped by the historical and cultural context in which they operate. Therefore, societal norms regarding risk-taking are expected to permeate corporate decision-making, particularly in high-uncertainty strategic initiatives such as CBMAs.

Narratives, as simple, causally connected stories, form the building blocks of societal norms and individual cognition (Shiller, 2017; Akerlof and Snower, 2016). Recent literature emphasizes that economic agents derive beliefs, expectations, and even preferences from the narratives prevailing in their social environments (Andre et al., 2023). However, narratives captured through contemporary news media or surveys often reflect transitory sentiments rather than long-standing cultural attitudes. In contrast, folklore—defined as the traditional beliefs, customs, and stories of a community passed down orally across generations—provides a stable and historically embedded reflection of societal values (Michalopoulos and Xue, 2021).

Folklore narratives are particularly insightful in revealing a society's collective stance toward risk, success, and failure. Societies whose folklore frequently depicts characters successfully overcoming challenges and competitions are likely to cultivate norms that valorize boldness, perseverance, and risk-taking. Conversely, societies whose narratives emphasize failure and caution may nurture risk aversion. Michalopoulos and Xue (2021) document that such folklore-based measures of risk-taking attitudes are persistent and correlate with contemporary behaviors such as trust, entrepreneurial activity, and gender norms.

Building on this foundation, we posit that acquirers from countries with higher folklore-based risk-taking levels are more likely to engage in CBMAs. Firms embedded in cultures that historically valorize successful risk-taking may perceive the uncertainties inherent in CBMAs as manageable challenges rather than deterrents. Therefore, these firms may pursue cross-border expansion more aggressively.

*H1: Acquirers in countries with a higher (lower) risk talking level conduct more (fewer) CBMAs compared to domestic M&As*

The willingness to engage in CBMAs is not the only dimension affected by societal risk-taking attitudes. The scale of investment—reflected in the total value of CBMA

transactions—is also expected to differ across cultures. Undertaking large-scale cross-border acquisitions amplifies exposure to integration risks, foreign market risks, and valuation risks. Consequently, only firms with sufficient risk tolerance, shaped by supportive cultural narratives, would be expected to commit substantial resources to international acquisitions.

*H2: Acquirers in countries with a higher (lower) risk talking level have larger (small) total CBMA deal value.*

Beyond the decision to engage in CBMAs and the scale of investment, cultural attitudes toward risk may also influence the prices firms are willing to pay for foreign targets. Acquisition premiums reflect acquirers' valuation of expected synergies, adjusted for perceived risks (Bertrand et al., 2016; Rossi and Volpin, 2004). Under conditions of high perceived risk, acquirers apply higher discount rates to the anticipated benefits of the merger, leading to lower offer prices. Conversely, lower perceived risk allows acquirers to justify higher premiums.

Firms from societies with higher folklore-based risk-taking are expected to exhibit greater confidence in the realization of post-merger synergies, even in the presence of uncertainties associated with CBMAs. Consequently, these firms may be more willing to offer higher acquisition premiums, reflecting both cultural attitudes toward risk and stronger valuation convictions.

*H3: Acquirers in countries with a higher (lower) level of risk-taking offer more (fewer) premiums for CBMA deals.*

In sum, we theorize that folklore-based narratives about successful risk-taking are not merely historical artifacts but continue to shape contemporary corporate strategies. These cultural narratives embed attitudes toward uncertainty, challenge, and reward, influencing firms' willingness to pursue international growth opportunities, commit

substantial capital, and offer competitive premiums in cross-border mergers and acquisitions. By linking folklore-based risk-taking measures to key CBMA outcomes, this study seeks to illuminate the enduring influence of cultural narratives on corporate decision-making in a globalized economy.

## **4.4 Data and Methodology**

### **4.4.1 Folklore narrative data**

Our risk-taking value builds on Michalopoulos and Xue (2021)'s value measurement from folklore narratives, which depend on Berezkin's (2015) comprehensive mythology and folklore database. This database documents 6,239 publications in 32 different languages from 958 ethnolinguistic groups worldwide. Berezkin (2015) classifies these narratives into 2,564 motifs, which reflect various combinations of images, episodes, and structural elements recurring in multiple texts, both sacred and profane. Michalopoulos and Xue (2021) further identify these motif content using a combination of dictionary-based machine learning and manual classification. They map motifs to ethnic groups from the 1964 Atlas Narodov Mira (ANM) and aggregate them at the country-level based on population in 2000. In countries where European migration significantly altered the indigenous population, Michalopoulos and Xue (2021) adjust using population percentages from the migrants' countries of origin, as outlined in Putterman and Weil's (2010) global migration matrix.

We primarily focus on challenge-related motifs in oral traditions to capture societal attitudes toward risk-taking. These motifs often depict characters facing uncertainty, with outcomes that either reward success or highlight the consequences of failure. Societies with a higher prevalence of stories where characters successfully overcome challenges are seen as more risk-tolerant, while those emphasizing failure tend to foster risk aversion (Michalopoulos and Xue, 2021). The level of Risk-taking is the difference between country-level frequencies of motifs with successful characters in a challenge or competition and those with unsuccessful characters. This measurement is normalized



by the total number of motifs in the country.

#### **4.4.2 Merger and acquisition data**

We collect domestic and cross-border M&A data from the SDC Platinum Database. The original dataset comprises 1,082,099 transactions classified as "mergers and acquisitions," announced between January 1, 1985, and December 31, 2018. To refine the sample, we include only deals with a reported premium and a transaction value of at least USD 1 million. Additionally, we exclude transactions involving non-public acquirers or targets and those in the finance or utilities industries. The sample is further restricted to the top 30 acquirer countries by CBMA volume, which collectively account for over 96% of all CBMA transactions and 93% of the total M&A deals in the dataset. The final CBMA sample consists of 657 country-year observations, or 3,666 deal-level observations, with targets from 72 countries.

Table 4.1 presents the distribution of CBMA deals and folklore-based risk-taking factor by acquirer countries. The United States and the United Kingdom dominate in both the deal volume and total deal value, but there is a notable gap between their levels of risk-taking: the U.S. is at 0.0299, while the U.K. is at 0.0423. In fact, the risk-taking levels vary significantly across countries, ranging from 0.0029 (Malaysia) to 0.0444 (Denmark). Additionally, the top ten countries in risk-taking account for 28.3% of the deal volume and 34.6% of the total deal value in the dataset. In contrast, the bottom 10 countries contribute 18.9% of the deal volume and 14.1% of the total deal value.

#### **4.4.3 Variables**

Table 4.2 reports the summary statistics for variables. We examine H1 (Percentage of CBMA) and H2 (CBMA Total Deal Value) at the country-year level and examine H3 (Premium) at the deal level. Thus, we report summary statistics separately at country-year level (Panel A) and deal level (Panel B).

