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**Lu Li**

**THE IMPACT OF PRE-MERGER DISCLOSURE AND  
ACQUISITION EXPERIENCE ON MERGERS AND  
ACQUISITIONS**

**ABSTRACT**

This thesis focuses on the effect of factors in the pre-acquisition planning stage on M&A outcomes. With three empirical chapters, the main findings provide compelling evidence that pre-acquisition factors are related to M&A fundamentals such as the motivation and incentives to carry out M&A transaction, and play significant roles in deal's negotiation and post-acquisition integration.

The first empirical chapter of this thesis investigates whether the voluntary disclosure at pre-acquisition issuance activities, i.e. the intended 'use of proceeds', has influence on subsequent M&A outcomes. The results show that firms disclosing acquisition intention at debt/equity issuance significantly raise more funds but fail to allocate capital efficiently on value-increasing M&A transactions. This evidence is consistent with the capital need theory.

The second empirical chapter examines the wealth effect of mega corporate takeover and explores whether rich acquisition experience facilitate acquirers to generate shareholder value in mega-deals. The findings show that acquirer's acquisition experience is positively related to mega-deals completion likelihood, stock performance in short- and long-run, and operating performance in the long-run following mega-mergers. The evidence indicates that acquirers are able to learn through experience and develop skills to deal with the complexity of mega-mergers.

The final empirical chapter provides evidence on the relationship between target CEOs' acquisition experience and takeover gains for target shareholders. The results show that target shareholders are likely to receive lower bid premiums and earn lower abnormal stock returns around deal announcement when they have a CEO with more acquisition experience. Additionally, target CEOs' acquisition experience is positively related to stock payment. Our evidence suggests that more experienced target CEOs tend to bargain for more personal benefits related to the voting influence in the combined firm instead of helping their shareholders to gain bargaining advantage in the negotiation.



**THE IMPACT OF PRE-MERGER DISCLOSURE AND  
ACQUISITION EXPERIENCE ON MERGERS AND  
ACQUISITIONS**

*A Thesis presented for the degree of  
Doctor of Philosophy*

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## **DECLARATION**

No part of this thesis has been submitted elsewhere for any other degree or qualification in this or any other university. It is all my own work unless referenced to the contrary in the text.

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*To my beloved family*

# **CHAPTER ONE: INTRODUCTION**

Mergers and acquisitions (M&A) are considered to be among the most important corporate activities. In the constantly evolving economic environment with fierce industrial competition, they provide firms with a fast way to grow via organizational restructuring or market penetration. Over the last few decades, as shown in Figure 1.1, M&A activities in the United States have experienced persistent and rapid growth in both number and value of transactions. The Institute for Mergers, Acquisitions and Alliances (IMAA)<sup>1</sup> estimates that between 1985 and 2017, there were more than 325,000 announced US M&A transactions (IMAA, 2017), approximately equivalent to one deal every hour. With regard to the resources involved, the IMAA values these deals to be over \$34 trillion, accounting for approximately 9% of US gross domestic product (GDP) over the period.

With the popularity and the economic importance of M&A as a growth strategy, a huge body of research has examined takeover activity from many perspectives. However, the field of M&A still calls for further research due to the existence of the merger paradox: that despite the increasing number, at least 50% of M&A transactions fail to achieve their purpose and actually destroy instead of creating value for acquirer shareholders (Christensen *et al.*, 2011; Hunt, 1990). Various hypotheses have been proposed and tested, including agency theory, managerial hubris, and managerial motives, and various factors have been investigated to help explain M&A performance, such as the public status of target firm (Bradley *et al.*, 1988; Fuller *et al.*, 2002; Jensen and Ruback, 1983; Lang *et al.*, 1989), method of payment (Chang, 1998; Travlos, 1987) and acquirer size (Moeller *et al.*, 2004).

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<sup>1</sup> The IMAA is the international academic institution which provides professional knowledge and information in the field of mergers and acquisitions.

Extensive evidence on M&A in terms of their motivation, performance, and effects on organization is reviewed in Chapter 2.

To gain a better understanding of the merger process, this thesis explores factors in the pre-acquisition planning stage that are unrevealed but critical for M&A outcomes. It is suggested that pre-acquisition factors play important roles in the M&A activities. During the planning process, the fundamentals, such as the motivation and incentives for conducting the takeover are determined and built, which serve as a base for how the M&A transaction will be managed during the negotiation process and post-integration process (Covin *et al.*, 1996; Gomes *et al.*, 2013; Haspeslagh and Jemison, 1991; Hubbard, 2001).

Initially, this thesis examines the information voluntarily disclosed at pre-acquisition debt or equity issuance and its influence on M&A transactions. Previous studies have investigated the relationship between firms' disclosure practices and M&A outcomes. For example: see Erickson and Wang (1999) for evidence that earnings forecasts influence the cost of M&A; Ahern and Sosyura (2014) for evidence that acquirer's media coverage influences the performance of M&A; Siougle *et al.* (2014) for evidence that conference call meetings contribute to reductions in information asymmetry around deal announcement; and Ismail (2011) for evidence that merger synergy forecast is related to M&A motives and outcomes. However, most of literature focuses on information disclosure around M&A announcement, and there is little research investigating the role of disclosure at the earlier stage before deal announcement. Chapter Three fills this gap and contributes to the literature by providing evidence on the disclosure during the acquisition financing process.

Chapter Three examines the disclosure of the intention to conduct acquisition at debt or equity issuance and its relation with the subsequent M&A activities. Firms are required by the Securities and Exchange Commission (SEC) to reveal the intended use of proceeds when they issue debt or equity to raise capital: i.e. the purposes to which the raised capital will be allocated and applied. However, as the content is unregulated, issuers have a large degree of discretion over the information provided. Either specific purposes such as debt reduction, future acquisition fund, and research and development fund, or more general purposes can be disclosed. Prior to the agreement between acquirers and targets, firms are under no obligation to disclose any information related to takeover plans or proposals (Gaughan, 2011). Generally, they keep the news from the public to avoid the proprietary cost related to releasing information to their competitors or third parties that could limit firms' flexibility (Verrecchia, 1983). Given the fact that around 20% of public bidders in the US reveal their plan to carry out takeover at pre-acquisition debt or equity issuance activities, Chapter Three empirically explores the motivation behind firm's behaviour associated with disclosure of merger-conducting intention and the influences on the M&A outcomes, including the probability of deal completion, bid premium, and acquirer's short- and long-run abnormal returns.

Literature on the voluntary disclosure at issuance activities documents two competing motives. On the one hand, the information could be disclosed to convey credible information and communicate with the public that the proceeds would be allocated efficiently. Walker and Yost (2008) and Autore *et al.* (2009) suggest that firms disclosing merger intention when they raise capital try to send a signal to the public that the following deal could generate synergies and increase

shareholder value. On the other hand, Diamond and Verrecchia (1991) and Botosan (1997) propose the capital need theory and suggest that the purpose of firms' voluntary disclosure at debt or equity issuance is to raise more fund. As investors have preference for M&A activities, managers would have catering incentives and strategically disclose their intention to undertake acquisitions for the purpose of obtaining higher proceeds (Baker *et al.*, 2009).

Chapter Three examines these competing perspectives by reviewing a sample of 8,903 M&A transactions in the US during the period between 1985 and 2015. To identify firms that disclose merger intention at issuing activities, this study collects the data item 'use of proceeds' from Thomson One database. Then, we create a dummy variable *Intention* that equals one if the 'use of proceeds' is labelled as 'Future Acquisitions' or 'Acquisition Financing', and zero otherwise. Moreover, we match a firm's takeover with its most recent debt or equity issue before M&A announcement date by using the CUSIP number of issuers and acquirers.

The main findings of Chapter Three are supportive of the capital need theory, suggesting that firms reveal the takeover intention at issuing for raising more fund rather than signalling the quality of following acquisitions and conveying valuable information to investors. Specifically, Chapter Three shows that the disclosure of acquisition intention at pre-acquisition equity or debt issuance is significantly positively related to the issue size. In terms of its influence on M&A outcomes, acquirers revealing the plan to conduct acquisition at earlier financing activities are more likely to complete the deal and pay a higher takeover premium to target shareholders. However, after offering a relatively larger issue size, acquirers with the disclosed merger intention tend to underperform around merger

announcements and during the three years following announcements. Therefore, with the disclosure of acquisition intention, the evidence indicates that firms undertaking takeover are motivated by simply completing the plan disclosed at earlier issuance instead of creating value for their shareholders. This is consistent with Walker *et al.* (2016) suggesting that in order to build credibility among investors and lower the future financing cost, a firm would deliver what they state at issuance activities.

Chapter Four and Chapter Five examine how acquisition experience influence the outcome of M&A. While a large body of research contributes to the understanding of M&A success by exploring the decision-making process and post-acquisition integration process, the role of the learning process is still under-researched (Barkema and Schijven, 2008). Kolb (1976) suggests that the ability to learn from previous failures and successes is important for a successful firm, which could exert influence on the entire acquisition process through target selection, agreement negotiation, and transition management (Zollo and Singh, 2004). These chapters seek to develop a better understanding on whether firms can develop and gain abilities associated with takeover management through learning from the experience and how M&A outcomes can be influenced.

Although acquisition experience is largely valued by practical study (Kengelbach and Roos (2011)), literature on the role of experience provides mixed empirical findings. Although some of the research documents that more acquisition experience leads to better deal performance (Barkema *et al.*, 1996; Bernile and Kang, 2017; Fowler and Schmidt, 1989; Mohite, 2017), others suggest that there is no significant relationship (Bruton *et al.*, 1994; Zollo and Singh, 2004) or a U-shaped relationship (Haleblian and Finkelstein, 1999; Zollo and Reuer, 2010). To

provide new evidence on whether previous acquisition experience can help firms conduct a successful acquisition and create value for shareholders, Chapter Four employs the mega-deal dataset of 3,544 US merger transactions, each with a value of at least \$500 million between 1980 and 2016.

Mega-deals serve as an ideal testing ground for two reasons. First, compared to smaller M&A deals, large deals play a more significant role in a firm's operation, an industry's competition environment, and even a country's economy, but literature shows that sizeable acquisition considerably destroy more value for shareholders (Alexandridis *et al.*, 2017; Alexandridis *et al.*, 2013; Cools *et al.*, 2007; Henry and Jespersen, 2002; Moeller *et al.*, 2004). Second, as large amounts of finance and human resources are involved, mega-deals are far more complicated and uncertain, and the failure cost is also higher than smaller takeovers. Therefore, understanding the effect of acquisition experience might be more important and meaningful in the sample of mega-deals. Mega-deals sample also enables Chapter Four to detect the influence of learning experience on the deal's valuation effect more easily.

Chapter Four follows Zollo and Singn (2004) and employs the number of M&A that an acquirer successfully previously conducted to measure acquisition experience. The empirical evidence confirms the important role of experience in mega-deals management, and suggests that acquirers are able to develop skills through conducting acquisitions and achieve better outcomes (Henderson, 1968; Lucas, 1988). Mega-deals conducted by more experienced acquirers have a significantly higher likelihood to complete and create more value for their shareholders around deal announcement. With more acquisition experience, acquirers also have superior stock performance in the long-run and enjoy a greater

improvement in the operating performance during the three-year period after the announcement of takeover. Overall, the findings are supportive of consulting firms' view that more experienced acquirers can be better at transforming the complexity of large deal into value (Kengelbach and Roos, 2011).

Other than Mohite (2017), there is little research investigating the learning process of target firms or target Chief Executive Officers (CEOs) and how the target's acquisition experience exerts influence over the M&A decision-making process. It is important to have a better understanding on the effect of target executives' learning experience as they actively engage in merger talks with the bidder and play an important role in the negotiation and deal-making process. Chapter Five fills this gap and contributes to both M&A and organizational learning literature by examining the relationship between target CEO's previous acquisition experience and M&A outcomes.

Although more experienced target CEOs are able to build better negotiation and bargaining skills, it is suggested that they are subject to agency problems in merger talks with the potential buyer (Hartzell *et al.*, 2004; Jenter and Lewellen, 2015; Wulf, 2004). More experienced target executives might have more knowledge of how to negotiate a higher bid premium on behalf of target shareholders (Bernile and Kang, 2016). Alternatively, as executives whose firms are acquired tend to lose their job following deal completion (Harford, 2003), some of them with personal incentives might use the better negotiation skill to bargain for private benefits, e.g. post-acquisition retention or higher walk-away pay, at the cost of target shareholder's interest (Becher *et al.*, 2017; Brewer *et al.*, 2006). To investigate whether target CEOs learn from their previous acquisition experience and bargain for M&A terms in the best interest of target shareholders,

Chapter Five includes a sample of 710 completed US public takeovers announced between 1980 and 2016, and collects information on target executives' previous employment from Execucomp. Like Zollo and Singh (2004), it measures target CEOs' prior acquisition experience by using the number of successful M&A transactions conducted by a target executive in their earlier CEO career.

The findings of Chapter Five provide support for the theory of agency and contributes to the literature that target shareholders could face a more severe agency problem when they have a more experienced CEO. First, the evidence shows that target CEOs with more acquisition experience are related to a significant lower deal premiums and abnormal returns to target shareholders around the deal announcement. By having an experienced CEO, target shareholders do not receive a bid with more favourable terms and enjoy more wealth creation. This is consistent with our hypothesis indicating that target CEOs might not act on behalf of their shareholders due to the conflict of interest. Chapter Five also examines the influence of target CEOs' acquisition experience on the method of payment and suggests that the probability of paying with acquirer's stock considerably increases as the acquisition experience of target CEO increases. This might be explained by considering that target CEOs are more willing to receive acquirer's stock in preparation for having more voting influence on their following job retention decision in the combined firm (Ghosh and Ruland, 2002).

This thesis contributes to the M&A literature in several ways. First, by focusing on the factors in the pre-acquisition planning process, it provides new evidence on the overall variation in the M&A returns that still remains unexplained after decades of research. Chapter Three links a firm's pre-acquisition debt or equity

issuance with M&A deals and for the first time suggests that the motivation and the performance of takeover can be predicted by examining the voluntary disclosure of proceeds spending intention at firms' financing activities. Chapter Four and Chapter Five highlight that acquirer's and target's previous acquisition experience should be accounted into M&A analysis as they could exert influences on M&A negotiation process and post-merger integration process, including deal completion, bid premium, and short- and long-run performance.

