Bank-Insurance Mergers and Acquisitions (M&A) and Shareholders' Value

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Thesis Summary

This thesis investigates whether M&A between banks and insurance companies create or destroy shareholders' value using a global dataset spanning 1999 to 2019. The study makes three significant contributions to the literature. In Chapter 4, we find that the various forms of restructuring across the banking and insurance sectors have a differential impact on shareholders' value. For instance, we find that focused acquisitions are wealth destroying whilst diversified acquisitions (bancassurance) enhance wealth but only for the owners of insurance companies. In contrast, except for instances when banks bid for insurance targets, we find evidence that other bank–insurance M&A generate wealth for the targets' shareholders. Chapter 5 utilises the cross-sectional OLS to test the explanatory power of deal characteristics and firm-level variables to the announcement returns of acquirers and targets. The results show that abnormal returns cannot be explained by a single determinant but rather by several factors such as firm and deal characteristics, as well as the prevailing economic conditions in the target country. We find that leverage ratio as a proxy for free-cash flow and acquisition of publicly listed targets are negatively associated with acquirer returns while Tobin's Q is positively associated with bidders' excess returns. Chapter 6 uses both logit and survival analysis to assess how internal governance structures influence the likelihood that bank–insurance M&A will be completed, as well as the time a deal takes to close after its initial announcement. The results suggest that internal governance can, to some extent, influence deal completion likelihood and the time-lapse between deal announcement and completion. Specifically, we find that the probability of a bank–insurance deal being completed quicker is higher if corporate boards are more independent, and lower if corporate boards are staggered. The study also finds that a large board size increases only the probability of completing a deal whereas CEO/Chair duality shortens the completion time. These findings contribute to the understanding of factors that would help managers to avoid deal abandonments and protraction in deal-making, as doing this would save firms from unnecessary frustration, financial and reputational loss.

Keywords: Bancassurance; Event study; M&A, Survival time; Abnormal returns; Corporate governance.

To my family, you always inspire me to work hard.

Success is won by fight.

…

There is no sleep for those who hope for fame.

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Glossary

Abbreviation	Description
AAR	Average Abnormal Returns
ACM	Assurances-Du-Crédit Mutuel
Adj.-BMP	Adjusted Boehmer, Musumeci and Poulsen's test
AFC	Asian Financial Crisis
AFT	Accelerated Failure Time
AIC	Akaike Information Criterion
ARs	Abnormal Returns (Excess Returns)
ATMs	Automated Teller Machines
BHARs	Buy and Hold Abnormal Returns
BIC	Bayesian Information Criterion
CAPM	Capital Asset Pricing Model
CARs	Cumulative Abnormal Returns
CCAR	Comprehensive Capital Analysis and Review
CBD	Cross-Border Deals
CEO	Chief Executive Officer
CG	Corporate Governance
DD	Domestic Deals
DFA	The Dodd-Frank Act of 2010
D-INS	Dummy variable for insurance company bidder
DV-US	Dummy Variable for Targets Domiciled In the USA
DV-AU	Dummy Variable for Targets Domiciled in Australia
ECNs	Electronic Communications Networks
EPS	Earning-Per-Share
EU	Continental Europe (Including UK)
FHC	Finance Holdings Companies
FSMA	Financial Services and Markets Act
GARCH	Generalised Auto-Regressive Conditional Heteroskedasticity

GDP	Gross Domestic Product
GFC	Global Financial Crisis
G-SIBs	Global Systemically Important Banks
HHI	Herfindahl–Hirschman Index
JV	Joint Ventures
LCFI	Large and Complex Financial Institutions
M&A	Mergers and Acquisitions
MM	Market Model
NEDs	Non-Executive Directors
NBER	National Bureau of Economic Research, USA
NPL	Non-Performing Loans
NPV	Net Present Value
OLS	Ordinary Least Squares
PH	Proportional Hazards
ROA	Return on Assets (Profit-too-Assets Ratio)
ROE	Return on Equity
RQ	Research Question
SBD	Second Banking Directive
SDC	Security Data Company - Platinum™
SIFI	Systemically Important Financial Institutions
SIC	Standard Industrial Classification
SOX	Sarbanes-Oxley Act
TBTF	Too big to fail (Too Interconnected to Fail)
UK	United Kingdom
US	United States of America
VIF	Variance Inflation Factors

1 Introduction to the Thesis

1.1 Background and Context

The earliest beginnings of alliances or operational arrangements between banks and insurance companies took the form of bancassurance. Bancassurance is a term used to describe the provision of banking and insurance services through a common distribution platform and/or to the same client-base. It may also refer to an association between banks and insurers wherein the former promises to sell insurance products (life and non-life) to its customers in exchange for commission or fees. Bancassurance engagement can take several structural forms. Saunders and Walter (1994) suggest four common setups. These are: 1) *full integration* where a variety of financial services are offered by one institution; 2) *joint venture (JV)* where banks and insurers form a joint entity under which one or both companies' products are sold, 3) *distributional agreement* where banks act as the appointed representatives of insurers to distribute products on their behalf; and 4) mergers and acquisitions (M&A) where a bank or insurance company wholly or partially owns shares in the other to form a joint entity (see Hoschka, 1994). While several other bancassurance methods do exist, such as cross-selling contracts, strategic alliances, and franchise agreements, their arrangements fit well into the four broad categories suggested by Saunders and Walter (1994), hence the need for their exclusion. All these corporate reorganisations are, in this thesis, referred to as M&A.[1]

The provision of insurance and banking services can be traced back to the 1800s, although it was only in the mid-1960s that Barclays-UK started to unofficially link mortgages with property insurance (Nurullah and Dinenis, 2000). Extensive developments along this line were made by French and Spanish banks in the 1970s and 1980s, when Assurances-du-Crédit Mutuel (ACM) and Banco-De-Bilbao Group officially launched loan protection cover to their customers, thereby by-passing brokers and middlemen (Chevalier et al., 2005). Daniel (1995) provides an excellent overview of bancassurance development and identifies three distinct eras: i) the period prior to 1980, which was characterised by banks selling products that were closely related to those offered by insurers, such as theft, consumer credit, and home property insurance; ii) the period from 1981 to 1990 when banks started to expand

[1] Other forms of consolidation include spin-offs which refer to a sale or distribution on a pro rata basis of all shares a company owns in a subsidiary (Schipper and Smith, 1983) and divestiture, which involves the sale of a business segment (subsidiary, asset, or product line)(see Joy, 2018).

their product portfolio to incorporate insurance services such as endowment contracts in countries like Portugal, France, Italy, and Spain; and iii) the period after 1991, when substantial expansion took place as a result of key regulatory reforms such as the EU Second Banking Directive (SBD) of 1989, and passage of the US Gramm-Leach-Bliley Act in 1999 – repealing the longstanding Glass–Steagall Act of 1933. These reforms removed major restrictions on Financial Holding Company (FHC) activities, thus, allowing banks to either merge with insurers or distribute contemporary insurance products such as property, life, title, and private mortgage insurance policies (Elyasiani et al., 2016; Genetay and Molyneux, 2016). [2]

Since then, the global market for bancassurance has rapidly expanded to become a significant channel for distributing insurance products across the world, with banks seeking to adopt a more diversified product portfolio in their business structure, especially in the face of banking sector regulations that could limit them from pursuing traditional business lines/activities. According to a World Bank report (see Gonulal et al., 2012) bancassurance has registered a dramatic impact on the sales of insurance products in some developed countries, attaining a market share of more than 50 per cent in life policies and in excess of 10 per cent in non-life policies. However, other developed countries have experienced a much lower impact. Recent statistics show that at the end of 2021, the global bancassurance market reached a value of more than US $1,191.70 billion and is estimated to grow by 6 per cent to USD 1,696.4 billion by the year 2026 (IMARC Group, 2020). This shows that bancassurance is gaining prominence both in emerging markets and developed economies and remains a feasible strategy for both retail banking and the insurance companies. Thus, there is a strong motivation for further research.

Practitioners and scholars observe that banks and insurance firms, when considered as separate entities, have certain similarities. They offer some of the same services, they operate in highly regulated industries, and they both offer services as financial intermediaries that require the pooling of their customers' financial resources or funds, which they channel to capital expenditures through indirect financing. They equally subscribe to the laws of large numbers, scale and scope economies, risk management, and liquidity creation. Consolidating their services as a means of competing for public savings funds (Andriosopoulos et al., 2017; Fields et al., 2007a) is therefore easily justified. However, despite these numerous similarities, their operations are based on dissimilar business models that lead

[2] Deregulation of financial markets also paved way for cross sector and geographical diversification pursuant to the Interstate Banking and Branching Efficiency Act of 1994 in the US.

to some notable differences between them. Whereas banks collect short-term deposits, issue long-term loans, and perform a variety of fee-based services, insurers collect premiums from policyholders, make low-risk investments, offer compensation for claims, and reimburse policyholders in the case of death or policy maturity (Mishkin, 2016, p. 52).

Their balance sheet structures, too, are different. Unlike banks, insurers have long-term (policyholder) liabilities that can easily be matched with assets of corresponding duration, thus making them more stable and less vulnerable to sudden economic shocks or contagion effects. Blending the operations of banks and insurers could offer an excellent platform for the two entities to complement their strengths and vulnerabilities thus enhancing their efficacy to become more resilient to market pressures. Consolidation can also be a risk reduction strategy, particularly for banks (Gonulal et al., 2012; Vander-Vennet, 2002). Banks, in this thesis, refer to universal banks, commercial banks, savings institutions, mortgage companies, and bank-holding companies, whilst insurance companies comprise life insurers, non-life insurers, insurance agents and brokerage firms. Other financial institutions that do not fall under this category such as central banks, mutual funds (including unit trusts) and pension funds are excluded.

The literature has hosted a raging debate as to whether mergers and acquisitions (hereinafter referred to as M&A) between banks and insurers create or destroy value for shareholders. Of course, from the investors' viewpoint, M&A are expected to add value in terms of total returns over and above their initial investment. Indeed, scholars have documented numerous potential benefits associated with M&A in the financial sector. These include greater operational efficiency, scope and scale economies, greater debt capacity, and increased tax-incentives (Dontis-Charitos et al., 2011; Elyasiani et al., 2016; Saunders and Walter, 1994; Vander-Vennet, 2002). However, other research (Grigorieva and Petrunina, 2015; Herring and Santomero, 1990; Laeven and Levine, 2007) suggests that M&A are not always value-enhancing; they generate significant and persistent value reductions for acquirers in diversified firms compared to non-diversified ones. Several theories have been suggested to explain this finding, with varying degrees of success. Some of the explanations include the inclination for merged entities to over-invest in low net present value (NPV) projects owing to their unexploited borrowing capacity, excess free cash flows, agency problems, and geographic diversification (Berger and Ofek, 1995).

Even though several studies have been conducted on the wealth effects of M&A, only a handful of these focus on financial institutions. Furthermore, the few studies that have been conducted on financial institutions to examine the equity wealth effects of bank–insurance mergers (Chen and Tan,

2011; Dontis-Charitos et al., 2011; Peng et al., 2017; Staikouras, 2009) produce mixed results. This may be due to sample selection bias or to variation in the time frames, variables, or methodologies used by the studies. Moreover, there is very little research looking at the shareholder's wealth from the perspective of targets and insurers, especially in the post global financial crisis period. In addition, no study has so far examined the link between internal governance mechanisms and deal completion likelihood, nor the link between internal governance and the duration it will take for an M&A to be completed after its announcement. In view of this, our study aims to provide comprehensive evidence on the welfare effects for all accessible M&A deals, both domestic and cross-border. This will help us to ascertain whether they generate wealth for the shareholders of both the bidders and the targets. The dataset spans the period between 1999 to 2019. The intention is to enhance our knowledge in the area, especially for the different structures that M&A deals may take.

1.2 Statement of Purpose

The main aim of this study is to scrutinise various structural arrangements falling under the broad umbrella of M&A within the banking and insurance sectors. This is to ascertain whether or not gains in market value for bidders and targets occur and to pinpoint the type of deals that are most likely to produce such gains.

1.3 Research Objectives

Section 1.1 has highlighted the areas that have been covered by prior M&A studies and those that remain largely unexplored. To bridge the existing knowledge gap, this study is designed to provide more insight into the impact of bank–insurance mergers on the market value of both target and acquiring firms.

To this end, we address three fundamental questions:

RQ1. Do mergers and acquisitions between banks and insurance companies create or destroy shareholders' value?

RQ2. What are the key determinants that shape the direction and magnitude of abnormal returns?

RQ3. What are the factors that affect the likelihood that an announced bank–insurance deal is completed or abandoned? For completed deals, do these factors also determine the time a deal takes to close after its initial announcement?

1.4 Contribution of the Study to Empirical Literature

This research contributes to the M&A literature as follows:

- In Chapter 4, we show that the various forms of restructuring or M&A that exist in the banking and insurance sector have a differential impact on shareholders' value. For bidders, focused acquisitions certainly are wealth-destroying, whilst diversified M&A (bancassurance) enhances wealth, but only for the owners of insurance companies. By contrast, except for bids initiated by banks for insurance targets, we find evidence that other bank–insurance M&A arrangements generate wealth for target shareholders. Thus, this study contributes to the literature by showing that bank–insurance consolidations may not be a viable investment option for bidders, unless a firm has purely strategic reasons for wishing to enter into such arrangements.

- In Chapter 5, we establish that the abnormal returns for acquirers and targets cannot be explained by a single determinant, but rather by several factors such as firm and deal characteristics, and the prevailing economic conditions in the target country. For instance, we find that leverage ratio as a proxy for free-cash flow and acquisition of publicly listed targets are negatively associated with acquirer returns while Tobin's Q has a positive correlation with excess returns for bidders. This evidence suggests that in the banking and insurance sector, high leverage may not serve its traditional role as a managerial control mechanism; rather, it may trigger additional risks and exacerbate the problem of over-investment. In addition, the acquisition of public listed targets may be associated with increased agency costs. This study, therefore, contributes to the understanding that the source of value destruction in bank–insurance M&A stems from high-leverage, managerial incompetence (as measured by the q-ratio), target size, and bidding for publicly owned or listed targets.

- In Chapter 6, we investigate the relationship between internal governance and the likelihood that an announced bank–insurance M&A will be completed or not, as well as the time-lapse between the deal announcement date and completion. The motivation behind this empirical

investigation is to assess whether the additional monitoring associated with enhanced governance improves the quality of investment decisions made by executives. We find that elements of internal governance mechanisms explain part of the variation in the likelihood of completing an announced bank–insurance M&A, and how long the deal takes to close. Specifically, we find that the proportion of non-executive directors (NEDs) on the board and whether a board is staggered explain both *acquisition completion* and *acquisition duration*, whereas board size and CEO/Chair duality explain one facet but not the other. For firms to increase their chance of completing an announced deal, the acquirer's board should be large and have a higher proportion of NEDs; both factors are subject to thresholds beyond which there are no benefits. Similarly, a higher proportion of NEDs in the acquirer's board and chief executive officer (CEO)/board chair duality shortens acquisition duration and consequently saves on cost. In contrast, a staggered board reduces the probability that a bank–insurance M&A will be completed and lengthens the deal completion time. This study contributes to the literature by diagnosing the factors that will help managers to avoid deal abandonments and protracted deal-making, thereby saving firms' money, reputation, and unnecessary frustration.

1.5 Thesis Layout

This chapter has presented information about the global landscape of M&A and the background of convergence between banks and insurance firms, while highlighting the various structural arrangements of mergers and acquisitions. It then specified the purpose of the research, which gave rise to specific research questions that the three empirical chapters examine. We then discussed the motivation of the research and summarised the chapter-specific contributions to the overall M&A literature.

The rest of the thesis is organised as follows. Chapter 2 presents an extensive review of the existing literature. It commences with a discussion of the fundamental theories, their origin, and a brief description of the motives that drive M&A within the financial sector. We then present a review of prior empirical work, reporting the significant developments and shortcomings of prior studies. Chapter 3 describes our research methodology. In this section, we also describe our data and data source, present the trend of the M&A cycle, and a statistical summary of the data. Chapters 4, 5, and 6 are the core empirical chapters. We structure them in such a way that each chapter comprises separate sub-sections: introduction, review of literature, data and method, empirical results/analysis, discussion, and conclusion. Chapter 4 reports our empirical results on the valuation effects of bank–insurance M&A.

Chapter 5 reports our empirical results that stem from the determinants of abnormal returns for acquirers and targets. Chapter 6 explores internal governance characteristics and their impact on deal completion outcomes. Chapter 7 concludes this thesis with a comprehensive summary of findings, critical discussion, contributions, policy implications, limitations of the study and offers suggestions for further empirical work.

2 Theory and Empirical Literature

2.1 Introduction

This chapter reviews prior finance theories and empirical works to document and understand the broad areas of M&A that are relevant to the thesis. The aim is to set the foundation for the empirical analysis that will be undertaken in this thesis and to extend knowledge in the area. We also undertake a critical analysis of prior work to set the stage for the hypotheses that will be tested.

The chapter proceeds as follows. Section 2.2 discusses the drivers and motivations behind M&A deals by drawing upon previous theories. Section 2.3 discusses the concept of information asymmetry and agency problems. Sections 2.4 and 2.5 present a critical evaluation of the various factors that have been cited by prior literature as influencing abnormal returns (such as target listing status, method of payment, etc.). Section 2.6 discusses internal governance issues in relation to M&A, and Section 2.7 concludes the chapter.

2.2 The Drivers and Motives for Financial Sector Consolidations

Several theoretical explanations have been put forward for the M&A motives of financial and non-financial institutions. Mueller and Yurtoglu (2007) examine these motives from two main perspectives: neoclassical and behavioural. The *neoclassical perspective* makes three assumptions. First, managers maximise the wealth of shareholders; second, M&A should increase shareholder's wealth; and third, capital markets are efficient and effectively price M&A deals (i.e., shareholders' wealth changes are a true reflection of share price variations ensuing from M&A announcements). The motives behind neoclassical theories include synergy (Barney, 1988; Wang and Xie, 2009), diversification (Benston et al., 1995; Servaes, 1996), and the market for corporate control proposition (Amihud et al., 1990; Manne, 1965). The third motive here is particularly interesting since it predicts that the executive office will be on their guard to avoid firm underperformance since this will likely cause their firm to be taken over by more efficient firms. So, the executive will endeavour to be effective out of concern for their careers.

Behavioural theories assume that growth-oriented executives choose M&A for motives of self-interest. Thus, corporate investments such as M&A are undertaken to obtain the psychological rewards

associated with empire building, even if these do not necessarily enhance the wealth of shareholders (Finkelstein and Cooper, 2009; Jensen and Meckling, 1976).[3] In such a case, Jensen (1986) states that the acquirers' shareholders are likely to experience negative abnormal returns due to agency-related problems. The motives associated with the behavioural hypothesis include scope and scale economies (Herring and Santomero, 1990; Pilloff and Santomero, 1998), managerialism or entrenchment (Harford et al., 2012; Jensen, 1986; Jensen and Meckling, 1976), the hubris hypothesis (Becher, 2000; Roll, 1986), and the overvaluation hypothesis (Moeller et al., 2004).

2.2.1 Regulatory Effects and Technology

Theory suggests that there are other factors underpinning the upsurge of M&A between banks and insurers (Elyasiani et al., 2016; Fields et al., 2007a; Walter, 2004). These include, *inter alia*, regulatory, and public policy changes (de-regulation and re-regulation), market globalisation, increased customer sophistication, and technological innovations. Legislation and regulatory changes have, over time, played a central role in defining the level of integration and consolidation in the financial sector. For instance, the Gramm–Leach–Bliley Act of 1999 in the US (Akhigbe and Whyte, 2004; Broome and Markham, 1999), the 'Big–Bang' in Japan (Gibson, 2000), and the EU's Second Banking Directive of 1989, which removed significant barriers on Financial Holding Company (FHC) activities and, consequently, encouraged affiliations between banks and insurance companies (Andriosopoulos et al., 2017; Elyasiani et al., 2016).

Other regulatory reforms were introduced in the aftermath of the global financial crisis (GFC), and these also have implications for cross-sector integrations. Such reforms include the Basel III accord, the Dodd-Frank Act of 2010, and the UK's Banking Reform Act of 2013. The Dodd-Frank Act (DFA) has played a dominant role in deterring bank–insurance M&A (Dimitrov et al., 2015) through its introduction of the 'SIFI threshold' (the Federal Reserve's heightened prudential regulations such as the comprehensive capital analysis and review [CCAR] stress-test) and other more stringent risk management and liquidity standards. Basel III's capital and liquidity rules, on the other hand, increased the banks' cost of capital and reduced their returns on equity, consequently spurring them to undertake M&A activities as a

[3] Managerial objectives (such as buying growth and diversification) may drive bad acquisitions. Mueller (1969) indicates that since managers' monetary and non-monetary rewards are closely tied with the size and growth of a firm, entrenched managers may choose to undertake wealth destroying acquisitions for personal gain (see Gaughan, 1991; Morck et al., 1990).

means of offsetting their declining earnings (Petersen and Mukkudem-Petersen, 2014; Roulet, 2018). Hannan and Pilloff (2004) and Valkanov and Kleimeier (2007) examine the effect of regulatory capital changes and discover that M&A activities increase due to the introduction of excess regulatory capital. They also find that M&A with higher excess capital create more value for shareholders since the bidders reap more rents from the reduction of excess capital in exchange for returns. Similarly, Conning and Company (1995) examine the reasoning behind increased merger activities by insurance companies following regulation changes. They provide evidence to suggest that the US adoption of risk-based capital standards in 1994 triggered M&A activities because weak insurers, who could not raise additional capital on their own, were forced to consolidate to avoid plunging into financial distress and facing regulatory consequences for non-compliance. The same pattern was observed during the introduction of the EU-wide Solvency II in 2016 for the insurance industry (Stoyanova and Gründl, 2014).

Berger and DeYoung (2006) suggest that technological innovation may have also stimulated alliances in the financial services sector. Organisations may be prone to potential diseconomies in the form of agency costs that can sometimes limit their geographical expansion. Thus, enhancing telecommunications and the systems for processing information may reduce these agency-related costs. For instance, improved communications can enhance the capability of senior managers to monitor the actions of junior managers based in distant subsidiaries.

In the banking sector, the introduction of technologies like ATMs, contactless payments, electronic communications networks (ECNs), and other internet-based interfaces allow bank staff to communicate effectively with customers over relatively long distances. These financial innovations may trigger institutions to consolidate their activities to take advantage of scope and scale economies. According to Walter (2004), a shift in technology that makes existing financial products or processes obsolete could also be a stimulus for more M&A activities in the financial services sector. Walter argues that if the new technology shows promise but is beyond the capabilities of a financial firm, a well-coordinated M&A can create significant value in terms of profitability and market share, as was the case when Swiss Bank Corporation acquired O'Connor Partners in 1992. Whatever the motivation, the underlying question is whether the ultimate aim is to maximise the shareholder's wealth, to pursue other objectives such as firm size and executive compensation or is driven purely by hubris.

2.2.2 Diversification Motive

This is a risk management strategy that strives to smooth out unsystematic risk by combining two or more assets to form a portfolio. Portfolio theory suggests that risk-averse investors can minimise their risks by selecting specific stocks whose returns are perfectly uncorrelated for inclusion in their portfolios (Markowitz, 1968). However, for banks and insurance companies, the opportunities for diversification would appear to be limited since this is a merger of firms that, while coming from two different industries, nevertheless have many commonalities. In fact, the universe of products and firms for M&A is relatively narrow compared to the available universe of other business activities. Therefore, while some degree of diversification is achievable, an efficient portfolio is unlikely to be in sight (Lewis, 1999). Of course, international diversifications can further reduce the level of risk. For instance, Elyasiani et al. (2016) study the effects of domestic and cross-border M&A on the acquirer's risk-return profile. They point out that cross-border acquisitions can significantly reduce idiosyncratic risks for both banking and insurance bidders. Similar results are reported by Repullo (2001) and Deng and Elyasiani (2008). However, Repullo (2001) points out that such mergers can increase social costs since the domestic regulatory agency still has the responsibility of supervising the foreign bank and maintaining a reserve for the insurance of the foreign deposits.

Empirical studies on the association between bank–insurance M&A and diversification vary in their focus and their findings. One strand of literature concentrates on risk effects. For instance, Estrella (2001) finds significant positive gains for all mergers involving banking, life, and non-life insurance following M&A announcements of US banks after the passage of the Gramm-Leach-Bliley Act. They also provide evidence to suggest that bank–insurance mergers lead to a decline in firm-specific risks and a reduction in bankruptcy likelihood for banks because of asset mismatch (see Benston et al., 1995; Elyasiani et al., 2016). In contrast, fusing banking and insurance activities may increase the level of similarity and interconnectedness among these institutions and propagate joint failures (Acharya, 2009; Andriosopoulos et al., 2017). These assertions are supported by Herring and Santomero (1990), who

argue that the consolidation of activities between banks and non-banking institutions could create the very large financial institutions (G-SIBs and SIFIs) that can propagate systemic risk.[4]

The other strand that focuses on performance and wealth effects indicates that diversification could have either positive (premium) or negative (discount) effects on the valuation of bank–insurance M&A (Berger and Ofek, 1995; Dontis-Charitos et al., 2011; Vander-Vennet, 2002). Vander Vennet (1996) investigates the performance effects of M&A between credit institutions and reports that both domestic and cross-border M&A significantly enhance the efficiency and the performance of the consolidated entity. These findings are reinforced by Vander-Vennet (2002) and Dontis-Charitos et al., (2011) who indicate that financial mergers yield significant diversification benefits such as revenue, cost, and operational synergies. Another potential diversification benefit arises from coinsurance (a combination of business lines whose earnings are not perfectly correlated), a characteristic that gives diversified organisations increased debt capacity compared to single-product-line firms (Berger and Ofek, 1995; Boot and Schmeits, 2000). Increased debt capacity also enhances the value of a combined entity by augmenting the interest tax shield benefits. Other empirical studies indicate that diversified financial institutions improve the allocation of resources across businesses by creating a larger internal capital market (Weston, 1970). This means that when diversified firms create a larger internal capital market, they reduce the problem of underinvestment, as described by Myers (1977). According to Berger and Ofek (1995) this argument is indicative of the idea that diversified firms make more wealth-enhancing investments than their segments would make as separate entities.

On the other hand, diversification can have value-reducing effects. For example, agency theory views diversification as an avenue through which company executives pursue their self-fulfilling interests at the expense of their shareholders (Jensen and Meckling, 1976). In other words, if managers are in absolute control of an entity, they will increase its size. Size allows managers to increase their compensation package and diversify their employment risk (Harford et al., 2012; Tosi and Gomez-Mejia, 1989). Firm size can also be associated with greater prestige and power for the management. Berger

[4] G-SIB is an acronym that stands for global systematically important bank whilst SIFIs (Systemically Important Financial Institutions) refers to the banks and other financial conglomerates that are considered to be very popular and interconnected. According to Hull, (2015), the failure of these institutions would have severe consequences for governments, society, and the global economy, thus necessitating their bailouts in the event of failure (Basel Committee, 2013: "G-SIB: Updated Assessment Methodology and the Higher Loss Absorbency Requirement").

and Ofek (1995) indicate that diversification can contribute to value loss for bidders as measured by Tobin's Q ratio. However, this loss is moderated by reasonable decreases in taxes. Staikouras (2006) and van Lelyveld and Knot (2009) support Berger and Ofek's (1995) argument that diversified firms make wealth enhancing investments that are greater than those that could be achieved by separately run entities.[5]

2.2.3 Synergy Motive

Synergy refers to the combined worth of two firms, which should be greater than the sum of separate individual entities. The empirical literature suggests three key motives that drive corporate takeovers: agency, synergy, and hubris, in which synergy is the dominant motive (Berkovitch and Narayanan, 1993; Bradley et al., 1983). Consistent with this prediction, Berkovitch and Narayanan (1993) argue that the post-acquisition benefits flowing from M&A would be positive only when synergy is the initial motive. Kiymaz and Baker (2008) and Goergen and Renneboog (2004) find that synergy is the primary motive for companies to merge. They further indicate that for synergy-driven M&A, both the target and the acquirer experience significant positive abnormal returns (AR) around merger announcement dates. Otherwise, normal returns should prevail for longer windows thereafter. Conversely, other studies find that M&A does not always create synergy. For example, Mueller and Sirower (2003) find little or no evidence to support the proposition that M&A create synergies, while Sharma and Ho (2002) report negative but insignificant findings on synergy. The various forms that synergy can take are discussed below.

2.2.3.1 Operating Synergy Motive

Operational synergy can be explained through the lenses of scope and scale economies, which are essential to validate the presence or absence of value-enhancement in terms of revenues or corporate growth (Gaughan, 1991). Walter (2004, p. 64) states that: "If economies of scale prevail, increased size will help create shareholder's value and systemic financial efficiency, however, if diseconomies prevail, both will be destroyed". The empirical literature suggests that M&A activities could enhance the efficiencies of a combined entity either through resource pooling or the transfer of skills. Huizinga et

[5] According to van Lelyveld and Knot (2009), higher diversification discount (negative impact on the value of the firm) depends upon the size of the deal while a decreasing discount (more benefits) is described by the risk profile and the familiarity with the conglomerate business model (mixedness).

al. (2001) examine the potential effects of M&A on the efficiency of banks in Europe. They report that the revenues and cost efficiencies of small and large banks tend to improve after a merger. Similar observations are made by Vander Vennet (2001).

Several other studies also report evidence of economies of scale (Dreassi and Claudia Schneider, 2015; Hoschka, 2016). Fiordelisi and Ricci (2011) present evidence in favour of bank–insurance M&A in terms of revenue and cost efficiency attributable to company-specific factors such as combined expertise/technical skills, a centralised customer database, and share market premiums collected through the bank's branch network. Similarly, Fields et al. (2007b) and Dontis-Charitos et al. (2011) also observe that bank–insurance mergers can trigger positive and significant market reactions around event days. This leads to higher ARs and wealth creation for the acquirer's shareholders. In addition, banks have a wider operational network with branches even in remote areas, and they enjoy higher public trust that allows insurance products to be distributed more economically. All these feed into the operational synergies achievable when banks and insurers consolidate their activities.

2.2.3.2 Financial Synergy Motive

This is a form of synergy that relates to the future financing costs of joint entities following a successful M&A. Theoretical literature suggests that M&A can foster financial synergy in three ways. First, the benefits that arise from a decrease in the cost of capital, which is achieved from the new capital structure of the parties to the M&A agreement (Damodaran, 2005; Rahatullah, 2014). Second, the benefits associated with operational efficiencies, shared facilities, cost savings, and incremental revenues (Modigliani and Miller, 1958). This may lead to a significant reduction in a combined entity's systematic risks (DePamphilis, 2019; Myers and Majluf, 1984). Third, the coinsurance effect, which may lower the cash flow volatility of a combined entity, making it less likely to experience financial distress (Higgins and Schall, 1975). This final effect is confirmed by Gaughan (1991) who argues that the cash flows of a combined firm may not fall so low for the company to become technically bankrupt. Instead, consolidations stabilise the earnings.

Prior studies suggest that bank–insurance M&A can be associated with performance benefits and risk reductions arising from combining the financial resources of separate institutions (Dontis-Charitos et al., 2011; Elyasiani et al., 2016; Fields et al., 2007a,b). For instance, Fields et al. (2007a) examine the potential wealth gains for bidders in bank–insurance mergers and find evidence to suggest that bank–

insurance M&A yield positive ARs for bidders. This is because the M&A broadens the companies' clientele-base and enhances revenue streams in terms of cash flow and profitability. Bancassurance structures can also eliminate the unnecessary pressure on individual companies' margins that could be associated with over-reliance on a single product (interest spread or premium loading) as a main source of revenue (Dontis-Charitos et al., 2016; Staikouras, 2009). We argue that in reality, financial synergy may not be achieved because acquirers may become trapped by the targets' overwhelming debt obligations or restrictive covenants.

2.2.3.3 Managerial Hubris Motive

The theoretical proposition for managerial hubris was first put forward by Roll (1986). Under this hypothesis, overconfident managers make a premium offer to acquire a target which that the market has already correctly valued (Gaughan, 1991). As a result, bidder shareholders may end up making losses from an M&A deal, leading to what in common value auctions is referred to as the 'winner's curse' phenomenon. The idea behind this concept is that bidders tend to overpay for auctioned items and their overconfidence will always create the highest positive valuation error. As a result, acquirers should experience negative returns because the stock market sends negative signals that reflect the mistake of the hubristic managers. Roll (1986) argues that if the hubris hypothesis holds in its strictest form, the acquirer's stock price should reduce when the market becomes aware of the merger announcement. Conversely, the stock price of the target should increase with the bid for control. The combined effect should be negative or fall slightly.

Previous studies indicate that the announcement of an M&A by a hubristic acquirer results in a significant reduction in the value of acquirer's stock price. Malmendier and Tate (2008) examine the market reaction of M&A deals initiated by overconfident CEOs and find evidence to support the existence of hubris behaviour in US mergers. Their results show that M&A involving firms with overconfident CEOs exhibit significantly negative abnormal returns when compared with those that have less-confident executives. Malmendier and Tate (2008) further indicate that overconfident executives tend to undertake value-destroying M&A because they overestimate the ability of their firm to generate returns, especially when the acquisition is funded by internally generated sources (see Billett and Qian, 2008). Some authors, however, argue that hubris is behaviour that is learnt over time through experience. For instance, Harding and Rovit (2004) and Billett and Qian (2008) point out that managers are not naturally endowed with hubris; they gain confidence incrementally through

acquisition experience. Nevertheless, the authors also report negative wealth effects for experienced acquirers. Conversely, Aktas et al. (2009) opine that through a learning curve, managerial hubris diminishes with time as the CEO's ability to select targets improves. This improvement leads to value-creation for bidders following an M&A announcement.

Gaughan (1991) argues that Roll (1986) did not put forward the hubris hypothesis as a blanket description of the actions of managers in all M&A, but rather to denote an element of agency conflict that manifests in the majority of M&A deal negotiations. In most cases, management actions may be geared towards maximising the wealth of shareholders; however, in some rare instances, another intention (e.g., the drive to build empires) may motivate takeovers. In fact, there is something of a paradox in the hubris hypothesis. There is a general expectation that executives are appointed for their leadership abilities, which include a sense of self-confidence and pride associated with previous achievements. Yet this trait can result in self-serving decisions that go against the principal goal of the firm, which is to maximise value for the shareholders.

2.3 Agency Theory

This refers to potential conflicts in the execution of contractual obligations by agents (managers) on behalf of their principals (shareholders). The theory was first put forward by Manne (1965) and extended by Jensen and Meckling (1976). Both studies describe a situation where principals and agents are utility maximisers. The overall goal of the firm requires financing and investment decisions (such as M&A, capital structure, etc.) which executives make with the aim of maximising shareholder's wealth even when it is in the manager's best interest to maximise their own. Growth-maximising managers however, through their egoistic desires, use M&A to build empires since their rewards and powers are tied to the growth and size of the firm (Mueller, 1969; Pastena and Ruland, 1986). In other words, entrenched bidder managers may seek value-reducing acquisitions that may be adversely evaluated by investors and result in negative abnormal returns.

One interesting manifestation of agency theory relates to the free cash flow hypothesis (Jensen, 1986). With free cash flow, a company can choose and invest in projects with positive net present values (NPV) when discounted at a given cost of capital. However, according to Jensen (1986; 1988), free cash flow may incentivise executives to invest in low-return projects whose NPVs are negative to serve their own interests. This justifies the conventional belief that the acquisitions undertaken by the managers of

cash-rich companies are value reducing. In support of this argument, Harford (1999) and Schwetzler and Reimund (2003) show that acquirers with substantial free cash flow generally experience negative returns during merger announcements because of perceived agency conflicts (hoarding and free cash flow misuse). Similar results were reported by earlier studies (Lang et al., 1991; Masulis and Korwar, 1986) that argued that the negative effect from bidders with huge cash holdings would be widespread until the agency costs of free cash flows were resolved.

In contrast, Mikkelson and Partch (2003) provide evidence against the free cash flow hypothesis. They report a positive association between firms with free cash flow and enhanced performance in the long run. They also find that bidders with excess cash reserves perform better than those with low excess cash reserves in terms of operational performance. We suggest that Mikkelson and Partch (2003) may have documented a benefit in the build-up of cash reserves because they examined industrial/non-financial entities, which require a stable financing cushion to sustain their operations in the event of industry downturn. We now discuss three other indicators of agency conflicts: informational asymmetry, choice of target, and method of payment.

2.3.1 Asymmetric Information

Asymmetric information refers to an informational imbalance between two or more parties that may in turn distort the choices or decisions they make (Akerlof, 1970). In an M&A setting, asymmetrical information plays a significant role in justifying the efficacy of corporate decisions. Scherer (1988) provides a theoretical explanation for the informational discrepancy that may exist in the stock market based on the assumption that stock prices largely follow a random trend. Thus, companies can randomly be undervalued and become targets not because their managers are inefficient, but because the stock market erred. In the same way, bidders may sometimes involve themselves in an M&A because of random market shocks.

The banking literature suggests two potential information asymmetry problems that characterise most M&A activities and which sometimes force companies to opt for joint ventures as opposed to full acquisition. *Ex-ante* opportunism (otherwise referred to as *adverse selection*) may arise once the merger agreement has been effected (i.e., the during initial merger stages) (Balakrishnan and Koza, 1993; Myers and Majluf, 1984). *Ex-post* integration or indigestibility problems may result from a change of behaviour

by one of the merger parties, which is a form of *moral hazard* (Hennart and Reddy, 1997; Keeley, 1990). These are discussed in detail below.

2.3.1.1 Adverse Selection

This is an agency problem that arises when one party has more prior information about certain parameters that are relevant in a relationship. A specific aspect of how adverse selection affects the normal functioning of markets is highlighted by Akerlof (1970) in what he referred to as 'the market for lemons', an analogy that he uses to explain how information imperfections between traders may affect the market price of used cars.[6] Akerlof argues that sellers have an incentive to sell products that are less than the average market quality, resulting in a condition where poor quality products automatically drive-out good quality products (Rolnick and Weber, 1986).

In a typical bank–insurance M&A setting, both parties (bidder and target) may be subject to information imperfections. For instance, banks may have access to private customer information, such as customer accounts and their individual levels of riskiness (history of loan default), which insurers would not have access to. The insurance companies will observe the overall health of a bank using only publicly available information such as low overall non-performing loans (NPLs) or profits, and they will not be given sight of individual customer information. As such, banks could use this informational discrepancy to their benefit. Similarly, insurers may, without proper screening or requiring appropriate signalling, recruit high-risk clients and pose as vulnerable or easy takeover targets. In addition, with increased access to private customer information that indicates whether a client is 'safe' or 'risky', banks may also have an incentive to sell only the insurance policies that match risky clients (the lemons), especially when the merger is loyalty/commission based.

The empirical literature on adverse selection largely focuses on *ex-ante* issues, in particular, those that stem from the valuation and financing of targets. Where uncertainties exist in establishing the accurate value of target firms, Balakrishnan and Koza (1993) propose that joint ventures (JV) would be a means of protecting bidders from adverse selection, especially when *ex-ante* opportunism is evident. Indeed,

[6] The word 'lemons' is used by George Akerlof to proxy for low-quality cars that are sold in the second-hand car market, the opposite of which is 'plum' - a euphemism for a good quality car. This concept has since been widely used in attempts to analyse the effect of information imperfections in different micro and macro-economic contexts to explain a diverse set of phenomena, such as Gresham's law (see also Greenwald et al., 1984; Rolnick and Weber, 1986).

Balakrishnan and Koza (1993) find that JVs exhibit more favourable ARs than other forms of M&A particularly in an environment of informational imperfections. Balakrishnan and Koza (1993) argue that JVs are the most efficient mechanism for coordinating synergistic assets, as they prevent the adverse selection related problems that exist in M&A. Similar results are reported by Reuer and Koza (2000). When comparing various forms of alliances, they report that only JVs generate significant positive ARs even in a context of information discrepancy. Reuer and Shen (2003) suggest that for bidders who choose full acquisition, they prefer to acquire listed targets as opposed to unlisted ones when the acquisition involves higher transaction costs, especially where adverse selection problems are evident. This is because more disclosure is required for public targets, and the signals that are attached to them for being public can alleviate information asymmetry problems between bidders and targets. Likewise, Hansen (1987) argues that bidders who are unable to determine the true value of targets would choose equity financing since they believe that the bidder and the target can thus share the overvaluation risks that might emerge in the post-acquisition period. Such acquisitions are highly likely to yield negative significant ARs for bidders around the merger announcement date because managers are perceived to be less confident about post-merger synergy (see also Travlos, 1987).

2.3.1.2 Moral Hazard

This is an *ex-post* problem that occurs when parties with superior information alter their behaviour to benefit themselves whilst imposing additional costs on the other party that has inferior information (Mishkin, 2016, p. 83). Take, for example, a contract that is signed between banks and insurers on a promise that banks will screen potential customers and ensure that they sell insurance policies only to low-risk clients. However, once the contract is signed, banks change their behaviour and start offering insurance to everyone. This scenario is far more likely to occur if the royalties are a fixed fee for each insurance customer sign-up rather than a full acquisition. Similarly, the specific type of bank–insurance M&A initiated by a bank could also signal the nature of its future actions. Indeed, if a bank insists on a distribution agreement type of merger where the only concern is royalties, it suggests that they have a higher proportion of risky/bad clients.

Theoretical literature on moral hazard draws meaningful lessons from the Asian Financial Crisis (AFC) and the 2008-09 sub-prime mortgage crisis, particularly in relation to government rewards for market failures in the form of bailouts. Hull (2015) and Ciro (2016) posit that deposit insurance and government guarantees may motivate financial institutions to form conglomerates and take-on additional/excessive

risk. While supporting these assertions, Mishkin (2016) argues that when governments become too generous in their support for financial institutions and provide partial or full compensation for losses, executives will lack the discipline to properly scrutinise future investments. Consequently, investors and executives could use this setting to exacerbate the moral hazard problem with full knowledge that, in the event of a loss, the government will compensate them. In a similar vein, being fully insured would also mean that investors and creditors have fewer reasons to control the actions of executives and prevent them from taking additional risks (Merton, 1977).