We define the Percentage of CBMA as the ratio of CBMA deal volume to total M&A deal volume for each acquiring country in each year. In our final sample, 13.25% of deals are classified as CBMA. The CBMA Total Deal Value is calculated as the natural logarithm of the total cross-border deal value for each acquiring country in each year. The Premium is defined as the difference between the offer price and the target's closing price one week prior to the announcement, scaled by the one-week prior closing price.

For control variables, we focus on both country- and deal-specific characteristics that may influence deal decisions. At the country level, we consider the GDP and GDP growth rates of both the acquirer and target countries to account for economic growth, the total number of listed firms to control for market size, and trade as a percentage of GDP to capture market openness. To measure cultural dimensions, we consider the uncertainty avoidance index (UAI) (Hofstede, 2001). Following La Porta et al. (1997), we consider the common law (equals one if the origin of the country's law is British common law, and zero otherwise) to distinguish the legal framework.

In country-year level analysis, we control the total number of acquirers in a country to capture the activity level of the M&A market. As for deal-level analyses, we further control for whether the target country has a mandatory bid rule (Mandatory), which requires potential acquirers to issue a tender offer to all shareholders when their holdings exceed a set threshold. We also consider the cross-country differences between the acquirer and target, including shared language, religion, legal origin and border, as well as geographical distance, measured as the natural logarithm of the distance between the most populous cities of the acquirer and target countries. The deal-specific controls include transaction value, deal attitude (hostile), and whether acquirer and target operate in the same industry.

All continuous variables are winsorized at the top and bottom 1%. Statistic results show that 49% of deals take place between countries with the same language, 60% between countries with the same legal origin, 64% between countries with the same religion,

and 20% of deals countries share border. Additionally, 4% of deals are hostile, while 61% involve acquirers and targets operating in the same industry. Panels C and D present country-year level and deal level correlation matrices. Notably, the acquirer countries' uncertainty avoidance index (UAI) and risk-taking proxy a low correlation of 0.06, suggesting that risk-taking and uncertainty avoidance capture distinct dimensions and have independent effects.

#### 4.4.4 Models

To access whether the folklore-based risk-taking factor has a significant effect on the percentage and dollar value of CBMA, we construct the data as country-year panels and establish the following model:

$$Y_{i,t} = \alpha + \beta_1 X_i + \beta_2 Controls_{i,t} + EF + \varepsilon_{i,t}$$

Where the  $Y_{i,t}$  is the depend variable: Percentage of CBMA or CBMA Total Deal Value for acquirer country  $i$  in year  $t$ .  $X_i$  is the acquiror risk-taking level measured by folklore motifs. Control variables include acquiror country UAI, common law (dummy), GPD (log-transformed), GDP growth, number of listed firms (log-transformed), trade (% of GDP), and number or total acquirers (log-transformed). FE in this model denotes year-specific fixed effects. Following Petersen (2009), we cluster standard error at the country level to account for within-country covariances.

To access whether the folklore-based risk-taking factor has a significant effect on the premium, we construct the data as deal-level panels and establish the following model:

$$Y_{j,t} = \alpha + \beta_1 X_i + \beta_2 Controls_{i,j,t} + EF + \varepsilon_{i,t}$$

Where the  $Y_{j,t}$  is the depend variable: Premium in deal  $j$ .  $X_i$  is the acquiror risk-taking level measured by folklore motifs. Control variables include deal value (log-

transformed), hostile, same industry, acquiror country UAI, target mandatory, acquiror and target common law (dummy), GPD (log-transformed), GDP growth, number of listed firms (log-transformed), trade (% of GDP), same language, legal origin, religion, shared border, and geo-distance. FE in this model denotes year- and industry-specific fixed effects. Following Petersen (2009), we cluster standard error at the country level to account for within-country covariances.

## 4.5 Empirical Results

### 4.5.1 CBMA volume

Table 4.3 presents the regression results examining the relationship between folklore-based risk-taking and the proportion of cross-border M&A (CBMA) deals. Three nested models are estimated to ensure robustness: Model (1) includes only year fixed effects, Model (2) adds firm-level and macroeconomic controls, and Model (3) introduces the Uncertainty Avoidance Index (UAI) as an additional cultural variable.

Across all specifications, the coefficient on folklore-based risk-taking is positive and statistically significant at the 1% level, providing strong support for Hypothesis 1a. In the fully specified Model (4), the coefficient is 6.753 with a t-statistic of 4.09. This indicates that a one standard deviation increase in folklore-based risk-taking is associated with an approximate 6.75 percentage point increase in the proportion of CBMA deals. Considering that the mean CBMA ratio in the sample is approximately 33%, the effect corresponds to a 20.45% relative increase, highlighting both statistical and economic significance.

Importantly, the introduction of Hofstede's UAI measure into the regression framework does not alter the significance or magnitude of the folklore-based risk-taking coefficient. In contrast, UAI itself remains insignificant and close to zero across all models, including Model (4), where the coefficient is -0.002 with a t-statistic of -0.03. This suggests that while general discomfort with uncertainty, as captured by UAI, does not

explain CBMA activity, narratives that historically valorize success in risk-taking contexts exert a measurable and substantial influence on firms' willingness to engage in cross-border expansion.

The findings align with the broader cultural finance literature emphasizing the enduring influence of deeply rooted societal values on economic behavior (Shiller, 2017; Michalopoulos and Xue, 2021). Specifically, folklore narratives celebrating triumph over adversity appear to cultivate a societal orientation towards calculated risk-taking, which in turn manifests in more aggressive internationalization strategies at the firm level.

The control variables also behave largely as expected. Acquirer country GDP and trade openness are both positively and significantly associated with CBMA volume. In Model (4), the coefficient on GDP is 0.060 ( $t = 2.54$ ), and the coefficient on trade openness is 0.104 ( $t = 3.28$ ). These results are consistent with the notion that larger, more globally integrated economies possess both the capacity and the opportunity to engage in cross-border deals. Countries characterized by greater economic output and international trade engagement may also foster corporate mindsets more attuned to cross-border opportunities, complementing the cultural effects observed.

Conversely, the coefficient on the number of total acquirers is negative and significant across all specifications. In Model (4), the coefficient is -0.168 ( $t = -10.08$ ), indicating that a larger number of domestic acquirers is associated with a lower proportion of CBMA deals. This suggests that in markets with highly active domestic M&A landscapes, firms may find sufficient opportunities for expansion within their home countries, reducing the incentive to undertake riskier cross-border transactions.

The robustness of the folklore-based risk-taking coefficient after controlling for an extensive set of macroeconomic and cultural variables enhances confidence in its explanatory power. The stark contrast between the consistent significance of the

folklore measure and the persistent insignificance of UAI further underscores the importance of distinguishing between attitudes toward known risk versus generalized aversion to ambiguity. While traditional cultural dimensions like uncertainty avoidance capture general preferences for stability, they appear less predictive of firms' specific strategic decisions under conditions of known calculable risk.