Second, this thesis provides contribution to the literature by distinguishing between the impact of bidders' acquisition experience and targets' acquisition experience on M&A outcomes. The existing research mainly examines the role of acquirer's acquisition experience and find mixed results. Given the important role of target CEOs during the negotiation process and the conflict of interest between target CEOs and target shareholders, it is necessary to study whether more experienced target CEO behave in the best interest of target shareholders. For the party of bidders, Chapter Four employs a sample of mega-deals and find supportive evidence that acquirers can learn from the experience and efficiently manage the whole process of mega-deals to create value. On the contrary, our findings show that target CEOs with more acquisition experience do not negotiate on behalf of target shareholders and their shareholders actually receive lower premiums and earn lower returns.

The findings of this thesis also has implications for practitioners. Chapter Three suggests that incentives for voluntary disclosure at debt or equity issuance might exist only for raising more capital rather than for communicating to investors, which provides investors a better understanding of firms' disclosure behaviour and requires enhanced monitoring from regulators. Chapter Five shows that target

shareholders face a more serious problem of interest conflict with a more experienced target CEOs, which indicates that more efficient external corporate governance might be required to align the interest of managers and shareholders.

The remainder of this thesis is organised as follows. Chapter Two reviews the existing literature on the various determinants of M&A valuation effect. Chapter Three empirically investigates the impact of disclosing merger intention at issuance before a merger upon a merger's completion, premium, and the acquirer's performance in both the short- and long-run. Chapter Four explores the relationship between the acquirer's prior acquisition experience and bidder gains in mega-deals. Chapter Five examines the role of target CEOs' acquisition experience playing in the negotiated M&A terms.

## **CHAPTER TWO: LITERATURE REVIEW**

Mergers and acquisitions are one of the most significant investment activities that occur for firms, industries, and the wider economy. Numerous empirical studies have been attracted by M&A' large transaction values and volume, and have paid considerable attention to the external factors (e.g. market-related characteristics) and internal factors (e.g. firm-related characteristics) that could influence their success. Although the existing research has made huge progress in this area, the inconclusive evidence concerning M&A' performance still poses a great challenge to academia and requires further examination. This thesis endeavours to develop a deeper understanding of M&A and to make a distinctive contribution to the existing literature. The remainder of this chapter is organized as follows. Section 2.1 provides the definitions of M&A that have been used in the studies. Section 2.2 describes the types of M&A. Section 2.3 reviews the various motivations for firms conducting a takeover. Section 2.4 details M&A' phases. Section 2.5 reviews the literature regarding the wealth effect of shareholders in the short- and long-run. Section 2.6 reviews the determinants of M&A' performance.

## **2.1 Definitions**

Mergers and acquisitions (M&A), in the broad sense, is a term referring to the consolidation of two firms through various forms of financial transactions e.g. merger, acquisition, takeover, purchase of assets, tender offer, and joint ventures. Although a few studies suggest that there could be a misunderstanding with the use of the broad definition of M&A (e.g. Nakamura (2005)), the term M&A is often used interchangeably. The aim of this section is to provide a clear understanding of different definitions used within the literature.

### **2.1.1 Merger**

A merger is defined by the Merriam-Webster Dictionary as ‘*a corporate strategy of combining different companies into a single company in order to enhance the financial and operational strengths of both organizations*’. It is the transaction in which two or more organizations combine to form a new and joint entity via transferring all the assets and liabilities to the merged entity (Alao, 2010; DePamphilis, 2009; Gaughan, 2011; Horne and Wachowicz, 2004; Jagersma, 2005; Khan, 2011; Scott, 2003; Sherman and Hart, 2006; Weston *et al.*, 1990).

### **2.1.2 Acquisition**

An acquisition is defined by the Merriam-Webster Dictionary as ‘*a purchase of all or a portion of a corporate asset or target company*’. Unlike a merger that comes from a mutual agreement and forms a new firm, an acquisition is the financial activity in which the acquirer has a controlling interest in the target and the target firm ceases to exist (DePamphilis, 2009; Jagersma, 2005; Krishnamurti and Vishwanath, 2008).

### **2.1.3 Takeover**

Machiraju (2007) defines a takeover as ‘*a market route for the acquisition of a company*’. A takeover is a special type of acquisition that occurs when a target firm is unwilling to conduct negotiations with a potential buyer and therefore the acquirer attempts to take control of the target by directly purchasing target shares from shareholders.

## **2.2 Classification of Mergers and Acquisitions**

Based on the competitive relationship between the two businesses that are combining, mergers are classified into several types in the US Federal Trade Commission (1980)'s *Statistical Report on Mergers and Acquisitions, 1978*: horizontal merger, vertical merger, product extension merger, market extension merger, and conglomerate merger.

### **2.2.1 Horizontal Merger**

A horizontal merger is defined as a combination of two companies operating in the same or a similar industry that offer similar products or services (Boseman and Phatak, 1989), which aims at creating a larger company with more market share and therefore achieving a cost reduction. The first merger wave following the Depression of 1883 has been documented as predominantly for monopolies and dominated by horizontal mergers especially in the oil, mining, and steel industries (Beckett, 1986; Sudarsanam, 2003). In more recent years, Chen and Findlay (2003) suggest that the number of horizontal mergers has increased rapidly because of the technology shock. A good example of such a merger would be the Exxon-Mobil deal. Both firms were in the oil and gas industry and combined to form a new firm named ExxonMobil in 1998.

### **2.2.2 Vertical Merger**

A vertical merger is defined as a combination of two firms having similar operations but with different levels of production including raw materials' purchasing, manufacturing, distribution, and retailing (Gaughan, 2011). For example, a vertical merger could join together an upstream firm (e.g. supplier or a

firm that produces products or services) with a downstream firm (e.g. client or a firm in an output market), in order to increase their economic efficiency and therefore reduce the inputs cost from the economies of scope (Besanko *et al.*, 2009; Chen and Findlay, 2003; Salop and Culley, 2014). A recent example of such a deal would be the CVS Health-Aetna merger. CVS Health, one of the largest pharmaceutical companies in the US, and Aetna, one of the largest health insurers, are both from the health care industry, and the merger provides Aetna the opportunity to reduce the cost of drugs.

### **2.2.3 Product-Extension Merger**

A product extension merger refers to a deal involving two entities that offer products or services of a related category and which operate in the same market. Ojanen *et al.* (2008) document an example of such a deal where a number of engineering firms in Finland have expanded their businesses by merging with other companies producing related services e.g. environmental engineering and energy consulting. Product extension is often intended to get access to a larger customer base by introducing related products and increasing the product diversification in the same category (Aaker and Keller, 1990; Boush and Loken, 1991; DeVecchio and Smith, 2005; Park *et al.*, 1991).

### **2.2.4 Market-Extension Merger**

A market extension merger combines two business organizations that deal in identical products but operate in separate markets. Unlike a horizontal merger, firms involved in the market-extension merger are not in competition with each other. This type of merger is often conducted to increase the size of their client

base and profits by expanding the firm's geographic scope. Typical examples would be cross-border mergers, which account for over one third of total M&A' transactions between 2004 and 2016 (Ernst & Young, 2017).

### **2.2.5 Conglomerate Merger**

A conglomerate merger is defined as a deal between two organizations whose businesses are not related to each other in any way. In other words, acquirers of conglomerate mergers do not have horizontal, vertical, complementary, or neighbourhood relationship with their target firms (Church, 2004; Weston *et al.*, 2003). This kind of deal generally results in reduced risk and more managerial synergies by diversifying into different industries (Amihud and Lev, 1981; Matsusaka, 1993). One example would be Walt Disney's acquisition of the American Broadcasting Company. While both were in the media and entertainment industry, the two firms had operations in different product lines.

## **2.3 Motivations for Mergers and Acquisitions**

Research on mergers and acquisitions (M&A)<sup>2</sup> has put a great amount of effort into investigating the motivations behind firms conducting M&A' transactions. However, this research topic still requires further examination, driven by the unsolved puzzle of post-acquisition performance i.e. shareholders in target firms largely gain whereas those of the acquiring firms experience on average negative to zero abnormal returns (Andrade *et al.*, 2001; Antoniou *et al.*, 2007; Bruner, 2002; Datta *et al.*, 1992; Jarrell *et al.*, 1988; Jensen and Ruback, 1983; Loughran and Vijh, 1997; Mueller, 1985; Mulherin and Boone, 2000; Weston *et al.*, 1998). To have a better understanding of the success of M&A, it is important to clarify

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<sup>2</sup> This thesis uses 'mergers and acquisitions' and 'takeovers' as interchangeable terminologies.

the reasons why companies decide to engage in takeovers (Seth *et al.*, 2002). There are many explanations proposed and tested by previous studies, including *efficiency theory*, *monopoly theory*, *valuation theory*, *empire-building theory*, *managerial hubris theory*, *managerial timing theory*, *raider theory*, *process theory* and *disturbance theory* (Berkovitch and Narayanan, 1993; Doukas and Petmezas, 2007; Gort, 1969; Hodgkinson and Partington, 2008; Raj and Forsyth, 2003; Roll, 1986; Seth *et al.*, 2002; Shleifer and Vishny, 2003; Trautwein, 1990). Of these theories, the literature suggests that there is no single theory that could explain the whole story. The following sections review literature concerning the motives behind M&A.

### **2.3.1 Efficiency Theory**

Efficiency theory suggests that M&A are planned and initiated to achieve ‘*synergy*’, which is the most important and basic of all the theories (Porter, 1985). The Merriam-Webster Dictionary defines synergy as ‘*the benefit that results when two or more agents work together to achieve something either one couldn't have achieved on its own. It's the concept of the whole being greater than the sum of its parts*’. Similar definitions can also be found in financial studies such as Jensen and Ruback (1983) and Bradley *et al.* (1988). Previous literature documents that there are three main types of synergy: operational synergy, financial synergy, and managerial synergy, which are reviewed below.

#### **2.3.1.1 Operational Synergy**

Operational synergy is often viewed by managers as the key criteria for measuring the success of M&A. It can be realized through achieving economies of scale and

scope and eliminating duplicate operating expenses e.g. production, inventory, advertising and marketing, and compensation-related costs (Devos *et al.*, 2008; Lubatkin, 1983). This suggests that operational synergies exist mainly in horizontal or vertical mergers involving two firms with related businesses rather than conglomerate mergers (Mooney and Shim, 2015). The enhanced operating efficiency in relation to productive assets could lead to a higher level of cash flow and therefore firm value.

The existence of operational synergy has been empirically investigated and the evidence is mixed. By employing post-acquisition accounting performance to measure operating performance, Ghosh (2001) and Ravenscraft and Scherer (1987) find little evidence supporting operating improvement, whereas Healy *et al.* (1992) and Heron and Lie (2002) document that there are synergies arising from the higher efficiency of a combined firms' operation, such as a higher asset turnover ratio. In addition, Houston *et al.* (2001) examine operational synergies of the M&A' transactions in the banking industry by using management's forecasts, and find that these acquisitions create value from cost savings instead of revenue increases. Moreover, Devos *et al.* (2008) employ the Value Line forecast and show that operating synergies from efficient resource allocation contribute 8.38% to the increased value, which is significantly higher than financial synergies of only 1.64%.

### **2.3.1.2 Financial Synergy**

Financial synergy is expected to arise from lower risks faced by a firm and thus lower costs of capital (Trautwein, 1990), which can be achieved in several ways. First, the reduced risk may be the result of a larger assets size in the combined

firm. With more financial assets, a firm would have a higher debt capacity, which leads to cheaper capital (Lewellen, 1971). Second, there would be a decrease in a firm's unsystematic risk if it acquires a target in unrelated segments, to diversify its operations. Lewellen (1971) suggests a co-insurance effect that can be achieved if two firms have less related businesses and therefore provide insurance to each other's cash flow. Similarly, Shrieves and Pashley (1984) argue that firms can benefit from the diversification effect by having a more stabilized income stream and a lower return variance. More recently, Hoberg and Phillips (2010) provide consistent empirical evidence that financial synergies can be generated through a product differentiation strategy i.e. where a target firm's product is very different from an acquirer's rival.

### **2.3.1.3 Managerial Synergy**

Managerial synergy could be gained in mergers that involve two firms with differential efficiencies in management. Trautwein (1990) suggests that firms are expected to benefit from this type of synergy if acquirers have more experience and more developed skills than targets. Lang *et al.* (1989) employ the Q theory to explain managerial synergies. Specifically, Tobin's Q is the ratio of a company's market value divided by the replacement value of its assets, which is an indicator of a firm's performance. A higher Tobin's Q implies a better management performance. According to Lang *et al.* (1989), managerial synergy tends to exist in mergers with a high Q acquirer and a low Q target as acquirers would help targets to improve their management efficiency. Servaes (1991) further documents the consistent evidence confirming that the difference of Tobin's Q between acquirers and targets can lead to a better merger performance.

In addition, Manne (1965) and Jensen and Ruback (1983) suggest that managerial synergy can be realized in a “market for corporate control”, which is defined as a market in which competition exists among firms’ management to obtain the rights of managing corporate resources. Therefore, firms with poor performance demonstrate a lack of competitiveness and are likely to be acquired by other firms with better performance (Martin and McConnell, 1991b; Mitchell and Lehn, 1990; Palepu, 1986). While some studies support the existence of managerial synergies, others report little evidence. For example, Agrawal and Jaffe (2003) employ a large sample of M&A announced between 1926 and 1996 and find only an insignificant relationship between a target firm’s operating performance and its abnormal stock returns.

### **2.3.2 Monopoly Theory**

To expand the market and gain market power is one of the most important motives of firms conducting a takeover (Jensen and Ruback, 1983; Srinivasan and Mishra, 2007). With the constantly changing economic environment, M&A offer firms the opportunity to grow at a fast pace. This type of synergy generally exists in horizontal and market-extension deals, which enables firms to increase market power via cross-subsidizing products, decreasing competition in the market, and deterring entry (Trautwein, 1990). Examples of such transactions would be the Bayer-Monsanto deal, the Dow-DuPont deal, the Syngenta-ChemChina deal, which account for more than two-thirds of the market share of global seeds and pesticides.