Prior studies on the effect of information symmetry on M&A between banks and insurers (John et al., 1991; Walter, 2004) report that mergers and the resultant information imperfections may lure merged entities into taking on additional risks so as to enjoy higher expected returns because of their newly acquired status as 'too–big–to–fail [TBTF]' or 'too interconnected to fail [TIF]'. This is because executives are aware that the failure of these large financial institutions may have severe consequences for governments, society, and the global economy. This self-serving prophecy may result in a loss of confidence on the side of bank customers and lead to a run on the bank (Diamond and Dybvig, 1983). A solution to these problems is to enhance corporate governance, as depicted by Harford et al. (2012) and Masulis et al. (2007). They suggest that using all-equity financing for the acquisition of both listed and unlisted targets could result in the creation of block holders who can monitor the bidding behaviour and post-merger actions of managers, thereby mitigating the possible moral hazard or adverse selection problems. However, it is unclear how this will work in practice. Indeed, in unrelated literature, there is strong evidence to suggest that even commercial banks and financial institutions with shareholder-friendly boards and higher institutional ownership took on excessive risks that were not sustainable during the GFC (Beltratti and Stulz, 2012).

Several other studies indicate that M&A activities are highly likely to minimise information asymmetry and reduce financing costs. As such, M&A deal announcements should signify positive news in the market for the firms involved. Mantecon (2008) analyses the implications of informational uncertainty on the wealth of acquirers using a sample of firms where the limit to the information available on private firms was circumvented by acquiring the firms a few days after they had filed an IPO. Mantecon (2008) finds strong evidence that acquirers experience positive ARs around merger announcement dates. He attributed a gain for bidders who acquire unlisted targets to the relative weakness in the bargaining

position due to informational uncertainty (lack of public price), agency problems (moral hazard and adverse selection), and the costly access to external capital markets for growth prospects.

2.4 Listing Targets

Theoretical literature suggests numerous theories to explain variations in AR for the acquisition of either listed or unlisted targets. These include: 1) *liquidity hypothesis* — where the market for unlisted entities is presumed to be illiquid. Because of this, M&A involving unlisted targets are expected to generate positive AR for acquirers owing to information opaqueness, weak bargaining power, and the absence of reference price, (Bargeron et al., 2008). 2) *Managerial motive hypothesis* — implying that bidder managers could be driven by two things: the desire to maximise shareholder's wealth or the need to exploit private gains (Amihud and Lev, 1981). The latter will be inclined to acquire prestige by settling for acquiring listed targets, which typically are large and well known (Harford et al., 2012). Such firms attract higher premiums from bidders, which may also be detrimental to the value of a combined entity (Draper and Paudyal, 2006). 3) *Bargaining power hypothesis* — where unlisted entities are often reputed to be less predisposed to agency problems owing to their unique ownership structure comprising either a small group of partners or family members, or both. Managers of such firms would be more interested in ensuring that M&A negotiations have a positive post-merger effect on the value of the consolidated entity. As such, they may opt to receive a higher price for their firm, thus reducing the potential benefits for their shareholders. Furthermore, if targets' shareholders accept shares in lieu of a cash offer, they will create a block-shareholding in the acquiring entity post-acquisition. Thus, efforts would be made to enhance the wealth in the acquiring entity. Consequently, unlisted targets should generate greater returns for the acquirers relative to listed targets.

Previous studies on listing effect indicate that unlisted targets generate significant positive ARs for bidders, whereas listed targets yield significant negative ARs (Chang, 1998; Fuller et al., 2002). Faccio et al. (2006) examine the returns available to acquirers of both listed and unlisted targets and indicate that the acquirers of listed targets earn an insignificant average AR while those that acquire unlisted targets earn significant average AR. Similar results are reported by Fuller et al. (2002) and Conn et al. (2005), who indicate that bidders (in non-financial mergers) earn significant AR from the acquisition of small and private targets compared to public takeovers. Both studies indicate that public takeovers destroy the wealth of bidder shareholders. Elyasiani and Jia (2010) show that bidders acquiring private targets earn positive AR for banks around the announcement date.

Conversely, Andrade et al. (2001) examine M&A between publicly traded entities and establish that acquirers tend to experience statistically insignificant returns with all gains accruing to the targets. These findings are similar to those of Cybo-Ottone and Murgia (2000), who find significant wealth gains for public targets, whereas bidders experience insignificant changes in the share price around merger announcement dates. Thus, in line with the agency problem, our study argues that growth/prestige driven managers would prefer value reducing acquisitions. This is confirmed by Masulis et al. (2007) and Harford et al. (2012) who claim that acquisitions that destroy bidders' value are made by partly entrenched managers who disproportionately avoid private targets in favour of public ones.

2.5 Method of Payment for the Target

During M&A contract negotiations, bidders and targets usually agree on the method of payment to be used. Bidders can pay for the target in cash, stock exchanges, or a mixture of the two. The mode of payment adopted by acquirers can have a significant impact on their performance because the stock market responds differently to merger announcements depending on the financing method adopted. Theoretical studies argue that cash-financed acquisitions largely exhibit higher stock returns for bidders compared to share-exchange acquisitions in both the short run (Faccio and Masulis, 2005; Gregory and McCorriston, 2005) and in the long run (Andre et al., 2004; Linn and Switzer, 2001). This corresponds with the information asymmetry hypothesis in that share-exchange suggests that bidders are either uncertain of the anticipated post-merger synergy or they believe that their shares are overvalued. In contrast, cash offers imply that bidder managers have no access to private information and they are confident that the merger will provide valuable synergy to shareholders (Draper and Paudyal, 2006).

Empirical literature offers strong evidence in favour of cash offers as opposed to share-exchange acquisitions. Myers and Majluf (1984) provide a link between the form of payment and market signalling hypothesis based on asymmetric information. They suggest that the mode of payment serves as a signalling tool for investors about the stock value of the bidder, such that cash offers signify good news whereas equity-exchanges imply bad news. From this, we can infer that, on average, cash offers should create a positive impact on acquirers' value, whereas share-based offers should have a negative impact. Hansen (1987) argues that bidders may choose equity-financing if they have insufficient information about the true value of the target or where it is a private acquisition. Travlos (1987) examines the ARs of acquirers who use different forms of payment and indicates that cash offers generate significant positive AR but financing comparable mergers by pure stock results in wealth destruction. In more

recent studies, Loughran and Vijh (1997) and Martynova and Renneboog (2009) indicate that M&A transactions that rely on cash payments yield significant positive returns to acquirers and are, at the very least, non-value destructive when compared to acquisitions that utilise share-exchanges.

Wansley et al.'s (1987) results contradict the above findings. They report insignificant negative returns for acquirers using equity-settled acquisitions. However, they also find cash-settled acquisitions to exhibit significant positive ARs, which is consistent with the payment method-signalling hypothesis. Similarly, Andre et al. (2004) analyse Canadian M&A and find that cash-financed mergers tend to underperform compared to mixed payment acquisitions. The authors attribute the inconsistency of the results to market inefficiencies and a lack of information transparency. It can therefore be argued that since growth maximising managers are motivated by the need to complete an M&A deal or build empires rather than to maximise their shareholders' wealth, they would eschew unlisted targets in favour of listed ones. However, if they have to acquire unlisted targets, they will prefer to use cash as opposed to equity offers in a bid to avoid the large private placement that comes with increased levels of scrutiny (Harford et al., 2012).

2.6 Corporate Governance Issues in M&A

Corporate governance (CG) refers to the manner in which organisations are directed and controlled (Cadbury, 1992). It represents various internal control mechanisms that are designed and exercised by stakeholders who wish to safeguard their interests from over-controlling insiders (Jensen and Meckling, 1976). Banks and insurers serve an important role in the economy, and their safety and soundness are crucial to financial stability. Therefore, effective CG is a key element for the proper functioning of these institutions, the failure of which can result in serious economic problems. A typical manifestation of CG shortcoming was during the 2007-08 financial crisis when the financial institutions failed to implement the internal controls that would encourage banks and other institutions to cultivate sound business practices (Minton et al., 2014).

Theoretical literature suggests that corporate boards could provide important internal governance structures that foster high standards of corporate behaviour and reduce agency problems (Fama, 1980; Fama and French, 1993). Therefore, we conjecture that firms with good corporate governance and where effective monitoring and accountability is apparent should make value-enhancing investment decisions (including M&A) compared to those that are poorly governed. In other words, we expect M&A involving

firms with good corporate governance to generate positive ARs and generate wealth for their shareholders.

Previous studies have examined the quality of CG in mitigating the agency problems in M&A by focusing on three prominent dimensions or proxies: CEO chair/duality, independence of non-executive directors, and ownership concentration. There are other aspects of CG, but we focus on these in our review as they appear more relevant to our context.

2.6.1 CEO Chair/Duality

Duality refers to where an individual serves as both the CEO and the chairperson of the board of directors. *A priori*, the presence of duality could signify bad corporate governance because power is concentrated in the hands of one individual (Felício et al., 2018). This implies that duality could also encourage hubristic behaviour since it gives CEOs excessive power and more influence over corporate strategies/decisions with less disciplinary threats. Several studies that have analysed this concept argue that agency problems could be exacerbated when an officer holds both positions. Fama and Jensen (1983) contend that with CEO duality, the board may lack independence and be less effective at monitoring or overseeing the actions of the management. This is so because the board itself is controlled by a CEO who might dictate the nature of the firm's investments (Gul and Leung, 2004). Moscu (2013) concurs, concluding that with CEO duality, the veracity of the information that is conveyed to the board can be compromised as the CEO determines the kind of information that is brought to the attention of the board. This evidence weakens the efficacy of using corporate governance as a mechanism for mitigating agency problems. For banks and insurers, the existence of government guarantees and deposit insurance gives stakeholders little or no incentive to monitor banks because they are protected from the consequences of the board's risk-taking by the government. In this setting, CEO duality would encourage insider entrenchment and excessive risk-taking (see Felício et al., 2018; Manowan, 2010).

Several other studies find CEO duality to be negatively related to the value and performance of the firm (Brown and Sarma, 2007; Florackis et al., 2009; Veprauskaitė and Adams, 2013). Pi and Timme (1993) examine a sample of US bank holding companies and find that banks whose CEO is also the board chair tend to initiate high-risk M&A. They also consistently under-perform non-duality-oriented banks. Daily and Dalton (1994) make similar arguments, maintaining that CEO duality increases the likelihood for

bankruptcy since CEOs have complete autonomy to make strategic decisions that can enhance their personal gain even when company performance is poor. Likewise, Adams and Ferreira (2007) posit that CEO power concentration can harbour moral hazard problems, especially if their investment preferences differ from those of the shareholders. Thus, in line with agency theory, CEO duality could have a negative effect on the performance of the firm (see also Masulis et al., 2007).

2.6.2 Independent Non-Executive Directors (NEDs)

NEDs are the outside directors who are responsible for providing checks and balances on the executive board of directors (Weir and Laing, 2001). Both the Cadbury Report (1992) and the Financial Reporting Council (2014) suggest that for a board to be independent, at least half of its membership, excluding the chair, should be composed of outside independent directors who have no material connections to the company. Independent NEDs are believed to be effective at representing the interests of shareholders since they have no conflicts of interest. As such, they efficiently perform an oversight role to help mitigate agency problems (Byrd and Hickman, 1992).

Extant literature shows that companies with more independent NEDs perform better (Dahya and McConnell, 2007; McKnight and Mira, 2003). Similarly, Schwizer et al. (2014) provide evidence to suggest that high-quality independent directors enhance the value of the firm and reduce the CEO's hubristic pride in their number of corporate investments, as well as the firm's exposure to corporate risk. In contrast, Subrahmanyam et al. (1997) indicate that independent outside directors play no role in evaluating the acquisition of targets. One possible explanation for the inconsistency in prior results is that for banks, outside directors are appointed for their effectiveness in interacting with legislative and regulatory authorities and other external stakeholders, rather than for their ability to evaluate the viability of acquisitions. A second possibility is that NEDs may tend to avoid confrontation in a bid to maintain good relationships with controlling executives. This compromises their oversight role and imposes less discipline on inside executives (Franks and Mayer, 2001; Huang et al., 2018).

2.6.3 Ownership Structure

This relates to the number of shares that are held by top-tier managers (insiders) in a particular company, and also to block ownership. According to Cotter and Zenner (1994) and Jensen and Meckling (1976) top-tier managers with substantial shareholding in a company have extra motivation to ensure

that prudent strategic and investment decisions enhance firm performance. Hence, the value of a firm should increase as ownership increases because of the better alignment of managerial interests with those of the outside shareholders (Fields et al., 2007a). Similarly, bidders with block shareholders or large CEO share ownership are expected to make sound commitments to mitigate agency problems compared to firms with diffused shareholders.

Prior studies indicate that there is a statistically significant positive relationship between CEO ownership and bidders' abnormal returns. Denis et al. (1997) examine the aspect of ownership structure, which they link with the valuation consequences of diversification. They argue that CEOs with high levels of firm ownership would at least be expected to engage in value-reducing diversification if they perceive that the cost to shareholders of diversification surpasses its benefits. As such, we expect positive valuation effects from companies with higher CEO ownership and negative effects from companies with lower CEO ownership structure. Lewellen et al. (1989) make similar arguments and indicate that diversifying mergers results in significant positive abnormal stock returns for firms with a higher managerial ownership structure (see Laeven and Levine, 2007).

On the other hand, Fields et al. (2007a) examine the efficacy of bancassurance mergers and report that bidders' returns are moderated by governance characteristics such as the level of CEO ownership, compensation plans, etc. According to Fields et al. (2007a), mergers in which bidders have higher CEO stock ownership are less well received and therefore generate negative or fewer positive gains for the bidders. These assertions are backed by Di Dio (2017) who finds a strong and significant negative relationship between CEO ownership and bidders' AR. The contradiction from the two bodies of literature suggests that at some point, very high levels of managerial share ownership could be attributed to insider entrenchment or to non-value enhancing behaviour. Therefore, low CEO ownership levels that imply lower insider entrenchment should generate higher or positive bidder returns.

2.7 Summary and Conclusion

This chapter provides a review of previous theoretical and empirical literature on M&A. From this review there are indications that bank–insurance M&A are firmly grounded in the tenets of agency theory. The main assumption underlying this theory is that human beings are rational utility-maximisers who, in the absence of appropriate penalising measures, would act to serve their own interests at the expense of others, i.e., their shareholders. We therefore group factors that explain M&A returns into three broad categories: M&A motives, information asymmetry, and corporate governance. All these categories seem interconnected and derive mainly from agency theory. The chapter also reviews other schools of thought that provide contradicting views from agency theory for comparison purposes, and justifies the alternative findings presented by prior empirical studies to explain M&A outcomes.

3 Research Methodology and Methods

3.1 Introduction

This chapter presents the methodology used in this study to examine stock returns from M&A activities. The M&A literature does not have an agreed and consistent approach for predicting whether there will be an abnormal return associated with M&A announcements (Kothari and Warner, 2007) but there are a number of commonly utilised approaches for modelling M&A performance. These include the event study approach, which is ideal for investigating the relationship between security prices and economic events (Brown and Warner, 1985; Fama et al., 1969), and the accounting based study approach, which relies on matching samples from financial statements to measure post-merger performance (Edwards and Bell, 1961; Guest et al., 2010; Healy et al., 1992). This study utilises the event study methodology because prior M&A literature has extensively used it to quantify or measure the impact of unanticipated corporate events on the wealth of firms' shareholders. The insights from this chapter will be the foundation of the empirical analysis in our subsequent chapters. In this chapter, we also identify the source of our data and discuss the sample selection process, before presenting M&A trends, cycles, and the summary of our data.

The rest of the chapter is structured as follows. Section 3.2 discusses the approach we use to estimate the abnormal return of individual firms and across firms. Section 3.3 explores the test statistics for significance. Section 3.4 describes the data and presents summary statistics. Section 3.5 concludes the chapter.

3.2 Estimating Stock Returns of Individuals and Across Firms

Our study aims to measure stock price changes in response to bank–insurance M&A announcements. We use an event study methodology that was first put forward by Dolly (1933) and extended by two landmark papers, Ball and Brown (1968) and Fama et al. (1969), to test for announcement effects. This approach is now well-established in the academic literature.[7] It relies on a pricing model such as CAPM or the market model (see below), to test the economic impact of an event (such as M&A) based on the

[7] As of 2007, over 500 empirical studies had used event studies, and the number continues to grow (see Kothari and Warner, 2007)

residuals, otherwise known as abnormal returns (AR). In an efficient market, the expectation is that the capital market will fully and accurately reflect all relevant information in determining the security prices, leaving no room for speculation such that even M&A announcements generate insignificant or no abnormal returns (Fama, 1970). This may, however, not be the case in reality because of imperfections in the market—meaning that the ARs around the announcement dates may assume non-zero values.

The concept behind AR is that the return of a security comprises two components: the expected return estimated in the normal period (benchmark return) and the realised or actual return. From this, we have:

$$R_{i,t} = K_{i,t} + e_{i,t} \quad (1)$$

where $R_{i,t}$ represents the dividend inclusive return for stock i in time t, $K_{i,t}$ stands for the expected or predicted return, and $e_{i,t}$ is the abnormal return, which is the difference between the security's realised return and expected return.

3.2.1 Event Study Methodology

As mentioned in section 3.2, an event study aims to meet two fundamental objectives: to test the null hypothesis that the stock market efficiently captures the release of new information, and to examine the wealth impact that an event triggers (Sudarsanam, 2003, p. 90). These objectives imply that the approach involves establishing whether the occurrence of an economic event yields some abnormal returns. Since the market is always presumed to be semi-strongly efficient (i.e., all the information is publicly available), stock prices should adjust appropriately to fully reflect the release of new information (such as M&A announcements) and allow us to capture the ARs.[8]

According to Sudarsanam (2003), the event study approach is preferred over others because it precludes the need to analyse accounting-based measures and instead focuses on security price changes that

[8] Fama (1970) delineates three scenarios within which security prices would adjust conditional on the information released: 1) *Weak form of efficiency,* where current security prices adjust to reflect only past information. This cannot allow the investor to earn abnormal returns. 2) *Semi-strong form of efficiency* is the most common form, where nobody has monopolistic access to information being released. This means that security prices include all publicly available information, allowing investors to benefit from abnormal returns. 3) *Strong form of efficiency* where security prices reflect both private and publicly available information. This implies that if investors rely on the market to make investment decisions, they will be competing with insiders who have an advantage with which they can beat the market.

should capture all the relevant information associated with M&A announcements. The justification behind this is that *accounting measures* rely on financial data reported either annually or semi-annually and are thus unable to reflect instantaneous change in the wealth of the firm (Amihud et al., 2002). Similarly, using the *comparison approach* to compute ARs could be deceptive because of the complexity of selecting a 'normal' period, as abnormal price movements could happen any time before the corporate news release due to leakage or rumour (Chen and Tan, 2011).

To fit an event study, MacKinlay (1997, p. 14) proposes a seven-step procedure (which we consolidate to four in this study). The four steps are: 1) identifying the event of interest, 2) defining the estimation and event window, 3) computing abnormal returns for each firm and aggregating them over time, and 4) testing the significance of aggregated abnormal returns and reporting the empirical findings. We now examine each of these in detail alongside the event study assumptions because this procedure will form the basis for our discussion in subsequent chapters. In the current study, we have already defined our event of interest, which is price reaction to bank-insurance mergers and acquisitions. The key element here is to uncover the timing of an event because the power of the tests depends upon the accuracy with which the exact date of an event can be identified (see Brown and Warner, 1980). Our event date is the date when an M&A is announced, not when the merger is completed; however, we will need to consider both when testing the hypothesis concerning the likelihood of completing an announced deal and completion time. When choosing the estimation and event windows, we are cognizant of the fact that confounding events specific to the firm (such as dividend/earnings announcement, stock splits, etc.) are bound to exist. As such, we take the necessary steps to control for the impact of these events, which may otherwise bias our results.[9]

3.2.1.1 Estimation Period and Event-Window

The estimation window covers the period of normal activity within which the expected returns will be calculated, which can either be before or after the event of interest (T1 – T2, or T3 –T4) (Figure 1). Brown and Warner (1980, 1985) indicates that longer estimation windows could achieve higher precision than shorter windows. These assertions are affirmed by Armitage (1995) with his argument that choosing a

[9] Event study methodology is powerful for estimating abnormal returns under three key assumptions: a) the markets are semi-strongly efficient, meaning that stock prices should adjust quickly to newly released information, b) the events are unforeseen–hence their occurrence will be instantly reflected in security prices, and c) throughout the test period, there will be no confounding events (see Campbell et al., 1997; MacKinlay, 1997).

sufficiently long estimation window enhances accuracy in the estimation of the parameters that will be used for generating returns. Armitage (1995) average acceptable range for estimating expected returns is between 100–300 for daily observations and 24–60 for monthly series. We follow this literature in choosing the estimation period for daily data and strike a trade-off between the highest and the lowest recommended period in settling for a length of 200 trading days before the merger announcement. This is also consistent with prior empirical literature (see, e.g., Dontis-Charitos et al., 2011; Fields et al., 2007a; Masulis et al., 2007).

The event window illustrates the period within which we evaluate the stock price movements of merged entities (T2 – T3) (Figure 1). The question here is: what is the optimal size of the event window that will effectively capture the behaviour of stock market movements. Should it be long or short? Many studies argue that a shorter window may not be sufficient because it does not show the point at which the effect of an event (say, M&A) pegs out. It does not also allow one to establish whether there was information leakage, predictions, or event anticipations of the announcement (see Gregory, 1997; Ritter, 1991; Sudarsanam and Mahate, 2006; Teoh et al., 1998). Sudarsanam and Mahate (2006) and Ritter (1991) use a two year event window, while Gregory (1997) and Teoh et al. (1998) utilise a five year event window. In contrast, Brown and Warner (1985) argue that shorter windows have higher precision to capture better the impact of an event without any distortions. Kothari and Warner (2007) confirm that assertions by indicating that the testing power of price shock estimations on M&A announcements diminishes in large event windows, presumably because of the potential introduction of noise in the data. Finally, short event windows are highly responsive to estimating abnormal returns (ARs) and cumulative abnormal returns (CARs) whereas long event windows are ideal for modelling buy and hold abnormal returns (BHAR) (see page 44).

In this study, we follow the latter argument and employ a short event window of 11 days: [–5, +5], five days before and after the event announcement date, because this will enable us to capture the likelihood of event anticipation and the spill over effect. While the main period of interest is the 11-day window, a short window such as [–1, 0], [0, +1], [–1,1) etc., will also be used in reporting CARs.

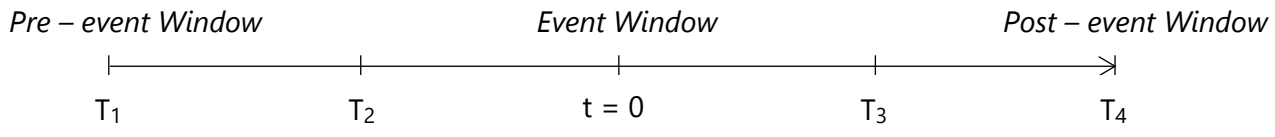

Figure 1. Timeline for the Event Study.

We use logarithmic equity returns throughout our econometric estimations, as suggested by Campbell et al. (1997). Logarithmic returns are preferred over arithmetic returns since its application would imply a more normally distributed dataset. The daily stock prices of each firm and their respective market indices are transformed into natural log-returns and expressed as follows:

$$R_{i,t} = \ln(\frac{P_{i,t}}{P_{i,t-1}}) \quad (2)$$

where $\mathrm{R_{i,t}}$ is the log return for stock i at time t, $P_{i,t}$ is the current price, and $\mathrm{P_{i.t-1}}$ is the price of the previous trading day. We then adjust our sample data for non-trading days (to exclude weekends and public holidays).

3.2.1.2 Modelling Expected Returns and Abnormal Returns (ARs)

We established in Eq. (1) that abnormal return is the difference between the actual *ex-post* return of a security and the expected normal return (i.e., expected return without conditioning it on an event). In the next step, this research follows mainstream studies (Asquith and Mullins, 1986; Cybo-Ottone and Murgia, 2000; Harford et al., 2012; Masulis et al., 2007) and utilises a market model to predict the hypothetical returns from which the actual returns would be deducted. Of course, other models for estimating expected returns of individual stocks do exist. The two main groupings available for this purpose are statistical and economic. Statistical models follow the assumptions of statistics, as opposed to the economic arguments concerning the behaviour of stock returns. Among the key assumptions is the distributional assumption: stock returns are jointly multi-variate normal, independent, and identically distributed through time (see MacKinlay, 1997). These models include the original market model and its variations (Brown and Warner, 1980, 1985), the comparison-period-mean-adjusted model, the market adjusted model (see Dyckman et al., 1984), the matched firm model (that utilise performance of a comparable firm's stock as a proxy for a distinct firm's expected returns), and the CAPM model.[10]

In contrast, economic models are multi-factor, relying on assumptions about the behaviour of investors as well as the statistical assumptions. The models include the Fama–French 3-factor, 4–factor, and 5–

[10] The variations of the original market model are 1) Market Model with Scholes-Williams beta estimation and 2) Market Model with GARCH and EGARCH error estimation (see, e.g., MacKinlay, 1997; Schimmer et al., 2014).

factor models (Fama and French, 1993, 2015, 2021) and Carhart's four-factor model (Carhart, 1997). The aim of these models is to mitigate the vulnerabilities of uni-factor/statistical models and provide better estimates for benchmark returns in event studies. While these aims are laudable, the empirical literature continues to report that the estimations of excess returns from the uni–factor and multi-factor models are equally correct and relatively similar. However, the market model still receives slightly higher preference than others. Indeed, the market model (MM) would be ideal for estimating the normal returns of firms since it considers market-wide movements as well as the risk adjustment element of individual stocks (Armitage, 1995; Brown and Warner, 1985). Furthermore, majority of my reference literature ((Asquith and Mullins, 1986; Cybo-Ottone and Murgia, 2000a; Dontis-Charitos et al., 2011) utilises this model. Finally, other studies examining the efficacy of the uni-factor *vis à vis* multi-factor models (Brenner, 1979; Chen et al., 1987; Dyckman et al., 1984; Holler, 2014; Kothari and Warner, 1997) find no evidence to suggest that complicated models convey better results. Although the market model has widely been accepted as a standard model, it is not short limitations. It assumes that the risk-free interest rate included in the α factor (see below) is constant, which contravenes the belief that market returns vary over time (see Schimmer et al., 2014).

The MM for a given firm (bank/insurer) in a particular country can be written as shown below:

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \mathcal{E}_{i,t} \tag{3}$$

where $R_{i,t}$ and $R_{m,t}$ are the dividend inclusive return of stock i at time t, and the return on an equally weighted or value-weighted market portfolio at period t respectively, and $\mathcal{E}_{i,t}$ is the zero-mean disturbance term. Finally, α_i, β_i are the parameters of the market model that will be estimated using ordinary least squares (OLS) for an estimation window (–221 to –21) of individual firms' stock returns and a pre-determined/chosen index return. We estimate Eq. (3) using a GARCH model (Bollerslev, 1986) which captures the time-variation in returns. To complete the GARCH specification, we write the variance equation as follows:

$$\delta^2 = h_{i,t} = \alpha_i + \beta_i \mathcal{E}_{t-1}^2 + \beta_2 h_{t-1}^2 \tag{4}$$

where α is a constant; ε_{t-1}^2 that represents past news, and h_{t-1}^2 captures past volatility. Eq. (4) is not needed for our ARs since the ARs are generated from the parameters in mean equation as shown below. That is,

AR is computed using the Eq. (3). Thus, AR and cumulative abnormal returns (CAR) of security i in time t can be expressed statistically as

$$AR_{i,t} = R_{i,t} - E\left(R_{i,t}\middle|\emptyset_{i,t}\right) \equiv R_{i,t} - \left(\alpha_{i,t} + \beta_i R_{m,t}\right) \tag{5}$$

$$CAR_{i,t} = \sum_{t=t_2}^{t_3} AR_{i,t} \tag{6}$$

where $R_{i,t}$ is the dividend inclusive return of stock i in time t and $R_{i,t}$ is the dividend inclusive return on the market portfolio at period t. To measure the short-term impact of M&A over the event window (T_2 = –5 to T_3 = +5), we simply add up all daily abnormal returns to create the cumulative abnormal returns (CARs). An alternative procedure for measuring the performance of M&A or computing abnormal returns over relatively long-term horizons (called 'buy and hold') may also be considered. The buy and hold return of a security is the product of one plus each month's abnormal returns, minus one (see Kothari and Warner, 1997; Sudarsanam, 2003). The estimation of buy-and-hold abnormal returns (BHARs) of stock i at time t is:

$$BHAR_{i,h} = \prod_{t=1}^{h}\left(1 + R_{i,t}\right) - \prod_{t=1}^{h}\left[1 + E\left(R_{m,t}\right)\right] \tag{7}$$

where $BHAR_{i,h}$ denotes the abnormal return of security i over period h (i.e., number of trading days in t month cumulation period), $R_{i,t}$ is the month t return of security i, and $R_{m,t}$ stands for the month t return of the stock market index or return of the benchmark portfolio. The merits of the BHARs approach over CARs have, however, long been debated. In theory, Barber and Lyon (1997) argue that BHARs are superior to CARs because they accurately reflect the value of a long-term investor, a claim Fama (1998) rejects. The argument in Barber and Lyon (1997) is that the estimation of abnormal returns over a long time horizon using BHARs overcomes the constraints posed by CARs of using narrow windows around the event announcement date, measuring only the expected cash flows. Empirically, Lyon et al. (1999) find the BHARs approach to be robust for long-term analysis while the CARs approach is good for short-term windows.

The average abnormal return (AAR) is the sum of all abnormal returns divided by the number of observations (N) in the sample. In this study, the cumulative average abnormal returns (CAAR), which is the sum of all AAR, is essential to evaluating the total effect of an M&A over T days in the event window (i.e., over all times t). The AAR and CAAR for all the N stocks at each time t are expressed mathematically as

$$AAR_t = \frac{1}{N}\sum_{i=1}^{N} AR_{i,t} \tag{8}$$

where N is the number of firms in the study.

$$CAAR_T = \sum_{t=1}^{T} AAR_t \tag{9}$$

The CAAR is particularly useful in addition to AAR because it aids in assessing the aggregate effect of abnormal returns, especially when the impact of an event within the event window does not fall on the announcement date. We use ARs and CARs to mean AARs and CAARs respectively, throughout this thesis.

3.3 Statistical Significance of ARs

In this section, we aim to test the hypothesis in a bid to answer the question of whether our estimated ARs are statistically different from zero. To test for the significance of ARs, there are two available approaches: parametric tests that are driven predominantly by the assumption that the firm's ARs follow a normal distribution, and non-parametric tests which do not rely on such assumptions (Schipper and Smith, 1983). Among the commonly used parametric tests cited in the literature are those advanced by Patell (1976) and Boehmer, Masumeci and Poulsen (1991), while the non-parametric tests are the rank test developed by Corrado (1989) and the sign test of Cowan (1992). Since prior literature finds that parametric tests are better, especially when they are based on standardised abnormal returns, we refrain from using non-parametric approaches in favour of the parametric ones (Boehmer et al., 1991).

By fitting an event study model, we assume that the ARs are cross-sectionally uncorrelated. According to Brown and Warner (1985), this assumption may not hold in an environment where firms are from the same industry or have some common characteristics, as is the case in our study. Thus, using test statistics

such as standard student t-distribution may severely bias our results. Even the Newey and West (1986) in-sample error adjustment procedure may not be an option because of the complexity of estimating the covariance matrix of returns in our large sample. To counter the problem of cross-sectional correlation of abnormal returns, Boehmer et al. (1991) propose a method that is based on standard abnormal returns (SAR) and is robust against any event induced variance. This is called the standardised cross-sectional or BMP test, which is an improved version of Patell's (1976) test.[11] We obtain the standardised abnormal returns (SAR) by dividing the event period regression residual by the standard deviations of residuals from the estimation window (Campbell et al., 1997b, p. 160). This is given by:

$$SAR_{i,t} = \frac{AR_{i,t}}{S_{AR_{i,t}}}, \text{ where} \quad .$$
$$S_{AR_{i,t}} = \sqrt{\frac{1}{N-1}\sum_{t=1}^{N}\left(AR_{i,t} - \overline{AR}_i\right)} \tag{10}$$

with S_{AR_t} denoting the standard deviation of abnormal returns over the estimation window (in our case this is 200 days: –220 to –21). N is the number of observations or firms in the sample. AR_{it} denotes the regression residuals over the estimation period, whilst $\overline{AR_i}$ stands for the average of regression residuals in the estimation window. The BMP-test statistic for ARs in the event window is given by:

$$BMP, t-stat = \frac{SAR_{it}}{\sqrt{N}S_{SAR_t}}, \text{ where} \quad .$$
$$S_{SAR_t} = \sqrt{\frac{1}{N-1}\sum_{t=1}^{N}\left(SAR_{i,t} - \overline{SAR_t}\right)}, \text{ and } \overline{SAR_t} = \frac{1}{N-1}\sum_{t=1}^{N} SAR_{i,t} \tag{11}$$

where S_{SAR_t} is the cross-sectional standard deviation of AR at period t, SAR_{it} denotes the standardised abnormal returns for firm i at period t, and $\overline{SAR_t}$ stands for the averaged standardised abnormal returns over N firms. Although Boehmer et al.'s (1991) t-statistic has been reputed to provide the best power, studies have found it to be valid only under the assumption that the ARs are contemporaneously uncorrelated, an issue that had previously been addressed by Patell's (1976) approach which aggregates standardised ARs (SCARs) using an equally weighted portfolio. Such a portfolio, however, does not seem

[11] Patel's test has long been recognised as a default parametric test and still remains the base model upon which many landmark papers (e.g., Brown and Warner, 1980, 1985; Boehmer et al., 1991; Kolari and Pynnönen, 2010) build.

to work well in the BMP approach, as confirmed by Kolari and Pynnönen (2010). Eun et al. (1996) attempt to estimate SCARs using a method identical to estimating SAR by using the standard deviation of CARs in the estimation window; in technical terms, this replaces $AR_{i,t}$ in the second part of our Eq. (10) with $CAR_{i,t}$. The authors report substantially large standard deviations, especially when cumulating residuals over a long estimation window or using the BMP t-test. In addition, there can be instances where a few firms undertake multiple acquisitions within a year, or the case is similar to ours in that the merging firms are from the same or closely related industries. In such cases, using the famous BMP-t test can lead to the underestimation of AR variance and an overstating of the t-statistic. This may result in erroneously rejecting the null hypothesis when it is in fact true; this is commonly referred to a type I error.

To treat this flaw, Kolari and Pynnönen (2010) modify the original BMP t-test to account for cross-correlations of ARs and event-induced volatility changes; this gives rise to the adjusted BMP t-test (hereafter *adj*. BMP), written as:

$$Adj.BMP, t = \frac{SAR_{it}}{\sqrt{N}S_{SAR_t}}\sqrt{\frac{1-\bar{r}}{1+(N-1)\bar{r}}} \tag{12}$$

For standardized ARs (SCARs) the above will be written as

$$Adj.BMP, t = \frac{SCAR_{it}}{\sqrt{N}S_{CAR_t}}\sqrt{\frac{1-\bar{r}}{1+(N-1)\bar{r}}} \tag{13}$$

where $\bar{r}$ is the average of sample cross-correlations of the estimation period abnormal returns. Notice that if our $\bar{r}$ remains zero, the $adj.BMP$ reverts to the original BMP test statistic. This is the part that makes the test unique and interesting. If we were to assume that the square-root rule remains unchanged for the standard deviation of different periods, we could use the $Adj.BMP$ test to estimate the aggregated abnormal returns (SCARs). We achieve this by substituting the S'AR' in Eq. (12) with CAR. Our new model that incorporates the cumulative abnormal returns is presented in Eq. (13) above.

In summary, since our research setting involves two industries cited by prior literature as having more similarities than differences (see, e.g., Fields et al., 2007a) our estimations should yield robust results when using the $adj.$ BMP t-test in lieu of all other test statistics.

3.4 Data and Sample Description

3.4.1 Data Source

The sample for M&A announcements and deal characteristics is obtained from Zephyr, a database provided by Bureau van Dijk and cross-checked for accuracy by Securities Data Company (SDC). It covers a global sample of all completed bank–insurance M&A announced between 1 January 1999, and 31 December 2019. The daily stock data and market index from which we model abnormal returns, together with the corresponding financial information for bidders and targets, are obtained from Thomson Reuters DataStream. To be included in the sample, the study requires that: 1) both the acquirer and the target come from the banking and insurance industry, 2) the merger or acquisition is completed as confirmed by Zephyr or Bloomberg's corporate calendar (except for Chapter 6 where the study examines deal completion or abandonment and timelapse), 3) the acquirer ends up controlling at least 25% of the target's shares after the transaction, and 4) the acquirer is publicly listed and has annual accounting data (including stock data for 220 days relative to the M&A announcement) available in DataStream.

The study excludes merger deals initiated by firms experiencing contaminating news that includes, but is not limited to, stock splits, earnings announcements, a change of executive, or issuance of new shares during the event and estimation period. As an additional control for serial or autocorrelation, we exclude from the sample those stocks where an acquirer initiates multiple bids within the same year.

Table 1 presents the sample distribution of M&A activities for banks and insurance companies drawn from over 55 countries globally. Beginning in 1999, we observe that, except for the period adjoining the year 2002, the number of financial sector acquisitions increases each year until it peaks in 2007. Then it considerably drops off over subsequent years until it bounces back in 2014. This trend is qualitatively similar to those observed by Moeller et al. (2004) and Masulis et al. (2007). Table 1 also reports the aggregated deals over different periods, the deal values, and the acquirers' market-capitalisation measured as the product of firm's stock price and the total number of shares outstanding at the end of each year. From this trend, we can deduce that bank–insurance M&A activities were intense during two periods: between 2004–2008 and 2015–2019. Both deal values and market capitalisations also appear to peak around two periods: during the "bubble" period of 1999–2000, and in the run-up to the 2008 global financial crisis (GFC). We also note that in 2011, market capitalisation

is at its highest but with corresponding low deal values, an indication of large acquisitions with low deal premiums.

3.4.2 Sample Distribution of Acquirers by Announcement Year

Table 1: Sample Distribution by Announcement Year

The sample consist of 1,384 completed bank–insurance deals reported between 1999-2019. Deal value refers to the average transaction value while market capitalisation denotes the mean market capitalization for all the deals initiated in each of the years.

Year	Number of deals	Percentage of Sample	Deal value ($mil)	Market Capitalisation ($mil)
1999	61	4.4	3,587.05	16,340.40
2000	62	4.5	3,230.34	25,541.65
2001	59	4.3	2,365.98	19,352.93
2002	41	3.0	1,556.58	26,452.21
2003	77	5.6	1,662.11	17,907.20
2004	60	4.3	2,702.33	15,576.17
2005	65	4.7	2,581.00	17,327.66
2006	84	6.1	2,563.77	23,132.48
2007	92	6.6	1,835.69	37,650.79
2008	58	4.2	3,033.00	31,930.20
2009	40	2.9	824.73	15,535.51
2010	48	3.5	1,661.19	25,151.75
2011	39	2.8	1,188.58	34,699.98
2012	41	3.0	1,072.81	20,314.62
2013	76	5.5	437.12	9,257.10
2014	94	6.8	618.68	13,446.83
2015	90	6.5	1,032.26	12,822.18
2016	73	5.3	8,96.59	7,187.63
2017	83	6.0	399.38	6,966.67
2018	82	5.9	1,079.44	12,059.88
2019	59	4.3	1,516.27	11,217.19
Overall	1384	100.0	1,656.74	18,331.72
Sub-sample analysis (different periods)				
1999–2003	300	21.7	2,517.89	20,571.39
2004–2008	359	25.9	2,484.73	25,897.24
2009–2014	338	24.4	870.24	17,636.54
2015–2019	387	28.0	954.55	10,129.19

Figure 2 presents the line and bar chart for the distribution of aggregated bank–insurance M&A activities. The bar chart illustrates the total number of M&A announcements whilst the line graph shows the average value of these deals in each of the years from 1998 to 2019. From the year 1998, there is noticeable initial growth in the volume of bank–insurance consolidations. This reaches a high level in the year 2001, presumably because of the removal of barriers to commercial bank, investment bank, and insurance company mergers through the Gramm-Leach-Bliley Act in the US, and similar legislation elsewhere in the world (see Akhigbe and Whyte, 2004; Filson and Olfati, 2014; Mamun et al., 2004). This

trend, however, did not last because it fell in the years 2002-03. The growth in M&A activities resumed over the next few years (i.e., from 2003 to 2007) to hit new highs in 2007, when previous records were broken by quite some distance. The trend became downward in the post-crisis period.

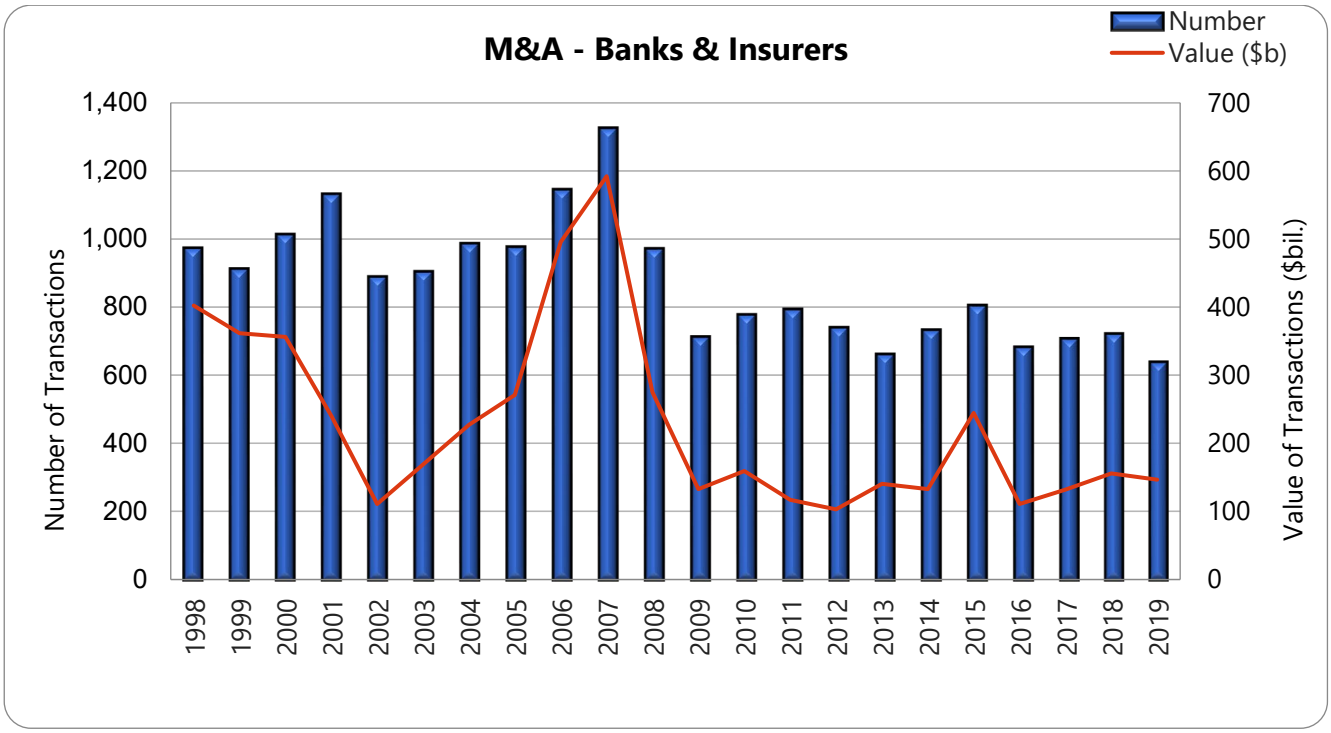

Figure 2: Global Distribution of Bank-Insurance Mergers

Notably, the average value of these mergers was fairly high during the years 1999-2000. Average value dropped significantly in subsequent years to hit rock bottom in 2002. After the imposition of disclosure requirements by the Sarbanes-Oxley Act (2002), there was an upward trend in average transaction values. This trend however ended abruptly in 2007 as the credit market spluttered, and it has remained low ever since. In the run-up to the GFC (i.e., 2006-2007), publicly announced bank–insurance deal values reached all-time highs of US$1.2tn, which included 50 megadeals with a deal value greater than US$5bn. This trend suggests that bank–insurance consolidations may have had a significant influence on the GFC through the creation of large and interconnected institutions that were either considered to be 'too-big-to-fail' (TBTF) or had implicit bailout guarantees.