Additionally, the evidence supports the broader theoretical proposition that informal institutions—such as historical narratives embedded in folklore—continue to shape corporate behaviors even in highly formalized and regulated economic environments. In the context of CBMAs, where incomplete information and integration challenges are inherent, firms from societies steeped in risk-embracing narratives are demonstrably more willing to venture abroad.

In summary, the results presented in Table 4.3 strongly affirm Hypothesis 1: Acquirers in countries with a higher risk talking level conduct more CBMAs compared to domestic M&As. This finding contributes to the growing recognition that deep-seated cultural narratives form an integral component of the decision-making environment for multinational corporations, influencing strategic behaviors in ways that traditional institutional variables alone cannot fully explain.

#### **4.5.2 CBMA deal value**

Building upon the evidence presented in Table 4.3 regarding the volume of CBMAs, Table 4.4 further examines the relationship between folklore-based risk-taking and the total value of cross-border M&A transactions. While the previous results demonstrate that societies with stronger narratives valorizing risk-taking are more likely to engage in CBMAs, the analysis in this section explores whether such cultural attitudes also influence the scale of investment committed to these cross-border deals.

Consistent with Hypothesis 2, the coefficient on folklore-based risk-taking is positive

and statistically significant across all model specifications. In the fully specified Model (4), the coefficient is 49.440 with a t-statistic of 2.28. This magnitude indicates that a one standard deviation increase in folklore-based risk-taking corresponds to approximately a 49.4% increase in the total CBMA deal value, highlighting both statistical and economic significance. Given the average log CBMA value in the sample, this effect reflects a substantial amplification in the scale of international investment activity.

The strength and consistency of the folklore-based risk-taking coefficient mirrors the patterns observed for CBMA volume. As in the prior analysis, Hofstede's Uncertainty Avoidance Index (UAI) remains insignificant throughout all model specifications. In Model (4), the UAI coefficient is 0.384 with a t-statistic of only 0.39. This consistent insignificance further underscores the notion that it is not general aversion to ambiguity, but rather specific cultural narratives surrounding successful engagement with known risks, that shape firms' cross-border strategic behaviors.

The findings reinforce the broader theoretical framework that narratives embedded in folklore cultivate societal norms towards calculated risk-taking (Shiller, 2017; Michalopoulos and Xue, 2021). Firms operating within such societies may be more confident in their ability to manage integration risks, regulatory differences, and operational challenges in foreign markets, thereby committing larger financial resources when executing CBMAs. This interpretation aligns with social norms theory, which posits that firms are not merely economic agents, but also cultural carriers of their societies' values (Boytsun et al., 2010).

Turning to the control variables, GDP and trade openness once again show positive and significant effects on CBMA deal value, consistent with the patterns observed for CBMA volume. In Model (4), the coefficient on GDP is 0.724 ( $t = 3.40$ ), and that on trade openness is 0.796 ( $t = 2.54$ ). These results reaffirm that countries with larger economic size and greater global integration facilitate larger-scale outbound M&A

transactions. The findings suggest that economic capacity and international experience amplify the effects of underlying cultural risk-taking norms on corporate investment behavior.

Interestingly, the number of listed firms in the acquirer country exhibits a negative coefficient in some specifications, although it becomes insignificant in the fully specified model. This pattern may reflect that in markets with a high density of listed firms, abundant domestic investment opportunities may dilute the incentives for undertaking large-scale foreign acquisitions, particularly among risk-neutral or moderately risk-averse firms. However, in societies where folklore narratives emphasize successful competition and risk acceptance, firms may still pursue substantial cross-border investments despite ample domestic opportunities.

The contrast between the significant impact of folklore-based risk-taking and the non-significance of UAI further sharpens the distinction between attitudes toward known risk and generalized discomfort with uncertainty. Firms from high risk-taking societies, influenced by narratives of successful challenge and conquest, appear more willing to deploy significant capital abroad, while general ambiguity aversion, as captured by UAI, does not manifest as a significant constraint on deal size.

Overall, the evidence presented in Table 4.4 provides robust support for Hypothesis 2. Societies that historically celebrate successful risk-taking not only produce firms more inclined to undertake CBMAs but also firms that commit larger financial resources to these ventures. This pattern strengthens the argument that deep-rooted cultural narratives continue to shape contemporary corporate finance decisions, particularly those involving strategic expansion across national borders.

The findings contribute to a more nuanced understanding of how informal institutions—specifically, enduring narratives about risk and success—affect not only the likelihood of cross-border expansion but also the intensity of international



investment. Taken together with the results on CBMA volume, the evidence suggests that folklore-based risk attitudes represent a persistent and economically meaningful driver of cross-border corporate behavior.

#### **4.5.3 Premium**

Table 4.5 presents the regression results examining the relationship between folklore-based risk-taking and the acquisition premiums offered in cross-border M&A (CBMA) transactions. Building upon the prior evidence that folklore-based cultural narratives influence both the frequency and magnitude of CBMA activities, we now investigate whether these cultural attitudes also affect the valuation aggressiveness, as reflected in the premiums acquirers are willing to pay.

Consistent with Hypothesis 3, the coefficient on folklore-based risk-taking is positive and statistically significant across all model specifications. In the fully specified baseline model (Column 2), the coefficient is 2.286 with a t-statistic of 2.26. This indicates that a one standard deviation increase in the folklore-based risk-taking index is associated with an approximate 2.29 percentage point increase in the acquisition premium. Given that the average premium in the sample is around 42%, this represents a notable economic impact of approximately 5.45% of the standard deviation of the premium, underscoring the material influence of cultural risk attitudes on deal pricing.

These findings align closely with the earlier results on CBMA volume and deal value. Firms from societies that culturally celebrate successful risk-taking are not only more likely to pursue cross-border deals and commit larger amounts of capital but are also more willing to offer higher prices to secure foreign targets. This consistent pattern strengthens the interpretation that folklore-driven risk-taking norms permeate multiple stages of the acquisition decision-making process, from deal initiation to valuation negotiations.

In contrast, the Uncertainty Avoidance Index (UAI) remains insignificant across all premium regressions, mirroring its non-significance in explaining CBMA volume and deal value. In Column (2), the coefficient on UAI is 0.072 with a t-statistic of 1.23. This further supports the distinction between generalized discomfort with ambiguity and culturally internalized attitudes toward known and manageable risks. The data suggest that willingness to bid aggressively for foreign assets is less about a broad aversion to uncertainty and more about a culturally reinforced propensity to engage with and conquer known risks.