### 2.3.3 Agency Theory

In contrast to the literature on managerial synergy suggesting that mergers are conducted to replace an inefficient management, some research suggests that mergers and acquisitions are motivated by the agency problem. The agency problem arises from the conflict of interest between managers and shareholders due to the separation of a firm's ownership and control (Jensen and Meckling, 1976).

First, managers might carry out a takeover to receive more compensation rather than to generate value for their shareholders. Murphy (1985) suggests a positive relationship between firm size and executive compensation. Yim (2013), Anderson *et al.* (2004), and Grinstein and Hribar (2004) find that acquirer executives are paid considerably more after undertaking mergers. Harford and Li (2007) examine the sensitivity of executive pay to merger performance and find that acquirer CEOs' pay significantly increases following the deal, regardless of the abnormal returns to acquirer shareholders. However, they find that pay-performance sensitivity can be improved by strong corporate governance, suggesting that the agency problem as the motivation of M&A tends to exist in firms with a poor governance system. Guest (2009) includes a sample of U.K. M&A and also finds that there is an increase in CEOs' compensation during the first year following a deal's announcement even for deals destroying a firm's value. Similar evidence is also documented in Bliss and Rosen (2001) who study M&A' transactions in the US banking industry. While the literature suggests that acquirer CEOs conduct mergers for a larger compensation package, there is research arguing that target CEOs would convince their shareholders to accept the bid for the purpose of exacting personal gains from the deal (Hartzell *et al.*, 2004).

Second, a merger might be initiated due to a higher level of free cash flow (Jensen, 1986). Specifically, additional cash is expected to be paid to shareholders when a firm has excess cash flow but does not have any value-increasing project. However, as the cash payout is in conflict with the interest of managers, the latter might simply spend the excess cash on takeovers even if the investment does not have a positive net present value. Mitchell and Lehn (1990) also suggest that firms having substantial free cash flow tend to conduct mergers with negative stock returns.

Third, the literature suggests that M&A' activities can also be motivated by managers' empire-building incentives. It is often argued that managers grow the firm beyond an optimal level in terms of both size and scope in order to achieve personal benefits. Jensen (1989) argues that a manager's social prominence, prestige, and power increases with the firm size. Reich (1983) argues that a CEO's salary and bonuses are positively related to his or her firm size. Avery *et al.* (1998) investigate both the compensation and prestige of executives and document that managers are able to increase their standing in the industry through conducting mergers but are unable to increase their salaries or bonuses.

#### **2.3.4 Hubris Hypothesis**

Hubris is defined by the Merriam-Webster Dictionary as '*exaggerated pride or self-confidence*'. Roll (1986) is the first study that employs hubris to explain the motivation of M&A and the negative abnormal returns to acquirer shareholders (Jensen and Ruback, 1983). Specifically, Roll (1986) regards executives as individuals who are excessively optimistic about their ability to create value for the firm. Unlike other managerial motivation, e.g. agency problem, that acquirer

managers are rational in pursuit of personal benefits at the cost of shareholders, hubris hypothesis suggests that takeovers are motivated by managers' irrational behaviour i.e. overconfidence in their capability to conduct a value-increasing deal. This overestimation of a deal's actual synergies is often related to the underestimation of a deal's risk, which leads managers to engage in a bad deal or make an overpayment to the target that could destroy acquirer shareholders' value.

Following Roll's (1986) hubris hypothesis, there is a large body of research testing this theory and documenting supportive evidence. For example, Hayward and Hambrick (1997) find that acquirers with an overconfident CEO tend to pay a higher bid premium and experience lower abnormal returns. In addition, they also document that the recent successes of firms can contribute to CEOs' hubris. Three examples of such successes would be the recent well-performance of firms, the recent praise of CEOs given by the media, and the self-importance of CEOs.

Malmendier and Tate (2005) examine the relationship between managerial hubris and corporate investment distortions. To measure CEOs' overconfidence, they construct three variables i.e. *Hoder67*, *LongHolder*, and *NetBuyer*, which are related to the exercise of options held by managers and the purchasing behaviour of company equity. Their findings show that overconfident CEOs have a tendency to make more investments when their firms have a higher level of internal funds.

Based on their work in 2005, Malmendier and Tate (2009) document a negative relationship between CEOs' overconfidence and market reactions to mergers, which is in line with the hubris hypothesis. Moeller *et al.* (2005) examine a sample of M&A with large value destruction and attribute the large losses to manager overconfidence.

In addition to the above literature, there is some other research investigating the relationship between frequent acquirers and merger performance, and explained by the hubris hypothesis. For example, Doukas and Petmezas (2007) show that firms with an overconfident CEO tend to be serial acquirers who undertake frequent acquisitions. In addition, they also find that overconfident CEOs tend to use cash to make the payment instead of stock because they think that their shares are undervalued by the market. Billett and Qian (2008) find a declining cumulative abnormal returns (CARs) trend from their first deal to higher-order deals and interpret this result as indicative of hubris. Similar empirical evidence is found in Conn *et al.* (2005) and Ismail (2008).

More recently, Kolasinski and Li (2013) construct a measure of an overconfident CEO based on insider-trading activities. Specifically, a CEO is likely to be overconfident if he or she buys his or her own firm's stock on the open market and loses money in the following two years. The loss of money implies a CEO's overestimation of stock value, which directly measures managerial hubris and provides future studies examining the impact of CEO overconfidence on M&A' activities an easier-to-construct method.

### **2.3.5 Market-Timing Hypothesis**

While the hubris hypothesis assumes that mergers are conducted by irrational managers in an efficient market, the market-timing hypothesis proposes that mergers are undertaken by rational managers, but in the market with irrational investors, to take advantage of the firm's misvaluation. The market-timing hypothesis was theoretically developed by Shleifer and Vishny (2003) to explain the selection of target, payment method, merger performance, and merger waves.

The deviations of a firm's stock price from its true intrinsic valuations in the short-term is the key principle of the theory. As managers are assumed to be rational, the deviations can be identified and used to generate gains via mergers and acquisitions. However, in the long-term, the hypothesis suggests that the market will go back to performing efficiently and therefore managers need to strategically time the market in order to gain.

The theory is developed on the basis of a scenario where the overvalued firm is the acquirer and takes over the less valuable firm. Several predictions concerning M&A' outcomes are generated. Regarding the method of payment, the theory forecasts that stock acquisitions tend to be conducted when (1) there is a high market or industry valuation; (2) there is a greater difference between the price and the true value of an acquirer's stock; (3) there are high prior returns to the acquirer; (4) there are signs of overvaluation e.g. earnings manipulation and insider selling, and that cash acquisitions tend to be undertaken when there are low prior returns to target firms. In terms of M&A' long-run valuation effect, the theory implies that (1) acquirers of stock deals tend to experience negative abnormal returns; (2) acquirers of cash deals or diversifying deals are likely to enjoy positive returns.

In Shleifer and Vishny (2003) 's model, the less overvalued target is assumed to willingly accept the more overvalued stock of the bidder, which is explained by assuming that target managers are self-interested and seek short-run personal interest rather than to maximize shareholders' interests in the long-run. However, Rhodes-Kropf and Viswanathan (2004) put forward another view, suggesting that target executives accept such types of deal by mistake as they lack accurate

information, and this because during a high value period, not only are acquirers' shares overvalued but deal synergies are overestimated as well.

There is a huge body of empirical evidence that is supportive of the theory of misvaluation-driven acquisitions. For instance, Rhodes–Kropf *et al.* (2005) divide the market-to-book ratio into three components: the firm-specific error, time-series sector error, and long-run pricing to book. Specifically, the firm-specific mispricing is measured by using the deviation of firm-specific pricing from short-run industry pricing, which identifies if a firm is relatively overvalued compared to the industry. The time-series sector mispricing is measured by using the deviation of multiples' short-run pricing from their long-run pricing, which identifies if sectors or overall markets are temporarily overvalued. Lastly, the long-run value to book measures firms' growth opportunities in the future. Their findings demonstrate: (1) acquirers are valued remarkably higher than target firms; (2) while the firm-specific mispricing accounts for about 60% of the acquirer's market-to-book ratio, it is hardly responsible for the target's market-to-book ratio; (3) less overvalued bidders are likely to use cash as their payment method and targets tend to be undervalued in cash acquisitions; (4) firms with greater firm-specific errors are likely to conduct merger and pay in stock; (5) the misvaluation effect only exists in the short-term and in the long-term firms with low value-to-book ratio tend to acquire firms with high value-to-book ratio. Overall, Rhodes–Kropf *et al.* (2005) consistently support Shleifer and Vishny (2003)'s and Rhodes–Kropf and Viswanathan (2004)'s theories.

Dong *et al.* (2006) investigate the market-timing hypothesis by comparing the effect of stock misvaluation with investment opportunities and document that M&A' transactions are more likely to be driven by market valuation during the

hot market. Their findings show that while the Q hypothesis contributes more to the M&A' motivations before 1990, the market-timing hypothesis better explains takeover activities after 1990. Additionally, they document that more overvalued acquirers tend to conduct stock acquisitions and offer higher bid premiums, which supports Shleifer and Vishny's (2003) studies. The positive relationship between market overvaluation and stock payment is also confirmed in Ang and Cheng (2006).

Savor and Lu (2009) provide consistent evidence concerning the market-timing hypothesis by categorising acquirers by a deal completion and payment method. By investigating acquirers' long-run performance, they show that bidders of completed stock acquisition earn significant higher returns than ones of incompleting deals. This evidence implies that stock acquisitions are conducted in the interest of long-run shareholders, which is consistent with the prediction in Shleifer and Vishny (2003).

Besides the empirical evidence, there is also anecdotal evidence to support the idea that overvalued firms tend to be acquirers and pay with stock. For example, America Online announced it would buy Time Warner with \$166 billion stock in 2000. During the year prior to the deal announcement, the share price of America Online had doubled and arrived at an all-time high one month before the announcement. However, its stock price dropped by more than 80% during the four years following the deal. Some Investment bankers support this view. One senior vice president of Lehman Brothers in an interview suggested that *'There is no question that equity valuation is one of the leading indicators of M&A trends.'*

*The common theme among all of these is a rich earning multiple which enabled them to do stock-based acquisitions with seemingly ‘cheap’ paper’.*<sup>3</sup>

Although the market-timing hypothesis has been supported by much research, there are studies developing conflicting hypotheses and producing inconsistent evidence. Harford (2005) finds that M&A’ activities are motivated by economic shocks related to the economy, regulation, and technology. Gugler *et al.* (2012) and Fu *et al.* (2013) document that overvalued acquirers do not outperform their control sample of overvalued firms without undertaking mergers, which suggests that acquirers cannot use overvalued stocks as a cushion for stock price collapses in the long-term. More recently, Eckbo *et al.* (2018) develop a “rational payment design” hypothesis based on information asymmetry between acquirers and targets, and suggest that the motivation behind bidders paying with stock is not overvaluation but the concern about target adverse selection. Specifically, they find that the percentage of stock in the total payment considerably increases with the information on acquiring valuation that a target has. In addition, by employing large aggregate outflows as an instrumental variable of misvaluation, they show that stock payment is not influenced by bidder mispricing, which is not consistent with the market-timing hypothesis.

## **2.4 M&A Process**

The M&A’ process is regarded as a critical determinant of the outcome (Cartwright and Schoenberg, 2006; Gomes *et al.*, 2013; Haspeslagh and Jemison, 1991; Jemison and Sitkin, 1986; Lasserre, 2003). The key differences between successful and failed mergers hinge on *‘understanding and better managing the*

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<sup>3</sup> Doug Solomon, personal interview, March 5, 2002.

*processes by which acquisition decisions are made and by which they are integrated'* (Haspeslagh and Jemison, 1991:3). Therefore, to have a better understanding of how takeovers can successfully work as a strategic move, this section reviews the literature on the process of M&A.

*[Insert Table 2.1 Approximately Here]*

Previous research has used different methods to identify the major stages underlying the process of acquisitions. A summary of the M&A' process classification in prior studies is shown in Table 2.1. For instance, Boland (1970) describes the M&A' process as the combination of pre-merger and post-merger. Graves (1981) considers the merger process involves four important phases: the planning stage, the anxiety stage, the merger itself, and the evaluation stage. Marks (1982) suggests that there are three crucial stages: pre-combination stage, legal combination stage, and post-combination stage. Buono and Bowditch (1989) break down the whole M&A process into seven stages including pre-combination, combination planning, announced combination, initial combination, formal combination, combination aftermath, and psychological combination. Haspeslagh and Jemison (1991) identify four major phases: idea phase, acquisition justification phase, acquisition integration phase, and results phase. They group the first two into the pre-deal period and the last two into the post-deal period. According to Galpin and Herndon (2000) the whole process is divided into five phases: formulate, locate, investigate, negotiate, and integrate. Picot (2002) identifies three critical stages: planning, implementation, and integration. Parenteau and Weston (2003) suggest that there are four phases: strategy planning, candidate screening, due diligence and deal execution, and the ultimate integration

phase. Overall, the M&A' process is considered as three crucial phases: pre-merger decision-making stage, negotiation, and the post-merger integration stage.

### **2.4.1 Pre-Merger Decision-Making Process**

Developing the right M&A' strategy, identifying the potential M&A' strategic and organizational contributions, choosing the right target firm, analysing and evaluating the target firm, and conducting due-diligence analysis to determine parameters for the subsequent negotiation process are the essentials of the pre-merger process. Based on Jemison and Sitkin (1986), Haspeslagh and Jemison (1991), Galpin and Herndon (2000), and Lasserre (2003), this thesis summarizes three sub-processes of the pre-merger process: synergy creation, target selection, and due diligence.

#### **2.4.1.1 Synergy Creation**

According to Jemison and Sitkin (1986), the assessment of strategic fit and organizational fit between the combining parties is critical to the M&A process and M&A outcome, which facilitates a bidders' decision-making stage and establishes the foundation for the following stages.