3.5 Conclusion

This chapter has described the methodology used to test our main hypothesis by quantifying the impact of bank–insurance M&A announcements on the firms' share prices using event studies. By evaluating the various estimation methods employed by prior studies, we explain why, in a semi-strongly efficient market, a combination of the OLS's market model and GARCH are superior for estimating benchmark returns over the various multi-factor models (Fama-French 3-factor, Carhart 4-factor, and 5-factor models). We also present an argument around the significance tests utilised by previous studies, delving into the merits and demerits of the standard t-statistics (a parametric test). We underscore that in a research setting where event date clustering is highly likely, Patell's (1976) and Boehmer et al.'s (1991) t-tests cannot effectively control for contemporaneous return correlations, thus justifying our choice of $adj.\,\mathrm{BMP}$ for significance testing, which is effective in such a setting. We then describe our data sources before reviewing the details of bank–insurance M&A trends and the characteristics of the acquisition sample.

4 Valuation Effects of Bank–Insurance M&A Announcements

4.1 Introduction

This chapter aims to assess the stock market reaction to various types of bank-insurance M&A announcements. Over the last three decades, the financial services industry has experienced tremendous developments and changes. These were the outcomes of numerous factors, including globalization, increased competition, and advancements in communications and technology. Factors such as the deregulation of the financial markets (except for solvency) under the 1989 EU-Second Banking Coordination Directive and the subsequent passage of US's Financial Services Modernisation Act of 1999, in which case long-standing restrictive barriers on the formation of financial holding companies were removed, also contributed to these changes.[12] These actions collectively paved the way for intense cross-product and cross-sector consolidations in the financial services sector through mergers and acquisitions (Andriosopoulos et al., 2017; Cummins et al., 2015; Staikouras, 2006). Since then, the banking and insurance sectors have witnessed significant structural shake-ups that have radically transformed the way both at retail and corporate level business is conducted.

In spite of the recent surge and the significance of M&A activities to the entire financial system, the empirical literature on global bank-insurance mergers is somewhat limited. Prior studies that have attempted to investigate the wealth effects of bank-insurance mergers produce contradictory findings (Chen and Tan, 2011a; Cybo-Ottone and Murgia, 2000; DeLong, 2001; Dontis-Charitos et al., 2011; Fields et al., 2007a; 2007). Besides placing little emphasis on the wealth effects of targets, these studies seem to have also ignored the implications of other vital arrangements (not exclusively bancassurance) that constitute the consolidation of financial services.

[12] The timeline for country-specific deregulations is explained in Swiss-Re (1996). In **Japan**, for instance, the Big-Bang financial deregulation framework came around 1996, while **Australia** introduced the deregulation policy in 1984. Subsequent gradual modifications in 1992 and 1997 followed this. In the **UK,** the concept was first introduced through the "Big Bang" of the London Stock Exchange in 1896 and received significant subsequent changes in the late 1980 and early 1990s to allow universal banking activities. In **Germany**, the first and second Financial Market Promotion Laws of 1990s provided a good opportunity for German banks and banking groups to extend their *Allfinanz* (bancassurance) strategies integrating new services such as managerial consultancy and, most notably , Insurance.

To address this knowledge gap, we provide evidence on the following research questions. 1) Does bank-insurance M&A announcements create, or destroy shareholders' value? In either way, does this value change based upon the industry from which the target is drawn? 2) How do deal, and country-specific characteristics influence the valuation premium for the acquirers relative to the targets? The study utilises the standard event-study technique to examine various structural alignments under the broad umbrella of mergers and acquisitions: bank to bank, bancassurance, assure-banking, and insurance to insurance deals that have been pursued by these entities over the past 20 years (1999-2019). The study, which is essentially global, provides a detailed account of the impact of these events on the market value of targets and acquirers during the period.

We attempt to answer the above questions by testing the announcement effects of M&A on the cumulative abnormal returns (CARs) of all acquirers and targets over different event windows. This is achieved by evaluating the reaction of the stock market from three different viewpoints. Firstly, we examine the behaviour of stock price returns several days prior to the announcement date to assess the likelihood of having information leakage that may cause the appearance of significant AR in the pre-announcement period. Secondly, we then cluster the CARs into several symmetric and non-symmetric windows (before and after the event date) to capture different reaction patterns and the overall impact of the events on the stock prices. Finally, we examine the return pattern in the post-event period (a few days after the announcement) to establish whether there is persistence in the abnormal performance or spill-over effect following a takeover bid.

The results suggest that bank-insurance merger announcements destroy value for the acquirers while targets gain significantly. Target shareholders gain the most in the US relative to other markets. The negative returns for acquirers are predominantly driven by interbank deals, deal-size, and the method of payment – as stock-settled deals are less well-received. The study also finds that bancassurance deals enhance shareholders' wealth, but only for insurance firm owners.

In what follows, Section 4.2 presents the results for the entire sample. Section 4.3 splits and report empirical results per industry sector. Section 4.4 examines excess returns based on deal specific factors and country effects. Section 4.5 concludes the chapter.

4.2 Overall ARs and CARs for Acquirers and Targets

In this section, we present empirical results from all bank-insurance deals estimated using event study approach's market model as it is preferred over the basic CAPM, especially in short return windows (Cable and Holland, 1999; Fama, 1998). The daily abnormal returns are estimated as the difference between actual stock returns and the normal returns, which is predicted based on two inputs: the market model parameters (α and β), and the actual reference market return. We use the adjusted BMP test statistic (*adj*.-BMP) of Kolari and Pynnönen (2010) to test for statistical significance. In informationally efficient stock markets, security prices fully reflect all publicly available information (Fama et al., 1969; Malkiel and Fama, 1970). Similarly, when M&A are announced, the deal's intrinsic characteristics reveal a considerable amount of information about the expected future gains or losses to investors. The deal details provide information about the future performance of the merged entity to investors, to which they react (Tao et al., 2017).

Despite the conflicting nature of results in the prior empirical literature on valuation effects of M&A, most banking and industry studies reveal that there are no gains and, in some cases, there are significant losses (Asimakopoulos and Athanasoglou, 2013; Delong and Deyoung, 2007; Gupta and Misra, 2007). As such, these M&A are presumed to be value-destroying, or at least value-neutral for acquirers, and value-creating for targets. The limitation in the current studies is that they are based on small samples largely drawn from either the US or EU, or US and EU combined. Studies conducted on a global scale tend to focus exclusively on either banking or insurance transactions (Cummins et al., 2015). Besides, most of these studies give more focus on acquirers and little attention to the target's wealth effects.

To counter the above limitation, we conduct a global study employing a relatively large sample. Table 2 shows the ARs around the announcement date (±5 days) and the associated CARs over some selected event windows for acquirers and targets, and the corresponding statistical tests. Panel A reports the ARs and CARs for acquirers while Panel B reports the ARs and CARs for the targets. During the pre-announcement period, there is an alternating pattern of positive and negative ARs. None of these returns is significant. This denotes an absence of information leakage or at least validates the view that the market did not anticipate these announcements. The ARs for acquirers are, however, negative, and significant on the event announcement day (t=0), and insignificant immediately thereafter. Looking at the CARs of windows close to the announcement date; it is also clear that acquirers experience negative and significant abnormal returns. Precisely, all CARs arising from a combination of windows within five-

days [–2; 2] are negative and statistically significant at 1% level. The existence of negative and significant CARs for acquirers clearly portrays the value investors put on bank-insurance mergers.

Panel B of Table 2 reveals that during the run-up to the event date, the ARs are positive and significant. On the announcement date (t=0), target shareholders earn an average abnormal return of 8.86 per cent; the value is statistically significant at 1% level. Besides, over 72 per cent (414 of 573) of the target returns on the announcement date are positive. Focusing on the post-merger period, the ARs on (t=1) are positive and significant, however, there are reversals in the ARs after day (t=2) suggesting the presence of short-term overreaction. The CARs are also statistically significant (at 1% level) or better for all the event windows analysed. For instance, the mean cumulative ARs for the [–1; 1], [–1; 0] and [0; 1] windows are 14.43, 10.91 and 12.38 per cent, respectively. This reaction tends to persist even when relatively wider intervals such as [0; 4], [–2; 2] and [–5; 5] are examined.

Based on these results, we observe that M&A between banks and insurance companies generate positive returns for the targets while acquirers' gains remain negative and significant. These results are consistent with prior empirical literature on mergers and acquisitions in the financial services sector – that is, target shareholders tend to gain from M&A activities at the expense of the acquirers' who experience negative abnormal returns around merger announcements date (Amihud et al., 2002; Asimakopoulos and Athanasoglou, 2013; Chavaltanpipat et al., 1999; Chen and Tan, 2011b; Cummins and Weiss, 2004). However, the above results are inconsistent with existing literature (Dontis-Charitos et al. (2011); Fields et al., 2007a,b; Johnston and Madura, 2000; and Nurullah and Staikouras, 2008; 2007) who report significant positive returns for acquirers in bank-insurance mergers. Nevertheless, other studies (Beitel and Schiereck, 2001; Cybo-Ottone and Murgia, 2000; Ismail and Davidson, 2005; Tourani Rad and Van Beek, 1999) find M&A between banks and insurers yield close to zero or negative and insignificant returns for bidders while targets experience significant positive returns. Our study contributes to this debate by showing that bank-insurance deals create wealth for target shareholders.

Several explanations could be put forward to justify the probable cause of the inconsistency between our results and previous bank-insurance M&A studies. Firstly, all the above-mentioned studies examine deals that are regarded exclusively as bancassurance and not ordinary M&A deals as is the case in our study, or where the discrimination between banks and insurers is apparent. Secondly, these studies are largely based on small samples (Cybo-Ottone and Murgia, 2000; Johnston and Madura, 2000) which, according to Kolari and Pynnönen (2010) could affect the reliability of statistical tests. Thirdly, the scope

of prior studies (as stated previously) is limited only to the US, EU, Australia, and Canada – regions which under World Bank designation are classified as developed and where the market is presumed to be fairly efficient. Lastly, these studies require firms in their final sample to end up owning a controlling interest in the target. In contrast, ours is a global study requiring that bidders end up with a minimum level of significant voting rights in the target after the merger.[13] We distinguish between these factors in detail at a later stage.

[13] The details about the requirement for acquirers to have minimum level of significant voting rights in the target is given in chapter 3.

Table 2: ARs and CARs for Acquirers and Targets Overall Sample

This table reports average values of abnormal returns (ARs) and cumulative abnormal returns (CARs) expressed in percentages (%) for the acquirers and the targets. In each of the panels: the first three columns report the daily ARs around the event date (±5 days) together with the statistical significance while the last three columns report the CARs over 11 symmetric and non-symmetric event windows and their statistical significance. The deal announcement date is day t=0. The results are for the entire sample period, 1999–2020. We estimate the returns from the market model parameters over 200 days, starting 220 days and ending 21 days before the event announcement.

Days	ARs	*adj.* BMP	N	Positive: Negative	Event-window	Mean CARs	*adj.* BMP	Days	ARs	*adj.* BMP	N	Positive: Negative	Event-window	Mean CARs	*adj.* BMP
	Panel A: Acquirers for all years (1999–2019)								Panel B: Targets for all years (1999–2019)						
–5	–0.02	–0.491	1384	645:740	(–5, +5)	–0.21	–2.816[a]	–5	0.21	1.940[c]	564	302:262	(–5, +5)	14.07	11.067[a]
–4	0.06	0.463	1384	678:707	(–4, +4)	–0.17	–2.804[a]	–4	0.04	1.735[c]	564	277:287	(–4, +4)	13.78	11.249[a]
–3	–0.04	–0.650	1384	642:743	(–2, +2)	–0.23	–3.113[a]	–3	–1.12	0.176	564	276:288	(–2, +2)	15.02	10.783[a]
–2	0.05	0.606	1384	671:714	(–1, +1)	–0.29	–3.608[a]	–2	0.45	3.237[a]	564	307:257	(–1, +1)	14.43	10.556[a]
–1	–0.03	–0.900	1384	651:734	(–1, 0)	–0.20	–3.660[a]	–1	2.05	3.469[a]	564	310:254	(–1, 0)	10.91	10.761[a]
0	–0.20	–3.182[a]	1384	657:728	(–2, 0)	–0.18	–3.514[a]	0	8.86	13.640[a]	564	414:150	(–2, 0)	11.36	11.148[a]
1	–0.06	–0.783	1384	663:706	(–5, 0)	–0.18	–3.603[a]	1	3.52	7.591[a]	564	330:234	(–5, 0)	10.49	11.567[a]
2	0.04	0.772	1384	671:722	(0, +1)	–0.26	–3.766[a]	2	0.14	1.217	564	258:306	(0, +1)	12.38	9.945[a]
3	0.02	0.090	1384	649:736	(0, +2)	–0.22	–2.968[a]	3	–0.03	–0.447	564	253:311	(0, +2)	12.52	10.155[a]
4	–0.01	1.212	1384	676:709	(0, +4)	–0.21	–2.509[b]	4	–0.13	–2.014[b]	564	272:292	(0, +4)	12.36	10.168[a]
5	–0.02	0.029	1384	638:747	(0, +5)	–0.23	–2.395[b]	5	0.08	0.538	564	256:308	(0, +5)	12.44	9.959[a]

Notes: The superscripts a, b and c represent the statistical significance at 1- , 5- and 10% levels, respectively. ARs = Average Abnormal Returns, CARs = Cumulative Average Abnormal Returns, *adj*.– BMP, t = the Adjusted BMP t – statistic.

4.3 ARs and CARs for Targets and Acquirers per Industry Sector

To shed light on whether the market reaction varies depending on the bidders' industry sector, abnormal returns are estimated for acquirers and targets independently for both industries to determine whether there are industry differences. From a theoretical viewpoint, (Staikouras, 2006; Yaghoubi et al., 2014) ARs are presumed to depend upon several factors: nature of merger relationship (vertical, horizontal or conglomerate); corporate reputation; firm size; a range of services provided, amongst others.

Empirical literature cites two fundamental factors to justify the presence of industry-level differences in M&A returns. i) *Relative firm profitability* where (Hao et al., 2011) report an inverse relationship between relative profitability and return sensitivity, a situation that becomes noticeable when there is positive rather than negative industry news, particularly for sectors with high capital intensity. ii) *Industry concentration* in which firms from highly concentrated industries, as opposed to low concentration, are expected to earn lower returns (Hou and Robinson, 2006). We could attribute this to either the existence of entry barriers that insulate firms in more concentrated industries from financial distress or a possibility that firms from highly concentrated industries engage in high innovative activities, largely associated with lower expected returns.

Prior studies point out that merger relationships can be used as a basis to evaluate the scope and scale benefits (Asimakopoulos and Athanasoglou, 2013; see, e.g. Berger and Humphrey, 1997; Hughes et al., 1999; Levy and Sarnat, 1970), as well as the implications of agency problem on acquisitions (Balakrishnan and Koza, 1993; Reuer and Koza, 2000; Travlos, 1987). These factors could also influence the ARs. Based on the assertions from both empirical and theoretical literature, we examine the behaviour of investors under the following arrangements: banks acquiring other banks, banks acquiring insurance firms, insurance firms acquiring banks, and finally, insurance firms bidding for each other. To achieve the above, we utilise a four-digits standard industrial classification (SIC), which is widely used in the finance and economics literature as well as prior bank-insurance studies (see, e.g. Cummins et al., 2015a; Fields

et al., 2007a).[14] Table 3 shows the distribution of the M&A deals for the acquirers and the targets based on the acquirer's industry sector.

Table 3: Number of Acquirers and Targets Based on Industry Sector

The table presents the distribution of M&A deals split based on the acquires' nature of activities. The final dataset comprises 1384 acquirers and the corresponding 564 listed targets for deals spanning the period 1999 to 2019. Notice, the unlisted targets are excluded from this analysis due to their stock data unavailability.

Acquirers and Targets				
	Bank–Bank	Insure–Insure	Bank–Insure	Insure–Bank
Acquirers	851	299	168	66
Targets	429	96	22	17

Such a breakdown is economically important, since depending on the degree of maturity of an industry or economic cycle, the gains arising from M&A in the *same* industry may not be substantial as there may be few opportunities for economies of scale through M&A. The results from our analysis provide an interesting picture of how different industries within the financial services sector react to mergers and acquisitions.

4.3.1 Bank–Bank Mergers

Panel A of Table 4 presents the ARs and CARs for acquirers and targets from interbank deals. These results are somewhat analogous to those reported in the entire sample. We find that on the announcement day (t=0), acquirers experience negative and significant ARs at 1% level. The CARs for the [–1; 1] and [–2; 2] windows are –0.45 and –0.34 per cent, respectively. The same pattern of significant negative returns for bidders is replicated in the asymmetric windows close to the announcement date. For instance, majority of the combinations that lie within the 5–day window [–2; 2]: [–2; 0], [–1; 0], [0; 1], and [0; 2] yield negative and significant returns. Contrary to the general expectation, these results suggest that focused merger transactions are likely to reduce value for acquirers.

The negative announcement returns for bidders could because of three things. First, agency related issues – banks and insurers are prone to moral hazard problems often arising from debt and equity

[14] All bank bidders and targets lie under SIC codes 6000 for depositary institutions, 602 – all national commercial banks, and 6022 – all state commercial banks and bank holding companies. Our corresponding codes for insurance bidders and targets are: 6311 – life insurers; 6321-accident and health insurers; 6331 – fire, marine and casualty insurers; 6399-insurance companies NEC; 6411-Insurance agents and brokers.

contracts. Consequently, investors may perceive mergers initiated by such entities as attempts by entrenched managers to pursue empire building and put the wealth of shareholders at risk (Harford et al., 2012). Second, the negative bidder returns could be attributed to the fact that banks are heavily leveraged. One could argue that due to high leverage in banks, there is a transfer of wealth from shareholders to bond or debt holders (see Chen and Tan, 2011b, p. 19). Third, based on the conventional view advanced by Schupmpeter (1912) and Hou and Robinson, (2006) showing that industry concentration could have an impact on the firms' risk behaviour: influence innovation dynamics, distress risks and affect the process of creative destruction. Banks, being a kind of oligopolies, they are highly concentrated with high entry barriers. Banks, being a kind of oligopolies, they are highly concentrated with high entry barriers. *Ceteris paribus* ,we suppose the above influences could be reflected in the management's strategic merger motives. For example, as innovation dynamics and strive for efficiency increases, monopolistic collusion motives could drive most bank mergers, as inclinations towards limiting the outputs, raising product prices and/or lowering factor costs seem more promising (Chatterjee, 1986). The market may perceive such mergers as value-irrelevant events for bidders and react negatively to their announcements.

Targets, on the other hand, exhibit substantial market value gains around merger announcement dates. The ARs for days t= –1, t=0 and t=1 are 0.58, 9.04 and 3.27 per cent respectively, and are statistically significant at 1% level. Similarly, CARs are positive and significant in all the windows investigated. Our results corroborate prior empirical studies (see, e.g. DeLong, 2003, 2001; Gabriel A. Hawawini and Swary, 1990; Houston et al., 2001; Madura and Wiant, 1994) indicating that acquirers from bank-to-bank deals tend to suffer losses in market value terms while targets enjoy significant gains around announcement dates.

Our results contradict other M&A studies that report average gains for acquirers around the event date (Amihud et al., 2002; Kolaric and Schiereck, 2013; Tourani Rad and Van Beek, 1999) and Pilloff and Santomero (1998) who find that on average bank mergers does not create or destroy shareholders' value. The cause of disparity in our study, in comparison to previous studies, can reasonably be justified. While our analysis focuses on bank mergers in the global arena, the above studies are either drawn from the US, the EU, or both. Notably, one of these studies: Amihud et al. (2002) examine unlisted targets, which, according to extant literature, creates value to shareholders (Fuller et al., 2002; Harford et al., 2012).

Table 4: ARs and CARs for Acquirers and Targets – Focused Acquisitions

Panel A: Bank-Bank deals

Days	ARs	*adj.* BMP	N	Positive: Negative	Event-Window	Mean CARs	*adj.* BMP	Days	ARs	*adj.* BMP	N	Positive: Negative	Event-Window	Mean CARs	*adj.* BMP
	Acquirers for all years (1999–2019)								Targets for all years (1999–2019)						
–5	0.01	0.345	851	404:447	(–5, +5)	–0.17	–2.467[b]	–5	0.19	1.513	429	226:203	(–5, +5)	13.65	9.019[a]
–4	0.08	0.452	851	418:433	(–4, +4)	–0.19	–2.648[a]	–4	– 0.05	1.349	429	211:218	(–4, +4)	13.44	9.231[a]
–3	0.01	–0.297	851	390:461	(–2, +2)	–0.34	–3.089[a]	–3	0.26	1.714[c]	429	208:221	(–2, +2)	13.24	8.749[a]
–2	0.09	0.890	851	413:438	(–1, +1)	–0.45	–3.907[a]	–2	0.27	1.768[c]	429	228:201	(–1, +1)	12.89	8.685[a]
–1	–0.02	–0.741	851	410:441	(–1, 0)	–0.42	–4.309[a]	–1	0.58	3.877[a]	429	237:192	(–1, 0)	9.62	9.359[a]
0	–0.40	–4.221[a]	851	378:473	(–2, 0)	–0.33	–4.062[a]	0	9.04	12.13[a]	429	313:116	(–2, 0)	9.89	9.561[a]
1	–0.03	–0.396	851	409:442	(–5, 0)	–0.23	–3.701[a]	1	3.27	6.573[a]	429	253:176	(–5, 0)	10.29	9.999[a]
2	0.02	1.404	851	422:429	(0, +1)	–0.43	–3.756[a]	2	0.08	0.925	429	195:234	(0, +1)	12.31	8.216[a]
3	0.05	0.438	851	388:463	(0, +2)	–0.41	–3.002[a]	3	0.05	0.122	429	191:238	(0, +2)	12.39	8.396[a]
4	0.01	0.836	851	411:440	(0, +4)	–0.36	–2.411[b]	4	–0.06	–1.159	429	206:223	(0, +4)	12.38	8.487[a]
5	0.01	0.138	851	384:467	(0, +5)	–0.34	–2.347[b]	5	0.02	0.160	429	190:239	(0, +5)	12.40	8.249[a]

Panel B: Insurance – Insurance (agencies/brokers)

Days	ARs	*adj.* BMP	N	Positive: Negative	Event-Window	Mean CARs	*adj.* BMP	Days	ARs	*adj.* BMP	N	Positive: Negative	Event-Window	Mean CARs	*adj.* BMP
	Acquirers for all years (1999–2019)								Targets for all years (1999–2019)						
–5	–0.03	–1.416	299	144:156	(–5, +5)	–0.16	–0.871	–5	0.20	0.633	96	53:43	(–5, +5)	16.70	5.860[a]
–4	0.02	0.441	299	152:148	(–4, +4)	–0.19	–0.798	–4	0.30	0.983	96	48:48	(–4, +4)	16.40	5.833[a]
–3	–0.10	–0.448	299	142:158	(–2, +2)	–0.21	–1.240	–3	0.00	0.833	96	48:48	(–2, +2)	16.22	5.678[a]
–2	–0.01	–0.198	299	145:166	(–1, +1)	–0.08	–0.830	–2	0.80	2.094[b]	96	56:40	(–1, +1)	15.25	5.417[a]
–1	0.04	0.595	299	140:160	(–1, 0)	0.01	–0.522	–1	1.00	1.440	96	48:48	(–1, 0)	10.99	4.568[a]
0	–0.05	–0.647	299	155:145	(–2, 0)	0.02	–0.540	0	9.99	6.110[a]	96	76:20	(–2, 0)	11.79	4.864[a]
1	–0.07	–0.809	299	135:165	(–5, 0)	–0.13	–0.836	1	4.26	3.545[a]	96	56:40	(–5, 0)	12.29	4.957[a]
2	–0.12	–1.145	299	133:167	(0, +1)	–0.12	–1.163	2	0.17	0.416	96	41:55	(0, +1)	14.25	5.384[a]
3	–0.06	–0.236	299	151:149	(0, +2)	–0.24	–1.547	3	0.05	0.743	96	47:49	(0, +2)	14.42	5.306[a]
4	0.16	1.476	299	153:147	(0, +4)	0.14	–1.332	4	–0.17	–1.678	96	45:51	(0, +4)	14.30	5.228[a]
5	0.06	0.651	299	148:152	(0, +5)	0.08	–0.872	5	0.10	0.954	96	46:50	(0, +5)	14.40	5.308[a]

The superscripts a, b and c represent the statistical significance at 1%, 5% level, and 10% level, respectively. ARs = Average abnormal returns, Mean CARs = Cumulative Average Abnormal Returns (%), A*dj.*-BMP = the Adjusted BMP t–statistic. The returns are estimated from the market model parameters over a period of 200 days (t_{220} to t_{21}).

4.3.2 Insurance–Insurance (Agencies/Brokers) Mergers.

Panel B of Table 4 shows the corresponding results for the insurance sector. Our criteria for this sub-sample differ slightly from prior insurance studies (Boubakri et al., 2008; Cummins et al., 2015; Cummins and Weiss, 2004) since our study uses a subset of insurers from the total set that the above studies use.[15] Our analysis show that insurance acquirers do not experience significant ARs and CARs during and after the announcement dates. Therefore, we do not find evidence to suggest that pure insurance mergers transactions create or destroy shareholders' value for acquirers.

In contrast, and consistent with prior studies, target transactions substantially enhance the wealth of shareholders. The results in Panel B show that targets receive positive and significant AR in days [–2, 0] and [+1]. On the announcement date, the AR is 9.99 per cent which is significant at 1% level. The CARs are also positive and significant regardless of the event window over which they are estimated.[16] Based on these findings, we conclude that mergers between insurance companies do not create or destroy the value for the acquirers' shareholders, but target shareholders experience up to 9.99 per cent increase in wealth around the event date.

Our results of insignificant abnormal returns for acquirers and significant positive ARs for targets in pure-insurance mergers are consistent with the findings of (Elango, 2006; Kusnadi and Sohrabian, 1999) and Cummins et al. (2015) who find within industry acquisitions (where both the acquirer and target are insurance firms) to generate substantial market value gains for target shareholders. Our results are, however, inconsistent with (Akhigbe and Madura, 2001a; Cummins and Weiss, 2004; Fields et al., 2007a; Madura and Picou, 1993) who show significant positive wealth effects for both acquirers and targets, thus, validating the need for a study that examines pure insurance mergers separately. We further observe that, the gains for target insurance-to-insurance acquisitions are larger than those of target bank-to-bank, although tests of statistical significance on the differences are not performed. An explanation for this could be due to their risk profile and the *moral hazard* problem: insurers are smaller in size, less dependent on short-term wholesale funding, and less interconnected (Raddatz, 2010). Similarly, insurers do not pose the same risk to financial stability as TBTF banks did during the 2008-09

[15] The criterion used by prior insurance studies require insurance company to be *either* the acquirer or the target. Our study requires both to originate insurance industry.

[16] Targets' cumulative average abnormal returns (CARs) for the 3-day window [–1; 1] and 5-day window [–2; 2] are 15.25 per cent and 16.22 per cent, respectively. Both figures are statistically significant at the 1% level.

financial crisis. Evidence from prior studies indicate that even the largest insurance firms have, in recent times, sought to avoid the global systemically important financial institutions (G-Sifis) *label* typically linked to financial guarantees (Geneva Association, 2012).

In summary, the insignificant announcement returns for acquirers' shareholders arising from pure insurance mergers could be attributed to the investors' inability to expect future benefits or an increase in the level of risk resulting from such acquisitions. We could broach two statements to explain why targets earn positive CARs; i) valuation provided for being listed (Cooney et al., 2009); and ii) the ability of target investors to bid up their price, especially for cash purchases (Davidson III and Cheng, 1997).

4.3.3 Bank–Insurance Deals (Bancassurance)

Extant literature proffers divergent views on the risk and returns trade-off available for banks-insurance and/or from bank-insurance agency/brokerage combinations (Boyd and Graham, 1988; Dontis-Charitos et al., 2011; Genetay and Molyneux, 2016; Nurullah and Staikouras, 2008). While Nurullah and Stailkouras (2008) and Dontis-Charitos et al. (2011) offer mixed results when banks merge with insurers, agencies/brokers, Boyd and Graham (1988) and Genetay and Molyneux (2016) emphasise that banking-insurance mergers significantly reduce failure risks due to the diversification nature of insurers with no considerable impact on returns and earnings volatility.

A priori, synergy motive maintains that banks and insurers are entities that share more similarities than differences, qualities that should stimulate scale and scope economies.[17] It is therefore conceivable that M&A between banks and insurers are wealth enhancing not only for the targets and acquirers but also for the combined entity. This section discriminates between banks bidders and insurance bidders to assess how the stock market reacts based on the bidders' industry sub-group or nature of activities.

Table 5 provides the results of our analysis of the market reaction to bank-insurance deals. We find that significant wealth gains accrue for target shareholders around the announcement period, while bidders experience no wealth changes. From Panel A, we observe statistically insignificant results for acquirers in all the 11 days (before and after the event), except for windows [–4; 4] and [–5; 5] which is an

[17] Banks and insurance companies have the following common characteristics. Both are *financial intermediaries*, liquidity creators, and manage financial risks. Their liabilities represent financial claims for policyholders, whereas their assets are financial assets: non-tangible assets whose value is derived from contractual claims (Fields et al., 2007a; Wyatt, 2005).

accumulation of ARs over 9 and 11 days, respectively. Our targets sub-sample that comprises brokerage/insurance agencies, which are perceived to have minimal or no underwriting risks, could motivate the insignificant excess returns experienced by bank bidders.

Targets experience positive AR around the event date. Although the market response is insignificant on the announcement day, the significant AR on day –1 could be seen as an early market response. This is reinforced by the positive and significant CARs in 5 out of 11 windows. For instance, CARs for the 3-day [–1; 1] and 5-day [–2; 2] windows around the event date are 4.56 and 6.72 per cent respectively. This observation is consistent with (Cummins et al., 2015) for cross-industry transactions, however, it opposes the general expectation, and most empirical studies carried out in the US, EU, Canada, and Australia (Cybo-Ottone and Murgia, 2000; Dontis-Charitos et al., 2011; Fields et al., 2007b) where positive valuation effects for bank bidders are reported.

4.3.4 Insurance–Banking Deals (Assure Banking)

Panel B of Table 5 presents the ARs and CARs for our empirical analysis of the equity reaction when insurance companies bid for banks. We observe positive and significant ARs of 0.35 and 0.91 per cent for acquirers for days –4 and 0, respectively, while most CARs are positive and insignificant. Targets experience substantially positive ARs of 8.31 per cent on the event date, significant at 1% level. All the CARs for targets are also positive and significant. These findings suggest that the market expects insurance-banking transactions to create strong synergies and generate wealth for the shareholders of both the acquirers and targets. Our results for acquirers significantly differ with prior bancassurance studies (Dontis-Charitos et al., 2011; Fields et al., 2007b; Staikouras, 2009) who find no wealth changes for both bank and insurance bidders.

We tentatively attribute the differences between our findings and prior studies as stemming from several causes-possibly not testable in the current study. First, in line with several a priori claim, bank shareholders could aim to use the bank-insurance interface as a revenue-enhancing source through scope economies: joint production and synergies. This action may, however, turn out to be a *curse in disguise* because of agency conflicts: *moral hazard* and *adverse selection, something that is* perceived to be detrimental to bank-insurer combinations. Second, our insignificant announcement effect for bank-bidders could be driven by the confusion by investors to discern the benefits of distributing insurance products through banking halls; financial product cannibalization, and misspelling: instances where

customers applying for credit facilities (such as a mortgage) and end up buying insurance products without receiving proper advice on the inclusions and exclusions of the contract (Broome and Markham, 1999).

Finally, most of the cited studies were conducted using datasets spanning the period 1988 to 2006. Recall, there was a marked resurgence of M&A around the global financial crisis (GFC). One could argue that the market for mergers may have changed significantly after the 2008–09 subprime crisis because of enhanced legal restrictions imposed in the financial services sector. This may have conceivably altered the trend of returns for banks and insurance bidders – during and after the merger. In fact, there are arguments based on the cycle of M&A and how this is associated with lower ARs as new M&A move to the end of the cycle (Dieudonne et al., 2014). We aim to explore this further in chapter 5, where we examine the pre-and-post GFC performance of M&A.

By labelling our interbank deals and insurance-to-insurance acquisitions as 'focused' and across the two industries as 'diversified, we observe that focused M&A are wealth-destroying whilst diversified enhance wealth, but only for the owners of insurance companies. We could use various arguments to explain why diversified acquisitions fare better than focused deals. First, the *Tax efficiency hypothesis* (See Moeller and Schlingemann, 2005; Santomero, 1995; Smith and Stulz, 1985) argues that unrelated diversification is often associated with lower operational risk and provides an opportunity to exploit tax benefits. Walter (2004) alludes that geographically diversifying M&A could reduce corporate taxes by lowering both the expected and actual tax burden of a combined firm. If effective marginal tax rates increase with the value of the firm's pre-tax revenues, Smith and Stulz (1985) show that lowering the variability of the firm's pre-tax value can reduce the expected tax burden, thus increasing the expected value of a firm.

Second, is the *risk reduction hypothesis* which comes along with financial stability. Activity diversification can reduce the risk embedded in a firm's share price. By reducing the earnings volatility (since separate activities react differently to market shocks), activity diversification could minimise the risks associated with failure and thereby reduce potential bankruptcy related costs (Walter, 2004). Various studies have tested the risk reduction hypothesis (see e.g. Boyd and Graham, 1988; Elyasiani et al., 2016; Saunders and Walter, 1994) and conclude that diversified M&A within the financial services sector has risk reduction benefits. These studies suggest that the risk reduction benefits increase with the number of activities undertaken. For instance, the most significant risk reduction gain mentioned by the above

studies stems from combining commercial banking activities with insurance, rather than with security activities.

Lastly, diversified mergers could generate synergy resulting from scope and scale economies. Activity diversification could result in cost reduction and enhance revenues because of optimised distribution networks such as a boost in market power, cross-selling, and eliminating duplication of functions, among others. According to Doukas and Travlos (1988), a diversified combined entity may generate internal capital markets, which allow for the efficient allocation of resources within divisions without resistance. Because of this characteristic, such acquisitions tend to be liberally rewarded by capital markets relative to focused M&A. Moreover, since diversified firms have higher credit quality, they are highly likely to provide greater financial synergies than focused firms.

Table 5: ARs and CARs for Acquirers and Targets - Diversified Acquisitions

Panel A: Bank-Insurance deals

Days	ARs	*adj.* BMP	N	Positive: Negative	Event-Window	Mean CARs	*adj.* BMP	Days	ARs	*adj.* BMP	N	Positive: Negative	Event-Window	Mean CARs	*adj.* BMP
	Acquirers for all years (1999–2019)								Targets for all years (1999 –2019)						
–5	–0.07	–0.137	168	69:99	(–5, +5)	–0.29	–1.743[c]	–5	0.72	1.403	22	13:9	(–5, +5)	8.00	1.831[c]
–4	–0.09	–1.361	168	69:99	(–4, +4)	–0.15	–1.842[c]	–4	0.98	0.450	22	10:12	(–4, +4)	6.85	1.596
–3	–0.05	–0.052	168	79:89	(–2, +2)	–0.05	–0.645	–3	0.51	0.739	22	14:8	(–2, +2)	6.72	2.143[b]
–2	–0.06	–0.384	168	84:84	(–1, +1)	–0.15	–1.060	–2	1.25	1.635	22	11:11	(–1, +1)	4.56	1.947[c]
–1	–0.10	–1.120	168	71:97	(–1, 0)	–0.04	–0.596	–1	1.57	2.046[b]	22	14:8	(–1, 0)	2.49	1.195
0	0.06	0.343	168	82:86	(–2, 0)	–0.10	–0.719	0	0.92	0.268	22	12:10	(–2, 0)	3.74	1.792
1	–0.11	–0.596	168	86:82	(–5, 0)	–0.31	–1.142	1	2.07	1.592	22	13:9	(–5, 0)	5.95	2.079[b]
2	0.16	1.228	168	80:88	(0, +1)	–0.05	–0.473	2	0.91	1.873[c]	22	14:8	(0, +1)	2.99	1.462
3	0.00	–0.296	168	77:91	(0, +2)	0.11	0.138	3	-0.93	–1.115	22	9:13	(0, +2)	3.90	1.687[c]
4	0.04	–0.391	168	78:90	(0, +4)	0.15	–0.643	4	-0.43	–0.822	22	14:8	(0, +4)	2.54	0.938
5	0.07	–0.722	168	80:88	(0, +5)	0.08	–0.900	5	0.43	1.049	22	12:10	(0, +5)	2.97	1.134

Panel B: Insurance to Bank deals

Days	ARs	adj. BMP	N	Positive: Negative	Event-Window	Mean CARs	adj. BMP	Days	ARs	adj. BMP	N	Positive: Negative	Event-Window	Mean CARs	adj. BMP
	Acquirers for all years (1999–2019)								Targets for all years (1999–2019)						
-5	–0.13	–0.759	66	28:38	(–5, +5)	–0.42	0.242	–5	0.24	0.674	17	10:7	(–5, +5)	18.09	2.860[a]
-4	0.35	1.921[c]	66	39:27	(–4, +4)	0.19	0.880	–4	–0.24	1.165	17	8:9	(–4, +4)	16.82	2.972[a]
-3	–0.27	–0.782	66	31:35	(–2, +2)	0.49	0.885	–3	–44.43	–1.030	17	6:11	(–2, +2)	63.81	3.134[a]
-2	0.14	0.546	66	30:46	(–1, +1)	0.42	1.259	–2	1.83	3.143[a]	17	12:5	(–1, +1)	61.43	2.511[b]
-1	–0.25	–1.157	66	30:36	(–1, 0)	0.66	1.474	–1	45.68	1.114	17	11:6	(–1, 0)	53.99	2.550[b]
0	0.91	1.963[b]	66	42:34	(–2, 0)	0.80	1.456	0	8.31	2.794[a]	17	13:4	(–2, 0)	55.82	2.945[a]
1	–0.24	0.223	66	33:33	(–5, 0)	0.74	0.973	1	7.44	1.290	17	8:9	(–5, 0)	11.39	2.973[a]
2	–0.06	–0.677	66	28:38	(0, +1)	0.67	1.644	2	0.55	1.282	17	8:9	(0, +1)	15.75	2.149[b]
3	–0.44	–0.066	66	33:33	(0, +2)	0.61	1.203	3	–1.15	–1.423	17	6:11	(0, +2)	16.30	2.501[b]
4	0.06	0.212	66	34:32	(0, +4)	0.22	1.223	4	–1.17	–0.654	17	7:10	(0, +4)	13.98	2.211[b]
5	–0.49	–1.808[c]	66	26:40	(0, +5)	–0.27	0.706	5	1.03	–0.012	17	8:9	(0, +5)	15.01	2.081[b]

The superscripts a, b and c represent the statistical significance at 1%, 5% level, and 10% level, respectively. ARs = Average Abnormal Returns, CARs = Cumulative Average Abnormal Returns (%), *adj.*-BMP = the Adjusted BMP t-statistic. The returns are estimated from the market model parameters over a period of 200 days (t_{-220} to t_{-21}).

4.4 Deal–Specific Factors and ARs/CARs

Having examined the aggregate results on the market reaction to various forms of bank-insurance merger announcements, we delve into deal-specific characteristics: *a)* forms of payment*, b)* size of deals*, c)* target listing status, d) cross-borde*r* effect, among others. The aim is to establish whether each of this attribute independently influences the direction and magnitude of abnormal returns. To achieve this, we partition and perform sub-sample analyses as follows.

4.4.1 The Payment Method

The acquirers' method of payment can serve as a key determinant of how investors react to takeover announcements and the valuation effect (Draper and Paudyal, 1999). Myers and Majluf, (1984) argue that the use of stock payment suggests that acquirers are uncertain about the expected post-merger synergy. This causes investors to interpret pure stock-exchanges as bad news on the bidders, true value, and cash-offers as good news. Similarly, under *the information signalling hypothesis* bidders' equity returns following an M&A is expected to vary depending on the payment adopted (Brealey et al., 1977; Fishman, 1988). For instance, a pure share swap triggers a negative market response as it gives an impression of overvalued stock and high agency costs. *The risk-sharing hypothesis* also suggests that acquirers would privilege a share swap if targets were large enough to share post-merger risks, as long as, the merger does not dilute their voting rights. Cash acquisitions could signify reduced agency costs and increased confidence by investors that a merger would to create synergy (Shleifer and Vishny, 2003). Thus, takeover premiums are projected to be significantly higher for cash-settled deals compared to equity-settled deals.

Following Fuller et al. (2002) we cluster our sample according to the payment methods: 1) *cash payment* to denote all combinations of cash, debt, and liabilities; 2) *stock payment* representing all combinations of common stock, options, and warrants, and finally 3) *hybrid payment* to represent all combinations of cash, common stock, debts, preferred stock, and convertible securities (mixed payment). Out of 1384 successful M&A, 614 are classed as financed through cash; 386 by common stock; 70 through hybrid, and the rest are undisclosed. We limit our focus to only two forms of payment: stock and cash in exclusion of others because the two have widely been cited in M&A literature to best explain the variation of ARs.