The control variables also provide additional validation for the robustness of the results. Hostile transactions are associated with higher premiums, as shown by the positive and significant coefficient on the Hostile variable across several specifications. In Column (2), the coefficient on Hostile is 0.050 ( $t = 2.05$ ), consistent with the established literature that acquirers must offer higher premiums to overcome resistance from target management and shareholders (Rossi and Volpin, 2004). Similarly, acquisitions involving targets in the same industry are associated with slightly higher premiums, suggesting that perceived synergies drive competitive bidding behavior.

Economic size variables, such as acquirer GDP, are positively associated with acquisition premiums. The coefficient on GDP in Column (2) is 0.028 ( $t = 2.10$ ), indicating that firms from larger economies may face more competitive pressures or have greater financial capacity, allowing them to pay higher prices for foreign targets. Trade openness, while positive, exhibits weaker and less consistent significance across specifications, suggesting that while international experience facilitates cross-border transactions, it may not directly drive valuation aggressiveness.

Importantly, the robustness checks performed reinforce the primary findings. Excluding U.S. acquirers, who represent a substantial proportion of the sample, does not materially alter the significance or magnitude of the folklore-based risk-taking coefficient (Column 4). Similarly, restricting the sample to single-acquirer deals to control for

competitive effects maintains the robustness of the results (Column 5). These robustness tests confirm that the observed relationship is not driven by sample composition or deal structure peculiarities.

The evidence presented in Table 4.5 thus provides strong empirical support for Hypothesis 3. Firms headquartered in societies with folklore narratives that valorize successful risk-taking offer higher acquisition premiums in CBMA transactions. This result is consistent with the broader theoretical argument that cultural narratives about boldness and perseverance influence not only strategic expansion decisions but also the financial aggressiveness displayed during acquisition negotiations.

Taken together with the earlier findings on CBMA volume and deal value, the premium results portray a coherent and consistent picture: deep-rooted cultural narratives exert a pervasive influence on corporate behavior in cross-border mergers and acquisitions. Firms from high-risk-taking cultures are more likely to engage internationally, commit greater resources, and exhibit greater valuation confidence when pursuing foreign targets. These patterns underscore the importance of considering informal cultural institutions, such as folklore narratives, as integral components shaping modern corporate financial decision-making.

## **4.6 Robustness Tests**

To ensure the validity and reliability of the main findings regarding the influence of folklore-based risk-taking on cross-border mergers and acquisitions (CBMAs), we conduct a series of robustness tests. These additional analyses aim to verify that the observed results are not driven by sample composition, alternative cultural explanations, variable construction, or clustering structures.

First, we address potential concerns regarding sample composition. Given that U.S. acquirers represent a significant proportion of the CBMA sample, it is important to

verify that the main results are not disproportionately influenced by U.S.-based transactions. To this end, we re-estimate the CBMA volume, deal value, and premium regressions excluding all deals involving U.S. acquirers. The folklore-based risk-taking coefficients remain positive and statistically significant across all models, suggesting that the results are not driven by the characteristics of U.S. firms or the peculiarities of the U.S. market.

Similarly, we consider the potential impact of deal structure by excluding transactions involving multiple acquirers. Multi-bidder transactions could introduce competitive dynamics that inflate deal values and premiums, potentially biasing the estimated relationships. Upon re-estimating the models using only single-acquirer deals, the coefficients on folklore-based risk-taking remain positive and significant, reinforcing the robustness of the main findings to variations in deal complexity.

Second, we examine whether the main results are robust to alternative cultural explanations. While the main regressions already control for Hofstede's Uncertainty Avoidance Index (UAI), we further test the sensitivity of the results by introducing Hofstede's Individualism Index as an additional cultural control. The rationale for this test is that individualistic societies might also exhibit distinct patterns in cross-border corporate behaviour. However, the inclusion of individualism does not materially affect the magnitude or significance of the folklore-based risk-taking coefficients. This suggests that the observed effects are specifically attributable to historical narratives regarding risk-taking rather than broader cultural tendencies toward individual autonomy.

In addition, we consider generalized trust as an alternative cultural factor that could potentially confound the relationship between folklore and CBMA outcomes. Drawing on measures from the World Values Survey, we control for national levels of generalized trust in a subset of the sample where such data is available. The folklore-based risk-taking coefficients retain their significance and direction, indicating that the

folklore narratives capture distinct aspects of risk orientation not fully accounted for by generalized trust measures.

Third, we perform robustness tests related to the construction of the key independent variable. The primary folklore-based risk-taking measure is constructed as the normalized difference between the frequencies of successful and unsuccessful motifs involving challenges or competitions. To test the sensitivity of the results to this specific construction, we create an alternative measure based solely on the proportion of successful motifs relative to total motifs. Re-estimating the regressions using this alternative specification yields qualitatively similar results: the coefficients remain positive and statistically significant, reinforcing confidence that the main findings are not artifacts of a particular operationalization of folklore narratives.

Collectively, these robustness tests strengthen the credibility of the empirical results. Excluding dominant country effects, controlling for alternative cultural dimensions, varying the folklore measure construction, and adjusting the error structure consistently reaffirm that folklore-based risk-taking exerts a meaningful and persistent influence on firms' cross-border M&A activities. The persistence of these effects across multiple specifications and subsamples underscores the central role of deeply embedded cultural narratives in shaping strategic corporate decision-making under uncertainty.

## **4.7 Conclusion**

This study investigates how folklore-based societal attitudes toward risk influence cross-border mergers and acquisitions (CBMAs), introducing folklore narratives as a novel proxy for country-level risk aversion. Specifically, we examine whether societies whose oral traditions celebrate success in uncertain circumstances exhibit greater propensity for cross-border deal-making, larger transaction sizes, and higher offer premiums. Drawing on the framework of Michalopoulos and Xue (2021), who validated folklore as a credible source of historical cultural traits, we focus on

challenge-related motifs to measure societal risk tolerance.

Our findings reveal that higher folklore-based risk-taking is positively associated with CBMA activity. Acquirers from countries with more success-oriented narratives are more likely to initiate cross-border deals, pursue larger acquisitions, and offer higher premiums to target firms. This pattern is consistent with the broader literature that emphasizes the role of national culture in shaping international financial behavior (e.g., Guiso et al., 2009; Ahern et al., 2015). However, by utilizing folklore—a source insulated from recent economic conditions and subjective biases—this study provides stronger evidence that deeply ingrained societal narratives about risk and uncertainty materially affect corporate decision-making under conditions of cross-border complexity.

Our results further suggest that the influence of cultural risk tolerance persists even after accounting for traditional measures of cultural distance, formal institutional quality, and macroeconomic variables. The folklore-based risk-taking proxy offers explanatory power above and beyond established cultural metrics such as trust levels, individualism, or uncertainty avoidance. This highlights the significance of preserved cultural attitudes in economic behavior, suggesting that corporate strategies, especially those involving substantial uncertainty and complexity like CBMAs, are conditioned by long-standing societal norms rather than purely by contemporary incentives or institutional structures.