In terms of the strategic fit, the American Federal Trade Commission (FTC) developed a classification of M&A based on the competitiveness relationship between the merging firms. According to the FTC, a firm can make a choice between five expanding strategies: horizontal, vertical, product-extension, market-extension, and conglomerate. Howell (1970) criticizes the classification of FTC for not being consistent with reality, and redefines the types of a firm's growth strategy as financial, marketing, and manufacturing. Salter and Weinhold (1981)

only identify two types of strategy: related and unrelated. Shelton (1988) follows Salter and Weinhold (1981) and further develops a classification of strategic acquisitions: identical, related-supplementary, related-complementary, and unrelated. Haspeslagh and Jemison (1991) differentiate M&A strategies in terms of the type of capability transfer, its contribution to corporate strategy, and its relation to business strategy.

To better facilitate the M&A decision-making process, the fit of cultural and organisational is also important (Buono and Bowditch, 1989; Chatterjee *et al.*, 1992; Datta, 1991; Leighton and Tod, 1969; Sales and Mirvis, 1984). While strategic fit analyses the degree to which the two companies build a complementary relationship, and generate financial and non-financial synergies, the key to organizational fit is to focus on the administrative and cultural relationship between the two parties (Jemison and Sitkin, 1986). Specifically, the two dimensions of organizational fits that are often documented in the literature are the management styles (Callahan, 1986; Seed, 1974) and the reward and evaluation system (Ferracone, 1987; Hayes, 1979; Magnet, 1984). The great differences of these factors between acquirers and targets can have a negative influence on M&A' performances (e.g. Datta, 1991), and therefore it is crucial to consider organizational fit before target selection.

#### **2.4.1.2 Target Selection**

Once the growth strategy and the motive for conducting M&A are formulated, the next move for a firm is to choose the right target firm based on its strengths and weaknesses (Angwin, 2001; Kitching, 1967; Schweiger *et al.*, 1994). The selection of a partner is one of the most important determinants of M&A

outcomes including the method of payment, bid premium, and deal performance. Prior literature documents several methods related to the choice of a target. One of the most frequently employed is the resource-based view (RBV), which is developed on the basis of firm growth theory (Penrose, 1959). It suggests that a company's competitiveness arising from the access to various resources is highly valuable (Barney, 1991), which provides new insight that differs from the traditional view (Wernerfelt, 1984). Three levels of analysis are involved in the RBV.

First, firms are required to identify different categories of resources and relate them to the corresponding potential synergies. Grant (1991) divides a firm's resources into two groups: tangible assets e.g. machinery, plants, and inventory, and intangible assets, e.g. patents, copyrights, brand recognition, and technical knowledge. Hooley *et al.* (1999) identify two types of resources namely internal resources i.e. resources that are fully controlled by a firm, and external resources i.e. resources that are related to parties outside the firm. Capron *et al.* (1998) classify resources into five groups: research and development, manufacturing, marketing, managerial, and financial resources.

Second, the linkage between a target's and an acquirer's resources need to be identified and analysed in order to match the specific growth strategy determined in the last M&A phase. Rumelt (1984) measures the relatedness of a target's and a bidder's resources with resource similarity while Barney (1986) uses resource complementarity.

Third, firms need to gather information and specify advantages and disadvantages in order to successfully combine two firm's resources. However, there could be

significant uncertainty concerning the resources value of the target party due to information asymmetry (Denrell *et al.*, 2003). Previous research suggests that the difficulty to measure the value can be mitigated by choosing a target with a relatively narrow geographic scope or within the same country (Capron and Shen, 2007; Rosenkopf and Almeida, 2003; Seth *et al.*, 2000), or a more elderly target (Henderson, 1999).

#### **2.4.1.3 Due Diligence**

Due diligence analysis is comprised of detailed research and potential risk evaluation for the target firm (Angwin, 2001; Hopkins, 1999; Knecht and Calenbuhr, 2007). It usually considers legal, financial, and commercial aspects conducted by legal and accounting advisors (Harvey and Lusch, 1995), which might take several months or even more than a year for large deals to complete. Legal issues such as ownership and structure are included. In terms of financial issues, due diligence analysis mainly focuses on information related to the degree of complementarity between two merging firms and the integration costs following the deal completion, e.g. assets assessment, debt capacity, and profitability. For commercial factors, buy side advisors often take the strategic-related and marketing-related issues into account, such as the management of customer perceptions and market orientation.

The motivation behind conducting due diligence is to offer acquirers sufficient information on the potential target, which serves as a foundation for the decision about initiating the deal and offers indications on the negotiated M&A' terms e.g. bid premium (Angwin, 2001; Sacek, 2015). According to Haspeslagh and Jemison (1991) and Lasserre (2003), determining the right range of bid premium is one of

the most important activities during the pre-acquisition due diligence analysis. It is generally suggested that a higher offer premium could lead to a higher likelihood for acquirers to complete the deal. However, a higher takeover premium could also destroy acquirer shareholders' value (Agrawal and Jaffe, 2000; Jarrell and Poulsen, 1989). By gaining a better understanding of the target valuation and risks, the uncertainty can be reduced and therefore acquirers would be more likely to pay the right price. Capron and Pistre (2002) also suggest that the post-acquisition integration speed can be significantly reduced if a firm conducts a thorough due diligence during the pre-acquisition period that could shorten the post-acquisition learning curve.

#### **2.4.2 Negotiation**

After identifying the growth strategy and selecting the eligible target, bidders can build strong bonds with the potential strategic partner during the courtship period i.e. a process of negotiation that enables two merging firms to have mutual knowledge and understanding before reaching an agreement (Colombo *et al.*, 2007; Jemison and Sitkin, 1986; Kitching, 1967). A negotiation process is defined as '*a process whereby two or more parties attempted to settle what each shall give and take, or perform and receive, in a transaction between them*' (Rubin and Brown, 1975:2). A successful negotiation is regarded as a process that generates accurate information and reduces tension and conflicts of interest between the two parties involved (Sebenius, 1998, 2002).

The courtship period plays an important role in mitigating information asymmetry and improving the trust between the two parties, which is related to the success of M&A (Jemison and Sitkin, 1986). To conduct an efficient M&A negotiation,

Gomes *et al.* (2013) document that firms might engage in specific activities during the courtship period, ranging from a joint venture, cooperation on a project, board interlocks to trading partners. This process could, in turn, help acquirers further assess the resources, cultures, and competences of the potential target firm. In addition, Hubbard and Purcell (2001) and Angwin (2000) suggest that the key to initiating a successful negotiation is to set proper expectations and communicate accurately and reflexively.

### **2.4.3 Post-Merger Integration Process**

Post-acquisition integration has been defined in various ways. Some studies suggest that it represents a set of actions, for instance, the actions to merge two firms (Cording *et al.*, 2008) or the actions to enable two firms to function as a whole entity by changing their organizational structure and cultural environment (Pablo, 1994). Alternatively, some research regards post-acquisition integration as an outcome e.g. where the operations and activities of two merging parties are consolidated (Heimeriks *et al.*, 2012), or the target ceases to be a standalone entity (Puranam *et al.*, 2006).

According to Haspeslagh and Jemison (1991), post-acquisition integration is the most important part of a successful M&A as synergies and sustainable economic value can only be generated after the transition period and when the two companies are working together toward the M&A objectives (Haspeslagh and Jemison, 1986). Other literature e.g. Christensen *et al.* (2011), Schweiger and Goulet (2005), Schweiger and Very (2003), Schweiger *et al.* (1993), Schweiger and Weber (1989), also document that the degree to which the post-merger

integration process facilitates the goal and the strategy of mergers significantly determines the efficiency of M&A.

Schweiger and Weber (1989) show that although the lack of integration could lead to a failed acquisition, too much integration could also result in a M&A failure as the cultural differences increases with the level of integration. More specifically, they point out that there would be negative attitudes and managerial resistance from the target management if a higher level of cooperation is required by the acquirer, which could cause cultural clashes and impede the expected M&A outcomes. Consequently, it is important to employ the right integration approaches in successful M&A.

The complexity of post-acquisition integration results in the development of various frameworks. Napier (1989) identified three different M&A' integration types and strategies based on the motivation behind the merger: extension, collaboration, and redesign. It suggests that while two firms in collaboration mergers need to exchange skills to successfully integrate, target firms in redesign mergers are required to adopt the acquirer's practices.

Another integration framework is developed by Haspeslagh and Jemison (1991), who propose three types of interaction: substantive, administrative, and symbolic, and four types of integration strategies: preservation, symbiosis, holding, and absorption. Specifically, they suggest that substantive interactions focus on transferring capabilities, and administrative interactions attempt to build information and management systems, and symbolic interactions involve efforts to develop certain values and beliefs. Regarding integration approaches, they

document that organizational autonomy and strategic interdependence are the most critical factors in determining the choice of integration strategies.

Shrivastava (1986) suggests that the whole integration process should be divided into different levels to achieve success. The first level is procedural, which aims to standardise work procedures in terms of strategic planning, operating, and management control. Physical integration is the next level, which involves the combination of two firms' tangible assets e.g. plants and machinery. The third level is managerial and sociocultural integration, which attempts to integrate corporate cultures and leadership styles.

## **2.5 M&A Wealth Effect**

M&A' performance has been extensively examined in the research fields of corporate finance, strategic management, and industrial organization for decades. A review of literature concerning acquisition performance and shareholder wealth effects is presented in the following sections.

### **2.5.1 Measurements of M&A Performance**

There have been various measures of acquisition performance constructed and used in previous literature. In an empirical research study reviewing 88 M&A' empirical research between 1970 and 2006, Zollo and Meier (2008) identify twelve methods of evaluating M&A valuation in terms of different dimensions, which includes (1) integration process performance; (2) overall acquisition performance; (3) employee retention; (4) customer retention; (5) accounting performance; (6) long-term financial performance; (7) short-term financial performance; (8) acquisition survival; (9) innovation performance; (10)

knowledge transfer; (11) systems conversion; and (12) variation in market share. Their summary shows that while 59% of the reviewed empirical studies employ event studies in the short-run or long-run, 28% measures M&A performance with accounting-based methods. Cording *et al.* (2010) review 104 studies and also suggest that the event study method and the accounting-based method are the most commonly used measurements in both management and finance literature, which accounts for 92% of the literature involved. However, several studies point out that the large-scale use of financial measurements might not provide the whole picture of M&A' performance (Schweiger and Walsh, 1990; Shleifer and Summers, 1988), and suggest that more attention should be paid to M&A' cultural and organizational fit (Appelbaum *et al.*, 2013; Stahl and Voigt, 2004).

#### **2.5.1.1 Short-Run Event Study Methodology**

Event study is a performance measurement based on the stock market, which has been the major method since it was first employed by Fama *et al.* (1969) in the 1960s. It is designed to capture abnormal stock returns related to the announcement of a M&A. By assuming that capital market is efficient, it suggests that any new information associated with deal valuation should be incorporated into the share price immediately and unbiasedly (Fama, 1970). An event window is usually employed to capture the event influence. In terms of short-run analysis, the two-day (-1, 0), three-day (-1, +1), five-day (-2, +2), and eleven-day (-5, +5) event windows are extensively used to measure M&A performance, in which 0 represents the deal announcement day. Although a longer event window may be helpful to capture more valuable information for the assessment of merger performance, it may also incorporate the effect of confounding events. By

including days before and after the announcement in the event window, studies are able to capture the potential leakage of information and delayed incorporation of information. According to Jensen and Ruback (1983), abnormal returns are calculated by subtracting the expected returns of a sample firm from its actual returns, which can be expressed as follows:

$$AR_{it} = R_{it} - E(R_{it})$$

where  $AR_{it}$  represents the abnormal returns for stock  $i$  on day  $t$ ;  $R_{it}$  represents the actual returns for stock  $i$  on day  $t$ ; and  $E(R_{it})$  represents the expected returns for stock  $i$  on day  $t$ . The expected stock returns could be estimated with different models e.g. the market model (Brown and Warner, 1985; Sharpe, 1963), the market-adjusted model, the Fama-French three-factor model (Fama and French, 1993), the Fama-French plus momentum model (Carhart, 1997), and the Fama-French five-factor model (Fama and French, 2015). Brown and Warner (1980) suggest that there is no great difference between the market model and the market-adjusted model.

Specifically, with the market model and the market-adjusted model, the estimation of expected stock returns is based on the market model parameters, obtained by regressing stock returns on an equal- or value-weighted market index, which is described as the following equation:

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} + e_{it}$$

where  $R_{mt}$  represents the market index returns.

In terms the Fama-French three-factor model, the market, size, and book-to-market indexes are included to estimate the expected stock returns as follows:

$$E(R_{it}) = \alpha_i + R_{ft} + b_i(R_{mt} - R_{ft}) + s_iSMB_t + h_iHML_t + e_{it}$$

where  $R_{ft}$  represents the risk free stock return;  $SMB_t$  measures the returns on a diversified portfolio of small and large stocks;  $HML_t$  measures the returns on a diversified portfolio of high and low book-to-market stocks.

Regarding Carhart's four-factor model, the expected stock returns can be calculated by adding the momentum factor to the Fama-French three-factor model:

$$E(R_{it}) = \alpha_i + R_{ft} + b_i(R_{mt} - R_{ft}) + s_iSMB_t + h_iHML_t + u_iUMD_t + e_{it}$$

where  $UMD_t$  measures the returns on a diversified portfolio of up and down trend stocks.

Finally, for the Fama-French five-factor model, the returns associated with profitability and investment are considered and added to the Fama-French three-factor model:

$$E(R_{it}) = \alpha_i + R_{ft} + b_i(R_{mt} - R_{ft}) + s_iSMB_t + h_iHML_t + r_iRMW_t + c_iCMA_t + e_{it}$$

where the additional variable  $RMW_t$  denotes the returns on a diversified portfolio of the most and the least profitable stocks, and  $CMA_t$  denotes the returns on a diversified portfolio of conservative and aggressive stocks.