Table 6 presents the results for acquirers and targets based on the payment method. Panel A report the estimated ARs and CARs for acquirers and Panel B reports the corresponding results for targets. For acquirers, we observe negative and significant ARs of -0.83 per cent at 1% level for stock-settled deals. All the corresponding CARs are also negative and statistically different from zero. This finding validates the assumption that stock financed mergers receive a negative market reaction and are wealth-destroying. Whether the negative returns experienced by acquirers of stock financed M&A is influenced by factors such as deal size, target listing etc., as alluded by Faccio et al. (2006) and Zhang (2003), is an issue to be explored in the next section. Our results for acquirers corroborate previous studies (Baradwaj et al., 1990; Ismail and Davidson, 2005; Mitchell et al., 2004) who find acquirers to experience negative returns when they predominantly finance their acquisition through pure stock. The acquirers' results for cash-settled deals are, however, positive, and insignificant. There is evidence consistent with Houston and Ryngaert (1997) suggesting that pure cash mergers generate a flat stock market reaction for acquirers: no evidence of wealth transfers between target and bidder shareholders. The method of payment seems to be key in explaining the announcement period returns for acquirers.

The corresponding results for targets show positive and significant ARs/CARs irrespective of the method of payment. For example, on the announcement day (0), the ARs for cash-settled and equity-settled deals is 8.36 and 7.58 per cent respectively. Both values are significant at 1% level or better. The CARs are also positive and significantly different from zero across the payment methods, for all the event windows examined. Our results for targets are similar to those of Andrade et al. (2001) where both forms of payment are reported to generate positive excess returns to target shareholders.

An alternative explanation for the observed relation between forms of payment and abnormal returns is that cash-financed mergers are positively received by investors because they are perceived to carry minimal or no chances of diluting their earnings. In contrast, shareholders may see the issuance of new shares (seasoned equity offering) as a means to create blockholders and ultimately dilute the earning per share (EPS). Similarly, stock financed mergers are believed to trigger agency problems such as adverse selection, or at least signal that the acquirer's stock is overvalued (Hansen, 1987; Houston and Ryngaert, 1997; Myers and Majluf, 1984).

Table 6: ARs and CARs for all Acquirers and Targets - Payment Methods

Panel A: All Acquirers

Days	ARs	adj. BMP	N	Positive: Negative	Event-window	Mean CARs	adj. BMP	Days	ARs	adj. BMP	N	Positive: Negative	Event-window	Mean CARs	adj. BMP
	Cash Payment for all years (1999 –2019)								Stock Payment for all years (1999–2019)						
–5	0.01	–0.280	614	278:336	(–5, +5)	0.09	–0.664	–5	–0.06	0.192	386	186:200	(–5, +5)	–0.64	–1.737[c]
–4	0.01	0.040	614	295:319	(–4, +4)	0.14	–0.513	–4	0.08	0.442	386	191:195	(–4, +4)	–0.63	–2.074[b]
–3	–0.02	–0.087	614	283:331	(–2, +2)	0.05	–0.615	–3	0.12	1.138	386	185:201	(–2, +2)	–0.74	–2.538[b]
–2	0.00	–0.765	614	296:318	(–1, +1)	0.03	–0.439	–2	0.10	1.287	386	197:189	(–1, +1)	–0.83	–2.950[a]
–1	–0.12	–1.586	614	260:354	(–1, 0)	0.12	0.360	–1	0.07	0.878	386	199:187	(–1, 0)	–0.76	–3.552[a]
0	0.24	1.586	614	319:295	(–2, 0)	0.12	–0.356	0	–0.83	–4.569[a]	386	151:235	(–2, 0)	–0.66	–3.030[a]
1	–0.09	–1.061	614	278:336	(–5, 0)	0.12	–0.629	1	–0.07	–0.142	386	190:196	(–5, 0)	–0.52	–2.441[b]
2	0.02	0.768	614	290:324	(0, +1)	0.15	–0.167	2	–0.01	0.047	386	186:200	(0, +1)	–0.90	–3.509[a]
3	–0.01	–0.165	614	299:315	(0, +2)	0.16	0.155	3	–0.06	–0.487	386	171:215	(0, +2)	–0.91	–3.423[a]
4	0.11	1.650	614	316:298	(0, +4)	0.27	0.239	4	–0.03	–0.003	386	177:209	(0, +4)	–1.00	–3.267[a]
5	–0.06	–0.279	614	293:321	(0, +5)	0.21	0.218	5	0.05	0.424	386	180:206	(0, +5)	–0.95	–2.761[a]

Panel B: All Targets

Days	ARs	adj. BMP	N	Positive: Negative	Event-window	Mean CARs	adj. BMP	Days	ARs	adj. BMP	N	Positive: Negative	Event-window	Mean CARs	adj. BMP
	Cash Payment for all years (1999–2019)								Stock Payment for all years (1999–2019)						
–5	0.50	2.508[b]	158	86:72	(–5, +5)	14.99	7.484[a]	–5	–0.04	–0.569	263	137:126	(–5, +5)	10.78	8.270[a]
–4	0.25	2.098[b]	158	79:79	(–4, +4)	14.53	7.428[a]	–4	–0.30	0.462	263	120:143	(–4, +4)	10.81	8.147[a]
–3	–4.84	–0.756	158	70:88	(–2, +2)	19.75	7.550[a]	–3	0.47	1.711[c]	263	136:127	(–2, +2)	10.77	8.275[a]
–2	0.68	2.442[b]	158	89:69	(–1, +1)	18.48	7.313[a]	–2	0.30	1.352	263	135:128	(–1, +1)	10.55	8.248[a]
–1	5.58	1.978[b]	158	84:74	(–1, 0)	13.94	5.451[a]	–1	0.48	2.774[a]	263	147:116	(–1, 0)	7.93	6.923[a]
0	8.36	7.162[a]	158	114:44	(–2, 0)	14.62	5.726[a]	0	7.58	9.118[a]	263	197:66	(–2, 0)	8.22	7.056[a]
1	4.54	5.282[a]	158	97:61	(–5, 0)	10.53	5.922[a]	1	2.49	4.999[a]	263	155:108	(–5, 0)	8.35	7.345[a]
2	0.59	1.143	158	74:84	(0, +1)	12.90	7.195[a]	2	–0.07	–0.349	263	112:151	(0, +1)	10.06	7.865[a]
3	–0.33	–1.760	158	65:93	(0, +2)	13.49	7.239[a]	3	0.03	0.056	263	119:144	(0, +2)	10.00	7.731[a]
4	–0.30	–1.860	158	78:80	(0, +4)	12.86	6.872[a]	4	–0.16	–1.668	263	119:144	(0, +4)	9.87	7.314[a]
5	–0.04	0.040	158	70:88	(0, +5)	12.82	6.909[a]	5	0.01	–0.763	263	111:152	(0, +5)	9.88	7.482[a]

Notes: ARs and CARs are expressed in percentages (%). The superscripts a, b and c represent the statistical significance at 1%, 5% level, and 10% level (two-tailed test), respectively. ARs = Average Abnormal Returns, CARs = Cumulative Average Abnormal Returns, adj.–BMP = the Adjusted BMP t-statistic.

4.4.2 Size of Deals

Prior empirical evidence provides conflicting views on the relation between M&A premia and deal-size. On one hand, Alexandridis et al. (2013) and Loderer and Martin (1990) postulate that large M&A deals destroy value for bidders. Some reasons broached in favour are the high value-at-stake associated with buying large targets; post-merger integration difficulties (complexity hypothesis); managerial hubris, amongst others. In contrast, DeLong (2001) and Moeller et al. (2004) find takeover premiums experienced in financial mergers to be positively correlated with deal size. The latter studies indicate that bids with high transaction volumes pose greater economic relevance to the acquirers, who would be more than willing to part with higher premiums. Within the financial services industry, Dontis-Charitos et al. (2011) reveal that large deals attract lots of media attention and are usually trailed by analysts due to the impact they pose on both the investment banks' portfolio and the broader economy. Large deals are also associated with enhanced scope and scale synergies, especially when banks and insurance companies merge (Fields et al., 2007b).

To test the impact of deal size on abnormal returns, we split our sample into three groups following Fama and French's (1993) breakpoints for the top 30% (large deals), middle 40% (medium-sized deals), and bottom 30% (small deals) of the ranked deal values. Panel A of Table 7 reports the results for acquirers while Panel B presents the results for the targets. We find a negative association between deal value and the announcement period returns. In other words, our results for acquirers reveal that the stock market reacts negatively to large deals, neutrally to medium-sized, and positively to small bank-insurance merger deals. For example, on the announcement day, ARs for large and small deals are -0.89 and 0.26 per cent respectively, significant at 1% level. All the CARs for both large and small deals are also statistically significant, however, the CARs for large deals are negative while small deals are all positive. The CARs for medium-sized deals are positive in all the event windows, except for windows [0; 0] and [0; 1], however, neither the ARs nor CARs are significant.

From Panel B, we observe that targets earn significant positive announcement period returns irrespective of the size with gains of 7.92, 8.89, and 9.83 per cent respectively for large, medium, and small deals. Small deals exhibit superior performance to medium and large deals. A possible explanation for this is hubris: managers of big firms overpay to acquire small firms either for empire-building, or

because they believe that such firms are undervalued (Moeller et al., 2004). The incentives of managers in small firms are also better aligned with those of outside shareholders than they are in large firms.

The above finding reveals that on average, M&A announcement of large firms generate negative synergies, while the announcements for small firms are profitable to their shareholders. Whether this is specific to the post GFC period is an important aspect to explore. A quick glance at our merger deals also reveals that most of our *very large* deals are financed through stock.[18] Whilst there exists no robust reasoning in the empirical evidence to justify why this is the case, numerous theoretical underpinnings suffice. First, the risk-sharing hypothesis provides that the acquirers' choice of payment medium is informed by the information available about the market value of targets. Thus, if a target enjoys an informational advantage relative to the bidder, the bidder is likely to privilege stock acquisition with a view of sharing potential post-acquisition risks (Eckbo and Thorburn, 2000; Hansen, 1987). Such transactions yield lower CARs for bidding firms.

Second, the existence of enormous deals could signal *outsized* targets either in market capitalization or total assets terms.[19] In the financial services sector, if outsized targets merge with potentially large bidders, it could create institutions so big and complex that are highly risky (Baele et al., 2007; Zanghieri, 2017). As highlighted by Zanghieri (2017), the formation of such institutions may be perceived as an attempt by entrenched managers to gain access to TBTF guarantees, thus attracting negative price adjustments. Finally, under *the hubris hypothesis,* managers of corporations with diffused ownership, when not carefully monitored, make self–gratifying investment decisions**,** instead of maximising their shareholders' wealth. As long as an M&A serves their interest or objectives, such managers would be willing to pay more for targets than they are worth (Harford et al., 2012; Morck et al., 1990). Therefore, we expect merger announcements involving these firms to yield negative, or at least less positive bidder returns.

[18] Very large/enormous deals are those whose transaction value ≥ $10 billion. Effectively, 56 deals are classified as "very large", out of whom 61 per cent (34) are financed through equity, 17 per cent (9) by cash, and 22 per cent (13) financed through a mix of the two (hybrid). Comparatively, out of 395 *small deals*; 52 per cent (204) are cash financed, and 21 per cent (79) are equity-settled.

[19] Outsized targets are big or very large targets whose value exceed USD 1.5 billion.

Table 7: ARs and CARs for all Acquirers and Targets - Controlling for Size

The sample consist of 1384 successful bank-insurance M&A announced between 1999-2019. A total of 1316 deals for acquirers disclosed their deal values and are populated as follows: Large (30%) = 395 (value >$750.00 mil.), medium (40%) = 526 ($92 mil. < value <$749 mil., and small (30%) =395 (value < 92 mil.). The corresponding values for disclosed targets are large (30%) = 169 (value >$1751 mil.), medium (40%) = 225 ($251.3 mil. < value <$1751 mil., and small (30%) =169 (value < 251.3 mil.) where bidders and targets are either banks or insurers. In each of the deal sizes, the first three columns report the daily ARs around the event date (±5 days) together with their statistical significance while the last three columns report the CARs over 11-day window and their statistical significance. The deal announcement date is day (t) = 0. We estimate the returns using the market model parameters over 200 days, starting 220 days ending 21 days relative to the event announcement date.

Panel A: All Acquirers

Days	ARs	*adj.* BMP	Event-Window	Mean CARs	*adj.* BMP	Days	ARs	*adj.* BMP	Event-window	Mean CARs	*adj.* BMP	Days	ARs	*adj.* BMP	Event-window	Mean CARs	*adj.* BMP
	Large Deals						Medium Deals						Small Deals				
–5	–0.09	–1.383	(–5, +5)	–1.61	–5.622[a]	–5	0.04	0.748	(–5, +5)	0.24	0.215	–5	–0.03	–0.569	(–5, +5)	0.51	2.082[b]
–4	0.02	0.129	(–4, +4)	–1.48	–5.409[a]	–4	0.02	–0.293	(–4, +4)	0.23	0.135	–4	0.05	–0.006	(–4, +4)	0.45	1.973[b]
–3	0.01	–0.447	(–2, +2)	–1.45	–5.656[a]	–3	–0.07	–0.581	(–2, +2)	0.19	0.351	–3	–0.03	0.070	(–2, +2)	0.45	2.703[a]
–2	0.05	–0.307	(–1, +1)	–1.41	–5.503[a]	–2	0.04	0.157	(–1, +1)	0.08	0.133	–2	0.11	1.804[c]	(–1, +1)	0.32	2.190[b]
–1	–0.21	–2.286[b]	(–1, 0)	–1.10	–5.275[a]	–1	0.10	1.564	(–1, 0)	0.02	–0.086	–1	0.05	0.471	(–1, 0)	0.31	2.336[b]
0	–0.89	–4.902[a]	(–2, 0)	–1.05	–5.510[a]	0	–0.08	–0.878	(–2, 0)	0.06	–0.185	0	0.26	2.593[a]	(–2, 0)	0.42	2.976[a]
1	–0.31	–2.086[b]	(–5, 0)	–1.11	–5.605[a]	1	0.06	0.377	(–5, 0)	0.05	–0.299	1	0.01	0.552	(–5, 0)	0.41	1.727[c]
2	–0.09	–0.372	(0, +1)	–1.20	–5.117[a]	2	0.07	1.308	(0, +1)	–0.02	–0.483	2	0.02	0.174	(0, +1)	0.27	2.287[b]
3	–0.05	–0.610	(0, +2)	–1.29	–5.019[a]	3	0.01	–0.045	(0, +2)	0.05	–0.088	3	–0.08	–0.544	(0, +2)	0.29	2.183[b]
4	–0.01	0.355	(0, +4)	–1.34	–4.905[a]	4	0.08	1.059	(0, +4)	0.14	0.123	4	0.06	0.553	(0, +4)	0.27	1.947[c]
5	–0.04	–0.781	(0, +5)	–1.39	–4.984[a]	5	–0.03	–0.260	(0, +5)	0.11	–0.010	5	0.09	1.217	(0, +5)	0.36	2.286[b]

(*Continued*)

Table 7: (Continued)

Panel B: All Targets

Days	ARs	adj. BMP	Event-Window	Mean CARs	adj. BMP	Days	ARs	adj. BMP	Event-Window	Mean CARs	adj. BMP	Days	ARs	adj. BMP	Event-Window	Mean CARs	adj. BMP
	Large Deals						Medium Deals						Small Deals				
–5	–0.07	0.092	(–5, +5)	10.66	7.790[a]	–5	0.14	0.718	(–5, +5)	13.13	5.236[a]	–5	0.59	2.576[b]	(–5, +5)	18.81	7.834[a]
–4	–0.41	0.536	(–4, +4)	10.30	7.819[a]	–4	0.25	1.923	(–4, +4)	13.19	5.448[a]	–4	0.22	1.325	(–4, +4)	18.13	7.695[a]
–3	0.59	2.040[b]	(–2, +2)	10.71	7.676[a]	–3	0.16	0.735	(–2, +2)	12.58	5.162[a]	–3	–4.54	–0.888	(–2, +2)	22.65	7.674[a]
–2	0.75	2.921[a]	(–1, +1)	9.97	7.299[a]	–2	0.27	1.047	(–1, +1)	12.09	5.137[a]	–2	0.38	1.547	(–1, +1)	22.09	7.762[a]
–1	0.92	2.539[b]	(–1, 0)	8.84	6.674[a]	–1	0.58	3.546[a]	(–1, 0)	9.47	6.454[a]	–1	5.13	1.547	(–1, 0)	14.96	5.088[a]
0	7.92	8.114[a]	(–2, 0)	9.59	7.060[a]	0	8.89	8.174[a]	(–2, 0)	9.74	6.511[a]	0	9.83	7.529[a]	(–2, 0)	15.34	5.313[a]
1	1.13	2.808[a]	(–5, 0)	9.70	7.347[a]	1	2.62	3.773[a]	(–5, 0)	10.29	6.788[a]	1	7.13	6.584[a]	(–5, 0)	11.61	5.398[a]
2	–0.01	1.013	(0, +1)	9.05	6.920[a]	2	0.22	0.908	(0, +1)	11.51	4.900[a]	2	0.18	0.035	(0, +1)	16.96	7.534[a]
3	–0.20	–1.945[c]	(0, +2)	9.04	6.885[a]	3	0.19	0.765	(0, +2)	11.73	5.038[a]	3	–0.15	–0.143	(0, +2)	17.14	7.588[a]
4	–0.39	–2.602[b]	(0, +4)	8.45	6.461[a]	4	0.01	–0.665	(0, +4)	11.93	5.147[a]	4	–0.05	0.161	(0, +4)	16.94	7.540[a]
5	0.43	1.733[c]	(0, +5)	8.88	6.565[a]	5	-0.20	–1.623	(0, +5)	11.73	4.923[a]	5	0.09	0.570	(0, +5)	17.03	7.645[a]

Notes: ARs and CARs are expressed in percentage (%). The superscripts a, b and c represent the statistical significance at 1, 5, level, and 10% level (two-tailed test), respectively ARs = Average Abnormal Returns, CARs = Cumulative Average Abnormal Returns, adj.–BMP = the Adjusted BMP t-statistic.

4.4.3 Acquiring Listed or Unlisted Targets

The listing status of targets can have a considerable effect on return pattern, both for acquirers and targets. Empirical literature emphasises that acquirers of unlisted firms earn significant positive excess returns (Ang and Kohers, 2001).[20] The positive announcement effect is however not replicated in the case of acquirers of listed targets (Andrade et al., 2001; Fuller et al., 2002; Moeller et al., 2004; Travlos, 1987). These studies have examined various probable variables to help explain the "listing effect" and produce inconclusive findings. Some of these factors include the method of payment for the target, relative deal value, and the relative size of the bidder against the target, amongst others.

As outlined in chapter 2, Draper and Paudyal (2006) offer three propositions to explain why the acquisition of unlisted targets perform better than the listed ones. These are i) *managerial motive hypothesis* wherein entrenched managers are likely to give privilege to investments that maximise (or at least do not decrease) their utility. They consistently avoid acquiring unlisted targets (using equity) to prevent the creation of block shareholding, which is mainly associated with increased internal scrutiny (Harford et al., 2012), instead, they opt for the alternative (listed targets). The capital market recognises the deals initiated by such managers and reward them negatively (Chang, 1998; Fuller et al., 2002). ii) *illiquidity hypothesis* unfolding instances of wealth creation for acquirers that stem from relative difficulties inherent in buying unlisted targets owing to the absence of reference price (Capron and Shen, 2007; Madura and Ngo, 2012), and iii) *bargaining power hypothesis* in which unlisted targets are, on average, perceived to possess lesser powers to negotiate for higher premiums from acquirers, thus creating more value for acquirers (Capron and Shen, 2007; Officer, 2005).

To test the effect of target listing on acquirers' returns, we split our sample into two groups: listed targets and unlisted targets. Following Konchitchki and O'Leary (2011) and McWilliams and Siegel (1997), we examine the acquirers' returns based on these sub-samples over an 11-day window (±5 days). Evaluating a shorter window allows us to detach M&A announcement returns from probable effects of confounding events. The results in Table 21 (in the appendix) show that acquirers of unlisted targets experience positive and significant excess returns while listed targets exhibit negative significant abnormal returns: ARs and CARs around the announcement period. For instance, the changes in the

[20] Unlisted targets include privately held companies or subsidiaries of public companies.

shareholders' wealth as reflected by the announcement day ARs are –0.90 and 0.43 per cent respectively for the acquirer of listed and unlisted targets.

We also observe positive excess returns (CARs) for unlisted targets, significant in almost all the windows, whereas those of the listed targets are negative and significant at 1%, in all the 11 windows. We perform a robustness check by re-estimating our model over a relatively longer event window [–15; 10]. Figure 3 confirms that bids for unlisted targets trigger a positive stock market reaction relative to those of listed targets. When we segregate the bids based on the payment method: stock, cash, or hybrid, we also notice acquirers of listed targets experience insignificant announcement period ARs for cash-settled deals while those utilising stock as a method of payment earns negative and significant ARs. In contrast, the acquirers of unlisted targets experience positive and significant returns irrespective of the payment method used.

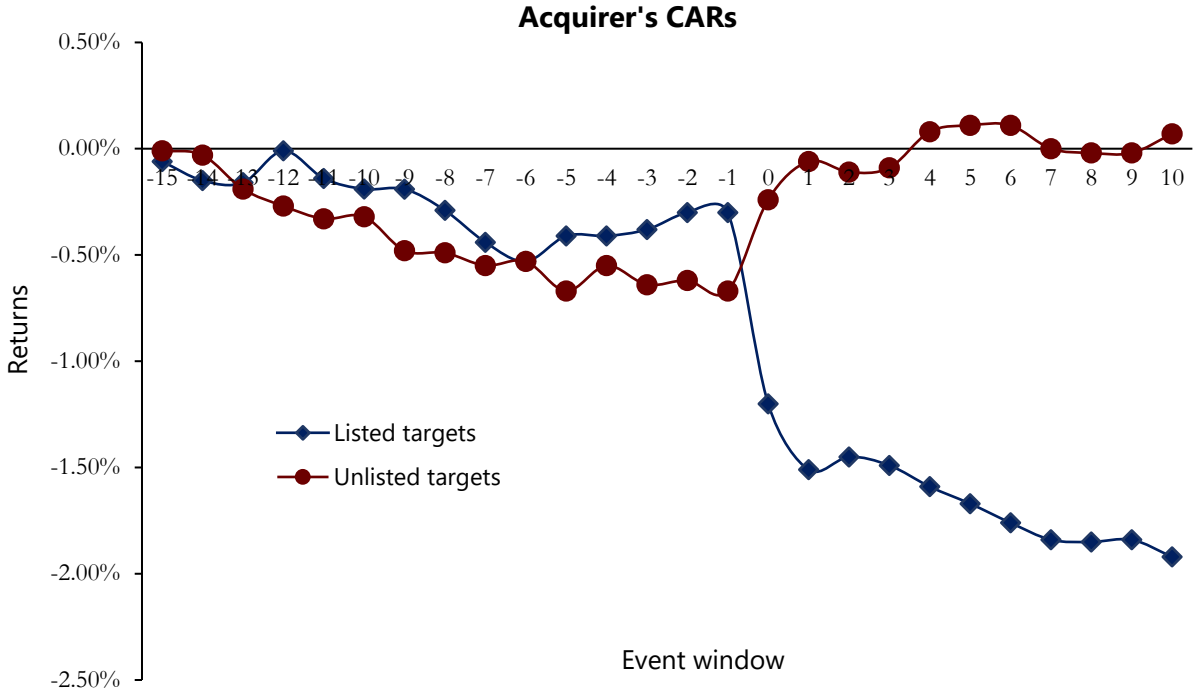

Figure 3: Bidders CARs (%) in Bids for Listed and Unlisted Targets

The figure above shows that in the period preceding the event announcement date, acquirers of listed target exhibit an inferior performance relative to unlisted ones. A prominent observation from the figure is the upward and downward trend around the event date exhibited by the acquirers of unlisted and listed targets, respectively. We label deals as 'listed target' if the target of a firm being acquired is a publicly traded company, and vice versa. This graph presents only CARs (%) for acquirers.

The pre-eminence of acquirer returns on unlisted acquisitions is notable for three reasons. First, the average value of bids for the acquisition of unlisted targets is significantly smaller than that for publicly listed targets ($2,738 million for listed targets versus $591 million for unlisted targets). *Ceteris paribus*,

the bids of smaller magnitude should have a corresponding lower impact on acquirers' equity value. Second, from our earlier results, a substantial proportion of smaller bids are cash financed. Cash-settled deals often exhibit a better market response relative to equity-financed since the capital market expects stock deals to fare worse simply because investors treat equity-financed deals as a signal that the shares are overvalued (see, e.g. Heron and Lie, 2002; Linn and Switzer, 2001; Shleifer and Vishny, 2003). Third, a sharp positive price adjustment around the announcement day for unlisted targets bids could signify failure for the stock market to anticipate the acquisition of unlisted targets. This is in line with higher private information hypothesis for unlisted targets (Faccio et al., 2006). Conversely, information on the acquisition of listed targets is transmitted even before the event announcement. This is evident from Figure 3 where bids for listed targets prompt a significant decline in acquirer return immediately preceding a takeover announcement, possibly signalling pre-bid price run-ups in the share price of acquirers of listed targets, or an eminent insider trading activity (see also, Schwert, 1996).

Our results are comparable to studies by Amihud et al. (2002), Capron and Shen (2007), Chang (1998), and Fuller et al. (2002) and are inconsistent with Fields et al. (2007a) who report positive wealth effects for the acquirers of publicly-listed targets and zero wealth effects on the acquisition on unlisted targets.

4.4.4 Country Effects

To test our hypothesis on whether the bank-insurance announcement returns differ based on the country or region upon which the acquirer is located, we partition our sample into five major categories: the US, continental Europe (including the UK), Australia, Canada, and the rest of the world. A common expectation is that countries with strong/well-developed financial systems (such as the US and UK) should record a substantial number of large and dominant transactions involving highly reputable institutions relative to less developed ones. The net effect should be visible in M&A returns. Similarly, the nature of these countries' financial markets which are essentially efficient should behave in a way that a release of new information, as in a merger, be reflected immediately on the stock prices of participating firms, making it virtually impossible for arbitrageurs to earn excess gains (Andrade et al., 2001; Mitchell et al., 2004).

Besides, various regulatory reforms may have stimulated or reduced gains from bank-insurance M&A. For example, introducing corporate accountability related - Sarbanes-Oxley Act of 2002 enhanced the

corporate disclosure requirements, altered the managerial risk perception, and constrained prospects for insider trading (Bargeron et al., 2010; Cohen et al., 2004). These actions may have had a positive correlation with M&A returns. Similarly, the 2014 UK's banking Reform Act, and the Solvency II Directive of 2009 for insurance companies may have posed a significant impact on the extent and magnitude of bidders' abnormal returns available from bank-insurance M&A.

Panel A of Table 8 shows that US acquirers experience negative and significant announcement period returns in all the event windows. For example, the CARs for the [0; 0], [–1; 1], and [0; 1] windows are –0.41, –0.34, and –0.40 per cent, respectively and are significant at 1% level. The returns for Continental Europe are negative and insignificant on the announcement day, however, CARs in the two windows bordering the event date: [–2; 2] and [–5; 0] are significant. Canada, Australia, and developing economies (rest of the world) show no significant gains for acquirers, except for one event window: [–5; 0] for Canada which is negative (–1.06 per cent) and significant. Our insignificant findings for some of the latter regions may not only be attributed to our small sample size in the Australian and Canadian markets but could also infer that developing county do not necessarily attach value to bank-insurance consolidations. As alluded by Dontis-Charitos et al. (2011), the value-neutral results for continental Europe acquirers may also be explained by the fact that such corporate structures have a rich history in the region, thus, making bank-insurance M&A announcements to trigger no significant market price adjustments.[21]

In Panel B, targets experience positive and significant excess returns around the event date in all the geographical locations. Notably, the CARs are considerably higher in the US and Australia relative to other regions. For example, CARs for the three-day-window [–1; +1] is 18.29 per cent in the US; 17.56 in Australia (including New Zealand); 7.61 per cent in Continental Europe (including the UK); 6.42 per cent in Canada, and 3.55 per cent in the rest t of the world. A plausible explanation for this target-premium differential puzzle is that the US remains the world's largest economy with relatively stable, and highly advanced financial markets that are key in giving financially constrained bidders access to funding. This allows them to compete favourably for value-enhancing acquisitions (Cybo-Ottone and Murgia, 2000; DeLong, 2003). Moreover, the active-nature of the US market - feasibly mirroring an

[21] By saying rich in history, we make reference to the deregulation of the financial market traced back to London's Big-Bang of 1986 and reinforced by successive banking and insurance directives: the Second Banking Directive in 1989, and the third generation Insurance directives of 1994 (Plender, 1986; Zavvos, 1990; Swiss-Re, 1996).

increased demand for M&A could imply multiple bidder contests or competition towards obtaining control. This, together with good investor protection framework, and the various coercive preventive anti-takeover provisions (such as *poison pills* and *staggered boards*) embraced by the US relative to other countries reinforces the bargaining power of their targets to command a higher transfer price (Aybar and Ficici, 2009; Servaes, 1991).

Table 8: CARs for Acquirers and Targets around Announcement Date by Geographical Location.

The table presents excess returns for all acquirers and targets clustered based on the country/region of origin for acquisitions spanning from 1999 to 2019. The sample for acquirers comprises 745 bank–insurance deals for US-based bidders, 359 from continental Europe, 48 from Australia, 39 from Canada, and finally, 202 from other less developed countries (rest of the world). The corresponding sample comprises 381 US-based targets, 101 from Europe, 9 from Australia, 6 from Canada, and 67 targets from the rest of the world. We estimate the CARs and ARs using the standard event study (market model) using daily returns from the period (t_{-220} to t_{-21}) relative to the event announcement date. We present the event windows for all the regions in the first column whilst we report excess returns under each of the subsequent five headings.

Panel A: All Acquirers

Event-window	Mean CARs	adj. BMP	Mean CARs	adj. BMP	Mean CARs	adj. BMP	Mean CARs	adj. BMP	Mean CARs	adj. BMP
	US		Europe		Australia		Canada		Rest of the world	
(–5, +5)	–0.16	–2.054[b]	–0.45	–1.597	0.91	0.297	–1.02	–1.982b	0.01	–0.240
(–4, +4)	–0.18	–2.260[b]	–0.23	–1.354	1.12	0.705	–1.00	–1.623	–0.14	–0.726
(–2, +2)	–0.23	–2.446[b]	–0.25	–1.782[c]	0.46	0.310	–0.40	–0.940	–0.34	–0.800
(–1, +1)	–0.34	–3.247[a]	–0.24	–1.438	–0.15	–0.335	–0.50	–1.303	–0.15	–0.392
(–1, 0)	–0.35	–3.877[a]	–0.11	–0.926	–0.14	–0.120	–0.52	–1.119	0.05	0.196
(–2, 0)	–0.26	–3.145[a]	–0.05	–1.382	0.17	0.354	–0.71	–1.607	–0.08	–0.430
(–5, 0)	–0.19	–2.939[a]	–0.37	–1.735[c]	0.45	0.259	–1.06	–2.346[b]	0.29	–0.344
(0, 0)	–0.41	–3.747[a]	–0.03	–0.496	0.02	0.034	–0.55	–1.415	0.27	1.274
(0, +1)	–0.40	–3.317[a]	–0.16	–1.089	0.01	–0.261	–0.53	–1.561	0.07	0.094
(0, +2)	–0.38	–3.032[a]	–0.23	–1.087	0.31	0.070	–0.25	–0.849	0.01	0.077
(0, +4)	–0.33	–2.676[a]	–0.15	–0.632	0.55	0.366	–0.53	–1.441	–0.05	0.114
(0, +5)	–0.38	–2.553[b]	–0.11	–0.632	0.48	0.151	–0.51	–1.659	–0.01	0.495

(*Continued*)

Table 8**:** (*Continued*)

Panel B: All targets

Event-window	Mean CARs	adj. BMP	Mean CARs	adj. BMP	Mean CARs	adj. BMP	Mean CARs	adj. BMP	Mean CARs	adj. BMP
	US		Europe		Australia		Canada		Rest of the world	
(–5, +5)	17.04	9.965[a]	8.96	3.469[a]	15.34	2.499[b]	9.18	1.958[b]	5.19	2.355[b]
(–4, +4)	16.71	10.157[a]	8.80	3.479[a]	16.12	2.706[a]	10.43	2.201[b]	4.61	2.251[b]
(–2, +2)	18.58	9.673[a]	8.45	3.279[a]	16.71	2.836[a]	11.35	1.908[c]	4.77	2.684[a]
(–1, +1)	18.29	9.635[a]	7.61	3.029[a]	17.56	2.799[a]	6.42	1.576	3.55	2.349[b]
(–1, 0)	13.59	10.214[a]	6.71	2.898[a]	13.23	2.113[b]	6.36	1.508	1.32	1.102
(–2, 0)	13.76	10.433[a]	7.16	2.988[a]	13.13	2.212[b]	7.74	1.613	2.75	1.945[c]
(–5, 0)	12.12	10.632[a]	7.94	3.311[a]	12.67	2.354[b]	5.32	1.518	3.93	2.229[b]
(0, 0)	10.89	13.842[a]	6.05	3.546[a]	11.91	2.663[a]	6.12	1.234	1.41	1.192
(0, +1)	15.45	9.060[a]	6.96	2.832[a]	16.25	2.938[b]	6.18	1.216	3.64	2.376[b]
(0, +2)	15.57	9.230[a]	7.34	2.932[a]	15.50	2.896[b]	9.73	1.362	3.43	2.436[b]
(0, +4)	15.51	9.410[a]	7.01	2.744[a]	14.63	2.573[b]	9.79	1.337	2.93	1.700[c]
(0, +5)	15.67	9.182[a]	7.07	2.806[a]	14.60	2.607[b]	9.97	1.345	2.67	1.588

Notes: The superscripts a, b and c represent the statistical significance at 1%, 5% level, and 10% level (two-tailed test), respectively. ARs = Average abnormal returns, CARs = Cumulative Average Abnormal Returns, and Adj.–BMP = the Adjusted BMP t-statistic.

4.5 Conclusion and Evaluation

This chapter investigates the valuation effects of bank-insurance M&A and presents the empirical results for acquirers and target shareholders around the event announcement date. We examine all global M&A initiated by banks and insurance companies: within themselves (focused), and between each other (diversified), over the period 1999-2019. Consistent with extant M&A literature, we find that bank-insurance mergers trigger a negative market reaction for acquirers, while target shareholders experience significant market value gains. Although the findings on acquirers are in stark contrast with prior bancassurance studies, we suggest the inconsistency could stem from examining other structural arrangements that are not only regarded as bancassurance but fall under the broad umbrella of bank-insurance mergers.

We further delve into the factors that influence the excess returns of both acquirers and the targets. Following the previous studies, we test, i) ARs and CARs per industry sector, ii) method of payment, iii) size of the deal, iv) target listing status, and finally v) country/regional effects. We find that the negative returns for acquirers are mainly driven by focused than diversified acquisitions; deal size: with the market reacting negatively to large deals, and vice versa*;* stock-settled deals fare worse compared to cash-settled. We also observe that acquirers of unlisted targets enjoy superior returns to listed targets, possibly signifying higher private *information* for unlisted targets. On average, bancassurance deals enhance the shareholders' wealth, but only for insurance firm owners. Target shareholders experience significant market value gains both in focused and diversified transactions, however, gains from focused acquisitions are markedly higher. The most rewarding is stock-settled small bank-insurance deals.

At the country level, we find small negative price adjustments for US and Europe acquirers while other regions exhibit insignificant valuations. Whilst all targets experience significant positive returns, the gains for US-targets are substantially higher than they are in continental Europe, Australia, Canada, and the rest of the world. The rationale for this disparity may be due, in part, to the competitive nature of the US's takeover market, possibly reflecting increased demand for M&A; multiple bidder contests; and the robust shareholder protection framework, both of which, gives US targets an upper hand to bargain for higher takeover gains.

There are two important implications of our findings. First, since large deals attract negative market valuation for acquirers and relatively lower dollar-value gains for targets, caution should be exercised when combining two or more equally sizeable firms, as this may give rise to large and complex financial institutions whose failure can have a ripple effect on the entire economy. Second, based on the above negative returns, bank-insurance consolidation does not seem to be a viable investment option for bidders unless a firm wants to enter such arrangements purely for strategic reasons.

5 The Determinants of Global Bank-Insurance Acquisitions Premiums

5.1 Introduction

The underlying motivation behind most mergers and acquisitions (M&A) is to create or take advantage of the synergies that can promote a company's growth, boost its profits, and enhance the wealth of its shareholders. The banking and insurance sector is one where, in theory, M&A can effectively exploit these synergies. However, a large body of empirical studies, mostly drawn from the US and the UK, reveals that acquirers earn either average returns or experience significant losses from the announcement of a takeover bid (Alexandridis et al., 2010; Asquith et al., 1983; Faccio et al., 2006; Schmid and Walter, 2009). The fact that most acquirers pay hefty premiums for targets and receive few, if any, benefits raise an interesting question that is worth investigating. Therefore, this chapter seeks to address what drives excess returns, whether positive or negative, for the acquirers and targets from mergers between banks and insurers.

While prior studies have attempted to thoroughly address the lack of acquirer returns from M&A deals, the determinants of excess returns from bank–insurance consolidations have so far received little attention. Furthermore, the available limited literature is somewhat inconsistent. One strand distinguishes M&A initiated by banks for insurers from bids for insurance agencies/brokerage, citing the existence of differentials in the risk-and-return profile.[23] For example, Dontis-Charitos et al. (2011) report that the significant gains for bank acquirers are driven largely by deal size and regional groupings, while Casu et al. (2016) finds evidence to suggest that size may be partly responsible, but that diversification is not. Another strand aggregates analysis and reporting of results to capture only banks that bid for insurance companies, and vice versa, or simply *Bancassurance*. For example, Akhigbe and Madura (2001) and Fields et al. (2007a) reveal positive wealth effects for bidders that are triggered by firm size and the prospects for synergy (scale and scope economies), while Chen and Tan (2011) cite being a serial acquirer and relative deal size as key contributors. In contrast, Cummins et al. (2015), and van Lelyveld and Knot (2009) note that banks diversify into insurance activities to receive negative

[23] The argument behind separating deals where the targets are insurance companies from those where the targets are insurance agents/brokers is the absence of underwriting risks for the latter, which could prejudice the results (see also, Boyd et al., 1993).

valuation premiums. These studies highlight, *inter alia*, two key factors that drive valuation discounts: cross border partnerships and agency problems.

Except for Akhigbe and Madura (2001) and Cummins et al. (2015), the above studies examine the market behaviour of M&A announcements from just one side, generally the bidder's. While this is not the case with Cummins et al. (2015), they draw their conclusions exclusively from univariate results. We consider univariate analysis as a good starting point from which to identify the potential effect of a particular factor on M&A returns (CARs), but that adding more covariates in a multivariate set-up is vital to achieve more precise estimates.

The limitation and controversy in the extant empirical literature is what motivates this chapter. In the preceding chapter, we established that bank–insurance merger announcements cause significant price adjustments for acquirers and targets. After splitting our sample into various sub-groupings based on certain features (bidder-target relationship, firm/deal characteristics, and country effect), we observed that such factors are highly likely to influence the behaviour of investors and consequently yield some variations in abnormal returns. *A priori*, our expectation is that since banks and insurers have several similarities (they are both financial intermediaries; they rely on the law of large numbers, and are liquidity creators) there should exist opportunities to leverage on joint production in order to generate synergies (Fields et al., 2007b; Staikouras, 2006). It is therefore prudent to assume that bank–insurance M&A announcement returns are partly influenced by the acquirers' or targets' previous performance. Neglecting the influence of prior firm performance could significantly compromise the ability of some of our earlier tests to explain the CARs. To avoid this, we incorporate various accounting/financial characteristics in our list of explanatory variables so that we can measure their aggregate effect on abnormal returns.[24]

This chapter makes three fundamental contributions to the M&A literature. First, this study utilises the most comprehensive sample of 1,384 bank–insurance deals announced between 1999-2019. This is a period characterised by intense M&A activity in the financial services sector, with perhaps the most significant deals. Prior empirical studies tend to focus on bank to non-bank (insurance) consolidations

[24] Throughout this chapter, we use interchangeably use the word 'acquirers' and 'bidders' to mean the same thing: a firm that makes an offer for the M&A bid. The same applies to the use of 'takeover', 'merger', and 'acquisition'.

drawn from developed economies (within US, EU, or a combination of the two, plus Australia and Canada) whilst also being based on small samples.[25] Second, this study complements Akhigbe and Madura (2001) by incorporating financial ratios as proxies of the financial characteristics that have been found to positively or negatively explain M&A returns depending on the motive for the merger. For instance, by analysing financial characteristics, M&A perceived by investors to be driven by *agency motive* (attempts by entrenched managers to preserve or extend their private gains) are adversely compensated (Jensen and Meckling, 1976), while those viewed as driven by the need to generate *synergy* exhibit positive returns for the acquirers (Harford et al., 2012). On the other hand, Tobin's Q and the acquirers' propensity for hubris could be excellent candidates to explain the magnitude of target firms' takeover gains. Since q-ratio is interpreted by Gompers et al. (2003) and Servaes (1991) as a measure of managerial performance, we expect high q firms to make better acquisitions, with more value being created through the market for corporate control whereby less efficient managers or those managing low q targets are replaced with more efficient acquirers'.[26]

A further significant contribution of this work is that it analyses whether there has been a shift in the determinants of bank-insurance M&A returns before and after the global financial crisis. To the best of our knowledge, this is the most inclusive study that examines intra and inter-industry mergers within the financial services sector whilst discriminating between the determinants of M&A returns for acquirers and targets on a global scale. While prior studies examining the determinants of bank-insurance M&A employ data samples up to the end of the GFC, we argue that there was a significant resurgence of M&A around this period. The trend/motives for bank-insurance mergers may have changed after the 2007-09 global financial crisis. Therefore, our study is relevant, as it might generate results that differ from those observed in extant literature.

This chapter documents some key new findings as follows. First, there is a significant inverse relationship between Tobin's Q and excess returns for bidders around bank–insurance merger announcements. By simultaneously considering q-ratio and firm size, one can deduce that the market rewards small financial institutions that have high growth prospects. Second, we find that leverage, high-relative value, and interbank deals drive a substantial proportion of the negative abnormal returns experienced by

[25] Chen and Tan, (2011); Cybo-Ottone and Murgia, (2000); Fields et al., (2007a,b); Peng et al. (2017).