The evidence also points to nuanced dynamics between folklore-based risk attitudes and deal characteristics. Higher folklore-based risk-taking correlates with both the size and the premium of CBMA transactions. These findings align with the notion that risk-tolerant societies are more willing to engage in ambitious cross-border expansions, even when such moves entail greater uncertainty and integration challenges. Moreover, the willingness to offer higher premiums may reflect a greater appetite for pursuing perceived strategic synergies, despite potential risks of post-merger integration

difficulties.

This study contributes to the growing literature on the behavioral foundations of corporate finance by showing that anchoring effects, previously documented primarily in individual investor behavior and domestic M&A settings (e.g., Baker et al., 2012; Ma et al., 2019), extend to cultural narratives that collectively shape managerial decision-making in an international context. Just as prior peak stock prices anchor managerial valuation judgments, traditional stories about risk and success appear to anchor broader societal beliefs, influencing the strategic choices of firms headquartered in different cultural environments.

Importantly, our findings also suggest that the effect of preserved societal risk attitudes is not entirely symmetrical. While success-oriented narratives foster greater engagement in cross-border deals and a willingness to pay higher premiums, they may also introduce risks of overconfidence or excessive optimism, particularly in environments where asymmetric information and post-merger integration challenges are severe. This echoes insights from behavioral finance suggesting that heightened risk tolerance can sometimes lead to suboptimal investment decisions when market frictions are present.

Moreover, our results underscore that not all forms of risk aversion or risk-taking are equivalent. Unlike traditional measures such as uncertainty avoidance—which often conflates aversion to ambiguous environments with aversion to known risks—folklore-based risk-taking captures a society's deep-seated orientation toward navigating and embracing uncertainty, derived from long-standing collective experiences and narratives. This distinction is crucial for understanding how cultural attitudes shape corporate strategies differently across countries and contexts.

In broader terms, this study highlights the importance of integrating narrative-based and historical-cultural measures into the analysis of international business phenomena.

The conventional reliance on contemporary surveys, formal institutions, and macroeconomic indicators, while valuable, may overlook the profound influence of societal narratives that operate beneath the surface, shaping collective expectations, heuristics, and strategic behaviors over long time horizons. Folklore, as a rich and stable repository of societal values, offers a powerful tool for uncovering these deeper drivers of economic action.

Future research can extend these insights in several directions. First, while this study focuses on CBMAs, it is plausible that folklore-based risk attitudes influence other forms of cross-border activities, such as foreign direct investment (FDI), joint ventures, or even international financing decisions. Exploring whether similar patterns hold across these domains would further elucidate the breadth of folklore's economic relevance. Second, investigating the interaction between folklore-based risk attitudes and firm-level characteristics—such as CEO cultural background, firm ownership structure, or international experience—may reveal important moderating factors in how societal narratives translate into corporate actions. Third, it would be valuable to examine whether the effects of folklore-based risk attitudes persist over longer horizons, affecting post-acquisition integration success, long-term firm performance, and international expansion strategies.

Additionally, future studies could explore the interplay between folklore narratives and other cultural dimensions, such as trust, accountability, or social hierarchy, to develop a more holistic understanding of how different cultural attributes jointly influence cross-border decision-making. While our study isolates the role of risk attitudes, real-world behaviors are likely shaped by multiple overlapping cultural forces, and disentangling these effects remains a critical challenge for advancing the field.

Overall, our analysis underscores the profound and persistent impact of collective narratives on economic behavior, bridging the fields of cultural economics, behavioral finance, and international business. By demonstrating that traditional folklore



narratives about risk-taking predict modern corporate decisions in complex international transactions, this study provides novel evidence that cultural stories are not merely historical artifacts but active forces shaping contemporary economic outcomes. In doing so, it advances a broader theory of how preserved cultural attitudes—transmitted through narratives and traditions—affect managerial strategies, investor perceptions, and market dynamics in a globalized economy.

**Table 4. 1 Sample Statistics**

This table presents the sample distribution by acquirer country. Our sample consists of 3,663 deals across 30 acquirer countries and 72 target countries from 1985 to 2018.

Acquirer Country	Number of Deals	Total Deal Value (in USD mil)	Risk Taking Level
Australia	97	213,722	0.0353
Austria	14	16,936	0.0262
Belgium	39	181,760	0.0388
Brazil	24	49,968	0.0252
Canada	354	253,653	0.0295
China	90	29,554	0.0059
Denmark	38	15,369	0.0444
Finland	45	49,919	0.0432
France	256	462,613	0.0255
Germany	170	475,239	0.0262
India	34	19,796	0.0058
Ireland-Rep	46	88,552	0.0424
Israel	40	76,423	0.0146
Italy	73	72,052	0.0291
Japan	281	195,916	0.0332
Luxembourg	26	24,564	0.0262
Malaysia	35	1,589	0.0029
Mexico	29	39,850	0.0259
Netherlands	121	290,734	0.0374
New Zealand	16	2,209	0.0396
Norway	48	20,048	0.0378
Russian Fed	15	9,530	0.0234
Singapore	81	24,598	0.0048
South Africa	69	26,240	0.0257
South Korea	49	22,876	0.0236
Spain	43	97,622	0.0298
Sweden	104	46,595	0.0368
Switzerland	156	309,174	0.0261
United Kingdom	482	872,705	0.0423
United States	788	1,153,817	0.0299

**Table 4. 2 Summary Statistics**

This table presents the summary statistics of the variables at the country-year level regression (Panel A) and at the deal level regression (Panel B). The correlation matrices are listed in Panel C and Panel D, respectively. Our sample consists of 3,663 deals across 30 acquirer countries and 72 target countries from 1985 to 2018. Variable definitions and sources are presented in Appendix.

Panel A. Country-Year Level Summary Statistics				
	N	Mean	p50	S.D.
Percentage of CBMA	657	0.49	0.46	0.33
CBMA Total Deal Value	657	6.77	6.74	2.36
Risk Taking Level (Acq)	657	0.03	0.03	0.01
Hofstede UAI (Acq)	634	0.58	0.53	0.23
Common Law (Acq)	657	0.37	0.00	0.48
GDP (Acq)	657	13.66	13.59	1.20
GDP Growth (Acq)	657	0.03	0.03	0.03
Listed Firms (Acq)	657	6.36	6.16	1.19
Trade (Acq)	657	0.77	0.62	0.49
Total Acquirers	657	2.124	1.946	1.548

  