Next, the cumulative abnormal returns can be obtained by cumulating abnormal returns over a certain event window:

$$CAR_{i,T_1,T_2} = \sum_{t=T_1}^{T_2} AR_{it}$$

### 2.5.1.2 Long-Run Event Study Methodology

Unlike a short-horizon event study which captures the immediate event effect, the long-horizon event study is designed to catch the delayed stock market reaction to the deal announcement (Barber and Lyon, 1997; Fama, 1998; Kothari and Warner, 1997; Lyon *et al.*, 1999; Mitchell and Stafford, 2000). As investors are likely to receive more information along with the process of two firms' integration and reconsider their evaluation of the M&A transaction, the M&A' wealth effects in the long-run are required to be incorporated into the analysis of M&A' success.

There are two widely used methods in long-run event studies, namely the buy-and-hold abnormal return (BHAR) methodology and the calendar time portfolio (CTP) methodology. The BHAR is calculated by subtracting the long-term holding period return of a reference portfolio from that of a sample stock, which is expressed as follows:

$$BHAR_{iT} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{pt}]$$

where  $R_{it}$  represents the returns for stock  $i$  in month  $t$ ; and  $R_{pt}$  represents the returns for reference portfolio  $p$  in month  $t$ .

According to the CTP methodology developed by Jaffe (1974) and Mandelker (1974) and discussed by Fama (1998), a stock's long-term performance is measured by the mean monthly calendar time abnormal return (MMAR) that can be obtained by the following equation:

$$MMAR = \frac{1}{T} \sum_{t=1}^T MAR_t$$

Where  $MAR_t$  denotes the mean abnormal return for an equally-weighted portfolio  $p$  of all event firms in each calendar month  $t$  that is described as follows:

$$MAR_t = \sum_{i=1}^{nt} x_{it}(R_{it} - R_{pt})$$

### **2.5.1.3 Long-Run Accounting-Based Methodology**

In addition to stock performance, a firm is expected to have a better long-run accounting performance if it conducts a value-increasing merger. Two main types of accounting data have been used in previous literature, which are measurements based on the cash flow ratio and the profitability ratio. In terms of the cash-flow-based method, the literature largely evaluates the changes in operating cash flow which is the amount of cash generated from a firm's normal operations (scaled by a firm's total assets). For a profitability-based measurement, return on equity (ROE) or return on assets (ROA) are commonly used in studies examining post-acquisition operating performance. Both ROE and ROA are the measurements of a firm's profitability, which can be respectively calculated by dividing net income by the book value of shareholder equity and by the book value of total assets.

It is suggested that the ratios should be adjusted by industry, which could be processed by subtracting the industry median in a given year (Alexandridis *et al.*, 2013; Healy *et al.*, 1992; Ramaswamy and Waegelein, 2003). To assess acquisition performance, a firm's profitability ratio is usually measured over a two-year or three-year period following the deal announcement, and then compared to the pre-deal accounting performance.

## **2.5.2 M&A Performance**

Whilst a huge body of research has investigated the valuation effect of mergers and acquisitions, there is no conclusive evidence of whether M&A generate synergies for firms and shareholders. Before investigating the determinants of M&A' wealth effect, this thesis provides a review of existing empirical evidence on short- and long-run acquisition performance.

### **2.5.2.1 Short-Horizon**

Numerous research has empirically investigated the short-run abnormal stock returns to shareholders for the bidder, the target, and the combined firm. It is well-documented that while the shareholders of target firms enjoy large and positive stock returns, acquirers on average experience zero or even negative returns.

Jensen and Ruback (1983) summarize thirteen empirical studies on the announcement returns for acquirers and targets of successful and failed deals.<sup>4</sup> The studies generally focus on the two-day announcement effects and the one-month announcement effects. According to their review, target shareholders earn remarkably positive returns in tender offers regardless of whether the deal is successful or not, ranging from 16.31% to 47.26% across the research. Regarding targets of successful mergers, the weighted abnormal returns in the two-day and the month are 7.72% and 15.90%, respectively. This suggests that a large fraction of the abnormal returns is realized before a deal announcement. Similar evidence is observed for targets of unsuccessful mergers, indicating that market participants

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<sup>4</sup> The reviewed studies include Dodd and Ruback (1977), Kummer and Hoffmeister (1978), Bradley (1980), Dodd (1980), Jarrell and Bradley (1980), Asquith (1983), Asquith, Brunder, and Mullins (1983), Bradley, Desai and Kim (1982), Bradley, Desai and Kim (1983), Eckbo (1983), Malatesta (1983), Ruback (1983a), and Wier (1983). For successful deals, it is generally defined in the literature as deals in which the acquirer takes over a large percentage of target shares that are initially sought.

are not able to differentiate the successful and failed deals at the first public announcement. However, after taking the outcome day into consideration, targets of unsuccessful mergers experience an insignificant loss of -2.88%, which suggests that the positive returns realized around a deal announcement are lost after the information of a bid's failure is released to the public.

In terms of the abnormal returns to acquirer shareholders, Jensen and Ruback (1983) summarize that while all reviewed studies on successful tender offers show positive abnormal returns, the evidence from mergers is mixed. In addition, acquirers earn significantly lower abnormal returns compared to target firms, regardless of deal type and the deal success state. For acquirers of successful mergers, overall, the research suggests that the abnormal returns realized by them are insignificantly different from zero and therefore mergers are investments with zero net present value (NPV). Of the thirteen studies, only Asquith *et al.* (1983) document significant positive abnormal returns of 3.48% to acquirer shareholders. However, compared to the market reaction to successful mergers, the reviewed research documents that investors react negatively to failed deals, which is supportive of the view that mergers are value-increasing investments.

To provide a more comprehensive picture of M&A' performance, Bruner (2002) reviews 130 studies between 1971 and 2001 and summarizes that there are sizable gains received by target shareholders while acquirer shareholders on average receive zero returns. In 21 studies on target shareholder returns, the evidence shows that target firms earn positive stock returns regardless of variations in deal type and sample period, suggesting that bid premiums are delivered to target shareholders. In 44 studies on acquirer shareholder returns, thirteen of them

document value destruction; fourteen of them document value conservation; and seventeen of them document value creation.

More recently, Tuch and O'Sullivan (2007) offer a review of studies on the M&A' wealth effect. For short-term performance, sixteen studies are included,<sup>5</sup> and to summarize, most of research documents negative abnormal announcement returns to acquirer shareholders. For example, Smith and Kim (1994) investigate 177 US acquisitions between 1980 and 1986 and find that acquirer shareholders are subject to negative abnormal returns of -0.23%. Sudarsanam and Mahate (2003) examine 519 U.K. mergers from 1983 to 1995 and document that acquirer shareholders on average earn significantly negative returns of 1.4% and only a third of bidders create value for their shareholders. Franks and Harris (1989) is the only reviewed research which finds that acquirers experience significant gains.

Compared to earlier literature reviewed in Jensen and Ruback (1983), more recent literature shows that there is a tendency for market reactions to decrease over time, which is consistent with Andrade *et al.* (2001). Bruner (2002) also summarizes that market participants reacted more positively in the 1960s and 1970s than in the 1980s and 1990s. Alexandridis *et al.* (2010) explain the increasingly negative trend with enhancing market competitiveness. They examine a sample of worldwide acquisitions between 1990 and 2007, and find that acquirers in the market with intense competitiveness (i.e. US, U.K., and Canada) experience loss, whereas their counterparts in the market with less competitiveness earn positive returns.

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<sup>5</sup> Firth (1980), Dodd (1980), Bradley et al. (1983), Franks and Harris (1989), Mitchell and Lehn (1990), Lang et al. (1991), Smith and Kim (1994), Holl and Kyriazis (1997), Higson and Elliot (1998), Walker (2000), Sudarsanam and Mahate (2003), Gupta and Misra (2004), Song and Walkling (2004), Campa and Hernando (2004), and Ben-Amar and Andre (2006).

In addition to abnormal returns to acquirers and targets, prior research also investigated the wealth effect of combined firms by constructing a portfolio of the acquirer and target abnormal stock returns. Overall, the evidence shows that the combined abnormal announcement returns are positive, which is supportive of the view that M&A create synergy gains. Bruner (2002) reviews 20 studies examining the value effect of combined firms and documents that eleven of them show significantly large gains. For example, Bradley *et al.* (1983), Bradley *et al.* (1988), Banerjee and Owers (1992), Berkovitch and Narayanan (1993), and Malatesta (1983) measure the changes in dollar value of the combined firms and show value creation ranging from \$9.95 million to \$120 million. More recent research such as Moeller *et al.* (2005) and Mulherin and Boone (2000) also find that combined firms earn positive abnormal announcement returns.

### **2.5.2.2 Long-Horizon**

The analysis of long-run M&A' performance examines completed deals in which the target firm is successfully incorporated into the acquirer's operation. The evidence on the stock performance and operating performance has been largely documented in the literature.

#### **2.5.2.2.1 Stock Performance**

In terms of M&A' long-run stock performance, the results are mixed, which can be explained by considering that long-term abnormal returns are sensitive to the approaches employed (Fama, 1998). Fama (1998) also suggests that all methodologies related to forecasting future stock performance are subject to various criticisms, and that there is a need to develop an improved model.

First, there is extensive research which finds that acquirer shareholders suffer from value destruction in the long-term. By focusing on US acquisitions, earlier research such as Asquith *et al.* (1983), Franks *et al.* (1991), and Langetieg (1978) find that shareholders of bidders experience losses over the years following the deal announcement. Specifically, Langetieg (1978) documents negative returns between -2.23% and -2.62% when investigating CARs over a six-year time period. Asquith (1983) and Malatesta (1983) respectively report a decrease of 7.2% and 7.5% in acquirer CARs one year after the acquisition. Jensen and Ruback (1983) conclude from seven studies that acquirers on average experience a loss of -5.5 % during the one year period following deal completion. Magenheim and Mueller (1988) examine the post-acquisition performance over a three-year period and find a significant CAR of -2.4%. Agrawal *et al.* (1992) re-examine acquirers' long-term performance with a five-year event window and a large sample of M&A over decades, and document that acquirer shareholders are subject to a significant negative returns of around -10% after size and beta adjustment.

This evidence is also confirmed by Anderson and Mandelker (1993) who employ the same event window. Loughran and Vijh (1997) criticize the use of a rebalancing strategy in the calculation of excess returns in the previous literature and introduce a new method that estimates a firm's buy-and-hold returns with a benchmark of control stocks to adjust size and book-to-market effects. Based on prior research, Rau and Vermaelen (1998) examine a sample of 3139 US M&A by incorporating size, book-to-market, and beta adjustment into the computation of buy-and-hold abnormal returns, and find that takeovers are subject to a loss of -4% in the long-term. Mitchell and Stafford (2000) reassess the estimates of long-run abnormal returns and obtain the same evidence of value destruction by following

Fama (1998) and using the calendar-time portfolio approach. They strongly criticize the bootstrapping approach as it assumes that multiyear abnormal returns to event firms are independent from each other, which could lead to cross-sectional correlations and biased statistics. Moeller *et al.* (2004) include a large sample of 12,023 public deals between 1980 and 2001 and show that acquirers experience a significant loss over three years by employing both event-time methodology and calendar-time methodology.

In terms of the UK market, long-run underperformance is shown to be larger in magnitude than in the US market. For example, Franks and Harris (1989) include a sample of 1800 UK M&A from 1955 to 1985 and find a significantly negative CAR of -12.6% in the two-year period after the completion of deals. Employing the same event window, Limmack (1991) documents that acquiring firms suffer significant wealth destruction of -14.08% and -6.87% with the use of the market model and the index model, respectively. Limmack and McGregor (1995) also provide evidence on the underperformance of acquirers in the long-term. Further, Gregory (1997) examines the post-acquisition performance with six benchmarks and finds significant two-year CARs ranging from -11.8% to -18%.

To have a more complete and clearer picture of M&A' long-run valuation effect, Agrawal and Jaffe (2000) provide a detailed review of 22 studies and attempt to make a distinction between the performance of mergers and tender offers.<sup>6</sup> They conclude that acquirers of mergers significantly underperform in the long-term, while their counterparts of tender offers earn non-negative abnormal returns.

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<sup>6</sup> Mandelker (1974), Dodd and Ruback (1977), Langetieg (1978), Firth (1980), Asquith *et al.* (1983), Malatesta (1983), Barnes (1984), Dodds and Quek (1985), Magenheim and Mueller (1988), Franks *et al.* (1988), Franks and Harris (1989), Limmack (1991), Franks *et al.* (1991), Agrawal *et al.* (1992), Loderer and Martin (1992), Anderson and Mandelker (1993), Kennedy and Limmack (1996), Gregory (1997), Loughran and Vijh (1997), and Rau and Vermaelen (1998).

Besides studies focusing on the US and UK market, researchers also assess M&A' long-run performance in other markets. For example, Dutta and Jog (2009) investigate acquirers in the Canadian market between 1993 and 2002 and document no significant abnormal returns by using both the event-time and calendar-time methodologies. Fatemi *et al.* (2017) conducted a study of Japan's M&A market and suggest that there are little shareholder gains in the long-term.

While there is a huge body of research providing evidence on the underperformance of acquirers in the long-run, some literature documents inconsistent results. For example, Franks *et al.* (1991) investigate a sample of 399 US M&A between 1975 and 1984, and find that while acquirers are subject to negative abnormal returns over a 36-month period with equally-weighted portfolios applied, they earn positive returns when value-weighted portfolios are employed. Additionally, to mitigate issues related to mean-variance inefficiencies, they use the multi-factor benchmarks and document zero abnormal returns earned by bidders in the long-term. Therefore, they conclude that the underperformance of acquiring firms in the long-run is due to the models' measurement errors.

#### **2.5.2.2.2 Accounting Performance**

Another important method to assess M&A' long-term performance is based on the analysis of reported accounting data. There are two main streams of research. Some literature employs accounting data related to a firm's cash flow to measure performance. Alternatively, a large body of studies use profitability-related ratios as a proxy to a firm's operating performance.