[26] See also Lang, Stulz and Walkling (1989); Martin and Mcconnell (1991).

acquirers. Third, when we disaggregate our sample into the pre- and post-GFC periods, we find that the market values pre-GFC bank insurance M&A according to their debt/leverage levels while in the post GFC-period, it values them based on growth opportunities, the likelihood of the agency problem, and the prevailing economic conditions of the country in which the bidder is domiciled. Our results for target firms show that targets located in the US and the inflation rate that prevails in the target's country key to explaining their positive excess returns. Firm size, Tobin's Q and stock-settled deals only reduce the magnitude of these returns.

The rest of the chapter proceeds as follows. Section 5.2 reviews the relevant literature. Section 5.3 discusses the determinants of excess returns. Section 5.4 explains the variables. Section 5.5 describes the data and model. Sections 5.6 and 5.7 present the empirical results. Section 5.8 concludes the chapter.

5.2 Review of Related Literature

The empirical literature draws from the theory of signalling that documents, among other drivers, three broad forces upon which the drive for financial services consolidation is anchored: *synergy*, *agency motive*, and *hubris*.[27] The search for synergy arises from tax and cost savings, risk reduction, market power, or efficiency improvements from financing capabilities and managerial competence (Berger et al., 1999; Bradley et al., 1988; Eckbo and Thorburn, 2000; Fields et al., 2007a, b). In the bank–insurance sector, proponents of synergy report positive bidder returns, or at least a win-win situation, for acquirers and targets. They contend that M&A could provide an excellent opportunity to bundle the provision of services from a single entity, taking advantage of the reduction in costs for information and transactions when compared to the unbundled products from separate firms.[28] Effectively, bank–insurance M&A should add value by capitalising on scope and scale economies in the production of financial services. These scale economies are achieved primarily through the improved allocation of resources: common databases, digitalization of information, managerial expertise, brand names, and compound marketing strategies (Devos et al., 2009; Lown et al., 2004).

[27] Theory of signalling borrows from Akerlof 's (1970) concept of information asymmetry, and from Grossman and Hart (1981). It suggests that the parties to a takeover bid are presumed to each have access to special information that is unknown to the other and they may use this informational advantage to extract more rent from M&A.

[28] Dontis-Charitos et al. (2011); Johnston and Madura (2000); Staikouras (2006).

Herring and Santomero (1990) examine financial conglomerates and conclude that stable profits and scope economies are the prime objectives of managers, who think that these can best be realised through M&A as opposed to separately-run entities. Fields et al. (2007a) attribute these synergies to high relative value transactions and to transactions that have the prospect of increasing the post-merger revenue streams of a combined entity (i.e., M&A with high performing targets) (Asquith et al., 1983; Kang, 1993; Fields et al., 2007b). In the same vein, Andriosopoulos et al. (2017) and Lewellen (1971) believe that M&A create additional synergies and value through enhanced debt capacities and coinsurance.

Synergy non-adherents argue that M&A are value-reducing for acquirers and enhancing for targets if they are motivated by agency and/or hubris (Jensen and Meckling, 1976; Malatesta, 1983).[29] Under agency motive, M&A are believed to be undertaken because the acquirers' managers intend to pursue private benefits such as empire building, compensation package inflation, or prestige acquisition, at the expense of shareholders (Jensen, 1986). Several reasons are broached to justify this divergence, key amongst which are utilising the free cash flows to expand an enterprise, diversifying the manager's human capital risk/portfolio, or simply acquiring a substantial proportion of assets in a bid to increase a company's dependence on its management (Amihud and Lev, 1981; Harford et al., 2012). Managers can also employ *defensive* acquisitions as a counterstrategy for averting hostile takeovers that would jeopardise their livelihoods. Such acquisitions have been identified in Hadlock et al. (1999) as the means of reducing the target's value around the M&A announcement date.

The hubris hypothesis describes the excessive confidence exuded by bidder managers regarding the value of targets (Roll, 1986). Because of over-optimism and the inclination to overstate potential post-merger synergies, these managers would engage in M&A even when the merger has no synergy (Moeller et al., 2004a; Roll, 1986). The net effect is the unequal sharing of wealth between acquirers and targets. Accordingly, Berkovitch and Narayanan (1993) show that the gains for a target in a hubris-led M&A is the exact proportion of the wealth transferred from the acquirer; thus, the total gains of the combined firm becomes zero. From the foregoing, it is evident that the impact of both agency and hubris on M&A returns will zero-in on the quality of the acquirer's management which, according to Lang et al., (1989), should be positively related to Tobin's Q: low q companies imply poor managerial

[29] Another M&A motive is the overvaluation hypothesis which is the direct opposite of Roll's (1986) hubris hypothesis. See Chapter 2 for more detail on M&A motives.

performance or high entrenchment (see Gompers et al., 2003; Lang and Stulz, 2015).

5.3 Determinants of M&A Excess Returns

5.3.1 Profitability Ratios

Prior M&A literature points out that the profitability ratio could be a manifest of two things: managerial efficiency and excess free cash flows (Healy et al., 1997; Jensen, 1986). Managers are presumed to be efficient if they can make informed investment decisions and choose profitable investment projects (including M&A) that are value enhancing. Their takeover gains are also much larger (Servaes, 1991). However, Manne's (1965) market for corporate control argues that poorly performing firms have a higher likelihood of becoming the takeover targets of well-managed acquirers. This serves as a way of disciplining inefficient managers to align their interests to those of the shareholders (Jensen and Ruback, 1983). Secondly, the theoretical literature reveals that firms with higher profits are inclined to hold huge cash flows or invest in value-reducing projects in lieu of distributing cash to the shareholders (Berger et al., 1999; Stulz, 1990). Such investments are negatively greeted by investors, who view them as empire-building attempts by entrenched managers. Confirming this, prior empirical literature reports a negative correlation between profitability and acquirers' announcement returns, while target firms record positive associations (Jensen, 1986; Palia, 1993).

There are three profitability measures that are most utilised by prior studies: return on assets (ROA), earning per share (EPS), and return on equity (ROE). Although ROE and EPS are still popular efficiency indicators, empirical literature has found them to be misleading, citing them as poor surrogates of economic profitability. First, looking at the EPS formula, the numerator is net income adjusted for preference dividends. Stewart (1989) argues that firms may choose not to pay out dividends in the current period, resulting in an increase in EPS in the next period. This may be misconstrued as good performance. Notwithstanding, Novy-Marx (2013) points out that items situated farther down in the income statement (e.g., net income) provide the weakest measure of true economic profitability. He finds that gross profit-to-assets (ROA) and book-to-market have almost the same satisfactory power in explaining stock returns. Second, the denominator is the number of outstanding shares. Stern (2018) warns that companies may deliberately boost their EPS without necessarily increasing their revenues by purchasing their own shares, thereby reducing the number of outstanding shares (see, e.g., Gould, 2008).

ROE is extremely responsive to fluctuations in financial gearing such that higher levels of leverage ratios lead to higher ROE. In the same vein, Modigliani and Miller (1958) caution against pursuing greater ROEs as they may lead to the destruction of wealth for shareholder. Furthermore, reliance on ROE could be deceptive, as banks and insurers have different leverage ratios (Bisias et al., 2012). We could also use the DuPont multiplier as an alternative measure for profitability. By decomposing the ROA into products of multiple financial ratios, such as equity multiplier, one can find a relevant factor that predicts excess returns. However, its expansive nature requires several inputs to estimate whose accuracy could be debatable. All these explanations validate our use of ROA for acquirers and targets over other profitability measures in explaining excess returns.

5.3.2 Leverage Ratios

Evidence from earlier empirical research suggests that leverage ratios could signal two fundamental things. First, agency conflicts are typically linked to free cash flows, and second, they can be a defence mechanism against hostile takeovers (Jensen, 1986; Safieddine and Titman, 1999). The argument behind agency and free cash flow is that bidders who are awash with cash, as measured by low leverage ratio, have a high propensity to engage in M&A and such acquisitions are often value decreasing (Harford, 1999). On the other hand, Madura and Susnjara (2013) find that bidders with high leverage ratios exhibit relatively cautious behaviour in their use of cash. This is the case because utilising debt in exchange for stock allows managers to meet their promise to pay out some of the future cash flow to shareholders (Jensen, 1986; Maloney et al., 1993). A similar view is held by Stulz (1990), who finds that higher leverage ratios act as a governance mechanism in reducing the free cash flows that managers can otherwise use to finance low-risk-return projects. Leverage also incentivises bidder managers to be more judicious in their actions and to spend more time enhancing the performance of a firm because failure to do so risks ceding control to creditors or even to them losing their jobs should their firms become financially distressed (Gilson, 1990; Masulis et al., 2007). We expect high leverage ratios to generate positive takeover gains for acquirers. *Debt signalling hypothesis* suggests that firms can use debt to signal sound financial health to investors and the market (Mitchell, 1993). Merger announcements where such firms are to take over debt are perceived as good news because they signal that the firms are creditworthy and are raising capital for growth purposes.

The benefits of high leverage ratios are not, however, sustainable. Modigliani and Miller (1963) affirm

that debt beyond a certain point where the marginal costs of leverage just offset the marginal benefits automatically plunges firms into financial distress (Baxter, 1967). Effectively, McConnell and Servaes (1995) and Myers (1977) reveal two perspectives from which investors can view debt when comparing it with a firm's growth potentials. For instance, if a firm has high-growth prospects, low leverage is desirable to avoid losses in value stemming from underinvestment. By contrast, if a firm is perceived to be mature and to have a low-growth potential (i.e., there are limited profitable investments available), high leverage is desirable to reduce the risk of overinvestment (see Barclay and Smith, 2020, p. 83). Based on this argument, we expect the leverage ratio to have a negative effect on abnormal returns, especially when a merger is driven by synergy (high growth firms).

Previous studies suggest that targets increase their leverage as a strategy to inhibit potential hostile takeovers. Stulz (1988) demonstrates that an increase in leverage enhances target shareholders' bargaining power in an M&A. Harris and Raviv (1990) and Israel (1992) find an increase in leverage to have a positive impact on M&A announcement returns for targets. These studies conclude that leverage discourages high leveraged bidders from initiating M&A deals with equally high leveraged targets, but even when they do, target shareholders extract more payoffs from acquirers (see also Billett and Ryngaert, 1997). We expect leverage ratios to have a positive correlation with M&A returns.

5.3.3 Firm Growth Ratios

Empirical literature interprets growth ratios from two main viewpoints – managerial performance and the need to expand the firm's business lines. In Rani et al. (2016), behaviourists contend that growth-maximising managers often engage in M&A purely to build empires and/or serve their own interests. In this situation, an acquirer's returns should be negatively correlated with the growth ratios because of agency problems (see Morck et al., 1990). For non-agency driven mergers, growth ratios should have a positive correlation with announcement returns. For instance, Higgins and Beckman (2006) show that firms with high-growth opportunities reap more benefits from M&A and meet merger-related costs more easily than those with low-growth opportunities. But there are exceptions to this. As Higgins and Beckman (2006, p. 256) highlight, when acquirers are seen to grow much faster than can be sustained, investors tend to change their perception and evaluate them negatively. Arikan and Stulz (2016) find that better performing acquirers with high growth opportunities generate positive M&A announcement returns. They also observe that firms with low-growth opportunities have high agency costs and are

likely to engage in value-reducing M&A.

The most common proxy for firm growth utilised by previous literature is Tobin's Q: a ratio between the market value and the replacement value of a firm. Lang et al. (1989) find bidder returns to be positively associated with Tobin's Q. They report that bidders with high q-ratios experience larger announcement returns compared to low q firms, with the optimal blend being a merger between high q bidders and low q targets. Morck et al. (1990) argue that the low q represents poorly performing firms that are typically run by entrenched managers, while high q implies the reverse.

Consistent with Myers' (1977) overinvestment hypothesis, Doukas (1995) reports a negative association between low q bidder returns and free cash flows, suggesting presence of managerial entrenchment.[30] Servaes (1991) states that if q-ratio is used as a measure of managerial competence, one would expect more value to be created when better-managed (high q) firms take over those that are poorly managed (low q firms). Arikan and Stulz (2016) also echo these assertions. Effectively, we expect Tobin's Q to have a positive correlation with M&A announcement returns and a negative association when there are signs of managerial entrenchment. In all the regressions, we test the hypotheses to see if managerial efficiency and growth opportunities affect excess returns.

5.3.4 Deal Characteristics

Aside from firm characteristics, variation in M&A returns also depends on deal characteristics. These include payment method, cross-border effect, nature of the bid (friendly *vs* hostile), and the target status, all of which have been represented by dummy variables in our cross-sectional analysis. This section dissects the most crucial facts, some of which we have examined in the previous chapter. On the payment method, research shows that equity-settled deals destroy value for the bidder's shareholders while cash-settled deals are short-term value enhancing (Andrade et al., 2001; Martynova and Renneboog, 2009; Masulis et al., 2007). Myers and Majluf (1984) attribute the negative price adjustments made by bidding firms to information asymmetry, i.e., it is an adverse selection problem arising from equity issuance (Shleifer and Vishny, 2003). As for the cross-border effect, Danbolt and

[30] This explains why mature low-growth firms with free cash flows and limited profitable investment opportunities would rather invest the excess cash flows on negative net present value projects than pay them out to shareholders (see Barclay and Smith, 2020, p. 83).

Maciver (2012) and Fields et al. (2007a) reveal that cross-border deals create value for both the acquirer's and the target's shareholders relative to their domestic counterparts. Specifically, targets experience higher announcement period gains than acquirers. However, these gains vary depending on the target location, with US targets recording the highest returns; this is partly because of their superior investor and creditor protection status and partly because of knowledge transfer. Another key factor that could potentially explain higher returns for US targets is the lower inflation rates in the US, making US targets cheaper for foreign firms who, because of competition, end up paying more. Dos Santos et al. (2008) also observe that acquirers gain higher valuation through focused cross-border acquisitions or by acquiring targets from inferior governance structures (Moeller and Schlingemann, 2005).[31] In contrast, Aybar and Ficici (2009) examine acquisitions initiated by multinationals in emerging markets and conclude that cross-border deals destroy value for acquirers' shareholders. Cross-border deals could, therefore, have a positive or negative influence on excess returns.

Turning to variables that are related to deal characteristics, the literature looks at friendly vs hostile M&A deals and target listing status. Baradwaj et al. (1990) investigate the wealth effects of hostile bank takeovers versus friendly bids and find that hostile targets experience significantly larger abnormal returns (CARs) than friendly targets. In both cases, bidders experience insignificantly negative abnormal returns. The net effect is that hostile bank acquisitions create more wealth for the shareholders of a combined entity. Employing a relatively larger sample, Loughran and Vijh (1997) find friendly mergers to be less attractive to bidder shareholders because the stock market often values them negatively. They document higher wealth gains from hostile takeovers, which are typically attributed to either operational synergies or as a move to discipline target managers for their inefficiency (see Martin and Mcconnell, 1991; Sudarsanam and Mahate, 2006). Finally, the acquirers of listed targets fare comparatively worse than their unlisted target counterparts (Andrade et al., 2001; Ang and Kohers, 2001; Fuller et al., 2002).

5.4 Control Variables

A number of control variables are included in this study. We take the existing literature (Harford et al., 2012; Masulis et al., 2007; Moeller and Schlingemann, 2005) to help guide the variable selection and

[31] The term 'focused acquisition' refers to bidders purchasing targets from the same industry (bank to bank, or insurer to insurer).

include variables like firm size, bidder-target relationship, and firm age as our control variables. In addition, we control for the specific macroeconomic environment of the country in which the firms operate.

5.4.1 Size Effect

Research shows that firm size could reveal two things in M&A: financial synergy and agency conflicts. Moeller et al. (2004) argue that managers of large corporations, driven by their desire to build empires, may end up acquiring large targets because hubris leads them to overestimate their ability to outperform the incumbent managers. Should such targets use their size as a defence against hostile takeovers, bidders may pay higher premiums to acquire them (Masulis et al., 2007). However, this may come with incompatibility issues, especially when integrating firm resources.

Effectively, we expect a negative association between M&A announcement returns and firm size (Fields et al., 2007b; Moeller et al., 2004a; Valkanov and Kleimeier, 2007). Following Harford et al. (2012), we use relative size (*deal value* to acquirer's *equity market capitalisation* at year -1) to control for potential scale economies (Chen and Tan, 2011). But because relative size alone may not fully capture possible agency costs, as alluded to by Moeller et al. (2004), we employ additional control variables such as logarithm of total assets and deal size to proxy firm size. We utilise the top and bottom 30% of the values, labelling them high and low respectively, in which respect they are similar to the breakpoints delineated in Fama and French (1993).

5.4.2 Acquirer–Target Relationships

Previous research suggests that some of the key incentives for banks to acquire targets from non-banking institutions is the reduced volatility in profits from core business activities and operational synergies (Boot and Schmeits, 2000; Vander-Vennet, 2002). In a second contrasting scenario, banks earning high profits with decent growth potentials may acquire other banks to increase market share and augment their regional presence. One could, therefore, interpret profitability and growth ratios in the former setup as a threshold for initiating M&A and attribute to it the negative valuation of M&A announcements. In the latter scenario, growth prospects and profitability may signify management efficiency, thus attracting positive stock-market valuations. This is also the case with leverage, as highly leveraged banks (low capitalisations) allow their balance sheet to grow much more quickly.

Since the need to reduce operational cost and cash flow volatility drives most diversified-product acquisitions, investors may use financial-slack indicators such as leverage to explain the motive behind these M&A. The general expectation is that firms with low excess cash flows should benefit more from diversified mergers than from focused mergers. Ekkayokkaya et al. (2009) study the market reaction of diversified over-focused M&A and find that diversifying bids increase value for bidders whereas focused (bank–bank) deals suffer significant losses (Hendershott et al., 2002). DeLong (2003) confirms that diversification could be invaluable to bidders despite studies in other industries finding value in focusing acquisitions (DeLong, 2001; Lang and Stulz, 2015; Morck et al., 1990). Consistent with Chapter 4, we categorise our deals into four: bank–bank, bank–insure, insure–bank and insure–insure to observe how the factors predicting M&A returns vary for these structural arrangements.

5.4.3 Macroeconomic Controls

The last set of variables that could influence the magnitude of M&A returns included in our regression are the macroeconomic controls: GDP growth to proxy business cycle conditions (De Bruyckere et al., 2013), inflation rate (%) to proxy macroeconomic stability, and Herfindahl–Hirschman Index (HHI) to measure competition. Research shows that a country with low inflation, high GDP growth, and a stable political environment creates a conducive market for the financial markets to thrive. GPD growth, for instance, shows that a market's maturity level is capable of supporting the ever-expanding investment opportunities (Montero, 2008; Tuman and Emmert, 2004). We therefore expect GDP growth to have a positive influence on M&A returns. Black (2000) argues that a higher inflation rate may make domestic targets expensive, which may reduce the motivation of bidders to make local acquisitions. However, it will increase their motivation to initiate acquisitions with targets in foreign countries (cross-border deals) where the inflation rate is low. We expect inflation to have a negative correlation with M&A announcement returns.

We include HHI as a measure of market concentration. Small values imply low concentration and large values denote highly concentrated markets or industries (i.e., those controlled by few large enterprises). Hou and Robinson (2006) find firms operating in highly concentrated industries to earn low M&A announcement returns. Thus, HHI may influence the interpretation of our per-industry results because banks and insurance companies are from diverse sectors governed by different regulatory authorities, with potentially different market concentrations.

5.5 Data and Methodology

This section describes the data and presents a model used to execute a study on the determinants of abnormal returns. This is followed by the descriptive statistics for our data and the variable specific correlation matrix.

5.5.1 The Construction of our Dataset

We utilise the Bureau-van-Dijk's Zephyr M&A database to retrieve our initial data on rumour, announcement, and completion dates for deals between banks and insurers that fall between 1 January 1999 and 31 December 2019. We cross-check M&A deals and the announcement dates using Securities Data Company (SDC) Platinum™ for accuracy. After adjusting for missing data and firms with multiple deals within a single year, we end up with 1,384 completed deals, of which 657 targets are listed. Financial data for all acquirers and targets are obtained from both Thomson Reuters DataStream and Bloomberg Terminal. Following prior empirical literature, we compute the financial ratios using yearly data.[32] Except for deal values, which are reported based on the transaction date, all data have a one-year lag in the accounting data/financial ratios. We use lagged values for two reasons. First, because of the assumption that financial information published after the announcement date does not affect M&A returns, and second, to control for simultaneity bias.

The cumulative abnormal returns (CARs) for acquirers and targets estimated in Chapter 4 are then used as the dependent variables against the financial characteristics and deal-specific information taken from Zephyr and SDC. The timeline for the GFC, obtained from the American National Bureau of Economic Research (NBER), runs from December 2007 to June 2009 (See Gorton and Metrick, 2012).

5.5.2 Announcement Period Returns and Model Specification

We estimate average daily M&A abnormal returns (CARs) over a five-day window (±2 days to the M&A announcement) using the event study framework proposed by Brown and Warner (1985).[33] The five-day window is ideal to capture pre-announcement run-ups and delayed or late reactions. To further

[32] Most financial data reported by DataStream and Bloomberg are obtained from annual reports.

[33] Like Harford et al. (2012) and Masulis et al. (2007), we employ the market model to predict the five-day CARs (–2; +2) on an estimation period of –220 to –21 days prior to the event announcement.

assess the link between M&A returns and the various explanatory variables, we follow Petersen (2009) and use ordinary least squares to estimate our empirical equation, as outlined in Eq. (14). For inference, standard errors are clustered at the year, quarter, and regional levels.

$$\begin{aligned} CAR_{(-2;+2)} &= \beta_0 + \beta_1(Tobin^{'}s\ Q) + \beta_2(Leverage) + \beta_3(Market - to - book) \\ &+ \beta_4(ROA) + \beta_5(Unlisted) + \beta_6(CrossB) + \beta_7 Cash + \beta_8(Stock) \\ &+ \beta_9(Friendly) + \beta_{10}(Control_{ki}) + \beta_{11} Cluster_{m_i} + \varepsilon_i \end{aligned} \quad (14)$$

We simplify the above equation to

$$CAR_i = \alpha + \sum \beta_i X_i + \beta_k Control_{ki} + \beta_m Cluster_{m_i} + \varepsilon_i \quad (15)$$

Subscript i indexes takeover firms, CAR denotes the cumulative excess returns for the 5-day event window (–2; +2), α is the constant, and β_i : β_1 to β_9 are the sensitivities of CAR to each of the factors X. $Control_{ki}$ represents k control variables, $Cluster_{mi}$ denotes m cluster dummies for year, quarter, and region with a value of 1, and 0 otherwise, and ε_i is the disturbance term.[34]

In order to eliminate any '*noise*' in our estimation that could emanate from having two or more variables that are highly (but not perfectly) correlated, we use *variance inflation factors* (VIF) as suggested by (Wooldridge 2015, p. 86). According to Snee (1981), a cut-off for the VIF-test to denote a significant variation in magnification effect or presence of multicollinearity problem is 10 and above. More conservative authors recommend having VIF below 5 to rule out multicollinearity issues (Dormann et al., 2013; Hair et al., 2016). Table 22 reveals that all our VIF-values are within the acceptable region, thus suggesting that multicollinearity is not a problem in this study.

5.6 Descriptive Statistics and Matrix of Correlations

Table 9 reports the summary statistics for excess returns and the explanatory variables for acquirers and targets. The average excess returns for acquirers are negative, while those for the targets are positive. The mean values of all other variables are also positive. Most of the explanatory variables (except for the targets' ROA) have low standard deviations, implying that our data is clustered closely around the

[34] The description of variables for model (1) and (2) is in the appendix

mean, which is good. Upon analysing Table 9, we note that the average cumulative abnormal returns from bank–insurance deals for acquirers between January 1999 and December 2019 is –0.23 per cent, while the mean CARs for targets over the same period is 14.94 per cent. The book-to-market ratio, a proxy for a firm's growth potential, has a mean value of 1.81 and 1.68 for acquirers and targets, respectively. This suggests two things; (1) most bidders have higher growth prospects relative to their targets, and (2) the stocks for both bidders and target are overvalued (M/B ratios>1). The firms' ROA, as a proxy for pre-merger performance, also suggests that, on average, targets are less profitable compared to acquirers. This underscores the general expectation that target firms with inefficient managers are highly vulnerable to takeovers by firms with more efficient managers. We reach the same conclusion when scrutinising the efficiency aspect for acquirers and targets using Tobin's Q (as targets exhibit a lower q–ratio relative to acquirers) (Berger and Humphrey, 1997; Lang et al., 1989).

We also observe that over 50 per cent of the M&A (726 out of 1,383) involve deals with unlisted targets and that only 47.51 per cent of the acquired firms are publicly listed. However, here, the sample size drops drastically to 512 because of financial data unavailability across Reuters DataStream and Bloomberg. Almost half (44.4 per cent) of the deals are financed through cash, 438 (31.7 per cent) are cross-border, and the vast majority (68.9 per cent) of deals are friendly rather than hostile.

Table 9: Sample Descriptive Statistics for Overall Sample

The deal characteristics: unlisted targets, cross-border, cash, stock and friendly are represented by dummies. The macroeconomic variables (GDP, Inflation and HHI) are for specific countries from which the firms are drawn. The dataset comprises of M&A initiated between 1999-2019. All variables are defined in the Appendix.

Variable	Obs	Mean	Median	Max	Min	Std Dev.
Panel A: Acquirers						
CAR (-2; +2)	1384	–0.2307	–0.1550	41.0800	–28.2300	4.9474
Tobin's Q	1384	1.2175	1.1472	13.4406	0.0024	0.4558
Leverage	1384	1.0014	0.4178	57.2637	–2.0840	2.1892
Market-to-book M/B)	1384	1.8101	1.5457	24.1085	–0.1576	1.3217
Return on assets (ROA)	1384	1.4068	1.0520	82.0000	–24.4700	2.8965
Listed targets	1384	47.51	1	1	0	0.4996
Cross-border deals	1384	31.67	0	1	0	0.4654
Cash financed	1384	44.40	0	1	0	0.4970
Stock financed	1384	27.91	0	1	0	0.4487
Friendly deals	1384	68.91	1	1	0	0.4630
Firm age (yrs.)	1384	59.029	34	383	0	56.964
GDP growth	1382	2.5867	2.5260	14.2309	–9.1325	2.2102
Inflation rate	1350	2.1603	2.0693	16.5235	–3.7491	1.5574
HHI	1309	0.0883	0.0649	0.6592	0.0341	0.0952
Panel B: Targets						
CAR (-2; +2)	512	14.927	11.135	89.119	–83.290	42.414
Firm size	512	8.4754	8.0819	14.0950	3.4904	1.8681
Tobin's Q	512	1.0636	1.0391	3.1288	0	0.1939
Leverage	512	0.0721	0.0491	0.7700	0	0.0864
Return on assets (ROA)	512	1.3548	0.9700	55.360	–53.000	34.282
Firm age (yrs.)	501	54.074	32	235	0	51.023
GDP growth	512	2.7368	2.8550	13.2081	–5.9185	2.1197
Inflation rate	504	2.3103	2.1301	11.5979	–3.6855	1.7060
HHI	485	0.0807	0.0655	0.7021	0.0330	0.0833

Table 10 presents a correlation matrix between CARs and a set of factors that could influence investors' reactions to M&A announcements. Except for the correlation between the q-ratio and the market-to-book of 0.60, most correlation coefficients are relatively small ($|r \leq 0.56|$), validating our earlier assertions that multicollinearity is not an issue, especially if 0.6 is the minimum threshold for high multicollinearity (Dormann et al., 2013). As we cluster standard errors by year and quarter, and market-to-book becomes insignificant, we drop it from model 4 onwards.

In Panel A, the acquirers' announcement returns (CARs) are positively correlated with Tobin's Q and cash-settled deals. This result may imply that investors attach value to growth opportunities, efficiency on the part of managers, and acquisitions that are devoid of agency costs. The CARs are also negatively

correlated with leverage, listed targets, and stock-settled deals. This may be the case because of the overvaluation hypothesis: stock payment signalling overvalued shares (Myers, 1984), managerial entrenchment, and the investor's tendency to attribute high-growth opportunities to firms with low leverage.[35] The CARs are also negatively correlated with friendly deals and the firm age and GDP control variables. Furthermore, the acquirers' Tobin's Q also shows a significant positive correlation with return-on-assets (ROA) and market-to-book ratio, but a negative correlation with leverage. This result may suggest that investors tend to use profitability instead of debt to predict growth opportunities for target firms.

Panel B reports the coefficients for target firms. Targets' excess returns are negatively correlated with firm size and stock-financed deals but insignificantly correlated with Tobin's Q. This result may imply that investors use existing assets rather than the quality of the firm's projects being undertaken by the current management (managerial efficiency) to anticipate the growth opportunities for target firms. The negative correlation between stock-financed deals and the targets' CARs could also be associated with increased information asymmetry and the uncertainties surrounding equity bids, such as the target firm's inability to evaluate the intrinsic value of acquirers (i.e., private information held by acquirers on their overvalued shares) (Shleifer and Vishny, 2003). In contrast, the positive correlation between cash offers and targets' excess returns may imply that acquirers predict a high potential for post-merger synergies or it may denote the existence of pre-emptive bidding attempts by acquirers, in which target firms reap significant benefits (Fishman, 1989).

[35] Notice that because of missing data for unlisted targets, we cannot report the correlations and findings for the listed targets category as it stems from a binary variable (i.e., equal to 1 for listed targets, 0 otherwise).

Table 10: Pairwise Correlations Between Left Hand and Right-Hand Variables (Chapter 5)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Panel A: Acquirers													
(1) CAR (-2; +2)	1.000												
(2) Tobin's Q	0.065[b]												
(3) Leverage	–0.081[a]	–0.090[a]											
(4) Market-to-book	–0.040	0.604[a]	0.001										
(5) Return on assets	0.016	0.341[a]	–0.063[b]	0.234[a]									
(6) Listed targets	–0.163[a]	–0.020	0.034	0.075[a]	0.018								
(7) Cross-border	–0.021	–0.025	0.078[a]	0.022	–0.033	0.249[a]							
(8) Cash payment	0.050[c]	0.041	–0.001	–0.080[a]	0.050[c]	0.279[a]	0.377[a]						
(9) Stock payment	–0.064[b]	–0.025	0.012	0.043[c]	–0.028	–0.344[a]	–0.340[a]	–0.556[a]					
(10) Friendly deals	–0.092[a]	0.000	–0.034	0.083[a]	0.023	–0.473[a]	–0.386[a]	–0.371[a]	0.327[a]				
(11) Firm age (yrs.)	–0.046[c]	–0.085[a]	0.024	–0.028	–0.064[b]	0.000	0.197[a]	0.102[a]	–0.114[a]	–0.133[a]			
(12) GDP growth	–0.067[b]	0.044c	–0.027	0.223[a]	0.077[a]	–0.043	0.008	–0.043[c]	0.027	0.060[b]	–0.024		
(13) HHI	–0.024	0.024	–0.076[a]	0.026	0.039	–0.005	0.177[a]	0.058[b]	–0.061[b]	–0.074[a]	0.095[a]	–0.057[b]	
(14) Inflation	0.000	0.010	0.001	0.083[a]	0.017	0.041	0.006	–0.042	0.041	–0.007	–0.002	0.175[a]	0.018
Panel B: Targets	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) CAR (-2; +2)	1.000												
(2) Firm size	–0.132[a]												
(3) Tobin's Q	–0.036	–0.038											
(4) Leverage	0.067	0.218[a]	0.050										
(5) Return on assets	0.066	0.005	0.062	–0.002									
(6) Cross-border	0.000	0.129[a]	–0.003	–0.016	–0.072[c]								
(7) Cash payment	0.080[c]	–0.044	0.028	–0.098[b]	–0.070	0.378[a]							
(8) Stock payment	–0.101[b]	0.079[c]	–0.027	0.093[b]	0.053	–0.341[a]	–0.556[a]						
(9) Hostile	–0.009	0.108[b]	–0.023	–0.044	–0.002	–0.064[b]	–0.005	–0.006					
(10) DV-US	0.120[a]	–0.378[a]	0.051	–0.021	0.010	–0.300[a]	–0.253[a]	0.082[c]	–0.117a				
(11) DV-AU	–0.072[c]	0.345[a]	–0.076[c]	0.175[a]	–0.010	0.225[a]	0.154[a]	–0.061	0.043	–0.690[a]			
(12) Firm age (yrs.)	–0.016	0.133[a]	–0.078[c]	–0.052	0.049	–0.068	–0.033	–0.049	0.093[b]	–0.004	0.013		
(13) GDP growth	0.006	–0.020	0.071[c]	–0.067	0.112[b]	0.105[b]	0.080[c]	–0.040	–0.075[c]	–0.107[b]	–0.043	–0.113[b]	
(14) Inflation	–0.002	–0.002	0.071	–0.056	0.047	0.239[a]	0.097[b]	–0.084[c]	0.014	–0.206[a]	–0.021	–0.104[b]	0.321[a]

The superscripts are significance levels of each coefficient (a) p<0.01, (b)<0.05, (c) p<0.1. Data include 1,383 acquirers and for targets is 512 listed targets.

5.7 Empirical Findings

This section presents the results of cross-sectional regressions against determinants of excess returns for acquirers and targets. First, we examine the findings for the entire sample. Second, we look at the determinants of excess returns whilst controlling for size and bidder-to-target relationship (e.g., instances where banks are the acquirers versus when insurance companies take the lead). Third, we explore a shift in the determinants of acquirers' abnormal returns before and after the GFC, before finally examining the determinants of excess returns for the targets.

Table 11 reports the results of our empirical analysis on the determinants of negative abnormal returns for bidders in bank–insurance consolidations. Following the general–to–specific approach suggested by Gilbert (1986), we start with a large statistical model that captures key characteristics; we then restrict or re-organise it until we achieve the most parsimonious level. From the output, four predictor variables are crucial to explaining the market response to bank–insurance M&A announcements for acquirers: Tobin's Q, leverage ratio, and the dummy variables for listed targets and cross–order deals. In model 1, Tobin's Q is positive and significant. This variable remains positive and significant (p-value ≤ 0.01) across all the models examined. An interpretation for this result is that acquirers that are perceived to have excellent growth opportunities tend to receive high price valuations around the M&A announcement date. Sudarsanam and Mahate (2006) suggest this to be an accurate reflection of their prior earnings, cash–flow performance, and the prospects for future growth. The negative bidder returns in our case may be interpreted in line with Roll's (1986) hubristic hypothesis, where the over-optimism for substantial future growth is perceived to drive glamour acquirers to engage in acquisitions that reduce shareholders' value. Furthermore, Dong et al. (2006) argue that the market misevaluation–where acquirers are overvalued prior to the event announcement date may also drive such a relationship.

The coefficient for leverage is negative and significant at 1% level throughout our specifications, while the relative return on assets (profitability ratio) is not significant. This result implies that an increase in debt through bank–insurance partnerships may propagate or even exacerbate systemic risks due to the interconnected nature of financial institutions, hence receiving larger negative returns around the announcement date. Moreover, badly capitalised banks are riskier and more prone to bankruptcy.

Table 11: Multivariate Regressions for Determinants of Acquirers' CARs

The table reports results of cross-sectional OLS regressions estimated using a sample of bank–insurance deals announced and completed between 1999-2019. The dependent variable is acquirers' five-day cumulative abnormal returns (in %), calculated using the standard event study market model (MacKinlay, 1997). The dependent variable is regressed against firm-level and deal-specific characteristics. Model 1 is estimated via OLS without including macros while regression 6 includes all the three country level controls. In the parentheses are the standard errors adjusted for heteroskedasticity using White's (1980) process. Subscripts a/b/c represent the statistical significance at 1-, 5- level, and 10% level, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	0.0214[a]	0.0236[a]	0.0046	–0.0018	0.0185	0.0402
	(0.007)	(0.007)	(0.010)	(0.008)	(0.018)	(0.025)
Tobin's Q	0.0116[a]	0.0108[a]	0.0094[a]	0.0059[a]	0.0063[a]	0.0063[a]
	(0.003)	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)
Leverage	–0.0015[a]	–0.0016[a]	–0.0012[a]	–0.0011[a]	–0.0014[a]	–0.0015[a]
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Market-to-book	–0.0033[b]	–0.0028[c]	–0.0017			
	(0.002)	(0.002)	(0.002)			
Return-on-assets	–0.0057	–0.0013	–0.0180			
	(0.035)	(0.033)	(0.033)			
Listed targets	–0.0143[a]	–0.0142[a]	–0.0144[a]	–0.0142[a]	–0.0148[a]	–0.0134[a]
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Cross-border	–0.0069[b]	–0.0068[b]	–0.0064[b]	–0.0053[b]	–0.0072[b]	–0.0066[b]
	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)
Cash payment	–0.0003	-0.0005	0.0007			
	(0.003)	(0.003)	(0.002)			
Stock payment	–0.0021	–0.0023				
	(0.003)	(0.004)				
Friendly	–0.0046	–0.0044	–0.0041			
	(0.003)	(0.003)	(0.004)			
Log firm age	–0.0016	–0.0017				
	(0.001)	(0.001)				
GDP growth		–0.0011	–0.0010			–0.0016[c]
		(0.001)	(0.001)			(0.001)
Inflation				0.0004		0.0007
				(0.009)		(0.001)
HHI					–0.0460[c]	–0.0565
					(0.025)	(0.043)
Observations	1378	1377	1377	1349	1308	1280
Adjusted R^2 (%)	4.01	4.16	5.62	5.69	5.86	6.07
Year dummies	No	No	Yes	Yes	Yes	Yes
Quarter dummies	No	No	Yes	Yes	Yes	Yes
Region dummies	No	No	No	Yes	Yes	Yes

The insignificant finding for the profitability ratio (ROA) may be attributed to agency costs borne from the holding of free-cash flows (Jensen, 1986). This result is consistent with van Lelyveld and Knot (2009), who find the acquirer's profits to be insignificantly related to cumulative abnormal returns (CARs). Further scrutiny of the results reveals that the listed targets dummy is negative and significant across

all the regression estimates. These findings validate our univariate test reported in the previous chapter, illustrating that acquiring listed targets is value-destructive, whilst the acquisition of unlisted targets enhances value for the acquirers' shareholders. Harford et al. (2012) and Masulis et al. (2007) argue that a significant proportion of value-destruction for listed targets stems from entrenched managers' disproportionate avoidance of unlisted targets in a bid to prevent the creation of monitoring blockholders and preserve their entrenchment position. Although the coefficients for payment method are statistically insignificant and thus offer little evidence to link the targets' *listing effect to* payment preference, one might argue that agency conflicts may still hold in explaining our negative M&A announcement returns because entrenched managers tend to overpay to acquire targets or they may even select targets that yield low synergies (Malmendier and Tate, 2008).

The dummy variable for cross-border deals, a proxy for geographical diversification, has a negative and statistically significant coefficient. A possible interpretation for this is that bank–insurance partnerships where the bidders originate from a different geographical background tend to experience negative market valuations. The complexities surrounding both entities (e.g., distinct organisational culture and differentials in tax systems, legal structures, and language) may make the execution of cross-border deals more challenging (costly and risky), and thus attract larger negative announcement returns. Our result is consistent with prior M&A literature (Amihud et al., 2002; Hawawini and Swary, 1990) who find cross-border acquisitions to destroy value for acquiring firms' shareholders. Aybar and Ficici (2009) argue that the challenges that characterise cross-border acquisitions (limited market knowledge) may be worsened if the acquirer has no previous operations in the country where the target is domiciled. Intriguingly, variables like market-to-book, profitability, and payment method do not play any significant role in explaining abnormal returns for acquirers.

Table 12 reports the results from our regression analysis after controlling for the size effect. For consistency, we utilise the criterion advanced by Fama and French (1993) for setting the breakpoints between high and low values in our dataset, as in Chapter 4. We classify the top and bottom 30% of acquirers' total assets and deal values as large and small, whilst the corresponding proportion for

relative deal size are labelled as high and low. We then regress these against CARs to see how they individually influence the direction and magnitude of abnormal returns for acquirers.[36]

In model 1, we find the coefficient for listed targets to be negative and statistically significant (*p*-value ≤0.01). This result suggests that the larger the acquirer that is bidding for publicly listed targets in bank–insurance M&A, the higher the magnitude of negative abnormal returns. This evidence is consistent with Moeller et al. (2004) who report negative abnormal returns of –1.022 per cent for acquirers taking over listed targets. The same authors also find the sample of large firms that bid for public targets experiences more negative abnormal returns. They attribute this size effect as occasioned by managerial hubris because they find that larger acquirers overpay for targets and make acquisitions that reduce shareholders' value. We, however, interpret our findings as evidence to support the managerial entrenchment hypothesis (Harford et al., 2012) where managers of large firms are inclined to acquire listed targets because they provide a relatively easy way of empire-building and earning prestige. The stock market negatively evaluates such deals in favour of targets.

In model 2, the coefficients for Tobin's Q and cross-border deals are positive and significant. This result suggests that investors attach positive value to cross-border M&A initiated by small firms with high growth opportunities, which is in line with the internalisation hypothesis (Rugman, 1980). This hypothesis posits that small bidders are presumed to be 'newer firms' that are, compared to large bidders, rich in the intangible assets (research and development) that enable them to expand abroad. Our result is consistent with the observations by Morck and Yeung (1992) that small bidders outshine large bidders because of their rapidly growing nature, which is augmented by their ability to capitalise on their intangible assets in order to generate more wealth from cross-border acquisitions.

[36] Notice that the sample for the first two models is higher than that of the last four models because some M&As choose not to disclose their transaction details/values; however, the acquirer's total assets may be retrieved from DataStream.

Table 12: Regression Results for Acquirers Controlling for Size

The regressions are estimated using a sample of completed bank–insurance deals from 1999-2019. The dependent variable is acquirer's five–day cumulative abnormal returns (%), which is utilised and regressed against firm-level and deal-specific characteristics. Total assets and relative deal value and transaction value are classed based on the largest and the smallest 30. In the parentheses are heteroskedasticity consistent standard errors. Subscripts a/b/c represent the statistical significance at 1-, 5- level, and 10% level, respectively.