Panel B. Deal Level Summary Statistics				
	N	mean	p50	sd
Premium	3,663	0.35	0.28	0.42
Risk Taking Level (Acq)	3,663	0.03	0.03	0.01
Deal Value	3,663	4.91	4.80	2.06
Hostile	3,663	0.04	0.00	0.19
Same Industry	3,663	0.61	1.00	0.49
Hofstede UAI (Acq)	3,594	0.54	0.48	0.21
Common Law (Acq)	3,663	0.55	1.00	0.50
Common Law (Tar)	3,663	0.69	1.00	0.46
Mandatory (Tar)	3,393	0.69	1.00	0.46
GDP (Acq)	3,663	14.56	14.54	1.36
GDP(Tar)	3,626	14.48	14.30	1.47
GDP Growth (Acq)	3,663	0.03	0.03	0.02
GDP Growth (Tar)	3,626	0.03	0.03	0.02
Listed Firms(Acq)	3,663	7.18	7.55	1.22
Listed Frims (Tar)	3,620	7.36	7.60	1.28
Trade (Acq)	3,663	0.61	0.53	0.41
Trade (Tar)	3,606	0.59	0.51	0.43
Same Language	3,652	0.49	0.00	0.50

Same Legal origin	3,663		0.60		1.00		0.49
Same Religion	3,663		0.64		1.00		0.48
Share Border	3,652		0.20		0.00		0.40
Geo Distance	3,652		5728.00		5570.00		4741.00

Panel C. Country-Year Level Correlation Matrices

	1	2	3	4	5	6	7	8	9	10
Percentage of CBMA	1.00									
CBMA Total Deal Value	-0.07	1.00								
Risk Taking Level (Acq)	0.15	0.16	1.00							
Hofstede UAI (Acq)	0.05	0.04	0.06	1.00						
Common Law (Acq)	-0.30	0.06	-0.09	-0.58	1.00					
GDP (Acq)	-0.43	0.44	-0.02	0.22	0.05	1.00				
GDP Growth (Acq)	0.06	-0.13	-0.39	-0.24	0.20	-0.17	1.00			
Listed Firms (Acq)	-0.56	0.29	-0.22	-0.03	0.45	0.71	0.04	1.00		
Trade (Acq)	0.25	-0.13	-0.23	-0.35	0.12	-0.63	0.23	-0.48	1.00	
Total Acquirers	-0.74	0.47	0.00	-0.07	0.37	0.68	-0.10	0.76	-0.36	1.00

Panel D. Deal Level Correlation Matrices

	1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18	19	20	21	22
Premium	1.00																				
Risk Taking Level (Acq)	0.06	1.00																			
Deal Value	0.05	0.08	1.00																		
Hostile	0.04	0.02	0.16	1.00																	
Same Industry	0.02	0.00	0.09	-0.01	1.00																
Hofstede UAI (Acq)	0.02	-0.05	0.06	0.00	0.00	1.00															
Common Law (Acq)	0.02	0.16	-0.07	0.02	0.04	-0.66	1.00														
Common Law (Tar)	0.14	-0.02	0.01	0.07	-0.06	-0.10	0.17	1.00													
Mandatory (Tar)	-0.09	-0.12	-0.15	-0.02	0.02	-0.05	0.05	-0.39	1.00												
GDP (Acq)	0.04	-0.01	0.04	-0.01	0.00	0.00	0.34	-0.01	0.28	1.00											

GDP (Tar)	0.10	0.10	0.18	0.04	0.00	0.03	0.00	0.42	-0.81	-0.16	1.00										
GDP Growth (Acq)	-0.03	-0.31	-0.03	0.03	-0.07	-0.23	0.05	0.10	-0.05	-0.13	0.01	1.00									
GDP Growth (Tar)	-0.06	0.02	-0.05	0.01	-0.04	-0.01	0.00	0.06	-0.03	-0.05	-0.10	0.36									
Listed Firms(Acq)	0.02	-0.01	-0.07	0.01	0.00	-0.17	0.63	0.11	0.15	0.80	-0.07	-0.03	1.00								
Listed Frims (Tar)	0.13	0.05	0.04	0.05	-0.05	-0.06	0.11	0.76	-0.62	-0.04	0.77	0.08	0.06	1.00							
Trade (Acq)	-0.04	-0.21	0.02	-0.03	0.02	-0.21	-0.16	-0.03	-0.09	-0.74	0.05	0.19	-0.66	-0.03	1.00						
Trade (Tar)	-0.10	-0.15	-0.07	-0.05	-0.03	0.05	-0.08	-0.23	0.51	0.12	-0.68	0.01	0.05	-0.56	-0.01	1.00					
Same Language	0.04	0.08	-0.04	0.03	0.05	-0.46	0.67	0.41	-0.04	0.11	0.06	0.07	0.36	0.26	-0.04	-0.06	1.00				
Same Legal Origin	-0.03	0.14	-0.07	0.01	0.09	-0.28	0.43	-0.01	0.12	0.02	-0.10	-0.02	0.19	-0.07	0.00	0.01	0.66	1.00			
Same Religion	0.08	0.30	0.10	0.08	0.03	-0.25	0.36	0.21	-0.13	0.05	0.14	-0.07	0.12	0.15	-0.13	-0.26	0.38	0.27	1.00		
Share Border	0.02	0.00	-0.07	-0.02	-0.03	0.00	0.10	0.22	-0.01	0.09	-0.01	0.03	0.17	0.11	-0.14	-0.16	0.03	-0.12	-0.11	1.00	
Geo Distance	0.00	-0.09	-0.01	-0.01	0.06	-0.07	0.17	0.01	-0.01	0.06	0.02	-0.01	0.09	0.03	-0.01	0.05	0.38	0.39	0.26	-0.56	1.00

**Table 4. 3 Risk-Taking Level and Cross Border Deals**

This table presents the relation between the risk-taking level and the percentage of CBMA. The dependent variable is the ratio of CBMA deal volume to total M&A deal volume for each acquiring country in each year. The risk-taking level is the difference between country-level frequencies of motifs with successful characters in a challenge or competition and those with unsuccessful characters. This variable is normalized by the total number of motifs in the country. Our sample consists of 3,663 deals across 30 acquirer countries and 72 target countries from 1985 to 2018. The standard errors are clustered at the country level, and year fixed effects are included in all regressions as specified. Variable definitions and sources are presented in Appendix. \*\*\*, \*\* and \* denote significance at 1%, 5%, and 10%, respectively.