In terms of the first stream of studies measuring cash flow ratios, Ravenscraft and Scherer (1987) include a sample of 62 tender offers in the US market and

document a significant decline in post-acquisition operating cash flow ratio. Healy et al. (1992) investigate a sample of the 50 largest US acquisitions over the five-year period between 1979 and 1983 and employ asset productivity as a measurement of operating performance. By using industry performance as a benchmark, their findings show a significant increase in asset productivity after deal completion, whereas asset sales, capital expenditures or R&D remain at the same level, suggesting that the increased operating performance is not at the cost of firms' fundamental business. Switzer (1996) finds consistent evidence that acquirers enjoy an improvement of 1.97% in operating cash flow regardless of the sample size and the observation period. Similar evidence is also documented in Parrino and Harris (1999) and Linn and Switzer (2001) that acquirers enjoy a better operating performance over a five-year period following acquisition than their peer firms. However, Ghosh (2001) criticizes the evidence in Healy et al. (1992) that the improved post-merger operating performance is due to the relatively large firm size compared to their peers in the same industry but without engaging in M&A activities.

To take this issue into consideration, the author employs a benchmark of control firms matched by firm size and performance, and documents little evidence on the increased operating performance after a merger. Kruse *et al.* (2002) include a large sample of mergers in the Japanese market between 1962 and 1992 and find that acquirers have a positive but insignificant long-run operating performance. However, by using a different period (1969 to 1999), Kruse *et al.* (2007) document a remarkable increase of 1.54% during a five-year event window. Moeller *et al.* (2004) use a pre-tax operating cash flow ratio and investigate operating performance following domestic and cross-border mergers in the US

market. According to their results, acquirers of diversified deals have a considerable lower operating cash flow ratio compared to their counterparts of domestic deals. Powell and Stark (2005) include a sample of 191 UK acquisitions between 1985 and 1993 and employ various measurements of operating performance and benchmarks. They find that acquirers experience a modest improvement in accounting performance after deal completion, ranging from 0.13% to 3.1%. Martynova *et al.* (2007) examine a sample of M&A in Continental Europe and the UK market. Their evidence shows that there is a significant decline in acquirers' raw operating performance and they conclude that it is due to macroeconomic change as the underperformance disappears after accounting for their peers' performance. Ramakrishnan (2008) investigates the Indian M&A' market over a two-year period from 1993 to 1995 and shows a significant increase of 5.2% in acquirers' operating margin. Yen and André (2010) examine M&A conducted in 13 emerging markets and suggest that a higher level of shares owned by large shareholders helps acquirers improve their post-acquisition performance by 3.9%.

Another stream of studies on the M&A' long-run operating performance is to use profitability-related measurements. Hogarty (1970) employs earnings per share (EPS) as the proxy for a firm's operating performance and finds that firms successfully conducting mergers suffer a worse profitability performance compared to their industry peers. Dickerson *et al.* (1997) use a firm's return on assets (ROA) to measure its operating performance. Their evidence on the US and UK M&A' market shows a significant decrease in post-acquisition operating performance. Sharma and Ho (2002) investigate a sample of mergers in the Australian market over a five-year period from 1986 to 1991 by using return on

assets (ROA), return on equity (ROE), profit margins, and EPS to assess post-deal operating performance. According to their results, they suggest that there is no significant difference between post- and pre-merger operating performance. This insignificant evidence is also confirmed by Ghosh (2001) who studies a sample of US acquirers. Yeh and Hoshino (2002) also employ different proxies of operating performance to evaluate the Japanese M&A' market, and suggest that firms experience a decline in both ROA and ROE after acquisition. Bild *et al.* (2010) examine the UK merger market between 1985 and 1996 and show a significant improvement in acquirers' ROE following merger completion.

## **2.6 Determinants of M&A Wealth Effect**

The valuation effect of M&A has been extensively investigated and the literature makes great efforts to understand the determinants of acquisition performance for both acquiring firms and bidding firms. This section offers a review of studies on various influential factors that exert influence on M&A' wealth effect and that are commonly considered in M&A' research. Specifically, the reviewed determinants include the firm size, the relative size of acquirer to target firm, the method of payment, the target firm's listing status, the market-to-book ratio, the deal attitude, and the industry relatedness between acquirer and target firm.

### **2.6.1 Firm Size**

Acquiring and acquired firm size can have an impact on the abnormal returns around a deal announcement. The acquirer or target firm size is usually measured with the market capitalization of a firm four weeks before the merger announcement (e.g. Fuller *et al.* (2002)). Earlier studies, e.g. Jarrell and Poulsen

(1989) and Loderer and Martin (1990), show that smaller acquirers of US domestic mergers were subject to larger gains in the 1960s. However, their evidence is not clear as to whether the positive abnormal returns were attributed to acquirer size *per se* or the smaller market competition during the 1960s.

Agrawal *et al.* (1992) is the first M&A research that takes acquiring firm size into consideration when analysing acquirers' long-run performance. They suggest that acquirer size plays a significant role in M&A transaction because most of the acquirers tend to be large companies. Their results show that bidders experience a significant loss of -10% over a five-year period after deal completion. More recently, Moeller *et al.* (2004) include a comprehensive sample of 12,023 mergers in the US market between 1980 and 2001 and investigate the impact of acquirer size on M&A abnormal returns. Overall, their findings show that acquirers on average earn 1.1% equally weighted abnormal returns surrounding the deal announcement, whereas they experience a loss of \$25.2 million when using dollar gains to measure announcement performance. This evidence suggests that the size effect plays a role in announcement abnormal returns, which is confirmed through further analysis, after they divided the sample based on firm size. The large firms are defined as the top 25% of NYSE firms and the small firms are those smaller than the bottom 25% of NYSE firms. According to Moeller *et al.* (2004), small acquirers are subject to a significant gain of 2.318% while large acquirers only earn a insignificant gain of 0.076%. A 2% difference still exists between large and small bidders regardless of the payment method and target listing status. The reverse relationship between acquirer size and announcement abnormal returns to acquirer shareholders is also documented in Billett and Qian (2008).

Several explanations might be provided as to why acquirer size has a negative effect on acquirer returns, which is summarized in Black (2013). First, smaller firms are subject to less severe agency problems because the owner and manager tend to be the same individual (Demsetz and Lehn, 1985). In large firms, the separation of ownership could lead managers to conduct M&A for managerial motivation e.g. empire building (Jensen, 1986) and managerial overconfidence (Roll, 1986), which might be the reason behind the underperformance of larger acquirers. This explanation is consistent with Jensen and Meckling (1976). Moeller *et al.* (2004) test various explanations and find that acquirer size is positively related to the size of the bid premium, which suggests that the hubris hypothesis might be an explanation. Second, the size effect on merger announcement returns might be due to merger arbitrage. Mitchell *et al.* (2004) suggest that short-selling prior to a deal announcement is one of the explanations for acquirers earning negative announcement returns. Given that the short-selling is more likely to exist in larger acquisitions, the negative abnormal returns to larger bidders might be explained by price pressure around the announcement.

In addition to acquirer size, Alexandridis *et al.* (2013) document a negative effect of target firm size on acquirer announcement returns by examining a sample of 3,691 US acquisitions between 1990 and 2007. Specifically, their findings show that acquirers experience more losses as target firm size increases, and acquirers of large deals earn lower abnormal returns of 2.37% than their counterparts of small deals. As takeover premium is found to be negatively associated with target firm size, Alexandridis *et al.* (2013) conclude that the underperformance of acquirers taking over large targets is due to the deal complexity instead of overpayment.

### 2.6.2 Relative Size

Another size factor that could have an influential impact on M&A' wealth effect is the relative size of the deal. Generally, relative size is calculated as the target market value (or the deal value in public deals) divided by the acquirer market value four weeks before the deal announcement. According to Eckbo and Thorburn (2000), the bidder size of US mergers is on average more than eight times larger than the target size. It is usually documented in the literature that the higher the percentages of target size to acquirer size, the more evident the effect of relative size on acquirer announcement returns. Asquith *et al.* (1983) include a sample of 214 US acquisitions announced between 1963 and 1979 and find a positive relationship between the relative size of a deal and acquirer gains surrounding the takeover. Specifically, while acquirers of deals with a target size more than one-tenth of the acquirer size earn abnormal returns of 4.1%, the returns to their counterparts of deals with the target size being less than one-tenth of the acquirer are 1.7%. In addition, the abnormal announcement returns to acquirers of deals in which the target's market value accounts for half of the acquirer's market value are on average 1.8% higher than acquirers of deals in which the target's market value is 10% of the acquirer's market value.

This evidence is further confirmed in Jarrell and Poulsen (1989) who include a large sample of 770 US tender offers over three decades and investigate the effect of the relative size of the deal, management resistance, and the time factor on acquirer announcement returns. According to their results, announcement returns received by acquirer shareholders significantly increase as a target's market value increases relative to the acquirer's market value. Loderer and Martin (1990) document supportive evidence after including private targets into the cross-

sectional analysis of acquirer returns, showing that deals of firms with the largest relative size generate gains of 1.6% to acquirer shareholders, whereas firms' deals in the smallest category of relative size only produce small gains of 0.2%. Additionally, they find that acquirers of acquisitions in which the deal value is more than 30% of the acquirer's market value experience significantly higher abnormal returns. The positive relationship between the relative size and acquirer announcement returns is also found in more recent literature, e.g. Mulherin and Boone (2000) and Fuller *et al.* (2002). However, Pettway and Yamada (1986) find the evidence of Asquith *et al.* (1983) inconsistent, by investigating acquirers in the Japanese market. Their findings show that acquirers of mergers with a smaller relative size of target size to acquirer size enjoy a better announcement performance.

### **2.6.3 Method of Payment**

There is a huge body of literature investigating the impact of the payment method on M&A' performance and suggesting that the method of payment plays a significant role in M&A activities. Acquirers can choose to pay with cash, stock, or a combination of them. In a perfect market, investors are expected to show indifferent reactions to different methods of payment because various payments are perfect alternatives when investors have perfect information on the firm (Modigliani and Miller, 1958). However, in the real world, there is information asymmetry between managers and investors and therefore investors have a preference for certain payment methods employed by acquirers.

Myers and Majluf (1984) develop a framework, which describes a firm's investment decision and market reactions based on asymmetric information.

Specifically, they predict that value-maximizing managers with private information concerning their firm's value will advise the firm to issue equity in the open market when the market value is higher than the intrinsic value of the firm's equity (i.e. overvalued equity). In terms of market reaction, the model predicts that investors are able to detect this behavior and accordingly make downward adjustments to the stock price.

On the basis of Myers and Majluf (1984), Travlos (1987) introduces the idea of information asymmetry to M&A' activities and examines the influence of the payment method on M&A' wealth effect. By including a sample of 167 US public acquisitions between 1972 and 1981, Travlos (1987) documents supportive evidence that the method of payment acts as an information signal and conveys information on a firm's value. Specifically, his findings show that while acquirer shareholders experience significant wealth losses of -2.09% in deals paid with stock around the announcement, there are small positive wealth gains of 0.31% earned by acquirers of cash-financed acquisitions.

Following Travlos (1987), more empirical studies have been conducted and find consistent evidence that acquirer shareholders experience higher announcement abnormal announcement returns in a cash-financed deal than in a stock-financed deal. For example, Moeller *et al.* (2004) document that acquirer shareholders earn abnormal returns of 1.38% and 0.15% in cash-paid and stock-paid mergers, respectively. Martynova and Renneboog (2006) investigate a sample of 1,721 mergers in the 28 Continental European countries between 1993 and 2001, and summarize that 54% of deals are fully paid with cash, 20% are fully paid with equity, and 25% are mix-financed. According to their results, cash-financed deals generate abnormal returns of 0.6% upon announcement, which is significantly

higher than the returns of stock-financed ones. During the six-month period following the merger announcement, acquirer shareholders of deals by cash payment are associated with abnormal returns that are indistinguishable from zero (-0.9%), whereas those of deals by equity payment experience significant losses of -2.2%. Similar evidence is also documented in Chemmanur *et al.* (2009).

However, some literature also suggests that stock-financed acquisitions do not always destroy value for acquirer shareholders. Chang (1998) and Fuller *et al.* (2002) examine the influence of the payment method on acquirer's announcement performance by combining it with the target listing status. They find that all-stock deals with the non-listed target firm can actually create significantly positive returns to bidders, which is higher than abnormal returns generated by all-cash deals. In addition, a more recent study by Alexandridis *et al.* (2010) suggests that bidders of deals by stock payment are not subject to wealth losses in a relatively less competitive M&A' market.

In addition to studies focusing on the relationship between the method of payment and announcement returns to bidders, research also reports the influence of payment choice on acquirer's long-run stock performance. For example, in an earlier study Agrawal *et al.* (1992) examined a comprehensive sample of M&A on the NYSE and AMEX between 1955 and 1987 and suggest that the post-acquisition performance of acquirers conducting cash-financed deal is superior to that of acquirers paying with stock during the five-years subsequent to the deal announcement. With the same investigation horizon, Loughran and Vijh (1997) studied 947 mergers announced between 1970 and 1989 and find considerably positive five-year returns of 61.7% for all-cash deals and -25% abnormal returns for acquirers choosing stock as the payment method. There is also other research

which finds supportive evidence for the positive effect of cash payment on the long-run stock performance, e.g. Ang and Cheng (2006), Bouwman *et al.* (2009), and Sudarsanam and Mahate (2003).

Linn and Switzer (2001) also investigate the impact of the payment method on acquirer's long-run operating performance. Their findings suggest that acquirers of cash-financed mergers outperform their counterparts from stock-financed mergers by more than a factor of four. Rahman and Limmack (2004) and Lau *et al.* (2008) respectively examine mergers and acquisitions in the Malaysian and the Australian market and both document that acquirers financing deals with cash experience greater improvement in post-acquisition operating performance than those financing with stock.

Finally, there are also studies analyzing the relationship between target shareholder gains and the method of payment. For instance, Wansley *et al.* (1983), Huang and Walking (1987), and Martynova and Renneboog (2006) document that cash-financed deals trigger significantly higher returns to target shareholders than stock-financed deals.