Variable	(1) Large asset value	(2) Small asset value	(3) High relative value	(4) Low relative value	(5) Large deal value	(6) Small deal value
Intercept	0.0145	–0.0082	0.0109	0.0164	0.0087	0.0041
	(0.021)	(0.025)	(0.031)	(0.014)	(0.034)	(0.014)
Tobin's Q	0.0239	0.0081[b]	0.0150[a]	0.0057	0.0143[a]	0.0079
	(0.040)	(0.004)	(0.005)	(0.012)	(0.004)	(0.010)
Leverage	–0.0011	–0.0020	–0.0014[b]	-0.0011	–0.0009	–0.0016
	(0.001)	(0.003)	(0.001)	(0.001)	(0.001)	(0.002)
Return-on-assets	0.3404	-0.0519	-0.0128	–0.1515	0.1086	–0.0918
	(0.551)	(0.032)	(0.025)	(0.202)	(0.202)	(0.100)
Listed targets	–0.0123[a]	–0.0066	–0.0241[a]	–0.0033	–0.0093	0.0034
	(0.005)	(0.005)	(0.008)	(0.004)	(0.007)	(0.005)
Cross-border	–0.0083	0.0171[c]	–0.0289[b]	–0.0003	–0.0110	0.0013
	(0.005)	(0.009)	(0.013)	(0.003)	(0.007)	(0.005)
Stock payment	–0.0052	0.0014	–0.0015	–0.0028	–0.0046	–0.0003
	(0.009)	(0.007)	(0.009)	(0.006)	(0.009)	(0.006)
Cash payment	–0.0026	0.0041	0.0053	–0.0046	0.0056	–0.0037
	(0.005)	(0.006)	(0.010)	(0.004)	(0.007)	(0.005)
Log firms age	0.0002	–0.0021	–0.0041	–0.0010	0.0009	–0.0007
	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	(0.002)
GDP growth	–0.0008	–0.0004	–0.0034	–0.0009	–0.0023	–0.0004
	(0.001)	(0.003)	(0.003)	(0.001)	(0.002)	(0.002)
Inflation	–0.0001	0.0009	0.0020	0.0003	0.0004	0.0017
	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)
Observations	415	414	395	394	392	390
Adjusted R^2 (%)	1.8	7.92	8.50	7.9	1.67	1.74
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Quarter dummies	Yes	Yes	Yes	Yes	Yes	Yes
Region dummies	Yes	Yes	Yes	Yes	Yes	Yes

Model 3 shows that the coefficient for Tobin's Q is positive and significant while leverage, listed targets, and cross-border are negative and significant. This implies that the stock market penalises low growth opportunity firms for taking over large foreign targets, especially if the bidder is highly leveraged. This result is inconsistent with Myers's (1977) hypothesis, where investors appreciate low growth opportunity firms becoming highly leveraged to reduce the problem of overinvestment.

The negative coefficients for *listed* targets and *cross-border deals*, however, obliges us to interpret our finding in line with Williamson's (1963) managerial discretion, in which the high utility associated with controlling larger firms drives most managers to undertake value-reducing investment projects (Stulz,

1990). Overall, our results indicate that size matters to a certain extent in explaining excess returns, thus validating Moeller et al.'s (2004) assertion that mergers initiated by small firms are likely to create synergy while those by large firms suffer negative synergy gains that stem from either managerial hubris or the potential cost of overinvestment (see Malmendier and Tate, 2008).

Despite the fact that banks and insurance companies have many similarities and operate in a highly regulated environment, they have distinct business models and face different risks. For instance, owing to a mismatch between their assets and liabilities, banks, unlike their insurance counterparts, are highly susceptible to systemic contagion (see Diamond and Dybvig, 1983). Hence, the determinants of M&A returns from bank–insurance mergers may differ based on the nature of the relationship between the bidder and the target. Table 13 reports the regression results controlling for the merger relationship between bidders and targets. The regression analysis is broken down into subsections for better understanding. First, the covariates for interbank deals, followed by deals between banks for insurers (both Bancassurance and assure–banking), and finally the covariates for deals initiated between insurance companies.[37]

5.7.1 Bank–to–Bank (Interbank) Deals

In column 1 (Table 13) the coefficients for leverage and the dummy for listed targets are negative and significant. This result implies that an increase in leverage for interbank deals reduces shareholders value. This, however, contravenes the general expectation and the M&A literature (Jensen and Meckling, 1976; Modigliani and Miller, 1963) where leverage is viewed favourably from the agency perspective as limiting the managers' ability to allocate resources to unproductive projects or otherwise pressuring them to perform well.

We, however, conjecture that since banks are, by nature, highly leveraged, their managers may be well accustomed to firm operations that support only the pre-acquisition debt levels. This means that any additional debt that is taken-on during the acquisition may raise the bidder's risk levels. Miller and Bromiley (1990) argue that higher levels of risk could harm the performance of a firm. They also suggest that acquisitions involving high leverage fare worse than those involving low debt levels. The reason for

[37] In this study, bancassurance generally mean any form of partnership between banks and insurance companies (bank–insurance and assure–banking).

this is that limiting management discretion for how they should allocate resources during the M&A process may tie their hands towards funding the most important activities, such as non-routine items aimed at customer retention and/or even making payments to facilitate the integration process.[38]

Table 13: Regression Results Controlling for Bidder-Target Relations

The sample here consists of 1,383 bank–insurance deals split into four categories based on the industry from which the target comes. The dependent variable utilised is acquirer's five–day cumulative abnormal returns (in %), regressed against firm-level and deal-specific characteristics. In the parentheses are the standard errors adjusted for heteroskedasticity using White's (1980) process. Subscripts a/b/c represent the statistical significance at 1-, 5- level, and 10% level, respectively.

	(1)	(2)	(3)	(4)
Variable	Bank-Bank	Bank-Insure	Insure-Bank	Insure-Insure
Intercept	0.0139	0.0821	0.1697	0.1292
	(0.027)	(0.05)	(0.109)	(0.097)
Tobin's Q	0.0041	–0.0502	0.0673	0.0019
	(0.023)	(0.052)	(0.045)	(0.004)
Leverage	–0.0016[a]	–0.0022	0.0032	0.0019
	(0.001)	(0.002)	(0.004)	(0.012)
Return-on-assets	–0.0337	0.5882	–1.5143[c]	0.1350
	(0.030)	(0.742)	0.870)	(0.105)
Listed targets	–0.0094[b]	0.0020	–0.0009	–0.0250[a]
	(0.004)	(0.009)	(0.021)	(0.007)
Cross-border deals	–0.0056	–0.0187[b]	–0.0108	–0.0071
	(0.005)	(0.008)	(0.028)	(0.006)
Stock payment	–0.0052	0.0168	–0.0635	0.0046
	(0.005)	(0.010)	(0.043)	(0.012)
Cash payment	0.0036	0.0079	–0.0326	0.0056
	(0.004)	(0.006)	(0.021)	(0.009)
Log firm age	–0.0015	0.0060[b]	–0.0213[b]	–0.0002
	(0.002)	(0.003)	(0.008)	(0.003)
GDP growth	–0.0030[b]	0.0046[a]	–0.0206[a]	–0.0027
	(0.001)	(0.002)	(0.007)	(0.003)
Inflation	0.0006	0.001	–0.0031	–0.0017
	(0.001)	(0.002)	(0.006)	0.003)
HHI	–0.0322	–0.1372[c]	–0.8174	–0.1901
	(0.035)	(0.071)	(0.498)	(0.172)
Observations	787	163	62	263
Adjusted R2 (%)	6.68	17.99	35.73	10.42
Year/Quarter dummy	Yes	Yes	Yes	Yes
Region dummies	Yes	Yes	Yes	Yes

When controlling for the acquirer's macroeconomic environment, the coefficient for GDP growth (a proxy for business cycle) is negative and significant (p–value ≤ 0.05). This result implies that in high economic growth countries, financial sector consolidations (where banks are targets) generate larger negative excess returns for acquirers.

[38] Evidence in Chen and Tan (2011) indicates that high leverage in banks may yield negative M&A returns due to a transfer of wealth from shareholders to debt holders in the form of interest payments.

5.7.2 Bank-Insure (Bancassurance) Deals

In column 2 (Table 13), the coefficient for cross-border deals is negative and significant. This result is consistent with Chen and Tan (2011) who find that bancassurance transactions that diversify geographically generate negative announcement returns. We also find firm age in bank–insurance deals to be positive and significant ($p \leq 0.05$). This result implies that older banks have rich acquisition experience and can better utilise the resources to initiate wealth enhancing acquisitions. GDP growth has a positive and significant coefficient ($p \leq 0.01$) suggesting that acquisitions involving banks from high economic growth countries that bid for insurance companies earn favourable or less negative ARs. The coefficient for HHI, a proxy for concentration or competition, is negative and statistically significant ($p \leq 0.05$). This result may imply that banks from highly competitive markets bidding for insurance companies do not create value for shareholders. This finding underpins the assumptions for concentration fragility hypothesis (Wagner, 2010; Weiß et al., 2014), where high market concentration and bank-insurance conglomerations are positively connected with "too-big-to-fail" guarantees and systemic risk (financial market volatility).

5.7.3 Insure-Bank (Assure-Banking) Deals

The result for assure–banking (in column 3) differs slightly from bancassurance. Insurers rarely engage in serial acquisitions from which they can learn, leveraging their experience to command superior returns. This explains the presence of a negative coefficient for age in assure–banking deals. Furthermore, the significant coefficient for ROA in model 3 (p–value ≤ 0.10) suggests that investors appreciate low profit insurers who initiate M&A with banks in order to achieve more profits through economies of scope.

5.7.4 Insure-Insure Deals

In column 4 (Table 13), the only coefficient which is negative and significant (p–value ≤ 0.01) is listed targets. This result complements our inter-bank deals (model 1), indicating that investors interpret focused product bids involving listed targets as having high agency costs. The finding is comparable with Ekkayokkaya et al. (2009) and Lepetit et al. (2004) who present results that are inconsistent with Beitel et al. 's (2004) finding that focused mergers fare worse than diversified ones in terms of returns to shareholders. Because of a considerable upsurge in bank–insurance consolidations around the GFC

period, there was a flurry of regulatory reforms, such as the Basel III Accord of 2009, US Dodd–Frank Act (DFA) of 2010, Solvency II for insurers, and the UK's Financial Services (Banking Reform) Act 2013. All these may have altered the landscape and determinants for bank insurance M&A. If the financial ratios are displaying an inconsistent pattern in the pre- and post-GFC period, one could argue that these regulations may have influenced the investors' interpretations.

Table 14 reports regression results for the acquirers' CARs against the financial ratios and deal characteristics while controlling for the crisis period. Results show that investors evaluate bank–insurance M&A announced before the GFC based on leverage, target listing status, and cross-border deals. In model 1, the coefficient for leverage is negative and statistically significant (p–value ≤ 0.05), showing that investors negatively evaluate mergers involving highly leveraged bidders. This finding is consistent with Demirguc-Kunt et al. (2013), who find that low leveraged firms perform better in the pre-crisis period. The banks' proclivities towards high leverage by engaging in high-risk activities prior to the GFC (subprime lending and collateralised debt obligations) may have been responsible for creating a build-up of leverage that resulted in systemic failure. Our results also suggest that in the pre-crisis period, geographical diversification involving listed targets is less well-received.

The only variation that appears in the findings for the post-crisis period is the coefficient for Tobin's Q, which is positive and significant ($p<0.01$). The coefficient for GDP (p–value ≤ 0.05) is also negative and significant. Leverage changes too, and concentration become more relevant. Since Tobin's Q signifies the opinion of investors about the growth prospects of the acquirers, this result may suggest that investors hold contradictory interpretations of the prospects for growth in the pre- and post-crisis periods. While we could interpret the coefficients for macroeconomic variables in line with models 1 and 2 of Table 14, the insignificant coefficient for leverage and cross-border deals may suggest that investors are confident that the regulatory measures imposed on financial institutions (leverage, capital, and liquidity requirements) after the GFC will adequately supress excessive risk-taking and thereby avert any future crises.

Table 14: Shift in the Determinants of Acquirers CARs Pre-and-Post Crisis

The regressions are estimated using a sample of completed bank-insurance deals from 1999-2019. We use the five-day (-2, +2) CARs as our dependent variable against firm level and deal specific variables. As per NBER (Gorton and Metrick, 2012), the timeline for the crisis starts from December 2007 to June 2009. In the parenthesis are the standard errors adjusted for heteroskedasticity using the White's (1980) process. Subscripts a/b/c signify significant CARs at 1%, 5% and 10% levels (two tailed tests) respectively.

	(1)	(2)
Variable	Pre-crisis	Post-crisis
Intercept	–0.0258	0.0352[b]
	(0.072)	(0.014)
Tobin's Q	–0.0075	0.0064[a]
	(0.017)	(0.002)
Leverage	–0.0010[b]	–0.0013
	(0.000)	(0.001)
Return-on-assets	0.2507	–0.0437
	(0.305)	(0.033)
Listed targets	–0.0179[a]	–0.0105[b]
	(0.005)	(0.004)
Cross-border deals	–0.0114[b]	–0.0060
	(0.005)	(0.004)
Stock payment	0.0016	–0.0087
	(0.006)	(0.006)
Cash payment	0.0066	–0.0050
	(0.004)	(0.005)
Log firms age	0.0004	–0.0028
	(0.002)	(0.002)
GDP growth	0.0018	–0.0023[b]
	(0.003)	(0.001)
HHI	0.0301	–0.0498[c]
	(0.110)	(0.028)
Observations	569	655
Adjusted R^2 (%)	5.45	3.76
Year/Quarter dummy	Yes	Yes
Region dummies	Yes	Yes

They, therefore, anticipate leverage ratios and geographical diversification to have no effect on excess returns in the post–crisis period. These findings corroborate Van-Dellen et al.'s (2018) assertion that, in the post-GFC period, financial institutions may have ceased to merge to achieve *too-big-to-fail status or otherwise* engage in excessive risk. Instead, they may pursue M&A for healthy growth, i.e., to expand their business lines and enhance their customer base.

5.7.5 Determinants of Abnormal Returns for Targets

In this section, we utilise the targets' 5–day CARs as the dependent variable, with various financial ratios and deal characteristics as explanatory variables. We note that the determinants of excess returns for

the targets differ slightly from those of the acquirers, hence the need to conduct a separate analysis. Table 15 presents regression results on the determinants of target excess returns from bank–insurance M&A. From the regression output, five variables explain the target's excess returns: target size, q-ratio, stock payment dummy, a dummy variable for US targets, and the country's inflation rate. First, the coefficients for firm size (natural logarithm of target's total assets) and Tobin's Q ratio are negative and statistically significant across all six models. This finding is consistent with Alexandridis et al. (2010), suggesting that large targets with high growth opportunities receive significantly lower acquisition premiums and consequently create less value for their shareholders relative to smaller targets. The general expectation is for the takeover premiums of targets to be higher when high q targets merge with low q acquirers (with 1 being the cut-off point for high and low q firms). This, in our estimation, can only hold in an environment of high managerial entrenchment, where company size, power, and prestige override the conventional goal of a firm.[39] Otherwise, in line with Lang et al. (1989) and Servaes (1991), our results confirm that shareholders of low q targets benefit most from M&A, compared to high q targets.

The empirical literature proposes numerous explanations for takeover premium differentials between large and small targets. Fuller et al. (2002) argue that acquirers pay lower premiums for large targets because of the potential costs and complexities that accompany post-merger integration, which may also hamper the realisation of projected synergies. Alexandridis et al. (2010) contend that investors are inclined to appraise large targets as uncertain projects because they perceive them to yield sharp increases in return uncertainty for combined entities around the M&A announcement dates. Moreover, the high values at stake in acquiring large targets may prompt acquirers to hire the services of financial analysts to offer more accurate valuations for targets, thus reducing the likelihood of the 'winner's curse' problem for acquirers and decreasing the targets' acquisition premiums (Chang et al., 2006; Collins et al., 1987).

Second, the coefficient for the stock payment dummy is negative and significant (p-value ≤ 0.01). This suggests that, on average, target acquisitions financed through the stock exchange earn significantly lower takeover returns than those paid for with cash or a mixture of cash and equity (hybrid). The

[39] The conventional goal of the firm is for managers act into the best interest of shareholders by making capital budgeting, investment, and financing decisions that aim to maximise shareholders' wealth (Brealey et al., 2019).

coefficient for cash payment is, as expected, positive but insignificant. Our finding is consistent with Baradwaj et al. (1990) and Davidson III and Cheng (1997) that, relative to their cash counterparts, equity offers yield lower overall returns for targets around the M&A announcement date.

Table 15: Determinants of Excess Returns for Targets

$$CAR_i = \alpha + \sum \beta_i X_i + \varepsilon_i$$

The original sample is 627 but after controlling for missing financial data, the sample size drops to 512 listed targets from bank–insurance M&A deals announced between 1999-2019. Our dependent variable is the target's 5-day CARs calculated using the market model, while the multivariate analysis is done using ordinary least squares (OLS). D-INS is a dummy variable indicating that the bidder is an insurance company, while DV–US and DV–AU are dummy variables for targets domiciled in the US and Australia, respectively. In the parentheses are heteroskedasticity consistent standard errors. Models 1 and 2 have been executed without clustering the standard errors

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	0.4168[a]	0.4128[a]	0.4242[a]	0.4266[a]	0.3743[a]	0.4422[a]
	(0.139)	(0.149)	(0.146)	(0.132)	(0.126)	(0.151)
Firm size	–0.0264[b]	–0.0263[b]	–0.0292[b]	–0.0268[b]	–0.0254[b]	–0.0277[b]
	(0.011)	(0.011)	(0.014)	(0.012)	(0.012)	(0.013)
Tobin's Q	–0.1387[b]	–0.1398[b]	–0.1222[b]	–0.1042[b]	–0.1066[b]	–0.0957[b]
	(0.069)	(0.067)	(0.053)	(0.050)	(0.050)	(0.047)
Leverage	0.5764	0.5798	0.3506			
	(0.426)	(0.418)	(0.252)			
Return-on-assets	0.0969	0.0959	0.0854	0.0847		
	(0.069)	(0.069)	(0.071)	(0.072)		
Cross-border	–0.0211	–0.0218	–0.0180	–0.0185		
	(0.066)	(0.064)	(0.062)	(0.064)		
Cash payment	0.0868	0.0862	0.0743	0.0612	0.0568	0.0551
	(0.110)	(0.111)	(0.101)	(0.096)	(0.078)	(0.087)
Stock payment	–0.0589[a]	–0.0588[a]	–0.0686[a]	–0.0748[a]	–0.0655[a]	–0.0731[a]
	(0.019)	(0.019)	(0.021)	(0.020)	(0.020)	(0.020)
Hostile	0.0054	0.0070	0.0275			
	(0.049)	(0.051)	(0.047)			
D-INS	0.0110	0.0125	–0.0194	–0.0350	–0.0266	–0.0375
	(0.035)	(0.040)	(0.055)	(0.0607)	(0.065)	(0.071)
DV-US	0.0923[a]	0.0928[a]	0.0921[a]	0.0818[a]	0.0948[a]	0.0798[a]
	(0.030)	(0.029)	(0.026)	(0.028)	(0.032)	(0.030)
DV-AU	0.0886[b]	0.0864[c]	0.0994	0.0793		
	(0.043)	(0.048)	(0.064)	(0.052)		
Log firm age	0.0013	0.0016				
	(0.007)	(0.008)				
GDP growth		0.0013	–0.0082			–0.0076
		(0.005)	(0.010)			(0.014)
Inflation				–0.0145[b]		–0.0116[b]
				(0.006)		(0.005)
Observations	501	501	511	502	511	502
Adjusted R2	3.45	3.26	7.40	7.43	7.42	7.34
Year/Quarter dummy	No	No	Yes	Yes	Yes	Yes

Subscripts a/b/c denote significant CARs at 1%, 5% and 10% levels (two-tailed tests), respectively.

This result is in stark contrast with Hawawini and Swary (1990) who find insufficient evidence to link target acquisition premiums with the payment method. Previous M&A studies (Amihud et al., 1990;

Travlos, 1987) show that shareholders of target firms prefer cash to stock offers because stock payments can, at times, signal the presence of uneven information between takeover parties. Thus, bidder managers may hold private information regarding the valuation of their stock (i.e., that it is overvalued), which is something the stock market evaluates adversely and promptly reflects in the stock price (Myers and Majluf, 1984).

Third, the dummy variable DV-US, which relates to deals in which target firms originate from the US, is positive and significant ($p \leq 0.01$) across the estimations. This finding corroborates our univariate results in Chapter 4, where we find that US targets earn takeover gains that are superior to those of their peers in Europe, Canada, Australia, and the rest of the world. This reinforces the validity of our previous results, as the positive and significant effect for US targets observed here seems to be the one that drives our target returns. This also suggests that the capital market favours US targets, perhaps because most US firms are publicly listed and have classified boards that inhibit hostile takeover attempts (Bebchuk et al., 2002). These characteristics give target managers more bargaining power with which to extract more rent and/or negotiate deals that maximise value for shareholders and, in turn, eliminate removal threats.

Finally, the target country's inflation rate is negatively associated to excess returns ($p \leq 0.05$). This result may be explained in line with Black (2000), who finds that countries with relatively low inflation rates make their domestic targets less expensive and thus more attractive to domestic and cross-border acquirers, while the countries with higher inflation rates have more expensive and less attractive targets. Since we draw most of our targets from the US and Europe, where inflation rates are relatively low, we expect the scramble for targets from local and overseas bidders to increase their price and, ultimately, the premiums paid during M&A.

5.8 Summary and Conclusions

In this chapter, we examine the determinants of abnormal returns for takeover deals, comprised of 1,384 acquirers and 512 targets. We utilise a multivariate regression framework using the five-day CARs as the dependent variable against financial ratios, deal characteristics, and macroeconomic variables. We find a significant inverse relationship between growth opportunities and bidders' excess returns around merger announcements. When we consider Tobin's Q simultaneously with firm size, results suggest that the market rewards for small financial institutions with high growth prospects are greater than those of the big financial institutions. Furthermore, we find that firms with higher debt levels underperform those with lower levels of debt, which is consistent with Myers's (1977) underinvestment incentive as moderated by low-leverage. This finding, however, contravenes the general expectation that high leverage is beneficial, because it curtails the managers' discretion to allocate resources to unproductive projects and/or pressures them to perform well (Jensen and Meckling, 1976). This, in our estimation, may well be the case for industrial or high–tech firms, but for firms in the financial services sector, high levels of leverage can be detrimental. We also establish that M&A that are motivated by the agency motive are less favourably valued by investors. When controlling for size and bidder–to–target relationship, we find that high-relative ratio and interbank deals drive a substantial proportion of the negative abnormal returns experienced by acquirers. These results are also robust for different data windows: (–1; +1), (–1; 0), (0; +1) and (–5; +5).

The disaggregation of our sample into the pre- and post-GFC periods also shows that there is indeed a shift in the determinants of abnormal returns for acquirers. Before the GFC, investors evaluated M&A deals based on their potential for bankruptcy from holding high debt and agency costs. After the GFC, they evaluate bank–insurance M&A based on the bidder's growth potential, managerial entrenchment, and the prevailing economic conditions of the country in which the bidder is domiciled. In contrast, being located in the US and a relatively low inflation rate are key to explaining the targets' positive excess returns, the magnitude of which are reduced by firm size, Tobin's Q, and stock-settled deals.

With increasing demand for integration between banks and insurers, managers should exercise caution when initiating M&A between two or more highly leveraged and equally large corporations, as these are likely to destroy shareholder wealth and may even destabilise the whole financial sector. In the next

chapter, we look at acquisition abandonment and completion through the lenses of internal governance characteristics.

6 Corporate Governance and Deal Completion Outcomes

6.1 Introduction

Over the last two decades, the financial services sector has witnessed an intense phase of structural change that has resulted in its consolidation and the formation of financial conglomerates.[40] Owing to the inimical role played by these structures during the 2007-09 financial crisis, several studies have attempted to link corporate governance with financial sector mergers and acquisitions (M&A) (Aebi et al., 2012; Armour et al., 2016; Brewer and Jagtiani, 2013; Hopt, 2021; Mullineux, 2011). While there also exists another body of research that goes beyond the confines of banks and insurance companies (Brewer et al., 2010; Martynova and Renneboog, 2010; Masulis et al., 2007; Starks and Wei, 2013; Wang and Xie, 2009), that literature focuses on the post-acquisition performance of completed deals and is largely silent about the role played by internal governance on the success or failure of M&A.

Although studying the ex-post performance of M&A is critical, we argue that there is need to focus on pre-merger happenings because they are the prerequisites for post-merger outcomes (in terms of whether a deal gets completed or not). Mergers and acquisitions are typically complex and costly, and their delay or abandonment will dissipate time and money. The literature indicates that prolonged deals attract incremental direct and indirect costs (such as negotiation or advice fees, overheads, etc.) that can accumulate with time to the extent that they cannot be offset by post-merger benefits (Muehlfeld et al., 2007). Failed mergers are bad because they attract significant losses that may be financial or non-financial. For instance, abandoning an acquisition during the negotiation process, be it a public or private takeover, may inflict tangible or intangible damage, including time wastage. Similarly, cancelling a deal after the offer has been made public can severely blight the reputation and credibility of the parties involved, and in some instances, attract huge penalties (Luo, 2005; Officer, 2003). Some deal cancellations may be so significant, particularly if they involve large and interconnected financial institutions, that they may have an impact not only on the financial services sector but also threaten the stability of the entire financial system (Kim and Song, 2017).

[40] This study adopts the definition of financial conglomerates from the Basel Committee on Banking Supervision (BCBS). The same definition is also used by Vander-Vennet (2002).

Understanding deal timelines is crucial because things may change between the announcement date and completion date, which can be costly to the acquirer. For instance, protracted deals may be interrupted by uncertainties such as adverse court rulings, regulatory changes, or external factors that necessitate deal renegotiations, revisions, or even terminations (Dikova et al., 2010; Hotchkiss et al., 2005).[41] There are two commonly cited reasons for deal cancellation. The first is information asymmetry, where the acquirer decides to re-evaluate the potential benefits of the deal in light of new information disclosed about the value of a target after the initial agreement (Davidson et al., 2002). The second occurs when the acquirer becomes unable to complete the acquisition, whether because of a lack of capacity to finance the deal or because the target has decided to counter the offer in the hope of obtaining a higher price from the current or a new bidder. We suggest that it is important to examine the period between the deal announcement and deal closure dates to identify exactly what accelerates bank-insurance M&A and what makes them more or less likely.

Despite the importance of this period to the overall M&A performance, there is very little evidence in the literature on the intricacies that characterise deal negotiations, or the costs and benefits that can accrue after signing an agreement and before concluding a deal. Prior studies on acquisition completion have largely focused on three key areas. First, the differences in institutional environments in cross-border acquisitions (Dikova et al., 2010; Muehlfeld et al., 2007; Zhang et al., 2011). Second, organizational learning, i.e., experience from prior acquisitions (Doan et al., 2018; Muehlfeld et al., 2012). Third, merger waves, entry timing, and industry/firm level factors (Fuad and Gaur, 2019; Lim and Lee, 2016). Only Dikova et al. (2010) explore the determinants of *Acquisition duration* alongside *Acquisition completion,* as we do. However, in their duration modelling, more than 80 per cent of their data are dropped for lacking the exact date of abandonment, and thus their focus is predominantly on the effect of institutional differences on cross-border M&A. Furthermore, no other study has, so far, attempted to evaluate how internal governance mechanisms predict deal completion time and outcomes within the financial services sector.

Considering this evidence, our study aims to answer the following research question: *are firms with 'good' internal governance practices better at executing M&A than their less-well governed counterparts?* To achieve this, we address two specific questions. First, do firms with large board sizes and a proportion

[41] Covid-19 related deal terminations: Softbank's $3B WeWork M&A ended in a legal battle.

of non-executive directors (NEDs) have a better chance of completing the focal transaction more quickly? Second, does the efficacy of internal governance mechanisms on M&A deal completion differ based on the nature or type of deal?

To answer these questions, we utilise a comprehensive set of M&A data on the completion and withdrawal of publicly announced bank-insurance deals from 2006 to 2019, which is retrieved from the Zephyr database that covers 57 countries worldwide. This study focuses exclusively on the financial services sector for three reasons. First, banks and other financial institutions are what make financial markets work. Without them, financial markets would not succeed in moving funds from those who save to those who have productive investment opportunities (Mishkin, 2016). Second, there are increased concerns regarding the role of bank-insurance consolidations in propagating systemic risks and exacerbating financial stability. Third, the corporate governance of financial institutions is different from that of ordinary industries.

We utilise two estimation techniques to study deal progression from the announcement date to the day at which the deal is concluded. First, a logistic regression; this is ideal for modelling dichotomous outcomes to study the factors that affect the likelihood that an announced deal will be completed (or terminated). Second, for completed deals, we apply survival analysis to examine whether the factors that predict acquisition outcomes could also determine the time taken to complete a deal (from announcement to the resolution of announced deals) (Dikova et al., 2010).

Our results show that overall, corporate boards that are more independent increase the probability that bank-insurance acquisitions will be completed and take a shorter time to complete. The effectiveness of independent boards diminishes when dealing with cross-border transactions, as we observe a semi-inverted U-shaped relationship between the proportion of NEDs and the indicators for the duration and deal completion outcomes. We also find that transactions involving companies with staggered/classified boards are less likely to be completed, and that those that do complete take longer. In addition, large board sizes only increase the likelihood that an announced bank-insurance deal would be completed (i.e., there is no effect on acquisition duration), while the presence of CEO/Chair duality only shortens the deal completion time. A series of robustness tests using different econometric estimations confirm that our results are robust.

The present study mainly contributes to the literature in two ways. First, it makes novel contributions to *acquisition completion* and *acquisition duration* by examining a fundamental, yet overlooked, aspect of corporate governance: internal governance mechanisms. Most studies that have investigated acquisition outcomes find that the impact of corporate governance is contingent upon institutional variables (Dikova et al., 2010; Kim and Song, 2017). This study reveals that the impact of board size on acquisition duration is conditional on deal type: cross-border deals get completed more quickly with an increase in board size. Second, the study adds to the growing body of literature on agency theory (Jensen and Meckling, 1976; Ross, 1973). Many scholars have applied agency theory in various contexts to solve problems of a principal-agent nature, such as M&A (Faccio et al., 2006; Harford et al., 2012; Masulis et al., 2007; Wang and Xie, 2009), transfer pricing (Eccles, 1985; Ronen and Balachandran, 1988), internal audit, management accounting, and compensation contracts (Adams, 1994; Ellis and Johnson, 1993; Lambert, 2006; Parks and Conlon, 1995), amongst others. This study supplements the M&A inputs by providing additional empirical evidence on governance and deal outcomes.

To the best of our knowledge, this is the first study to link internal governance mechanisms with both deal completion likelihood and the time a deal takes to close after its announcement. Studying *acquisition completion* and *acquisition duration* is important because abandoned and prolonged deals attract huge costs and could severely mar the parties' reputations. Reneging on a deal after a public announcement is also tantamount to a breach of contract and is associated with heavy penalties. Focusing on the factors that can trigger delays in and abandonment of M&A deals could reduce firms' frustrations and prevent them from incurring unnecessary costs. This study calls upon executives to carefully evaluate bank-insurance deals in order to avoid the terminations and prolonged completions that waste company resources, damage firm status, and risk systemic failures.

The remainder of this chapter is structured as follows. Section 6.2 discusses the theoretical background, related literature, and hypotheses. Section 6.3 describes the data, variables, and methodology. Section 6.4 reports the empirical results. Section 6.5 presents the robustness checks. Section 6.6 concludes.

6.2 Theoretical Background and Hypotheses

6.2.1 Corporate Governance and Acquisition Outcomes

Mergers and acquisitions are among the most significant and readily observable forms of corporate investment. This distinctive feature makes them an obvious setting for potential agency conflicts between managers and stakeholders (Jensen and Meckling, 1976; Masulis et al., 2007). The executives who are the agents of shareholders have a responsibility to act in the shareholders' best interests and make investment decisions that enhance value. However, managers can be wasteful and behave foolishly, so there is need for some oversight to prevent bad things from happening and to ensure that the parties' interests are better aligned. This is where corporate governance comes in (Morck et al., 1990a; Roll, 1986).

When managers who are viewed as partly entrenched make acquisitions or any other corporate investment, they will mostly consider two things: the potential for personal gain and the consequences for the market value of the firm. Some of these investments could be attractive and offer valuable opportunities for expanding firms in the long term, diversifying risks in their human capital or enhancing their job security (Harford et al., 2012; Shleifer and Vishny, 1997). If these investments seem to promise huge personal benefits, managers may be willing to pursue them at the expense of the market value of the firm. Extant empirical literature finds that acquisitions that fall under this category are value destructive, especially if the underlying agency conflict is not appropriately tamed (Harford et al., 2012; Masulis et al., 2007).

Theoretical literature favourably views corporate governance mechanisms (such as the board of directors, executive compensation, and the ownership structure) as appropriate for curtailing agency conflicts and galvanising managers to align their interests with those of outside shareholders (Lipman and Lipman, 2006; Mallin, 2018; Naciri, 2009). Of the listed governance elements, Jensen (1993) believes that boards of directors are the most efficacious aspect of internal control. However, critics cite notable scandals such as Lehman Brothers, WorldCom, and the global financial crisis (GFC) as evidence of laxity by corporate boards who simply rubberstamped their CEOs' actions. These governance-related flaws have spurred various reforms and a heated debate about the appropriate measures for ensuring an effective board: reducing board size, increasing board independence, de-staggering the boards, or

abolishing CEO/Chair duality? It is likely that each of these mechanisms will exert different effects, which is why we focus on them in this research.

Empirical literature examining corporate governance and M&A has largely concentrated on shareholder wealth effects over merger outcomes and deal completion time. However, M&A performance and acquisition outcomes should be elements that are highly correlated. This means we can put reliance on the literature to develop our hypotheses. Since the early works of Jensen and Meckling (1976) and Fama (1980), corporate governance has been seen as an effective control mechanism for monitoring and controlling the actions of managers, thus preventing them from pursuing bad acquisitions.

Subsequent researchers studying specific internal governance mechanisms have also found that such mechanisms are adequate for mitigating agency conflicts. With respect to ownership structure, Lewellen et al. (1985) find managerial shareholding to be useful for deterring executives from engaging in acquisitions that dissipate firm value, including deal abandonments. This is because managers who own shares have their incentives better aligned with outside shareholders.[42] Regarding board independence, several studies (Byrd and Hickman, 1992; Guo and Masulis, 2015; Knyazeva et al., 2013) show that firms with a large proportion of outside directors tend to have improved monitoring systems and make better acquisitions than those with insider-dominated boards. Thus, outsider-dominated boards are good news and they make deal completions more likely. Mitchell and Lehn (1990) test the governance hypothesis on the quality of acquisitions pursued by managers, and find supportive evidence that the market for corporate control (i.e., where non-performing managers are threatened with company sale if they fail to perform: Manne, 1965) can indeed discourage empire building and increase deal completion outcomes. These assertions are also supported by Lehn and Zhao (2006) who posit that the executives who make bad acquisitions are highly likely to be sacked by the board of directors; this is something that can discipline executives to pursue only the investment projects (such as acquisitions) they are sure they can complete.

Other scholars have focused on the board's inability to monitor the actions of executives when the position of board chair and CEO are held by the same person. Indeed, duality can exacerbate conflicts

[42] Fields et al. (2007b) and Stulz (1988) find the relationship between increase in managerial ownership and firm value to be non-monotonic: higher levels of managerial shareholding breed managerial entrenchment, which is associated with bad acquisitions.

of interest and render boards ineffective in their oversight role (Lorsch and Maciver, 1990). In the context of M&A, CEO duality tend to be associated with better M&A performance (Pham et al., 2015). For instance, Daily and Dalton (1997) find that non-distressed firms with duality do better in acquisitions than their non-duality peers. They argue that duality provides a unified command and signals an efficiency in decision-making that could be associated with deal expedition. Based on the above evidence, we propose that internal governance mechanisms can have a positive impact on both acquisition completion and duration.

6.2.1.1 Board Size

Theoretical literature contends that large boards of directors are more likely to incur agency costs than small ones and are value decreasing (Jensen, 1993, p. 865). This conjecture suggests that there could be a negative connection between board size and acquisition performance or completion likelihood. Consistent with these assertions, Eisenberg et al. (1998) find smaller boards of directors to be associated with higher measures of Tobin's Q. Subrahmanyam et al. (1997) also report that small boards have a positive relationship with acquirers' acquisition returns. Increased wealth means better acquisition outcomes, and vice versa. Lipton and Lorsch (1992) find a board size of no more than 8-10 members to be optimal. Building on Lipton and Lorsch, Jensen (1993) argues that corporate boards with more than 7 or 8 members are likely to be less effective and could easily be manipulated by CEOs. The other factor that can negatively link board size with acquisition duration is *size and capture:* 1) it is expensive to capture large boards (i.e., arrange board meetings and reach consensus), and 2) they are characterised by sluggishness in decision-making.

In contrast, non-agency theorists argue in favour of large board size because it can boast a breadth of skills and benefit a firm by establishing linkages with other firms (Dalton et al., 1999; Hillman and Dalziel, 2003), as well as secure a firm's vital resources through the directors' networks (Stearns and Mizruchi, 1993).[43] Large boards are also conservative in their decision-making. For instance, Berger et al. (2014) show that increases in board size reduce firms' risk-taking endeavours, meaning that larger boards are less likely to make risky acquisitions that will eventually be terminated. However, because of their slowness in decision making, they are likely to lengthen deal completion time. Banks tend to have larger

[43] We refer to resource dependence theorists in this context (e.g., Daily et al., 2002; Dalton et al., 1999; Hillman and Dalziel, 2003)

boards compared to other industries. All of these schools of thought are relevant to our study focus. Thus, we propose the following null and negative hypotheses.

Hypothesis 1: *There is no significant relationship between board size and the likelihood that a bank-insurance M&A will be completed.*

Hypothesis 2: *Board size is negatively related with the time a deal takes to be concluded.*

6.2.1.2 Board Independence (the Proportion of NEDS in the Board)

Corporate directors are classified into two broad groupings: inside directors who also double up as employees of a firm, and outside or unaffiliated directors (non-employees or non-executives). The SOX (2002) requires that publicly traded companies should have a substantial number of non-executive directors on the board. The common assumption under agency theory is that outside directors are better at carrying out the monitoring and oversight role than their insider counterparts (Daily et al., 2003; Raheja, 2005). According to Bhagat and Black (1999) and Hermalin and Weisbach (2003), firms with a large proportion of non-executive directors make major corporate decisions that serve the interests of shareholders. For instance, Byrd and Hickman (1992) find, in an examination of tender offers, that bidders earn higher abnormal returns when outsider representation is close to 60 per cent of the total directors on the board. In support of this, Brickley et al. (1994) and Rosenstein and Wyatt (1997) report that the stock market response is positive when there a non-executive director is added to the board, while the response is insignificant to the addition of an insider. These could imply that bidders with more NEDs are better at completing M&A deals compared with their low NED counterparts. Regarding risk disclosure, Adelopo et al. (2021) show a positive association between board independence and the quality of disclosures during periods of uncertainty (such as Covid-19). This suggests increased levels of transparency and reduced information asymmetry, which are prerequisites for successful acquisition completion and duration. We therefore conjecture that higher representation of NEDs on the board makes firms more attractive because of increased transparency, accountability, etc. More transparent firms have a higher likelihood of being taken over quicker as there is no hidden information. Considering the above literature, we propose that:

Hypothesis 3. *The proportion of non-executive directors on the board is positively related with acquisition completion likelihood and the time it takes to close a deal after its announcement.*

6.2.1.3 CEO/Chair Duality

CEO duality occurs when a company officer holds two positions: Chairperson to the board and the CEO (Baliga et al., 1996, p. 42). *A priori*, duality could lead to a concentration of power, curtailment of the oversight function of corporate boards, and may "signal the absence of separation of decision management and decision control..." (Fama and Jensen, 1983, p. 314; Lorsch and Maciver, 1990). No wonder duality has, in recent years, been attributed to a series of accounting scandals and corporate failures in the US (such as Westinghouse, Sears, Enron, etc.). Goyal and Park (2002) find duality to reduce the sensitivity of the CEO to the performance of a firm, while Core et al. (1999) document a positive relationship between duality and higher CEO compensation. In the context of M&A performance, Masulis et al. (2007) obtain evidence to suggest that duality is negatively associated with bidder returns. Diminished shareholders' wealth indicates that there is a reduced likelihood that an announced M&A would be completed. Moreover, Baliga et al. (1996) argue that duality could prevent dilution of leadership while improving congruity in management and board objectives and decision making, thus reducing deal completion delays. Interestingly, stewardship theorists concur with Baliga et al. that duality eliminates unnecessary competition between the board chair and the CEO, through which it may water down the board's governance function (Daily et al., 2003; Daily and Dalton, 1997). CEOs in such a structure tend to rely more on their instincts and are often overconfident in their decisions. If CEO duality yields a more consistent formulation of strategy and implementation, it should increase the likelihood of completing and M&A and the time it takes to conclude.

Hypothesis 4. *CEO duality positively impacts the probability of completing a deal and the time a deal takes to conclude*.

6.2.1.4 Staggered Board

Board tenure refers to the length of time a director sits on the board and it is categorised into two: unitary boards where all directors are subject to reappointment each year, and classified boards where directors (who are in three classes) each serve staggered three-year terms (Cremers et al., 2017; Lipton and Lorsch, 1992). Theoretical literature contends that staggered boards promote managerial entrenchment and harm the value of the firm because they insulate managers from the threat of being replaced (Bebchuk et al., 2002; Rauh, 2006). These assertions are empirically confirmed by Amihud and Stoyanov (2017), Bebchuk and Cohen (2005), and Faleye (2007) who report negative associations

between staggered boards and corporate performance as measured by Tobin's Q. Similarly, Guo et al. (2008) find that de-staggering corporate boards significantly increases wealth to shareholders. Better wealth implies that bidders are more likely to have their M&A completed, and vice versa. This assertion is confirmed by Masulis et al. (2007) who find that firms with staggered boards tend to yield worse acquisitions and their stock receives more pronounced negative market valuation around the M&A announcement date. Based on the above evidence, we propose that:

Hypothesis 5. *Staggered boards are negatively associated with the likelihood that a bank insurance deal is completed and the length of time to completion.*

6.3 Methods

6.3.1 Sample and Data Source

The data for this study are obtained from three sources: The Bureau van Dijk's Zephyr database for bank-insurance M&A announcements, Thomson Reuters' DataStream for the corresponding financials, and Bloomberg for governance characteristics. The two databases have recently been extensively used in the academic literature on M&A (Beck et al., 2003; Bollaert and Delanghe, 2015; Dikova et al., 2010). Our dataset spans the period between January 1, 2006, and December 31, 2019, comprising deals involving publicly traded acquirers drawn from 57 countries globally, and targets that are either public, private, or subsidiaries.