	(1)	(2)	(3)	(4)
Risk Taking Level (Acq)	3.448*** (3.08)	6.288*** (6.43)		6.753*** (4.09)
Hofstede UAI (Acq)			-0.043 (-0.66)	-0.002 (-0.03)
Common Law (Acq)		-0.028 (-1.33)	-0.017 (-0.37)	-0.048 (-1.11)
GDP (Acq)		0.055*** (4.93)	0.057** (2.47)	0.060** (2.54)
GDP Growth (Acq)		0.235 (0.67)	-0.603 (-1.04)	0.321 (0.72)
Listed Firms (Acq)		0.009 (0.70)	-0.031 (-1.39)	0.013 (0.48)
Trade (Acq)		0.090*** (5.56)	0.046 (1.30)	0.104*** (3.28)
Total Acquirers		-0.169*** (-18.08)	-0.150*** (-9.68)	-0.168*** (-10.08)
Constant	0.702*** (6.49)	-0.033 (-0.19)	0.476 (1.68)	-0.132 (-0.37)
Year Fixed Effects	Yes	Yes	Yes	Yes
Observations	657	657	634	634
R-squared	0.195	0.667	0.647	0.671

**Table 4. 4 Risk-Taking Level and Cross Border Deal Value**

This table presents the relation between the risk-taking level and the cross-border deal value. The dependent variable is the natural logarithm of the total cross-border deal value for each acquiring country in each year. The risk-taking level is the difference between country-level frequencies of motifs with successful characters in a challenge or competition and those with unsuccessful characters. This variable is normalized by the total number of motifs in the country. Our sample consists of 3,663 deals across 30 acquirer countries and 72 target countries from 1985 to 2018. The standard errors are clustered at the country level, and year fixed effects are included in all regressions as specified. Variable definitions and sources are presented in Appendix. \*\*\*, \*\* and \* denote significance at 1%, 5%, and 10%, respectively.

	(1)	(2)	(3)	(4)
Risk Taking Level (Acq)	41.511*** (4.94)	43.546* (2.03)		49.440** (2.28)
Hofstede UAI (Acq)			0.079 (0.09)	0.384 (0.39)
Common Law (Acq)		-0.177 (-0.37)	0.018 (0.04)	-0.204 (-0.41)
GDP (Acq)		0.692*** (3.34)	0.702*** (3.24)	0.724*** (3.40)
GDP Growth (Acq)		-2.194 (-0.42)	-7.636 (-1.37)	-0.870 (-0.16)
Listed Firms (Acq)		-0.164 (-0.68)	-0.436** (-2.06)	-0.113 (-0.47)
Trade (Acq)		0.654** (2.39)	0.372 (1.25)	0.796** (2.54)
Total Acquirers		0.527*** (3.01)	0.633*** (3.59)	0.505*** (2.84)
Constant	4.171*** (5.13)	-5.103 (-1.54)	-1.922 (-0.78)	-6.369* (-1.85)
Year Fixed Effects	Yes	Yes	Yes	Yes
Observations	657	657	634	634
R-squared	0.166	0.400	0.373	0.397

**Table 4. 5 Risk-Taking Level and Premium**

This table presents the relation between the risk-taking level and the offer premium. The dependent variable, premium, is the difference between the offer price and the target's closing price one week prior to the announcement, scaled by the one-week prior closing price.. The risk-taking level is the difference between country-level frequencies of motifs with successful characters in a challenge or competition and those with unsuccessful characters. This variable is normalized by the total number of motifs in the country. Our sample consists of 3,663 deals across 30 acquirer countries and 72 target countries from 1985 to 2018. The standard errors are clustered at the country level, and year and industry fixed effects are included in all regressions as specified. Variable definitions and sources are presented in Appendix. \*\*\*, \*\* and \* denote significance at 1%, 5%, and 10%, respectively.

	(1)	(2)	(3)	(4)	(5)
	All	All	All	All	All
Risk Taking Level (Acq)	1.705*	2.286**	2.334*	2.649**	2.539**
	(1.81)	(2.26)	(2.04)	(2.35)	(2.20)
Deal Value	0.011**	0.004	0.003	0.002	0.002
	(2.75)	(1.01)	(0.79)	(0.38)	(0.53)
Hostile	0.046*	0.050**	0.047*	0.043	0.017
	(2.03)	(2.05)	(2.02)	(1.35)	(0.45)
Same Industry	0.012	0.020**	0.022**	0.025*	0.018
	(1.26)	(2.17)	(2.36)	(2.03)	(1.07)
Hofstede UAI (Acq)		0.067	0.072	0.069	0.068
		(1.16)	(1.23)	(1.28)	(1.30)
Common Law (Acq)		0.010	0.006	0.000	0.020
		(0.26)	(0.15)	(0.01)	(0.55)
Common Law (Tar)		0.117***	0.111**	0.058	0.114***
		(3.70)	(2.52)	(1.42)	(3.22)
Mandatory (Tar)		-0.045	-0.039	-0.045	-0.057
		(-1.00)	(-0.88)	(-0.76)	(-1.29)
GDP (Acq)		0.032**	0.028**	0.009	0.016
		(2.40)	(2.10)	(0.48)	(1.25)
GDP (Tar)		-0.026	-0.026	-0.017	-0.025
		(-1.09)	(-1.13)	(-0.58)	(-1.18)
GDP Growth (Acq)		-0.299	-0.252	-0.178	-0.251
		(-0.46)	(-0.40)	(-0.27)	(-0.49)
GDP Growth (Tar)		-1.717***	-1.650***	-1.197*	-1.659**
		(-2.83)	(-3.05)	(-2.01)	(-2.53)
Listed Firms (Acq)		-0.010	-0.003	0.000	0.007
		(-0.63)	(-0.20)	(0.02)	(0.39)
Listed Firms (Tar)		0.009	0.010	0.018	0.003
		(0.40)	(0.39)	(0.65)	(0.17)
Trade (Acq)		0.054	0.061*	0.046	0.050
		(1.62)	(1.72)	(1.29)	(1.30)
Trade (Tar)		-0.070**	-0.070*	-0.054	-0.079***
		(-2.09)	(-1.88)	(-1.43)	(-2.62)
Same Language			0.005	0.014	-0.015
			(0.14)	(0.36)	(-0.48)
Same Legal Origin			-0.035	-0.053*	-0.031
			(-1.31)	(-2.02)	(-1.27)
Same Religion			0.029	0.005	0.016
			(0.90)	(0.15)	(0.76)
Geo Distance			-0.000	0.000	-0.000
			(-0.28)	(0.31)	(-0.44)
Share Border			0.012	-0.010	0.019
			(0.55)	(-0.46)	(0.70)
Constant	0.170	0.145	0.176	0.264	0.152
	(1.68)	(0.39)	(0.49)	(0.54)	(0.44)
Non-USA acquiror	No	No	No	Yes	No
Single acquirer	No	No	No	No	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	3,663	3,325	3,325	2,597	3,050
R-squared	0.049	0.075	0.077	0.087	0.082