#### **2.6.4 Target Listing Status**

Prior literature suggests that a target firm's listing status significantly influences market reactions to a merger announcement. It has been widely documented that while acquirers taking over publicly listed targets earn zero-to-negative abnormal returns, those of deals with an unlisted target firm (privately held or subsidiary firm) enjoy wealth gains. For example, Hansen and Lott (1996), Chang (1998), Ang and Kohers (2001), Fuller *et al.* (2002), and Moeller *et al.* (2004) investigate the effect of the target listing status on merger performance in the US market and

report similar results. Hansen and Lott (1996) document that deals involving private targets generate gains of 1.15% for acquirer shareholders around the deal announcement, whereas those with public targets on average generate negative returns of -0.98%. Chang (1998) finds that acquirers of private deals earn abnormal returns of 1.45%, which is significantly higher than the returns of -1.49% received by their counterparts of public deals. Ang and Kohers (2001) report that around 22,000 mergers include an unlisted target during the period between 1984 and 1996, which is almost three times more than deals involving listed target firms (around 8,000).

By comparing the market reactions to private target acquisitions with public target acquisitions based on the method of payment, they document that stock offers and cash offers made to unlisted targets generate significant positive returns of 1.32% and 1.83%, respectively. In contrast, for deals with publicly listed targets, there are significant negative abnormal returns to acquirers paying with stock and insignificant returns to acquirers paying with cash. Fuller *et al.* (2002) divide the whole sample into three groups based on target listing status: listed firms, unlisted stand-alone firms, and unlisted subsidiaries. Their findings show that while acquirers taking over a listed firm experience significant losses of -1.00%, acquirers with an unlisted stand-alone firm or an unlisted subsidiary enjoy significantly positive returns of 2.08% and 2.75%, respectively. Moller *et al.* (2004) group the sample into the same groups as in Fuller *et al.* (2002) and document that the abnormal returns to bidders of public, private, and subsidiary firms are -1.02%, 1.50%, and 2.00%, respectively.

Faccio *et al.* (2006) examine the effect of target listing status with a sample of mergers in 17 Western European countries between 1996 and 2001. Their

evidence shows that for deals involving public target firms, acquirers experience negative abnormal returns of -0.38%. For deals involving private target firms and subsidiaries, acquirers earn positive returns of 1.51% and 1.44%, respectively. Draper and Paudyal (2006) document that 88% of target firms in the UK M&A' market between 1981 and 2001 are unlisted firms. By including a large sample of 8,597 UK acquisitions, they find supportive evidence that there are significant positive abnormal returns (2.19%) to acquirers of private deals surrounding the announcement. However, acquirers of public deals experience abnormal returns of around 0.4%, which is remarkably lower than ones choosing an unlisted target.

### **2.6.5 Market-to-Book Ratio**

The role of acquirers' market-to-book ratio playing in the M&A' wealth effect has been studied since Fama and French (1993) suggested that book to market values should be accounted for in the analysis of acquirers' post-acquisition performance. Rau and Vermaelen (1998) directly investigate merger long-run performance of glamour and value acquirers over the period 1980 to 1991. Glamour acquirers are those firms with a higher market value to book value ratio because of the better stock performance before a deal announcement. In contrast, value acquirers are defined as firms having a low market value to book value ratio due to poor stock market performance. By examining the performance of 3,169 mergers and 348 tender offers, they find that value bidders enjoy significant wealth gains of 8% in mergers and up to 16% in tender offers over a three-year period following the deal announcement, whereas glamour bidders experience significantly negative abnormal returns of -17% in mergers and modest positive abnormal returns of 4% in tender offers. Based on their results, Rau and Vermaelen (1998) provide an

explanation with the performance extrapolation hypothesis, which argues that firms with a superior performance before conducting a merger (glamour firms) tend to continue to extrapolate future performance and are related to managerial overconfidence at the same time. This results in managers overestimating their abilities to generate synergies and undertaking riskier investment (Roll, 1986). In contrast, for value bidders, mergers are carefully undertaken for the purpose of generating gains for shareholders. Additionally, the stocks of glamour firms are likely to be overvalued by the market. Although managers could take advantage of the stock overvaluation and provide stock offers to target firms, investors will make a downward adjustment on the stock price over time after the deal announcement.

Sudarsanam and Mahate (2003) include a sample of 519 UK acquisitions between 1983 and 1995 and examine the relationship between the pre-merger firm's financial status and acquirer performance during the short- and long-term periods. In addition to using the market to book value ratio, Sudarsanam and Mahate (2003) also employ the price to earnings ratio i.e. '*a measure of the esteem in which the company is held by investors*' (Brealey and Myers, 1996:449), to determine whether a firm is a glamour or a value firm. Their findings show that there are insignificant differences in abnormal announcement returns between glamour acquirers (firms with a high price to earnings ratio) and value acquirers (firms with a low price to earnings ratio). In terms of long-run performance, they document that glamour acquirers earn abnormal returns ranging from -47% to -17% over a three-year period following a deal announcement, while for value bidders the abnormal returns are between -9% and -2%, which is significantly higher than for glamour acquirers. This evidence is consistent with Rau and Vermaelen (1998).

### **2.6.6 Industry Relatedness**

The M&A' wealth effect is also determined by the industry's relatedness to the target firm. During the conglomerate merger wave of the 1960s, acquiring a target from unrelated industries became increasingly popular in the US merger market. The notion of relatedness in M&A is defined as the acquirer and the target having a related skill, market, resource, or purpose (Rumelt, 1974). Empirical studies generally determine the degree of relatedness by examining whether two merging firms share the same two- or four-digit US Federal Trade Commission's Standard Industry Classification (SIC) code.

The idea of diversification is originally from Markowitz (1952)'s modern portfolio theory suggesting the diversified portfolio should be more preferred by investors than undiversified ones. At the firm level, although there are conflicting hypotheses concerning the effect of diversification on M&A' performance, most of the research suggests that related acquisitions are more profitable than unrelated mergers.

Specifically, firms diversifying across industries by taking over an unrelated firm are expected to create less firm value than if conducting a related merger (Rumelt, 1974; Salter and Weinhold, 1981; Singh and Montgomery, 1987). This is because choosing a related-industry target could have a greater potential for achieving operational, financial, and managerial synergies in mergers and acquisitions. In contrast, for unrelated acquisitions, as bidders and targets have less overlap in terms of businesses, there are only financial and managerial synergies potentially available to be generated. Stulz (1990) suggests that firms operating across industries may make value-destroying investments by using the funds from a profitable project with a positive cash flow, leading to the inefficiency of a firm's

operation. This is further confirmed by Lang and Stulz (1994) who document a negative relationship between a firm's Tobin's Q and corporate diversification.

Morck *et al.* (1990) include a sample of 325 mergers in the US market between 1975 and 1987 and show that acquirers of unrelated mergers experience lower returns of 6.97% than their counterparts of related mergers in the 1980s. During this period, 45.6% of acquirers purchasing related targets are subject to positive abnormal returns, while only 32.2% of acquirers with unrelated targets earn wealthy gains. This evidence is interpreted as evidence that diversified mergers are conducted to achieve managerial objectives. Berger and Ofek (1995) also confirm the managerial motivation factor behind unrelated acquisitions and document that acquirers of diversified deals on average suffer large losses ranging from 13% to 15%. Lins and Servaes (1999) document similar results in the Japanese and the UK market.

More recently, DeLong (2001) investigates focusing and diversifying acquisitions in the banking industry and divides the whole sample into four groups based on activity or geographic focus and diversification. Specifically, his findings show that the group with deals focusing both activity and geography is the only one creating positive abnormal returns, which on average generates significant gains of 6.23%, 2.21%, and 15.83% for combined firms, acquirers, and target firms, respectively. Similarly, Denis *et al.* (2002) include a large sample of 44,288 acquisitions from 1984 to 1997 and examine both firms diversifying across different businesses and national markets. They find that both acquirers of globally and industrially diversified deals experience wealth losses, with abnormal returns -3.4% and -2.6%, respectively. Although Graham *et al.* (2002) document negative abnormal returns of -14% to acquirers of diversified deals, they further

suggest that the decreased performance is due to acquirers taking over discounted targets rather than conducting unrelated acquisitions. Their findings imply that the prior literature taking standalone bidders as a benchmark for diversified bidders could result in misleading evidence if these two types of firms are systematically different, and therefore the impact of diversification on firm performance should be revisited with the new method.

### **2.6.7 Deal Attitude**

Previous literature suggests that whether an acquisition is hostile or friendly has an impact on M&A' performance. Manne (1965) suggests that a hostile takeover enables acquirers to generate wealth gains by replacing the inefficient management of a target firm and improving its operation. However, Morck *et al.* (1988) argue that mergers conducted to create value tend to be friendly in character, whereas mergers with a hostile attitude are generally driven by the discipline of the underperforming target management. The disciplinary motive has been questioned by several studies as they find that target firms of friendly mergers are not superior to their counterparts of hostile mergers (Franks and Mayer, 1996; Kini *et al.*, 2004).

Franks *et al.* (1991) include a sample of 399 US takeovers during the period 1975-1984 and compare the valuation effect of a hostile deal with that of a friendly deal. Specifically, acquirers of a hostile takeover on average earn cumulative abnormal returns of -3.54% surrounding the deal announcement, which underperform their counterparts of friendly deals who earn abnormal announcement returns of -0.17%. However, in terms of long-run performance, the average excess returns to acquirers of hostile and friendly takeovers are 1.32% and -0.54%, respectively,

which is opposite to the evidence concerning acquirer's short-run performance. Kennedy and Limmack (1996) examine hostile and friendly takeovers in the UK market and document that hostile bidders have abnormal returns of 0.1% over the first year subsequent to the deal announcement, and the returns decrease to -5.4% over the second post-acquisition year. For friendly bidders, the abnormal returns over the first-and second year after a merger are 0.3% and -6.1%. Cosh and Guest (2001) investigate a large sample of hostile takeovers in the UK market between 1985 and 1996 and find that firms of hostile takeovers experience significant improvement in the abnormal profit returns following the deal completion, while those of friendly takeovers do not. Specifically, the median annual profit of combined firms over a three-year period before a deal announcement are -0.9% and -0.4% for hostile and friendly takeovers, respectively. During a three-year post-acquisition period, the annual profit significantly increases to 3.1% in hostile deals, whereas this number for firms of friendly deals drops to -0.6%.

This evidence is inconsistent with Healy *et al.* (1997) who document that firms' profitability improve following friendly takeover instead of hostile takeovers, but it is confirmed in Conn *et al.* (2005) who find that hostile deals outperform friendly ones. Sudarsanam and Mahate (2006) include a sample of 519 UK mergers between 1983 and 1995 and report that while hostile acquirers making a single bid earn positive but insignificant returns of 0.62% (size and market to book value ratio adjusted), friendly acquirers, white knight, and hostile acquirers that make multiple bids earn significantly negative returns. In terms of the long-run performance, single hostile bidders also outperform other types of bidders.

**Table 2.1 - Phases Underlying M&A Whole Process and Corresponding References**

The M&A Phases	Reference
The courtship phase, the marriage ceremony, the honeymoon, and after the honeymoon	Vance <i>et al.</i> (1969)
Pre-merger and post-merger	Boland (1970)
The planning stage, the anxiety stage, the merger itself, and the evaluation stage	Graves (1981)
Pre-combination stage, legal combination stage, and post-combination stage	Marks (1982)
Integration with the strategic plan, intelligent screening, evaluation of targets through creativity and analysis	Farley and Schwallie (1982)
Pre-merger and implementation	Schweiger and Weber (1989)
Pre-combination, combination planning, announced combination, initial combination, formal combination, combination aftermath, and psychological combination	Buono and Bowditch (1989)
Pre-merger, merger, post-merger	Salus (1989)
Assessment, joint planning, issue analysis, structure selection, securing approvals, final planning, and implementation	Kazemek and Grauman (1989)
Idea phase, acquisition justification phase, acquisition integration phase, and results phase	Haspeslagh and Jemison (1991)
Formulate, locate, investigate, negotiate, and integrate	Galpin and Herndon (2000)
Planning, implementation, and integration	Picot (2002)
Strategy planning, candidate screening, due diligence, deal execution, and the ultimate integration phase	Parenteau and Weston (2003)

# **CHAPTER THREE: DO MANAGERS KEEP THEIR WORD? THE DISCLOSURE OF MERGER INTENTION AT PRE-MERGER ISSUANCE AND M&A PERFORMANCE**

This chapter investigates whether disclosing merger intention at the announcement of equity/debt issuance has an impact on subsequent M&A transactions. We find that companies tend to issue higher proceeds when they reveal their merger intentions, and, subsequently, they are more likely to complete the merger deal itself and pay a higher bid premium. However, we did not find a significant difference in merger performance between firms revealing merger intention and others. Our finding is consistent with the capital need theory.

### **3.1 Introduction**

The Securities and Exchange Commission (SEC) requires a firm to disclose the intention of proceeds usage in the prospectus for debt or equity offering. The main interest in this paper is the revealing of acquisition intention at debt or equity issuance and its relation to subsequent acquisition performance.

With a large degree of discretion over content, issuers have the option to reveal either specific intentions, such as reducing indebtedness and funding a future acquisition, or vague generalisation. Therefore, the intention of spending proceeds is, in essence, a voluntary disclosure. As strategic moves, mergers and acquisitions are generally kept secret before deal announcement because the disclosure may contain proprietary message and limit a firm's flexibility. However, approximately one-fifth of US public acquirers reveal their merger intention in advance at the pre-merger issuance over the period 1985 to 2015. For example, Facebook Inc. raised nearly \$4 billion via the secondary offering of 70 million shares in 2013 and stated that a portion of proceeds may be used for future acquisitions. Two months later, Facebook Inc. announced that it would purchase the messaging giant WhatsApp by offering a premium of approximately \$19 billion. Consequently, several questions have been raised. Why would a firm be willing to reveal its future merger plan at debt or equity issuance? Does the disclosed merger intention have economic impacts on the follow-on merger?

Studies on voluntary disclosure around merger announcement have mainly focused on bidder earnings forecasts and synergy forecasts. The results show that voluntary disclosure benefits acquiring firms through lower premiums and a favourable market reaction, which suggest that bidders use voluntary disclosure to

deliver credible and favourable information to the market (Amel-Zadeh and Meeks, 2016; Dutordoir *et al.*, 2014; Kimbrough and Louis, 2011).