The initial sample contains 12,202 bank-insurance takeovers globally, comprising 11,609 completed and 1,133 abandoned deals. We follow Fields et al. (2007) by setting the following criteria for our final sample: 1) both the bidder and the target come from either the banking industry (SIC codes: 6000, 6021, and 6022) or the insurance industry (SIC codes: 6311, 6321, 6399 or NEC 6411); 2) the acquirer must own less than 50 per cent of the shareholding in the target company before the announcement; 3) the merger results in the bidder owning over 50 per cent interest in the target; and 4) the acquirer is a publicly listed company with data available in DataStream and Bloomberg. After excluding deals that did not meet all these criteria, our final sample is 1,652 M&A consisting of 1,478 completed and 186 abandoned deals.

6.3.2 Measures

6.3.2.1 Dependent Variables

We utilise two *dependent variables* in our empirical analysis. The first is a binary variable for *Acquisition* completion, consistent with prior literature (Dikova et al., 2010; Muehlfeld et al., 2012, 2007; Rossi and Volpin, 2004) that takes the value of 1 if a deal is completed, and 0 otherwise. To achieve this, we rely on information on deal characteristics such as completion status, announcement, and completion dates as reported in Zephyr database. Deals with no clear completion dates or those whose status shows as *pending or rumoured only* are excluded from the sample. The second is a discrete variable, *acquisition duration*: time until the announced M&A deal closes (or is subsequently withdrawn/abandoned), computed as the difference (in months) between the M&A completion date and its announcement date (e.g., Dikova et al., 2010).

6.3.2.2 Independent Variables

There are four variables that are of interest: Board size, independence, staggered, and CEO/Chair duality. We measure board size as the number of board members sitting on the acquirer's board, and board independence as the ratio of non-executive directors over the total number of directors on the acquirer's board. The staggered board indicates whether the acquirer's board comprises directors serving different term lengths coded as 1, or 0 otherwise. The idea behind this inclusion is that although the staggered board is a simple measure, it is a blunt proxy for agency problems on the part of acquirers as it protects against one type of disciplinary action: a proxy fight (see Harford et al., 2012). *CEO/chair duality* is a proxy for powerful CEOs (dictator) and indicates whether the position of CEO and Board Chair in the acquirer's board is held by the same person coded as 1, or 0 otherwise. All the internal governance data retrieved from Bloomberg reflect the composition of the board at the time of the focal deal announcement.

6.3.2.3 Control Variables

We control for several variables that may influence both acquisition completion and duration. The first is prior *acquisition experience*, a proxy for learning that is operationalised as the cumulative number of similar deals attempted by the acquirer within the 10 years prior to the focal deal. We include this variable because of the expectation that managers will learn from previous deal-making experience and

will thus be able to speed-up successive acquisitions (Doan et al., 2018). Within the learning curve, we also control for prior failure record, which is measured by the ratio between failed and successful M&A in the last 10 years, as retrieved from Zephyr. This should have a negative influence on the acquisition process (see Muehlfeld et al., 2012).

Second, we control for firm-level variables such as acquirer size, leverage, the listing status of targets, and industry relatedness. *Acquirer size* is operationalised as the natural logarithm of the firm's total assets one year before the focal year. We also measure acquirers' leverage as the ratio between long-term debts and total assets. The reason for using this variable is that over-leveraged firms have the proclivity to choose targets with less-information asymmetry. Based on this characteristic, they are likely to settle for publicly listed targets instead of non-public ones, which may generate better synergies and maximise value for them in the long run. However, these acquisitions could be negatively received in the short run and take longer to complete (Faccio et al., 2006; Fuller et al., 2002).

Listing status of target firms is a dummy variable with a value equal to 1 for M&A transactions involving publicly owned/listed targets, and 0 for privately owned. The rationale behind this inclusion is that public targets are prone to many regulatory measures and have to comply with disclosure requirements, something that can cause significant delays or even lead to deal abandonment if the regulatory authorities decline to approve an acquisition (Dikova et al., 2010; Weston et al., 2013). *Industry relatedness* is a proxy for diversification coded as 1 if the acquirer and the target originate from the same industry, and 0 otherwise. The financial data are a one-year lag retrieved from Thomson Reuters DataStream.

Third, we control for deal-specific characteristics such as the method of payment, deal attitude, and cross-border acquisitions (CBD). The *method of payment* (cash, stock, or hybrid) may have an impact on deal completion and duration as managers with better information about the target tend to use cash, thus reducing the tendency to haggle over valuation uncertainties (Myers and Majluf, 1984). This variable takes the value of 1 if the transaction is predominantly cash-settled, and 0 otherwise. *Deal attitude* exemplifies the effect of friendly vs. forced or hostile takeovers. It is measured using an indicator value of 1 if the M&A deal is negotiated between merger partners, and 0 otherwise. Since there is a likelihood that targets could employ defence-tactics in a forced merger, we expect hostile takeovers to impact deal closure and duration negatively. *Cross-border* deals is a dummy variable coded as 1 if the

partners to the transaction are from different countries, and 0 otherwise. We include this variable because cross-border mergers are prone to differences in institutional environments and information asymmetry that create pressure in the negotiation and cause delays (Popli et al., 2016).

In a robustness test, we also control for *percentage sought* because the proportion of target ownership sought by the acquirer may impact the acquisition process. For financial institutions, higher stakes may be subject to intensified regulatory scrutiny before approval is granted (Lim and Lee, 2016). Finally, we also include *industry* and year *dummie*s, taking the year 2019 and the insurance industry as reference categories to control for year and industry variations.

6.3.3 Empirical Model

6.3.3.1 Logistic Regression

Since our first dependent variable is a binary, we follow prior studies (Dikova et al., 2010; Muehlfeld et al., 2007, 2012; Fuad and Gaur, 2019) and estimate a logistic regression to model the impact of independent variables based on the possibility that an announced M&A deal is either completed or abandoned. The sign of significant coefficients (positive or negative) only implies that an M&A is more or less likely to be completed. However, marginal effects are more intuitive as they quantify the effect of change in governance variables on the likelihood of acquisition completion. While there exist other, equally appropriate methods for measuring this scenario, such as discriminant analysis or a probit regression model, we prefer the logistic regression because the econometric literature suggests it has numerous benefits. For instance, unlike linear models, a logistic model does not require the independent variable to be normally distributed, or linearly related, or to have equal variance within groups (Kopacek, 2005; Muehlfeld et al., 2007). Also, a logit regression permits for covariates to be of any mix (dichotomous, continuous, or discrete, etc.), as is the case for this study (Tabachnick and Fidell, 2018). We also find the results from our probit and logistic regressions to be pretty much the same (see e.g., Doan and Rao Sahib, 2019). We utilised robust standard errors for our binary regression estimates.

Effectively, the likelihood of completing an M&A deal is assumed to be a logit function of predictor variables such as internal governance mechanisms, deal attributes, firm-level, and other control variables. This is estimated as:

$$P_i = \frac{1}{1 + e^{-\beta X_i}} \quad (16)$$

Where P_i is the probability that an announced M&A i will be completed, and x_i is a vector of predictor variables (covariates). The explanatory power of a logistic model is determined using a log-likelihood ratio. The model being used to test the hypothesis for *acquisition completion* likelihood can be specified as follows:

$$\Pr(sucess = 1) = \alpha + \beta' X_i + \gamma_i + \mathcal{E}_i \quad (17)$$

Where α is a constant, β is a vector of the logit regression coefficients for the respective predictor variables X_i, which include interaction terms, and γ_i represents industry, and year dummies. We use Stata (version 17) to compute the estimates and, for ease of interpretation, we report the average marginal effects of each predictor variable (see Bowen and Wiersema, 2004).

In addition, we conduct robustness checks by reiterating all our analyses (with and without standard error clustering) and the illustration for interaction terms using the probit model. Similar to Fuad and Gaur (2019), we only report the results of the logistic regression in our main models because the results from both estimation methods are qualitatively similar.

6.3.3.2 Survival Analysis

The second piece of analysis prompts us to investigate a time-to-event outcome. A logit model can shed some light into the various factors that influence *acquisition completion*. However, it only utilises status information (0 or 1) whilst excluding other pertinent facets, such as the time-lapse until the status changes. To address this, we conduct an event history analysis (survival analysis) to assess how internal governance characteristics influence the time taken for a transaction to be completed. The sample comprises 1,252 transactions that meet the criterion of complete governance data. However, 41 of these suffer from incomplete spells (right censoring), while an additional 152 transactions are excluded from duration modelling for being completed upon the day of announcement (t=0). The final sample for which we can study duration (those with M&A announcement and completion dates) becomes 1,059 bids. First, we define our survival function (the probability of M&A being completed later than time, t) as

$$S(t) = Prob(T \geq t) = 1 - F(t) \tag{18}$$

Where t stands for time in question, T is the time of the event (M&A completion), and $F(t)$ denotes the duration distribution of an event. The duration distribution function, which is the probability that M&A deals would be completed in less than or equal to time t, is

$$F(t) = Prob(T \leq t) = \int_0^t f(s)ds. \tag{19}$$

The derivative function of $F(t)$ gives us the probability of a single firm completing an M&A at time t. Second, we model the hazard rate to obtain additional information on the instantaneous completion rate at time t as

$$\lambda\,(t) = \frac{f(t)}{S(t)} = \frac{pdf\,(t)}{1 - cdf(t)} \tag{20}$$

The hazard rate is the likelihood that an M&A will be completed by time t, given that the M&A has not yet been completed. To implement this, we consider both parametric and semi-paramedic estimation approaches, from which we select the best model based on the Akaike information criterion (AIC), and the Bayesian information criterion (BIC) (see Akaike, 1974; Raftery, 1995). Typically, if two or more models are fitted on the same data, the model with smaller AIC or BIC values is deemed to have better estimates (Burnham and Anderson, 2004). We estimate five models falling within the above categories for comparison purposes. The *Cox-proportional*, a semi-parametric model which allows the hazards to fluctuate over time, is preferred by scholars because it contains minimal assumptions. Under the parametric category, the *Weibull model* is ideal for modelling data with monotone hazard rates, while the *Exponential model* is a special case of the Weibull and is suitable for data with constant hazard rates.[44]

The *Gompertz distribution* is parameterised only in the proportional hazards (PH) form and, like the Weibull, is ideal for modelling data with monotone hazard rates. The *Log-logistic* model, on the other

[44] Weibull and Exponential distributions are implemented as both proportional hazards (PH) and the accelerated failure time (AFT) which assume that the effect of covariates increases or decreases over time by some constant.

hand, is implementable only in the accelerated failure time (AFT) form and is suitable for data with non-monotone hazard rates. We compare the results using the above goodness-of-fit measures and find that the Weibull distribution provide the best performance because it offers the smallest AIC and BIC values compared to the Exponential, Log-logistic, Gompertz, and Cox-proportional models. Notably, all our parametric models outperform the Cox model (see Table 26). This choice is also confirmed through nesting the four parametric models, wherein Weibull registers the largest log-likelihood. To complete the survival estimation, we follow Dikova et al. (2010) and include the same set of controls and independent variables as in the models for acquisition completion.[45]

[45] Estimates are obtained using *streg, nohr* in Stata version 17. Standard errors are clustered by year and industry based on SIC codes.

Table 16: Descriptive Statistics and Correlations Coefficients

Variable	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14
M&A success	0.89	0.31	0.00	1.00														
Cash payment	0.46	0.50	0.00	1.00	0.07[a]													
Deal attitude	0.67	0.47	0.00	1.00	0.10[a]	–0.41[a]												
Cross border deals	0.32	0.47	0.00	1.00	–0.03	0.42[a]	–0.50[a]											
Leverage	12.82	18.0	0.00	552.5	–0.04[c]	0.03	–0.03	0.08[a]										
Industry relatedness	0.90	0.30	0.00	1.00	–0.04[c]	0.02	0.09[a]	–0.02	–0.12[a]									
Target listing status	0.36	0.48	0.00	1.00	–0.05[b]	–0.34[a]	0.39[a]	–0.21[a]	0.02	0.23[a]								
Market to book ratio	1.57	0.95	0.00	18.58	0.07[a]	0.03	0.08a	0.03	0.01	–0.01	–0.03							
Acquirer size (log)	9.47	2.38	0.91	15.02	–0.08[a]	0.21[a]	–0.32[a]	0.48[a]	0.23[a]	–0.15[a]	–0.05[c]	–0.09[a]						
Board size	11.93	3.70	4.00	33.00	0.02	–0.06[b]	–0.01	0.07[b]	0.21a	–0.08[a]	0.05[c]	–0.12[a]	0.42[a]					
% NEDs	70.96	21.3	0.00	100.0	0.16[a]	–0.20[a]	0.19[a]	–0.22[a]	–0.18[a]	0.07[a]	0.15[a]	–0.04	–0.29[a]	–0.17[a]				
12. Duality	0.28	0.45	0.00	1.00	0.04	–0.09[a]	0.12[a]	–0.18[a]	–0.11[a]	0.00	0.04	–0.04	–0.09[a]	–0.03	0.14[a]			
Staggered board	0.45	0.52	0.00	6.29	–0.05[c]	–0.11[a]	0.05c	–0.10[a]	0.23[a]	0.03	0.05[c]	–0.07[b]	–0.18[a]	0.00	0.06[b]	–0.05[c]		
Prior M&A experience	2.49	1.41	0.00	6.69	–0.05[b]	0.16[a]	–0.23[a]	0.37[a]	0.16[a]	–0.10[a]	–0.06[b]	–0.06[b]	0.72[a]	0.35[a]	–0.05[c]	–0.02	–0.18[a]	
Failure/success ratio	0.05	0.14	0.00	2.00	–0.13[a]	–0.02	0.01	–0.04	0.01	–0.03	0.02	0.00	–0.07[a]	–0.10[a]	–0.08[a]	–0.08[a]	0.04	–0.18[a]

The table presents that the descriptive statistics and the associated Pearson correlation coefficients. [a], [b] and [c] denote statistically significant at a 1- , 5- and 10% levels, respectively, at the two-tailed level. Variable definitions are in the Appendix.

6.4 Empirical Findings

6.4.1 Descriptive Statistics and Correlations

The 1,662 analysed deals were undertaken by 742 banks and insurers, representing a multiplier of approximately 2.24 attempted deals per firm. Of these, 1,478 deals were completed and only 186 were terminated, making a completion rate of 89 per cent, which is comparable to prior literature (see Chakrabarti and Mitchell, 2016; Pollock et al., 2008).

Table 16 lists the descriptive statistics and correlation matrix of the variables. The average board size and the percentage of non-executive directors (NEDs) on the board is 12 members and 72 per cent respectively, both of which are slightly higher than what is commonly perceived to be the 'optimal' industry averages of 8-11 for board size and 57 per cent for NEDs (Beiner et al., 2004).[46] Table 16 also reveals no multicollinearity concerns, as all the correlations are far below the standard cut-off of $|r|<0.7$ applied by prior literature, except for the high correlation between *previous acquisition experience* and *acquirer size* (0.72). Dikova and Rao Sahib (2013) argue that this is to be especially expected for large firms, as they are typically perceived to be active acquirers who use acquisitions to achieve firm growth. We perform further multicollinearity checks using variance inflation factors (VIF) and find that all our values range between 1.14 and 2.89, which are well below the VIF threshold of 10 (Kennedy, 2008, p. 199).

Although the extant empirical literature applies measures such as mean centring as probable corrections for multicollinearity, especially when dealing with interaction terms, this study desists from using such corrections. Belsley (1984) and Echambadi and Hess (2007) note that such measures could generate irrelevant and misleading collinearity diagnostics while not affecting the magnitude or interpretation of interaction terms. According to Dikova et al. (2010), mean-centring could be ideal for augmenting the interpretation of variables in a linear model when interaction terms are included, but not in a logit regression model where a cursory inspection of the coefficient of interactions may not reveal significant interaction effects. As such, we follow Shaver's (2006) recommendations for computing the average

[46] Larger average size of corporate boards of between 12-14 have been mentioned by earlier studies (Chaganti et al., 1985; Gordon, 1945), but Eisenberg et al. (1998) and Yermack (1996) but recommends that smaller boards are ideal to effectively execute a controlling function.

marginal effects relating to moderating factors. In our case, these are board size and proportion (%) of non-executive directors (NEDs), and chart it (*as shown in* Figures 5 and 6) to ease the interpretations.

Tables 17 and 18 logit on the *acquisition completion*, while Tables 19 and 20 present results from the Weibull regressions of the survival analysis that test the hypotheses for *Acquisition duration*. In both cases, Model 1 is a baseline specification containing a constant and with results corresponding to the control variables. Models 2-5 present results with governance variables: board size, the proportion of NEDs, duality, and staggered board (added to the models piecemeal). Models 7 and 8 include interaction terms, while Models 6 and 9 are the full models that incorporate measures of experience as additional controls. We follow Fuad and Gaur (2019) to report the coefficients, standard errors, marginal effects, and the value of likelihood function at convergence, as well as the value of the Wald Chi-squared test (χ^2) for the null-hypothesis that all parameters associated with independent variables are simultaneously equal to zero. We reject the null hypothesis since the χ^2 statistic is significant at ($p \leq 0.01$) in all the logit models.

6.4.2 The Effect of Internal Corporate Governance Measures

The results in Table 17 show that board size has a significant positive effect on the acquisition completion likelihood ($p < 0.01$). However, in Table 19 it does not seem to influence the duration of M&A deals. This means that regardless of the time an M&A takes, firms with larger boards will pursue acquisitions to completion, possibly because they understand that aborting them could be costly and detrimental to their reputation. The proportion of independent directors (NEDs) on the acquirer's board ($p < 0.01$) also has a positive and significant effect on both the *acquisition completion* and *acquisition duration*. This result implies that acquisitions initiated by firms with more independent directors get completed more quickly than those with fewer independent directors on the board. A staggered board has a negative effect on acquisition completion ($p < 0.01$) and acquisition duration ($p < 0.1$). This indicates that transactions initiated by firms whose boards are staggered take longer and are less likely to be completed. The argument here is that although staggered boards effectively ward-off hostile takeovers, they tend to insulate managers from the punishment of the *market for corporate control,* which may

deter the pursuit for low-quality investments.[47] This kind of shielding prompts empire-building managers to take up long-term projects that may take time to materialise.

Further, the coefficient of duality is positive but statistically insignificant for acquisition completion, and positive and significant for acquisition duration ($p<0.01$). This finding suggests that transactions involving acquirers whose CEOs are also the chairs of the board have an equal chance of being completed or of being abandoned, as such CEOs have full discretion over their firms' acquisitions policies and can easily use them to pursue personal interests. The proportion of M&As that complete do so in a shorter time, perhaps because there is a significant elimination of the potential competition and leadership-related overlaps that may delay board decisions.

Since the magnitude or significance of coefficients in a non-linear model do not necessarily reflect the size effect, we compute the average marginal effects of each measure of governance on M&A deal completion and report the results as suggested by Bowen and Wiersema (2004). Based on the calculation, we conclude that, *Ceteris Paribus*, the average probability of completing a bank-insurance M&A deal increases by 1.2 per cent with an increase in board size, but by only 0.2 per cent with an increase in the proportion of NEDs on the acquirers' board. We also observe that when all other variables are fixed at their means, the probability of completing an M&A deal would drop by 4.8 per cent if there is an introduction of staggered terms to the acquirer's board of directors.[48]

[47] See also Bebchuk (2013)

[48] For marginal effects, we report the higher percentage from the range.

Table 17: Logistic Regression Results Predicting M&A Completion Likelihood for Full Sample

The table reports the results for the logistic regression for bank-insurance M&A between 2006-2019. All the regressions include industry and year dummies. We use the year 2019 and the insurance industry as reference categories. [a], [b] and [c] denote statistically significant at a 1- , 5- and 10% levels, respectively, at the two-tailed level. Robust standard errors are in the parenthesis. Marginal effects are in in square brackets.

Variables	(1) Controls only	(2) Board-size	(3) % NEDs	(4) Duality	(5) Staggered board	(6) All + Experience
Intercept	2.250[a]	3.454[a]	1.326	3.559[a]	4.456[a]	2.083[c]
	(0.673)	(0.840)	(0.971)	(0.837)	(0.898)	(1.141)
Board size		0.137[a]				0.142[a]
		(0.034)				(0.037)
		[0.012]				[0.011]
% Non-executive directors			0.021[a]			0.024[a]
			(0.004)			(0.005)
			[0.002]			[0.002]
Duality				0.217		–0.112
				(0.233)		(–0.009)
				[0.019]		[–0.052]
Staggered board					–0.554[a]	–0.662[a]
					(0.204)	(0.224)
					[–0.048]	[–0.052]
Cash payment	0.940[a]	0.973[a]	1.061[a]	0.905[a]	1.037[a]	1.231[a]
	(0.208)	(0.244)	(0.254)	(0.243)	(0.255)	(0.271)
	[0.085]	[0.085]	[0.090]	[0.080]	[0.090]	[0.097]
Deal attitude	1.128[a]	0.948[a]	0.962[a]	0.998[a]	1.019[a]	1.009[a]
	(0.228)	(0.261)	(0.270)	(0.261)	(0.274)	(0.287)
	[0.102]	[0.083]	[0.082]	[0.088]	[0.088]	[0.080]
Cross-border deals	0.095	0.350	0.186	0.266	0.209	0.329
	(0.230)	(0.266)	(0.276)	(0.268)	(0.282)	(0.302)
	[0.009]	[0.031]	[0.016]	[0.024]	[0.018]	[0.026]
Leverage	–0.017[b]	–0.016[c]	–0.019[b]	–0.016[c]	–0.020[b]	–0.020[b]
	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)
	[–0.002]	[–0.001]	[–0.002]	[–0.001]	[–0.002]	[–0.002]
Industry relatedness	–0.611[c]	–0.692[c]	–0.457	–0.541	–0.637[c]	–0.612
	(0.329)	(0.374)	(0.378)	(0.368)	(0.386)	(0.402)
	[–0.055]	[–0.060]	[–0.039]	[–0.048]	[–0.055]	[–0.048]
Target listing status	–0.539[a]	–0.611[a]	–0.687[a]	–0.586[b]	–0.514[b]	–0.630[b]
	(0.202)	(0.235)	(0.246)	(0.236)	(0.241)	(0.261)
	[–0.049]	[–0.053]	[–0.058]	[–0.052]	[–0.045]	[–0.050]
Market to book ratio	0.317[b]	0.267	0.249	0.208	0.175	0.260
	(0.132)	(0.164)	(0.161)	(0.158)	(0.168)	(0.180)
	[0.029]	[0.023]	0.021]	[0.018]	[0.015]	[0.021]
Acquirer size (log)	–0.094[b]	–0.340[a]	–0.153[a]	–0.221[a]	–0.266[a]	–0.378[a]
	(0.044)	(0.063)	(0.059)	(0.056)	(0.059)	(0.089)
	[–0.008]	[–0.030]	[–0.013]	[–0.020]	[–0.023]	[–0.030]
Prior acquisition experience						0.104
						(0.125)
						[0.008]
Ratio of failure to success						–1.632[b]
						(0.735)
						[–0.129]
N	1662	1259	1210	1260	1202	1137
Wald χ^2	105.57[a]	102.09[a]	104.72[a]	91.01[a]	99.29[a]	121.31[a]
Log pseudo-likelihood	–516.72	–376.86	–353.25	–383.75	–357.78	–308.68

Table 18: Logistic Regression Results Predicting M&A Completion Likelihood Using Interactions Terms

Variables	(7) Board Size * Cross-border	(8) % NEDs *Cross–border	(9) All + Experience
Intercept	2.967[a]	0.792	1.295
	(0.892)	(1.015)	(1.251)
Board size	0.174[a]		0.168[a]
	(0.042)		(0.048)
	[0.015]		[0.013]
Board size * cross-border deals	–0.089		–0.071
	(0.057)		(0.065)
	[–0.008]		[–0.006]
% Non-executive directors		0.028[a]	0.029[a]
		(0.006)	(0.007)
		[0.002]	[0.002]
% NEDs * cross-border deals		–0.016[c]	–0.012
		(0.009)	(0.010)
		[–0.001]	[–0.001]
Staggered board			–0.649[a]
			(0.224)
			[–0.051]
Duality			–0.133
			(0.263)
			[–0.011]
Cash payment	0.988[a]	1.061[a]	1.229[a]
	(0.244)	(0.252)	(0.269)
	[0.086]	[0.090]	[0.097]
Deal attitude	0.966[a]	0.965[a]	1.006[a]
	(0.261)	(0.270)	(0.287)
	[0.084]	[0.082]	[0.079]
Cross-border	1.426c	1.106[c]	1.873[c]
	(0.741)	(0.589)	(1.081)
	[0.124]	[0.093]	[0.148]
Leverage	–0.017[c]	–0.019[b]	–0.020[b]
	(0.009)	(0.009)	(0.010)
	[–0.001]	[–0.002]	[–0.002]
Industry relatedness	–0.682[c]	–0.482	–0.615
	(0.374)	(0.380)	(0.401)
	[0.059]	[–0.041]	[–0.048]
Target listing status	–0.609[a]	–0.703[a]	–0.644[b]
	(0.235)	(0.247)	(0.261)
	[–0.053]	[–0.059]	[–0.051]
Market to book ratio	0.264	0.264[c]	0.260
	(0.164)	(0.160)	(0.178)
	[0.023]	[0.022]	[0.020]
Acquirer size (log)	–0.339[a]	–0.142[b]	–0.366[a]
	(0.063)	(0.059)	(0.090)
	[0.030]	[–0.012]	[–0.029]
Prior acquisition experience			0.113
			(0.125)
			[0.009]
Ratio of failure to success			–1.584[b]
			(0.735)
			[–0.125]
N	1259	1210	1137
Wald χ^2	104.08[a]	100.65[a]	122.66[a]
Log pseudo-likelihood	–375.63	–351.68	–307.52

6.4.3 Control Variables

First, with regard to *transaction-level variables*, we observe that cash-settled deals are more likely to be completed faster than those settled through equity alone. Two possible explanations of this finding are: 1) adverse selection or valuation uncertainty for stock deals (i.e., the market impression that stock payment is a risk-shifting endeavour on the part of bidders: Fuller et al., 2002), and 2) a decline in acquirer's stock price which may lead to renegotiation or prompt the target board's members to back out (Savor and Lu, 2009; Shleifer and Vishny, 2003a). The deal attitude (equal to 1 if the deal is friendly, 0 otherwise) positively affects both acquisition completion and acquisition duration. In friendly deals, targets shareholders have no incentive to employ defensive tactics or to drag themselves into corporate battles that may derail the acquisition process. Notably, the cross-border dummy which has been cited by prior M&A literature (e.g., Dikova et al., 2010; Lim and Lee, 2016) as vital in influencing both duration and completion of M&A deals has insignificant coefficients across all the models. We also find the similarity between the acquirer's and target's industries (as a diversification measure) to be negatively associated with acquisition completion ($p<0.1$).

Second, we find that acquisitions involving publicly owned targets are less likely to be completed and lengthen acquisition completion time, possibly because such transactions are usually large and face more hurdles relative to those involving privately owned firms. We also find that deals initiated by highly leveraged and large acquirers (in terms of total assets) take longer to complete and are highly likely to be abandoned. The intuition behind this is that large financial sector acquisitions attract more political attention and are subject to scrutiny by the regulators, being perceived to cause significant changes in industry concentrations.

Third, we find that *prior acquisition experience* does not have any effect on the focal deal completion likelihood. The insignificance of this result may be due to too much accumulation in the variable. However, prior experience has a positive impact on acquisition duration (p-value ≤ 0.05), implying that more experienced firms are better placed, through a learning curve, to cherry-pick only the targets that have an increased chance of completing within the shortest time possible. Finally, we add the ratio of sum failures to the sum of successes (per firm since 2006 up to the focal deal) as a proxy of the company's historical failure rate (Muehlfeld et al., 2012). The results indicate that a history of failure has a negative impact on M&A completion likelihood, and no impact on *acquisition duration*. Its marginal

effects suggest that increasing the record of failures by one unit decreases the average probability of a deal completion by 13 per cent, all else being equal.

6.4.4 Interaction Effects

We iterate the tests for Models 2, 3, and 6, interacting the cross-border deals (CBD) dummy with the indicator for board size and also with the proxy of board independence (% of NEDs) to establish whether the effect of these governance variables differs for home and cross-border acquisitions. Their results are presented in Tables 18 and 20 for acquisition completion likelihood and acquisition duration, respectively. For completion likelihood, Model 7 of Table 18 reveals that the coefficient of interaction terms between *board-size* and *cross-border-deals* is statistically insignificant, but Model 8 shows significant interaction effects between CBD and the *proportion of NEDs* in the board. Interestingly, the coefficient for cross-border deals shows results, both positive and significant, with the introduction of interaction terms.

Extant literature (Doan et al., 2018; 2019; Hoetker, 2007) indicates that the effect of the interaction in a non-linear model not only depends on the magnitude and coefficients of interaction, and the coefficients of the two variables that are being interacted, but also on other variables that form the model. Thus, placing sole reliance on the magnitude and direction of coefficients of interaction terms can be misleading. Furthermore, the significance of interactions sometimes exhibits some unique features. For example, the coefficient of interaction could be insignificant at face value, but still have a significant interaction effect for a specific range of observations (Hoetker, 2007, p. 336). Thus, to aid the interpretation of results reported in Table 18, we compute the average marginal effects of the two moderating factors (board size and % of NEDs) and chart them (see Huan and Shields, 2000).

The margin plots in Figure 4 and 5 reveal that the impact of cross-border deals is no different from that of domestic (non-CBD) deals based on board size and the % of NEDs. Therefore, assertions regarding the transparency of information disclosure cannot be proved or disapproved. As corporate governance becomes good (% of NEDs and larger board size), its marginal benefits start to increase at a decreasing rate. For instance, Figure 5 reveals that an increase in board size could be beneficial in cutting the value-decreasing actions of managers, thus increasing the chances of completing deals. However, once board size reaches 22, there are no additional benefits, which validates the findings of previous studies (Del

Guercio et al., 2003; Yermack, 1996) that the shareholders' interests could be compromised if boards are too large. A firm's board is said to be independent if it comprises 50 per cent or more outside directors (NEDs) (Paul, 2007, p. 776). These boards are better able to play an active oversight role on corporate insiders and protect the interests of shareholders and other stakeholders.

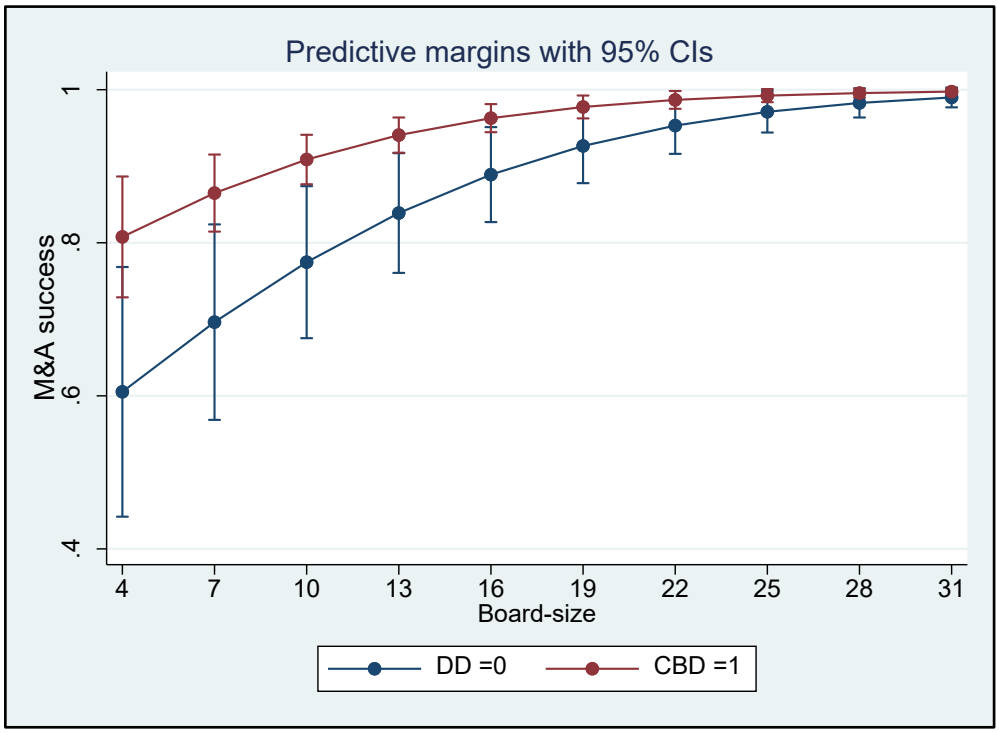

Figure 4: Two-Way Interaction Graph Between Board Size and Cross-Border Deals.

Figure 5 shows that increasing the number of independent directors (% of NEDs) could foster better board performance by augmenting the quality of investment decisions, which of course includes M&A. But when the proportion of NEDs reaches a certain level, say 70 per cent, no more benefits are realised.

For acquisition duration, Model 7 (Table 20) reveals that the interaction term between board size and CBD is positive and statistically significant. Since the coefficient for board size without the interaction term is insignificant, it implies that the effect of board size on acquisition duration is conditional on cross-border transactions. To interpret this effect, we plot deal completion time against board size in Figure 9. We then notice that as the number of directors on the board increases, CBDs get completed more quickly, possibly because there is more at stake and the parties to the merger are in a rush to cement agreements before either party can renege on the deal. This finding contravenes the general

expectation that cross-border deals are inherently riskier than domestic ones because they carry higher political risks simply by moving capital across borders.

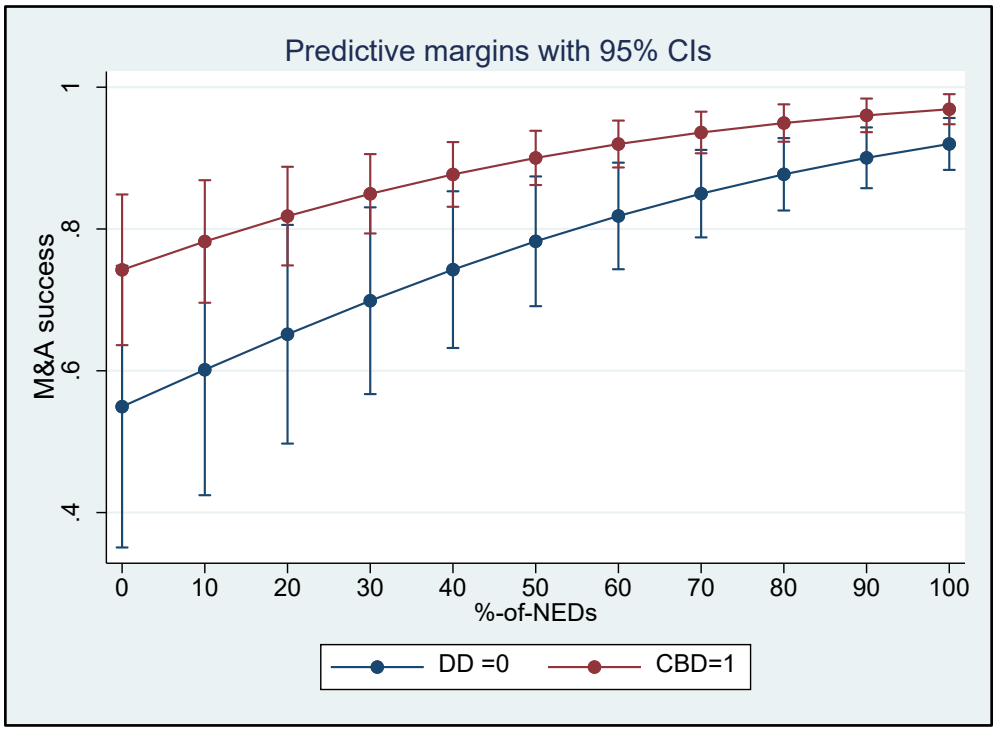

Figure 5: Two-Way Interaction Graph Between % of NEDs and Cross-Border Deals

Model 8 of Table 20 indicates that there is a negative and significant interaction effect between the proportion of NEDs and CBD ($p<0.05$), suggesting that with increased levels of board independence; cross-border transactions take longer to complete. In addition, considering that the coefficient of NEDs prior to introducing the interaction term was significant and positively related to acquisition duration, the latter result could signify one of two things: 1) it validates the notion that board independence loses its efficacy in an environment of information asymmetry and the uncertainties associated with cross-border investments (Adams and Ferreira, 2007); or 2) cross-border deals take a longer time to complete because boards with higher NEDs take the necessary time to conduct careful due diligence.

Table 19: Duration Analysis - Weibull Regressions

Variables	Acquisition duration					
	(1) Controls only	(2) Board size	(3) % NEDs	(4) Duality	(5) Staggered board	(6) All + Experience
Intercept	–1.496[a]	–1.488[a]	–2.256[a]	–1.608[a]	–1.447[a]	–1.921[a]
	(0.303)	(0.304)	(0.347)	(0.308)	(0.308)	(0.380)
Board size		–0.004				–0.003
		(0.011)				(0.012)
% NEDs			0.008[a]			0.007[a]
			(0.002)			(0.002)
Duality				0.286[a]		0.271[a]
				(0.076)		(0.079)
Staggered board					–0.131[c]	–0.127[c]
					(0.070)	(0.073)
Cash payment	0.184[b]	0.182[b]	0.220[b]	0.201[b]	0.202[b]	0.270[a]
	(0.084)	(0.084)	(0.086)	(0.084)	(0.086)	(0.090)
Deal attitude	0.182[c]	0.184[c]	0.165	0.186[c]	0.109	0.067
	(0.102)	(0.102)	(0.104)	(0.102)	(0.105)	(0.107)
Cross-border deals	0.022	0.014	0.021	0.063	–0.065	0.009
	(0.106)	(0.108)	(0.108)	(0.106)	(0.113)	(0.116)
Leverage	0.003	0.003	0.003	0.004	0.004	0.006
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Industry relatedness	0.150	0.149	0.103	0.146	0.001	–0.043
	(0.161)	(0.161)	(0.164)	(0.162)	(0.161)	(0.166)
Target listing status	–0.237[a]	–0.237[a]	–0.234[a]	–0.240[a]	–0.232[a]	–0.167[b]
	(0.080)	(0.080)	(0.081)	(0.081)	(0.081)	(0.084)
Market to book ratio	–0.231[a]	–0.232[a]	–0.209[a]	–0.220[a]	–0.062	–0.044
	(0.043)	(0.043)	(0.043)	(0.043)	(0.055)	(0.056)
Acquirer size (log)	–0.156[a]	–0.152[a]	–0.141[a]	–0.160[a]	–0.162[a]	–0.217[a]
	(0.021)	(0.024)	(0.022)	(0.022)	(0.022)	(0.032)
Prior acquisition experience						0.099[b]
						(0.042)
Ratio of failure to success						–0.126
						(0.316)
N	1059	1059	1059	1059	1027	1001
Log-likelihood *(Null)*	–1055.64	–1055.64	–1055.64	–1055.64	–988.22	–955.22
Log-likelihood (*Model*)	–963.83	–963.77	–953.59	–957.00	–921.38	–865.75
Degrees of freedom	24	25	25	25	25	30
AIC	1975.67	1977.53	1957.17	1964.00	1892.48	1791.50
BIC	2094.83	2101.66	2081.30	2088.12	2016.13	1938.76
Year/industry dummies	Yes	Yes	Yes	Yes	Yes	Yes

The estimates are shown with standard errors are in parentheses. c = p<.10., b = p<.05., a = p<.01. respectively

Table 20: Duration Analysis with Interaction Terms - Weibull Regressions

Variables	Acquisition duration		
	(7) Interacting Board Size with Cross–Border	(8) Interacting % NEDs with Cross–Border	(9) All + experience
Intercept	–1.296[a]	–2.603[a]	–1.926[a]
	(0.315)	(0.380)	(0.436)
Board size	–0.016		–0.016
	(0.012)		(0.014)
Board size * Cross-border	0.045[b]		0.048[b]
	(0.021)		(0.023)
% NEDs		0.012[a]	0.009[a]
		(0.002)	(0.003)
% NEDs * Cross border		–0.008[b]	–0.005
		(0.004)	(0.004)
Duality			0.273[a]
			(0.079)
Staggered board			–0.126[c]
			(0.073)
Cash payment	0.174[b]	0.233[a]	0.266[a]
	(0.085)	(0.086)	(0.090)
Deal attitude	0.187[c]	0.137	0.068
	(0.102)	(0.104)	(0.107)
Cross–border deals	–0.509[c]	0.566[b]	–0.203
	(0.274)	(0.255)	(0.397)
Leverage	0.003	0.004	0.007[c]
	(0.004)	(0.004)	(0.004)
Industry relatedness	0.177	0.133	0.022
	(0.162)	(0.164)	(0.169)
Target listing status	–0.240[a]	–0.228[a]	–0.164[c]
	(0.080)	(0.081)	(0.084)
Market to book ratio	–0.219[a]	–0.197[a]	-0.036
	(0.043)	(0.044)	(0.057)
Acquirer size (log)	–0.158[a]	–0.137[a]	–0.220[a]
	(0.024)	(0.022)	(0.032)
Prior acquisition experience			0.094[b]
			(0.042)
Ratio of failure to success			–0.125
			(0.316)
N	1059	1059	1001
Log-likelihood (Null)	–1055.64	–1055.64	–955.22
Log-likelihood (Model)	–961.57	–950.82	–862.62
Degrees of freedom	26	26	32
AIC	1975.14	1953.63	1789.34
BIC	2104.24	2082.72	1946.32
Year/industry dummy	Yes	Yes	Yes

The estimates are shown with standard errors are in parentheses. c = p<.10. b = p<.05. a = p<.01.

6.5 Robustness Tests

To check the validity and robustness of our models, we conduct several further empirical investigations. First, since our sample of 1,662 deals is drawn from 742 firms, there is a likelihood that some firms may have undertaken multiple acquisitions within the sample period, which can compromise the

independence assumption of our observations and bias the results. To control for a lack of interdependence in our data, we re-run the analyses of the models in Table 17 while clustering the standard errors (Dikova et al., 2010; Fuad and Gaur, 2019; Pollock et al., 2008). We also iterate the same procedure whilst mean-centering the variables that form our interaction terms to control for possible spurious collinearity in our models (Cohen et al., 2003). The results of all additional measures remain unchanged and confirm those reported in Tables 17 and 18 – indicating that our results are robust.