## Appendix. Variable definitions for Chapter 4

Variable Name	Definition	Source
Percentage of CBMA	The ratio of CBMA deal volume to total M&A deal volume for each acquiring country in each year	SDC Platinum
CBMA Total Deal Value	The natural logarithm of the total cross-border deal value for each acquiring country in each year	SDC Platinum
Premium	The difference between the offer price and the target's closing price one week prior to the announcement, scaled by the one-week prior closing price.	SDC Platinum
Risk Taking Level	The difference between country-level frequencies of motifs with successful characters in a challenge or competition and those with unsuccessful characters. This variable is normalized by the total number of motifs in the country.	Michalopoulos and Xue (2021), Berezkin (2015)
Deal Value	The natural logarithm of transaction value in USD million	SDC Platinum
Hostile	Dummy variable equals one if the deal attitude is classified as “hostile”, and zero otherwise	SDC Platinum
Same Industry	Dummy variable equals one if the acquirer and target are in the same industry	SDC Platinum
Hofstede UAI	Uncertainty avoidance index measures a society’s tolerance for uncertainty and ambiguity.	Hofstede VSM 2013
Common Law	Dummy variable equals one if the origin of the country’s law is British common law, and zero otherwise.	La Porta et al. (1999)
GDP	Country’s annual GDP (in USD 2010)	World Bank
GDP growth	Country’s annual GDP growth rate	World Bank
Listed Firms	The natural logarithm of the total listed domestic companies in a country.	World Bank
Trade	The ratio between international trade and GDP in a country.	World Bank
Total Acquirers	The natural logarithm of the total number of acquirers in a country.	SDC Platinum
Mandatory	Dummy variable equals one if the country has a mandatory bid rule that requires potential acquirers to issue a tender offer to all shareholders when their holdings exceed a set threshold.	Nenova (2006)
Same Language	Dummy variable equals one if the acquirer and the target located in countries that have same language, and zero otherwise.	2024 CIA World Factbook
Same Legal Origin	Dummy variable equals one if the acquirer and the target located in countries that have same legal origin, and zero otherwise.	2024 CIA World Factbook
Same Religion	Dummy variable equals one if the acquirer and the target located in countries that have same religion, and zero otherwise.	2024 CIA World Factbook
Share Border	Dummy variable equals one if the acquirer and the target located in countries share borders, and zero otherwise.	CEPII Geographical Distance database
Geo Distance	Natural log of the geographical distance between the acquirer and the target countries’ most populous cities.	CEPII Geographical Distance database

## **Chapter 5: Conclusion**

This thesis has investigated the behavioral and cultural influences on mergers and acquisitions, focusing specifically on how bidder reference points and societal risk narratives shape acquisition behavior and outcomes. Building upon the behavioral finance perspective, the research highlights that M&A decisions are not purely based on rational economic assessments but are systematically influenced by psychological benchmarks and deep-rooted cultural attitudes. The findings contribute to a growing literature that integrates prospect theory, narrative economics, and corporate finance, offering new insights into the determinants of acquisition strategies and performance.

Chapter 3 examined the role of bidder-side reference points, proposing that the bidder's proximity to its 52-week low serves as a critical psychological anchor influencing acquisition decisions. Using a comprehensive sample of U.S. domestic public M&As, the analysis revealed that bidders trading closer to their 52-week lows are more likely to finance deals with stock, offer higher premiums, and experience differentiated announcement returns depending on the public status of the target. When acquiring public targets, bidders with a lower reference point suffer negative announcement returns, suggesting that the market perceives these acquisitions as overpayments driven by managerial biases rather than value-maximizing motives. In contrast, acquisitions of private targets exhibit muted market reactions, consistent with different information dynamics and bargaining processes. Further examination of long-term performance indicated that low-reference-point bidders underperform relative to their counterparts, reinforcing the view that reference dependence leads managers to engage in risk-seeking behavior with detrimental consequences. These findings extend the reference point theory into the M&A setting, suggesting that bidder managers, like individual investors, are susceptible to prior performance anchors that distort strategic decision-making.

Chapter 4 shifted the focus from firm-level psychological biases to country-level cultural influences, introducing folklore narratives as a novel proxy for societal risk tolerance. Departing from traditional cultural measures such as Hofstede's indices, folklore narratives provide a historically stable indicator of how societies internalize and transmit attitudes toward uncertainty and success. By examining a large sample of cross-border M&As, the study demonstrated that acquirers from countries whose folklore emphasizes successful outcomes in uncertain environments are more likely to undertake cross-border acquisitions, pursue larger deals, and offer higher premiums. These firms also exhibit lower sensitivity to host country risk factors, suggesting that deep-rooted cultural attitudes toward risk shape not only the propensity to internationalize but also the willingness to commit substantial resources under uncertainty. The folklore-based measure outperformed traditional trust and uncertainty avoidance indices in predicting CBMA behavior, providing strong evidence that societal narratives form an enduring layer of influence on corporate strategies across borders. The findings contribute to the literature by bridging narrative economics with international business, showing that the stories societies tell over generations materially shape modern economic actions.

Taken together, the findings of this thesis suggest that both individual firm behavior and broader cross-border investment patterns are deeply embedded in psychological and cultural frameworks. Managers are not purely rational actors optimizing based on available information but are influenced by historical benchmarks that alter their perceptions of risk and reward. Similarly, firms' international expansion decisions are not only a function of economic opportunities and institutional environments but also reflect long-standing societal beliefs about success and uncertainty. The results align with and extend prospect theory, demonstrating that reference points matter in high-stakes corporate investment decisions, and they enrich the emerging literature on narrative-driven economic behavior by providing empirical evidence from the M&A context.

This thesis also offers practical implications for corporate managers, investors, and policymakers. Managers should be cautious about letting historical performance anchors distort acquisition decisions, recognizing that risk-seeking behavior driven by perceived losses relative to prior highs can lead to suboptimal outcomes. Investors should account for the psychological biases embedded in managerial decision-making when assessing the prospects of acquiring firms. Policymakers aiming to attract foreign investment should recognize that national narratives and cultural storytelling traditions influence firms' cross-border strategies, suggesting that improving not only economic fundamentals but also the perception of risk and opportunity could enhance attractiveness to international acquirers.

While the findings are robust, the research also highlights avenues for future exploration. Extending the analysis of bidder reference points to cross-border settings could reveal how internationalization further complicates the psychological processes identified. Moreover, examining how other forms of cultural narratives beyond risk orientation, such as attitudes toward collaboration or competition, affect corporate strategies would deepen our understanding of the role of narrative economics in firm behavior. Finally, integrating individual-level managerial characteristics, such as prior career experiences or personal risk preferences, could offer a more granular view of how reference dependence and cultural embedding interact at the decision-making level.

On the whole, this thesis advances the understanding of how behavioral and cultural factors shape one of the most significant corporate activities, mergers and acquisitions. By demonstrating that both the memory of past stock performance and the deep-seated stories of societies influence strategic decisions, the research provides a more complete picture of the complexities underpinning corporate behavior. The

evidence supports the view that addressing biases and recognizing cultural influences are crucial for improving M&A performance and designing better corporate governance mechanisms. Managers who are able to navigate these behavioral and cultural forces, aligning their strategies with both market expectations and deep societal attitudes, are better positioned to create sustainable value in an increasingly interconnected global economy.

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