Second, we explore an alternative method for modelling non-linear functions where there is a binary dependent variable. Instead of using the logit model, we replicate our estimations for acquisition completion utilising the probit model and report our results with and without robust standard errors in Tables 24 and 25 respectively.[49] The results are generally robust, except for slight differences in the magnitude of some coefficients and the marginal effects. For instance, the magnitude of most coefficients in the probit results are relatively smaller but retain their sign and significance. The statistical significance of the coefficient for industry relatedness also becomes more pronounced. This means that for the latter results, M&A transactions involving firms from the same industry take longer to complete. In addition, the signs of the three governance variables: board size, the proportion of NEDs, and staggered boards, remain significant and consistent.

Finally, we explore whether the percentage of ownership sought by the acquirer in the target firm affects the completion likelihood and the time taken to complete the focal deal. To do this, we include a variable for the stake an acquirer is seeking in the target when the focal M&A deal was announced (stake-sought) as an additional control for both the logit and survival estimations. We find stake-sought to have no impact on *acquisition completion*, as all the coefficients are insignificant (with and without clustered errors). However, stake-sought has a significant positive effect on *acquisition duration* ($p<0.01$). This finding indicates that as the stake sought becomes larger, the deal becomes important to the acquirers as there is more riding on it. They then devote more resources to the transaction in order to expedite its completion and prevent any possible hindrances (see also Dikova et al., 2010).

[49] Tables 24 and 25 are in the appendix.

6.6 Discussion and Conclusion

Banks and insurance companies play a significant role in the economy, and their corporate governance differs from that of other industries. Owing to the dramatic experiences and consequences of the GFC, the importance of enhancing the structures that provide management oversight has been a focal issue for theorists, managers, and policy makers. Numerous empirical studies (Conyon et al., 2011; Kirkpatrick, 2009; Sun et al., 2011; Yeh et al., 2013) have documented evidence suggesting that weak governance systems in the financial services sector may have precipitated the collapse that morphed into a global recession. Company boards of many financial institutions were seemingly unable to prevent the ill-fated decisions and risky activities (which included M&A) that created institutions that were 'too big' and so interconnected whose failure had a ripple effect (e.g., Brewer and Jagtiani, 2013; Muller-Kahle and Lewellyn, 2011).

With this in mind, and taking into account the cost and damages of abandoning an already announced M&A deal, this study has examined the impact of internal governance mechanisms on the probability that a bank-insurance merger will be completed, as well as the time such a deal will take to close after its initial announcement. We focus on the three core elements that delineate a typical corporate board: board size, the proportion of non-executive directors on the board, and staggered boards, to enable us to paint a picture of the impact of each element on our hypotheses. The results from 1,662 firms covered in the Zephyr data over the 2006-2019 period show that the proportion of non-executive directors, proxying for board independence, has a positive effect on both *acquisition completion* and a*cquisition duration.* This implies that more independent corporate boards increase the chances of completing an M&A and reduce how long it takes a deal to close, which is good because it reduces the overall cost of executing a deal. The effectiveness of independent boards, however, diminishes when the deal involves cross-border transactions, as we observe a semi-inverted U-shaped relationship between the proportion of non-executive directors (NEDs) and the indicators for the duration and deal completion outcomes.

We also find that the presence of staggered terms in the board has a negative impact on both completion and duration, meaning that transactions involving companies with staggered/classified boards are less likely to be completed, and even those that do complete take longer. Furthermore, board size and duality have partial effects on our overall hypothesis—we observe a positive impact of board size on completion but no impact on acquisition duration. CEO/Chair duality has no effect on

completion, but it shows a positive association with duration. This implies that a large board size increases the likelihood that an announced bank-insurance deal would be completed (but has no effect on the duration), while the presence of CEO/Chair duality only shortens the deal completion time.

We also observe insignificant coefficients between the cross-border interaction with board size and acquisition completion, but the coefficients are positive and significant for cross-border interaction with acquisition duration. Since board size does not influence duration in our overall sample, this finding implies that the effect of board size on acquisition duration is moderated by cross-border deals. Meaning that as the number of directors on the board increases, CBDs get completed quicker. Since there is fairly limited research on acquisition duration (Dikova et al., 2010) and acquisition completion (Dikova and Rao Sahib, 2013; Fuad and Gaur, 2019; Kim and Song, 2017; Muehlfeld et al., 2012, 2007; Zhang et al., 2011), this study contributes to the literature by providing evidence that internal governance mechanisms are important determinants of M&A completion likelihood and the time taken to complete bank-insurance deals.

Practical Implications

This study has several practical and policy implications. First, the study demonstrates that higher representations of NEDs on the bidders' board are crucial to determining the success of bank-insurance M&A. NEDs usually participate in conducting due diligence and lead M&A discussions, offering the benefit of their experience and the required level of challenge. Thus, they keep management in check, and reduce unnecessary delays in reaching agreement, which can allow both parties to take advantage of synergies associated with closing the deal relatively quickly. Second, investors should consider de-staggering the acquirer's board because staggered boards entrench directors and management, thus encouraging them to engage in acquisitions purely for empire building. Such acquisitions are usually large and take a long time to close. Indeed, as shown in the literature, protracted deals rarely generate synergy—instead, they incur huge costs and sometimes result in terminations (see Luo, 2005; Officer, 2003). For policymakers, this study underscores the need for regulatory authorities to 1) make it obligatory for the corporate boards of financial institutions to be sufficiently independent (have at least 60% NEDs) to facilitate the deal completion process, and 2) set an optimal time by which a bank-insurance M&A should close. Practitioners should be aware that going beyond this period sends out a warning signal.

Limitations and Directions for Further Research

This study is not devoid of limitations and raises questions that future studies could consider. For example, the current study utilises a limited sample size owing to governance data unavailability, because the Bloomberg database reports internal governance data only from 2006 onwards. Second, this study focuses only on two industries (banks and insurers), thus inhibiting the generalisability of our results across different industries. Future studies might be conducted over a relatively larger sample and extend the scope of this analysis to other industries for more robust results. Likewise, studies could also explore how the interplay of institutional and internal governance variables could simultaneously predict acquisition completion likelihood and the time a deal takes to conclude from the announcement date.

7 Summary, Conclusions and Recommendations

7.1 Introduction

This final chapter of the thesis provides a summary of findings in line with our main research question and a critical discussion along with the policy implications of the present study and the lessons learnt. It also discusses the limitations and closes with recommendations and suggestions for future research.

7.2 Summary and Conclusions

The landscape for bank-insurance mergers has changed significantly over the past three decades due to numerous reasons. Pursuits for superior profits, globalisation, technological advances, and the deregulation of financial markets resulted in considerable structural transformations in the conventionally fragmented functions of the financial services sector. These led to an upsurge of cross-sector integrations and the formation of Financial Holding Companies: universal banks and financial conglomerates. These structures created a dominant group of large and complex financial institutions (LCFI) whose failure had a ripple effect and is presumed to have annihilated the wealth for shareholders (see Elyasiani et al., 2016; Weiß et al., 2014).

The popularity of these M&A and the formation of financial conglomerates has since triggered a long-standing debate among academics and policymakers. At the theoretical level, proponents believe that financial conglomerates could extract benefits associated with synergy, diminished earnings volatility through coinsurance effect, better resource allocation resulting from effective internal markets, and reduced bankruptcy-related-risks due to revenue diversification(Boot and Schmeits, 2000; Dontis-Charitos et al., 2011; Saunders and Walter, 1994). At public policy level, financial conglomerates can benefit from wider political influence, superior market power and enhanced access to the safety net (Andriosopoulos et al., 2017; Kane, 2000). In contrast, opponents contend that bank-insurance consolidations harbours increased agency problems and propagate systemic risks due to financial sector interconnectedness (Harford et al., 2012; Herring and Santomero, 1990).

The empirical literature furthers this debate by focusing on the value effects of bank-insurance mergers. However, these also yield conflicting findings by reporting positive value changes, and a few reports

negative, whilst others find no value fluctuations for bidders. These studies have also given little attention to the wealth effects of target shareholders and seem to have focused excessively on Bancassurance whilst ignoring other vital structural arrangements (such as *interbank deals*, *insure-bank* and *between insurance companies*) that still constitute the consolidation of financial services. Besides, the aftermath of the global financial crisis reignited increased concerns regarding the effectiveness of internal governance in overseeing executive actions and decisions, such as M&A. The question that begs is, what constitutes an effective corporate board that can prevent potential firm failures and enhance value for shareholders? Is it the one with reduced size or with more NEDs? Is de-staggering the board or abolishing CEO/Chair duality better off? The oversight by prior studies regarding the influence of internal governance on corporate failures, coupled with the limited or mixed results on value effects of bank-insurance M&A specifically, have been the motivation for this thesis.

This study aimed to empirically test whether gains in market value from bank-insurance M&A are occurring and identify the type of transaction(s) that are most likely to produce them. Incidentally, we also examine the intricacies surrounding bank-insurance deal announcements and attempt to unravel the possible deal breakers. By so doing, the current study makes substantial contributions to the existing literature as follows. First, it employs the most comprehensive dataset comprising domestic and cross-border deals from 57 countries worldwide, announced between 1999 and 2019. This period is characterised by intense M&A activities and has the largest and most significant deals. Second, the study takes a broader view by examining all possible M&A structures within the banking and insurance industry. Doing this allows for the segregation between focused and diversified deals and provide an opportunity for evaluating the behaviour of investors before and after the global financial crisis. Third, to the best of the author's knowledge, this is the first study to scrutinise the wealth effect of targets companies on bank-insurance partnerships. Fourth, for the first time in the literature, internal governance characteristics in the context of pre-merger integration is being evaluated. This study is also the first to test the hypotheses on acquisition completion and acquisition duration based on the banking and insurance industry. Fifth, it utilises the *adj.-BMP* test statistic to overcome possible upward bias linked to BMP test statistic.

The event study results suggest that bank–insurance M&A trigger negative market returns for bidders and positive abnormal returns for targets around the announcement dates. As such, the overall conclusion is that bank-insurance M&A are value destroying for bidders. Specifically, focused

acquisitions are wealth destroying whilst diversified acquisitions (bancassurance) enhance wealth but only for the owners of insurance companies. The cross-sectional regression reveals a negative association between deal size, leverage, publicly listed targets, cross-border deals and bidders' excess returns. On the other hand, targets gain significantly from bank-insurance M&A regardless of the deal structure, with targets located in the US receiving the highest excess returns. These findings are generally inconsistent with the previous literature that finds bank–insurance M&A to be mutually beneficial to acquirers and targets, with the proviso that these mergers are not driven by managerial entrenchment.

The findings of this thesis have numerous practical and policy implications. First, since large deals attract negative market valuation for acquirers and relatively lower dollar-value gains for targets, managers should excise caution when merging two or more equally sizable companies as doing this may give rise to institutions that are too big and whose failure could be contagious to the entire financial sector. Thus, regulatory changes should focus more towards containing the risk arising from combining large banks with large insurance companies. Second, studying M&A could help managers to decide whether bank-insurance is a viable investment option or not. If they are value-creating, then it would be worthwhile for them to devote scarce resources and time to pursue consolidation activities. If, however, these M&A have little or no impact or perhaps destroy value, managers should focus more on other activities such as improving profitability, and efficiency rather than M&A. Third, since diversified acquisitions have proved to generate positive excess returns for insurance bidders, bancassurance could be used as a mechanism for spreading the investment risk for insurance companies. Finally, this research provides a platform for evaluating the effectiveness of corporate boards, especially during the pre-merger integration process.

7.3 Strength and Limitations of the Present Study

All empirical investigations are subject to various forms of bias. However, the possible limitations of an inquiry should not deny it the chance to contribute to the existing body of literature. The fundamental strength of this study is that it utilises the *adj*. BMP test statistics instead of standard tests such as Patell's (1976) or Boehmer et al. (1991) t-statistics to cushion for the serial correlation that may bias our computation of announcement returns.

The following are the possible limitations of this study. First, this study only examines the short-term effect of bank–insurance M&A and does not consider what happens to the combined entity after the event window. The M&A integration process takes time and presents lots of opportunities and challenges. There have been instances where firms have gone into bankruptcy during the integration stage, whilst other firms have experienced integration incongruencies (such as culture shift, technology integration, etc.) that have occasionally denied them the opportunity to achieve the envisaged synergy.

Second, our study focuses only on the performance of M&A for banks and insurance companies, two industries that are highly regulated with unique governance systems and have greater levels of opacity in information disclosure. These distinctive features may inhibit the generalisability of our results. Finally, sample size limitations may bias our findings. In Chapter 6, we utilise a limited sample size to model acquisition completion and acquisition duration because of governance data unavailability from 1999 to 2005, as the Bloomberg database reports internal governance data only from 2006 onwards.

7.4 Suggestions for Future Research

Further empirical work could be done to extend this research along the following lines. First, arising from the first limitation, future research may consider evaluating the long-term or post-merger effect of such mergers on the performance of the combined entity. Second, further studies can be conducted over a relatively larger sample and extend the scope of the study. In particular, extending duration modelling to other industries may generate results that are more robust. Likewise, studies may also explore how an interplay of institutional and internal governance variables could simultaneously predict acquisition completion and the time a deal takes to complete. Third, future studies could investigate the costs associated with delayed, expedited, and abandoned acquisitions and their differential impact on *ex-post* M&A performance. Finally, further research could explore the impact of the recent Covid-19 pandemic on the global bank-insurance M&A, and perhaps incorporate tests built around disclosure levels, regulation, and the efficacy of internal governance within that period.

8 Appendices

Table 21: ARs and CARs for Bidders Taking Over Listed and Unlisted Targets

The sample here comprises 1375 bank-insurance deals: 652 for listed and 723 for unlisted target announced between 1999-2019, excluding 10 asset-sale deals. The average deal values are $2738.03 and $591.20 million for listed and unlisted targets, respectively. The reported values are ARs, and CARs calculated using standard event study methodology (market model) and expressed in percentages (%). In each of the panels: the first three columns report the daily ARs around the event date (±5 days) together with their statistical significance while the last three columns report the CARs over 11 symmetric and non-symmetric event windows and their statistical significance. ARs = Average abnormal returns, CARs = Cumulative average abnormal returns, *adj.*-BMP = the adjusted BMP t-statistic.

All Acquirers

Days	ARs	*adj*. BMP	Event-window	Mean CARs	adj. BMP	Days	ARs	*adj*. BMP	Event-window	Mean CARs	*adj*. BMP
	Panel A: Listed Targets						Panel B: Unlisted Targets				
–5	0.12	1.085	(–5, +5)	–1.14	–4.787[a]	-5	–0.14	–1.864[c]	(–5, +5)	0.64	1.538
–4	0.00	–0.524	(–4, +4)	–1.18	–4.831[a]	-4	0.12	1.197	(–4, +4)	0.75	1.757[c]
–3	0.03	0.044	(–2, +2)	–1.07	–5.080[a]	-3	–0.09	–0.873	(–2, +2)	0.53	1.789[c]
–2	0.08	1.433	(–1, +1)	–1.21	–5.965[a]	-2	0.02	–0.552	(–1, +1)	0.56	2.656[a]
–1	0.00	–0.474	(–1, 0)	–0.90	–5.994[a]	-1	–0.05	–0.687	(–1, 0)	0.38	2.943[a]
0	-0.90	–6.885[a]	(–2, 0)	–0.82	–5.531[a]	0	0.43	4.257[a]	(–2, 0)	0.40	2.143[b]
1	-0.31	–2.304[b]	(–5, 0)	–0.67	–4.824[a]	1	0.18	1.622	(–5, 0)	0.29	0.956
2	0.06	1.463	(0, +1)	–1.21	–6.096[a]	2	–0.05	–0.405	(0, +1)	0.61	3.051[a]
3	-0.04	–0.101	(0, +2)	–1.15	–5.415[a]	3	0.02	0.147	(0, +2)	0.56	2.649[a]
4	-0.10	–0.999	(0, +4)	–1.29	–5.246[a]	4	0.17	2.554[b]	(0, +4)	0.75	2.900[a]
5	-0.08	–1.489	(0, +5)	–1.37	–5.540[a]	5	0.03	0.894	(0, +5)	0.78	3.086[a]

Notes: The superscripts a, b and c represent the statistical significance at 1%, 5% level, and 10% level (two-tailed test), respectively.

Table 22: Variance Inflation Factors for Chapter 5

The table reports the variance inflation factors for acquirers and targets, a measure for the existence or severity of multicollinearity in an OLS. According to Snee (1981) a $CVIF_j \geq 10$ indicates that variance magnification effect is serious or there is multicollinearity.

Variable	Acquirer's Centered VIF	1/VIF	Target's Centered VIF	1/VIF
Tobin's Q	1.79	0.560141	1.11	0.899281
Leverage	1.03	0.970359	1.13	0.883041
ROA	1.15	0.873146	1.04	0.963895
Listed	1.32	0.458524	–	–
Cross border	1.38	0.725769	1.54	0.647372
All Cash	1.63	0.612702	1.95	0.512301
All Stock	1.58	0.634487	1.60	0.624899
Friendly/Hostile	1.51	0.664282	1.09	0.917639
Firm age	1.06	0.939868	1.09	0.913467
Target size	–	–	1.35	0.739635
GDP	1.11	0.899976	1.30	0.767567
HHI	1.05	0.951335	–	–
Inflation	1.48	0.959935	1.33	0.751724
D-INS	–	–	1.23	0.814415
D-US	–	–	1.46	0.686039

Table 23: Logistic Regression (Robust Standard Errors, No Marginal Effects)

The table reports results of bank-insurance M&A between 2006-2019 for comparing the significance of coefficients. All the regressions include industry and year dummies. We use the year 2019 and the insurance industry as reference categories. Results that are significant at 1-, 5-, and 10% are shown by [a], [b] and [c], respectively.

Variables	(1) Controls Only	(2) Board size	(3) % NEDs	(4) Duality	(5) Staggered Board	(6) All + Experience
Intercept	2.250[a]	3.454[a]	1.326	3.559[a]	4.456[a]	2.083
	(0.747)	(0.949)	(1.115)	(0.942)	(1.034)	(1.280)
Board size		0.137[a]				0.142[a]
		(0.036)				(0.038)
% Non-executive directors			0.021[a]			0.024[a]
			(0.005)			(0.006)
Duality				0.217		–0.112
				(0.235)		(0.266)
Staggered board					–0.554[a]	–0.662[a]
					(0.213)	(0.231)
Cash payment	0.940[a]	0.973[a]	1.061[a]	0.905[a]	1.037[a]	1.231[a]
	(0.220)	(0.267)	(0.277)	(0.264)	(0.272)	(0.292)
Deal attitude	1.128[a]	0.948[a]	0.962[a]	0.998[a]	1.019[a]	1.009[a]
	(0.239)	(0.274)	(0.290)	(0.278)	(0.289)	(0.303)
Cross-border	0.095	0.350	0.186	0.266	0.209	0.329
	(0.251)	(0.287)	(0.300)	(0.290)	(0.304)	(0.327)
Leverage	–0.017[b]	–0.016[c]	–0.019[c]	–0.016[c]	–0.020[b]	–0.020[c]
	(0.008)	(0.009)	(0.010)	(0.009)	(0.010)	(0.010)
Industry relatedness	–0.611[c]	–0.692[c]	–0.457	–0.541	–0.637	–0.612
	(0.347)	(0.395)	(0.415)	(0.400)	(0.420)	(0.419)
Target listing status	–0.539[b]	–0.611[b]	–0.687[a]	–0.586[b]	–0.514[b]	–0.630[b]
	(0.217)	(0.244)	(0.260)	(0.247)	(0.245)	(0.265)
Market to book ratio	0.317[b]	0.267	0.249	0.208	0.175	0.260
	(0.141)	(0.177)	(0.158)	(0.161)	(0.179)	(0.194)
Acquirer size (log)	–0.094[b]	–0.340[a]	–0.153[b]	–0.221[a]	–0.266[a]	–0.378[a]
	(0.048)	(0.064)	(0.064)	(0.060)	(0.064)	(0.086)
Prior acquisition experience						0.104
						(0.115)
Ratio of failure to success						–1.632[b]
						(0.700)
N	1662	1259	1210	1260	1202	1137
Wald χ^2	105.57[a]	102.09[a]	104.72[a]	91.01[a]	99.29[a]	121.31[a]
Log pseudo-likelihood	–516.72	–376.86	–353.25	–383.75	–357.78	–308.68

In the parenthesis are robust standard errors and no marginal effects.

Table 24: Probit Regression Results with Marginal Effects (Robustness)

The table reports logit results of bank-insurance M&A between 2006-2019. All the regressions include industry and year dummies. We use the year 2019 and the insurance industry as reference categories. Results that are significant at 1-, 5-, and 10% are shown by [a], [b], and [c], respectively. In the parenthesis are standard errors and marginal effects.

Variable	(1) Controls Only	(2) Board Size	(3) % NEDs	(4) Duality	(5) Staggered Board	(6) All + Experience
Intercept	1.294[a]	1.961[a]	0.760	1.965[a]	2.399[a]	1.226[b]
	(0.347)	(0.434)	(0.501)	(0.431)	(0.462)	(0.595)
Board size		0.071[a]				0.076[a]
		(0.017)				(0.020)
		[0.012]				[0.011]
% Non-executive directors			0.011[a]			0.013[a]
			(0.002)			(0.003)
			[0.002]			[0.002]
Duality				0.096		–0.062
				(0.121)		(0.136)
				[0.016]		[-0.009]
Staggered board					–0.282[a]	–0.341[a]
					(0.107)	(0.118)
					[–0.046]	[–0.051]
Cash payment	0.516[a]	0.511[a]	0.559[a]	0.483[a]	0.552[a]	0.630[a]
	(0.110)	(0.128)	(0.133)	(0.127)	(0.134)	(0.142)
	[0.088]	[0.084]	[0.089]	[0.081]	[0.090]	[0.094]
Deal attitude	0.613[a]	0.522[a]	0.533[a]	0.548[a]	0.565[a]	0.536[a]
	(0.120)	(0.138)	(0.141)	(0.137)	(0.144)	(0.151)
	[0.104]	[0.086]	[0.085]	[0.091]	[0.092]	[0.080]
Cross-border	0.046	0.199	0.115	0.153	0.123	0.170
	(0.122)	(0.142)	(0.146)	(0.142)	(0.150)	(0.161)
	[0.008]	[0.033]	[0.018]	[0.026]	[0.020]	[0.025]
Leverage	–0.009[b]	–0.009[c]	–0.009[c]	–0.009[c]	–0.010[b]	–0.009[c]
	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
	[–0.002]	[–0.001]	[–0.001]	[–0.001]	[–0.002]	[–0.001]
Industry relatedness	–0.327[c]	–0.390[b]	–0.247	–0.293	–0.344[c]	–0.347[c]
	(0.167)	(0.195)	(0.193)	(0.188)	(0.197)	(0.211)
	[–0.055]	[–0.064]	[–0.039]	[–0.049]	(–0.056]	[–0.052]
Target listing status	–0.256[b]	–0.315[b]	–0.346[a]	–0.295[b]	–0.262[b]	–0.328[b]
	(0.105)	(0.124)	(0.129)	(0.123)	(0.128)	(0.139)
	[–0.044]	[–0.052]	[–0.055]	[–0.049]	[–0.040]	[–0.049]
Market to book ratio	0.157[b]	0.129	0.136	0.110	0.104	0.143
	(0.066)	(0.082)	(0.084)	(0.080)	(0.086)	(0.093)
	[0.027]	[0.021]	[0.022]	[0.018]	[0.017]	[0.021]
Acquirer size (log)	–0.048[b]	–0.179[a]	–0.083[a]	–0.115[a]	–0.139[a]	–0.205[a]
	(0.023)	(0.033)	(0.031)	(0.029)	(0.031)	(0.048)
	[–0.008]	[–0.029]	[–0.013]	[–0.019]	[–0.023]	[–0.031]
Prior acquisition experience						0.062
						(0.068)
						[0.009]
Ratio of failure to success						–0.886[b]
						(0.410)
						[–0.132]
N	1662	1259	1210	1260	1202	1137
Wald χ^2	105.61[a]	102.28[a]	111.06[a]	92.28[a]	100.91[a]	123.86[a]
Log pseudo-likelihood	–516.95	–377.58	–353.13	–384.40	–358.83	–309.76

Marginal effects in box parentheses and italicised

Table 25: Probit Regression Results with Robust Standard Errors and no Marginal Effects

The table reports probit results of bank-insurance M&A between 2006-2019. All the regressions include industry and year dummies. The study uses the year 2019 and the insurance industry as reference categories. Results that are significant at 1-, 5-, and 10% are shown by [a], [b] and [c], respectively. In the parenthesis are robust standard errors.

Variables	(1) Controls only	(2) Board size	(3) % NEDs	(4) Duality	(5) Staggered board	(6) All + experience
Intercept	1.294[a]	1.961[a]	0.760	1.965[a]	2.399[a]	1.226[c]
	(0.369)	(0.468)	(0.543)	(0.459)	(0.502)	(0.633)
Board size		0.071[a]				0.076[a]
		(0.018)				(0.019)
% Non-executive directors			0.011[a]			0.013[a]
			(0.002)			(0.003)
Duality				0.096		-0.062
				(0.118)		(0.132)
Staggered board					–0.282[a]	–0.341[a]
					(0.109)	(0.118)
Cash payment	0.516[a]	0.511[a]	0.559[a]	0.483[a]	0.552[a]	0.630[a]
	(0.113)	(0.137)	(0.144)	(0.137)	(0.142)	(0.156)
Deal attitude	0.613[a]	0.522[a]	0.533[a]	0.548[a]	0.565[a]	0.536[a]
	(0.121)	(0.142)	(0.146)	(0.141)	(0.148)	(0.155)
Cross-border	0.046	0.199	0.115	0.153	0.123	0.170
	(0.130)	(0.150)	(0.154)	(0.149)	(0.157)	(0.171)
Leverage	–0.009[b]	–0.009[c]	–0.009[c]	–0.009[c]	–0.010[c]	–0.009[c]
	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Industry relatedness	–0.327[c]	–0.390[b]	–0.247	–0.293	–0.344[c]	–0.347[c]
	(0.170)	(0.194)	(0.199)	(0.193)	(0.201)	(0.205)
Target listing status	–0.256[b]	–0.315[b]	–0.346[a]	–0.295[b]	–0.262[b]	–0.328[b]
	(0.108)	(0.123)	(0.130)	(0.123)	(0.125)	(0.134)
Market to book ratio	0.157[b]	0.129	0.136[c]	0.110	0.104	0.143
	(0.068)	(0.085)	(0.080)	(0.079)	(0.088)	(0.094)
Acquirer size (log)	–0.048[c]	–0.179[a]	–0.083[a]	–0.115[a]	–0.139[a]	–0.205[a]
	(0.024)	(0.033)	(0.032)	(0.030)	(0.032)	(0.045)
Prior acquisition experience						0.062
						(0.061)
Ratio of failure to success						–0.886[b]
						(0.386)
N	1662	1259	1210	1260	1202	1137
Wald χ^2	119.14[a]	102.28[a]	111.06[a]	92.28[a]	100.91[a]	123.86[a]
Log pseudo-likelihood	–516.95	–377.58	–353.13	–384.40	–358.83	–309.76

Table 26: AIC and BIC Values Based on the Base Model for Each of the Survival Approaches

Model	OBs	Log –likelihood (null)	Log – likelihood (model)	Degree of freedom	AIC	BIC
Exponential	1059	–1243.38	–1224.78	23	2467.55	2512.34
Gompertz	1059	–1233.40	–1209.59	24	2439.18	2488.95
Weibull	1059	–1093.99	–1018.47	24	2084.95	2204.38
Log-logistic	1059	–1213.65	–1201.43	24	2369.08	2318.85
Cox-proportional	1059	–5866.00	–5835.58	22	11687.2	11727.0

Survival analysis graphs

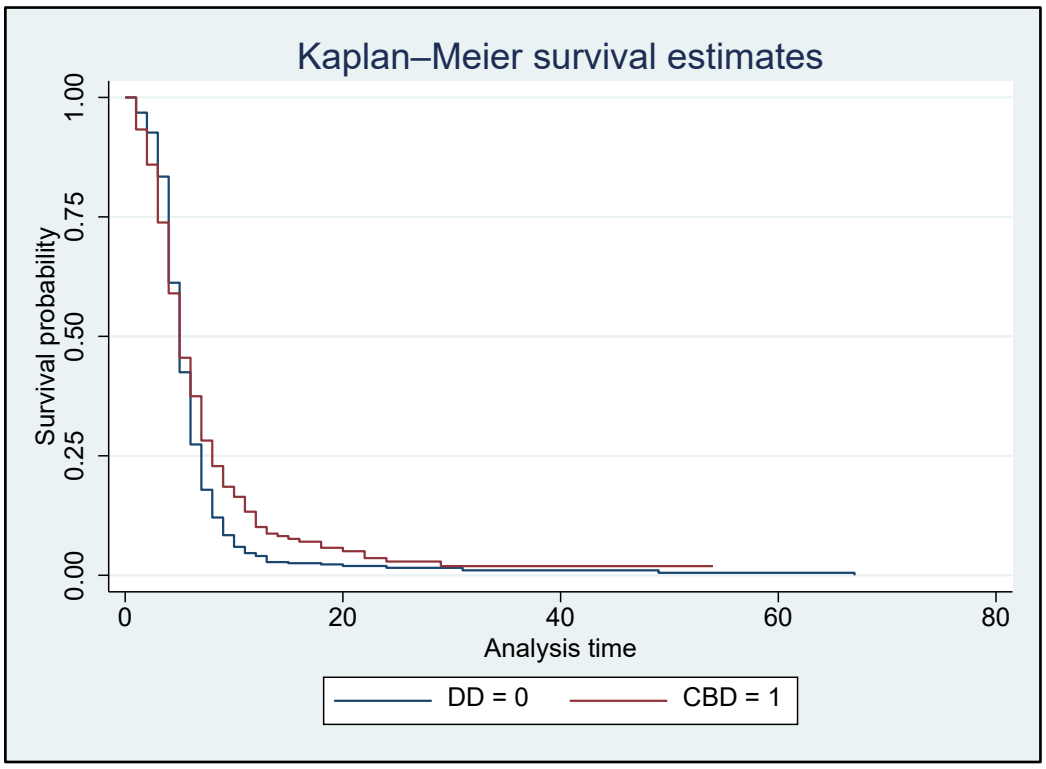

Figure 6: Estimation of Kaplan Meier Survival Function for Domestic and Cross-Border Deals.

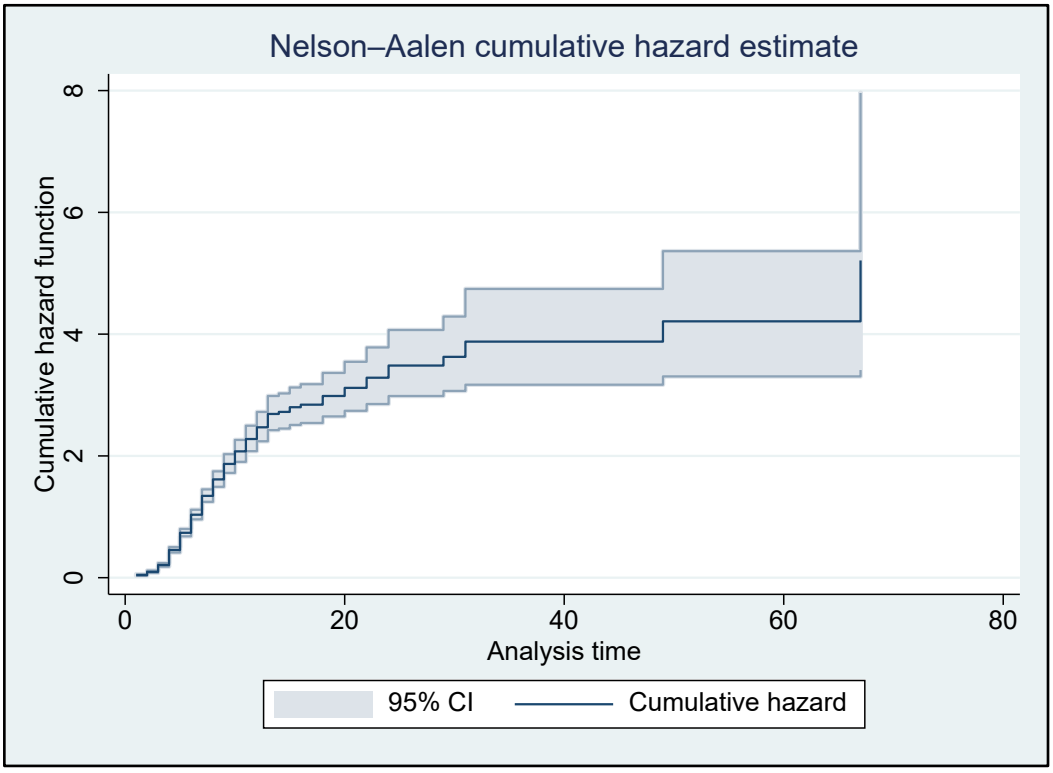

Figure 7: M&A Completion Nelson-Aalen Cumulative Hazard Function

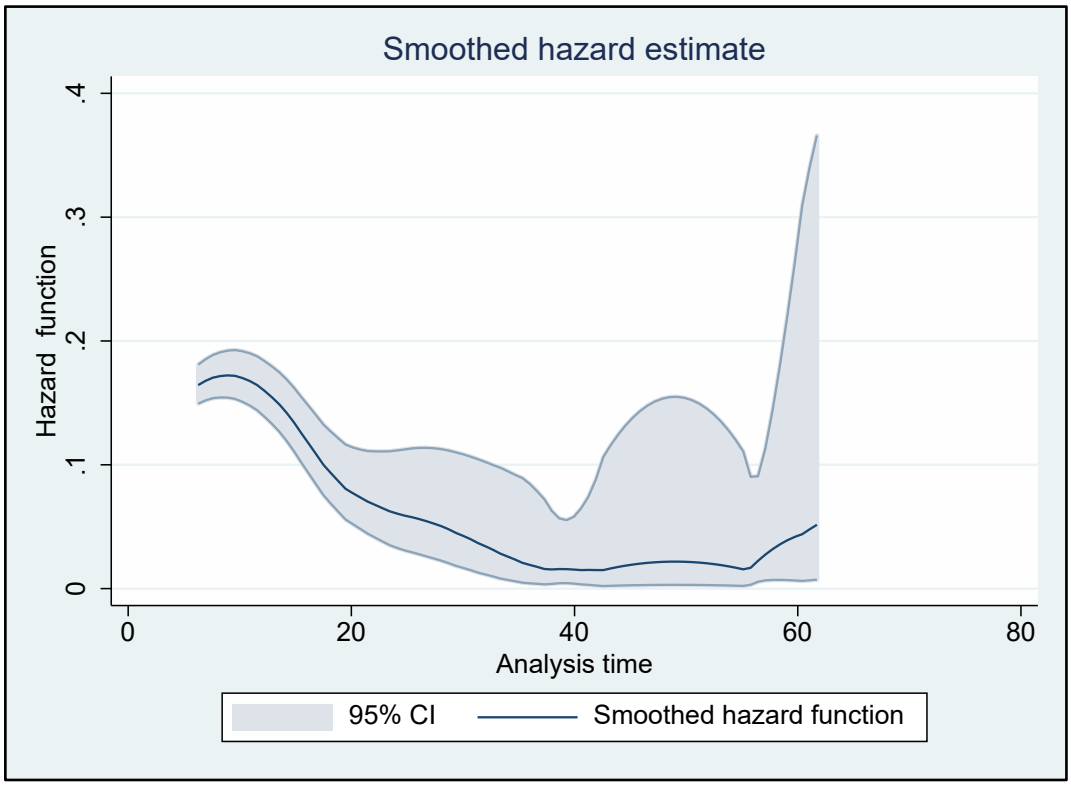

Figure 8: Smoothing the Completion of Bank-Insurance Deals.

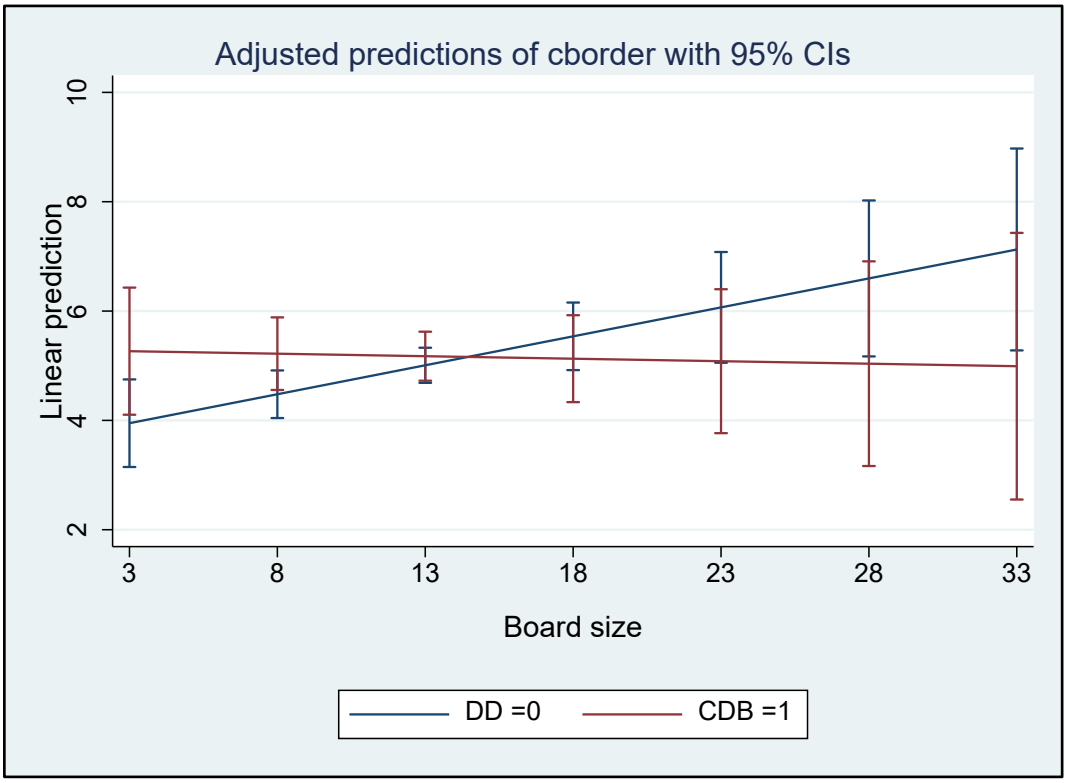

Figure 9: Two-Way Interaction Graph Between Acquisition Completion and Board Size

Table 27: Definition of Variables

Variable	Definition
Dependent variables	
M&A completion dummy	A binary variable equal to 1 if the M&A is completed, 0 otherwise
Time until completion/failure (spell)	Period between deal announcement and period is completed or terminated
CARs	5-day cumulative abnormal returns (%) calculated using the market model. The parameters are estimated OLS over a period of 200 days (-220; -21).
Corporate variables and governance characteristics	
CEO-Chair/Duality	Dummy variable: 1 if the chief executive officer is also the chairman of the board (acquirer), zero otherwise.
Board size	Number of directors on the acquirer's board. Data are from the Bloomberg Terminal and are available for 2006-2019.
Proportion of NEDs	Dummy variable: 1 if more than 50% of the directors are independent, zero otherwise.
Staggered board	Dummy variable: 1 if the board is classified, zero otherwise
Tobin's Q	Market capitalisation divided by (book value of equity plus current assets) - which is equal to the firm's market cap/the replacement value of its assets.
Leverage	Banks' leverage = ((total Assets - customer liabilities on acceptances)/common equity)) c100. Insurance companies' leverage = (total assets/ (common equity + policyholders' equity))c100.
Firm size	Natural logarithm of total assets.
Relative size	Transaction value (obtained from Zephyr) divided by the market value of equity.
Market to book	Market capitalization divided by the book value from the company.
ROA	After-tax profits over total assets (%).
Firm age	Logarithm of 1 plus the number of years the firm has been in existence; since incorporation.
Control variables	
Firm size measures	The logarithm of acquirer's total assets or logarithm of market capitalisation.
Market-to-book (bidder)	This is the market value of equity divided by the book value of equity at the end of year -1 to the date of takeover.
Leverage	Long term debt over total assets
Prior acquisition experience	Total number (historical count) of all M&A deals attempted by the acquirer in the period prior to the focal M&A.
Ratio of failure to success	Sum of failures (non-completed deals) to the sum of successes (completed) M&A since 2006-to the focal M&A)
Year dummies.	20 dummy variables, 1 for every year (1999-2019, except for 1 year).
Industry dummies	A dummy variable: 1 if acquirer industry is bank, 0 otherwise.
Inflation	Annual rate of inflation (%) as computed using the Laspeyres formula.
GDP (growth)	Annual real gross domestic product (GDP) growth rate (in %) of a country where the acquirer or the target is headquartered. We use it as an economic development indicator. GDP growth has been used by other studies to proxy business cycle conditions (see De Bruyckere et al., 2013). We use regional dummies in lieu of GDP per capita to control for economic development effects.
HHI	The Herfindahl–Hirschman Index computed as the sum of the squared market shares of a country's domestic and foreign banks. A strong concentration is reflected by a higher HHI value.
Year	20 dummy variables, 1 for every year (1999-2019, except for 1 year
Industry	4 dummy variables, 1 for every industry, 0 otherwise.
Region	5 dummy variables, 1 for every region, 0 otherwise, except for 1 region
Deal Characteristics	

Deal value	The dollar value of deal as reported by Zephyr database
Target listing status	Dummy variable: 1 for listed targets, 0 otherwise.
Industry relatedness	Dummy variable: 1 for firms from same industry, zero otherwise
Deal Attitude	Dummy variable :1 for friendly deals, 0 otherwise
Cash payment/ All cash	Dummy variable: 1 for deals financed through cash only deals, 0 otherwise
Cross-border	Dummy variable: 1 for cross-border deals, 0 otherwise
D-BB	Dummy variable: 1 for bank bidder, 0 otherwise
D-INS	Dummy variable: 1 for insurance bidder, 0 otherwise
DV-US	Dummy variable: 1 for US based targets, 0 otherwise
DV-EU	Dummy variable: 1 for continental Europe based deals, 0 otherwise
DV-AU	Dummy variable: 1 for targets from Australia, 0 otherwise
DV-CA	Dummy variable: 1 for targets from Canada, 0 otherwise
DV-Others	Dummy variable: 1 for targets from other countries, 0 otherwise
Stake or Per cent sought	Actual proportion of shares the acquirer seeks to control after the completion of the focal deal.
Pre-crisis	Dummy variable: 1 for merger was announced before the 2007-09, 0 otherwise
During-crisis	Dummy variable: 1 for merger was announced during the 2007-09, 0 otherwise
Post-crisis	Dummy variable: 1 for merger was announced after the 2007-09, 0 otherwise

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