However, there is little evidence on the voluntary disclosure at pre-merger issuance, which might serve as an important channel to obtain corporate information for forecasting. On the one hand, the revealed acquisition intention can be used to signal that the subsequent merger transaction is a value-enhancing project (Autore *et al.*, 2009; Walker and Yost, 2008). With a specific intention, managers may credibly communicate with potential investors that they would allocate the proceeds efficiently. In addition, the disclosure of merger intention enables the market to anticipate merger transactions and estimate the growth prospects of the issuer. Thus, issuers would be motivated to reveal such information if they believe the follow-on acquisition will generate synergies for the firm and investors.

On the other hand, instead of signalling and conveying credible information, the capital need theory suggests that firms disclose merger intention at debt or equity issuance to raise more capital.<sup>7</sup> Specifically, the nature of voluntary disclosure, i.e. unregulated, gives managers great flexibility in terms of what information to provide. Cumming and Walz (2010) find that fund managers tend to disclose an inflated valuation of the unsold private equity investment to acquirer more funds. Similarly, by catering to investors' preferences for conglomerates (Baker *et al.*, 2009), the acquisition intention might be stated simply for the purpose of raising higher proceeds at issuing activity. Opler *et al.* (1999) argue that managers inherently prefer holding higher cash balances to lower risks and pursue personal

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<sup>7</sup> The capital need theory argues that greater disclosure helps firms raise capital at a low cost, for example Diamond and Verrecchia (1991) and Botosan (1997).

objectives more flexibly. With higher cash reserves, bidding firms face fewer obstacles during the negotiation process with target firms. The completion of a merger, in turn, brings benefits to managers in terms of their personal financial contracts and career hopes (Grinstein and Hribar, 2004). Therefore, the revealed merger plan may facilitate a follow-on merger to some extent, e.g. a higher completion rate, but is not necessarily related to a superior performance.

This study employs a sample of 8,903 U.S. mergers and acquisitions over the period 1985 to 2015. All bidders are public traded company and conducted an equity or a debt issuance three years prior to the merger announcement. In addition, we exclude any firms that issued both equity and debt as literature largely suggests the signal effect of merger financing decision. To assess the impact of merger intention disclosure, we then divide M&As sample into two subsamples – those with revealed acquisition intention at a debt or equity issuance before merger announcement (henceforth “revealed deals”) and those without such disclosure (henceforth “non-revealed deals”). Of these deals, 1,521 firms mentioned future acquisition as one of the purposes of raising capital at pre-merger issuance.

Our analysis first shows that issuers announcing merger intention raise more debt or equity but conduct smaller mergers following the issuance, and both results are significant. The results still hold after we consider other determinants of issue size, e.g. issuers’ funding deficit and financing costs.

With a larger issue size, this paper next find that the presence of revealed merger intention at pre-deal issuance remarkably increases the probability of follow-on acquisition success by nearly 7%. In addition, a bidder of the revealed deal pays a

significantly higher premium even after controlling for the target 52-week high.<sup>8</sup> However, such higher completion rates and higher premiums do not indicate a value-increasing merger transaction. Our analyses show that acquirers with the disclosed merger intention experience significant lower abnormal returns of -0.94% and -8.08% in the short-run and the long-run respectively, with the pre-merger issuance type and other related variables considered.

Overall our findings suggest that the revealed acquisition intention at issuing activity is mainly for raising higher proceeds, rather than signalling good investment and conveying valuable information, which is consistent with the capital need theory. Once issuers state acquisition intention, they have a willingness to simply complete the follow-on acquisition to avoid losing the trust of investors (Walker *et al.*, 2016).

Nevertheless, it is difficult to draw a causal relation between the revealed merger intention and the completion of follow-on merger due to endogeneity. The possibility of reverse causation is a serious concern. For instance, an acquiring firm has a specific target in mind and needs more capital to facilitate the completion process. As a consequence, the firm decides to disclose acquisition intention at debt or equity issuance in order to raise more proceeds. To address this problem, we employ a two-stage least squares (2SLS) regression analysis and instrument the disclosed merger intention using the total number of a firm's earlier issuance with revealed merger intention in the prospectus. The result shows that the probability of takeover completion increases with the revealed intention, confirming our earlier results.

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<sup>8</sup> Baker *et al.* (2012) find that bid premiums are significantly and positively biased by the target 52-week high stock price. Specifically, a target 52-week high is calculated as the percentage difference between the target firm's 52-week high share price and the target's stock price four weeks before the merger announcement.

Our study contributes to literature on both corporate disclosure and M&As in several ways. First, to the best of our knowledge, it is the first study investigating the motivation behind the disclosure on proceeds usage at issuance through the relation between the disclosure and the performance of subsequent corporate investment. Prior literature documents that issuers with revealed investment intention enjoy superior post-issue performance, and suggests the reason is that these firms use proceeds to invest in value-increasing projects. However, none of the papers actually examine the quality of follow-on investment. Our paper contributes to this school of literature by providing direct evidence of how effectively the proceeds are allocated when a firm reveals its merger plan. In contrast to the existing evidence, we find that the intention to conduct acquisition is disclosed mainly for raising more capital.

Second, our analysis of the disclosed merger intention complements the evidence on the influence of voluntary disclosure on M&As. Previous research, e.g. Kimbrough and Louis (2011) and Amel-Zadeh and Meeks (2016), mainly focus on the voluntary information disclosed around merger announcement. Our study examines the disclosed information at pre-merger financing activity, enabling us to examine takeovers from an earlier stage and predict merger performance in a longer horizon than previous studies.

Third, our paper contributes to the literature by introducing the disclosure of merger intention at issuance to the existing framework of the capital structure and firm value (Baker and Wurgler, 2002; Jensen and Smith, 1985; Myers, 1984). On the one hand, we find supportive evidence that bidders with pre-merger debt issuance significantly outperform ones with pre-merger equity issuance. On the other hand, our results indicate that acquirers in revealed deals suffer lower

abnormal returns in both of the short-run and the long-run, regardless of the pre-merger issuance type.

Fourth, this paper demonstrates for managers that disclosing merger intention at debt or equity issuance are welcomed by investors and related to larger issue size. However, for investors, our findings suggest that firms do not always credibly communicate regarding the efficiency of proceeds allocation, and therefore investors might need additional information to avoid or reduce agency problems when they invest.

The remainder of this paper is structured as follows. The next section reviews related literature. Section 3.3 presents the hypotheses development. Section 3.4 describes the issuing and merger data. We start our formal analysis in Section 3.5, where the empirical results are reported and analysed. And then we conclude in Section 3.6.

## **3.2 Literature Review**

### **3.2.1 Value-Relevance of Corporate Information Disclosure**

Literature on the relationship between information disclosure and a firm's value begins by investigating the role of financial disclosure (Bushman and Smith, 2001; Healy and Palepu, 2001). According to these studies, corporate information disclosures are expected to improve investment efficiency in several ways.

First, corporate disclosure can increase firm's value by reducing the cost of capital. There are two main streams of theoretical literature. One of them suggests that disclosure can improve market liquidity and thus reducing the cost of capital (Diamond and Verrecchia, 1991; Francis *et al.*, 2008; Verrecchia, 2001).

Specifically, more information disclosed makes it harder for traders to become better informed, and in terms of informed traders, more disclosures reduce the potential information advantage that they have. Both effects reduce the risk of investors' loss from trading with privately informed investors. Therefore, revealing more information decrease bid-ask spreads and attracts increased demand, and this in turn leads to lower costs' of equity financing.

The other line of research suggests that better disclosure can reduce cost of capital by lowering estimation risk perspective (Clarkson *et al.*, 1996; Coles *et al.*, 1995; Klein and Bawa, 1976). By disclosing private information, information asymmetry can be reduced, which helps managers and investors distinguish good investment projects from bad ones. Therefore, a potential investor's estimation risk perspective related to a stock's future return or payoff distribution could be decreased, resulting in higher demands and stock prices. For example, Leone *et al.* (2007) find that a higher level of corporate disclosure is correlated with a lower level of IPO underpricing.

Second, increases in disclosures can potentially influence investment efficiency and firm value by improving transparency and thus corporate governance. Literature in agency theories suggests that better corporate governance can prevent managers from expropriating shareholder's wealth and monitor managers to make good investment decisions (Lambert, 2001).

In addition to financial information, studies have also investigated the value-relevance of non-financial information. Amir and Lev (1996) firstly document that investors might underreact the non-financial disclosure and finds that non-financial information contributes to the explanation of stock prices and returns. It

was followed by lots of studies, such as Ittner and Larcker (1998), Hirschey *et al.* (2001), and more recent Simpson (2010) and Dhaliwal *et al.* (2011). They provide evidence on the predictive ability of non-financial information for a firm's future performance.

Unlike financial disclosure, the disclosure of non-financial information is generally voluntary and unregulated. In another words, managers have great discretion to statically release information. With such discretion, managers could disclose related information and improve shareholder's information environment in a more flexible way. For example, Kimbrough and Louis (2011) find that conference calls around merger announcements are positively related to market reactions to merger announcements. By holding conference calls, acquirers could reveal a great volume of related information and focus more on forward-looking details. In addition, Chen *et al.* (2014) document that non-financial disclosure can improve investment efficiency only in firms with strong corporate governance. In another words, good governance leads to greater credibility of voluntary disclosure.

However, it is also argued that mangers could use discretion to misdirect shareholder's attention and mislead them. For instance, Lang and Lundholm (2000) find that voluntary disclosures have been used to hype the stock prior to the equity offerings. In the context of mergers and acquisitions, Amel-Zadeh and Meeks (2016) consistently document that acquirers' executives positively bias earnings forecast to facilitate merger completion, which is highly correlated with their personal wealth and career (Grinstein and Hribar, 2004).

### 3.2.2 Debt and Equity Issuance Decision

There is a huge body of literature on debt and equity issuance decisions. It suggests that firms raise external capital for two reasons. One is an attempt to invest in value-adding projects but with insufficient internal fund. For example, McLean and Palazzo (2018) test the liquidity squeeze framework and documents that debt and equity issuance are partially made to fund investments and expenses. DeAngelo *et al.* (2010) suggest that lack of cash could explain most equity issuance decisions. Consistently, Kim and Weisbach (2008) find that firms seem to spend money raised in equity offerings on both capital expenditures and R&D.

Another one is to time the market when market condition is favourable. Specifically, firms tend to behave opportunistically by making large issues and keeping the proceeds for later when the market condition is in their favour. In turn, these firms are more likely to experience a lower market return in the future when investors have realized their issuing motivation. A large number of studies have found supportive evidence. For instance, Graham and Harvey (2001) document that market timing is a primary consideration when two-thirds of corporate executives make financing decision-making. In addition, firms tend to issue a higher volume of equity and debt when the market conditions are favourable, i.e. higher market valuations compared to book value or past market values, and lower interest rate (Alti, 2006; Barry *et al.*, 2008; Doukas *et al.*, 2011). Loughran and Ritter (1995, 1997) and Baker and Wurgler (2000) suggest that equity issuance result in following negative market reactions in the US, while Henderson *et al.* (2006) document similar evidence internationally. Baker and Wurgler (2002) investigate market timing through capital structure. According to their results, a firm's leverage ratio is largely influenced by fluctuations in market valuations, e.g.

firms with low-leverage tend to be those that issue equity when their stocks are overvalued. Consistently, Greenwood (2005) finds that firms with excessive amount of cash holdings experience lower future market returns, which is because it offers overvalued equity.

Initially market-timing analyses mainly focus on equity issuance, and recent studies expand the scope to include debt issuance. In terms of debt market, most of research documents that interest rates are related to bond mispricing and thus influence a firm's issuing decision. For example, Graham and Harvey (2001) directly suggest that market timing motivate debt financing decisions and find that firms tend to offer short-term debt when the long-term interest rate is expected to fall. Consistently, Baker *et al.* (2003) find that managers are more likely to issue long-term debt when future bond returns are lower. Barry *et al.* (2008) and Doukas *et al.* (2011) provide evidence that the probability of debt issue is higher and the size of debt issue is larger when interest rates are low.

### **3.2.3 Use of Proceeds**

Generally, debt or equity issuers are required to disclose the intended use of proceeds in the prospectus, while managers have great discretion in terms of the revealed detail. There are mainly three kinds of intention in spending proceeds: investment, recapitalization and general corporate purposes. Investment purposes often include mergers and acquisitions, research and development and capital expenditure etc. Stating general corporate purposes means that firms choose to leave the S-filing ambiguous.

Walker and Yost (2008) suggest several reasons for proceeds usage that is disclosed ambiguously or revealed specifically, and they find that issuers with

specific investment intention experience more favourable market reactions to SEO announcement. Specifically, firms revealing vague information about the use of proceeds might try to protect useful information from rivals or take advantage of market condition to opportunistically increase liquidity. Additionally, if a manager plans to engage in agency expenditures, the usage information may also be revealed ambiguously. In terms of firms disclosing specific intention, Walker and Yost (2008) document that the disclosed investment opportunity tends to be more valuable than the average project. In other words, firms are confident about their future investment and less likely to be opportunistic market timers, allowing the investors to make an estimation of the project's value. This view is also confirmed in psychology research. According to Ajzen (1985, 1991, 2002)'s theory of planned behaviour, people having intention to perform a given behaviour should be confident in their ability to successfully conduct it and achieve certain performance. In consistent with Walker and Yost (2008), Autore *et al.* (2009) investigate 880 SEOs and find that firms stating recapitalization and general corporate purposes suffer from negative abnormal returns over the following three years, while firms citing investment reasons show no evidence of underperformance. Hanley and Hoberg (2012) suggest that more specific of the proceeds intended usage results in less uncertainty of a firm's stock value and the less IPO underpricing. These findings are supportive of the view that issuers without specific investment plans tend to opportunistically time the market.

By using the disclosed intention of proceeds usage, previous research tries to distinguish whether an issuance is for value-adding investment or for taking advantage of favourable market condition. However, much literature examines the market reactions to issuing announcement and the long-term abnormal returns

following issuance. Few of them actually investigate the quality of subsequent project to verify if it is a value-adding investment. Therefore, this paper builds on the prior literature and examines whether mergers will have a better performance following an issuance with ‘future acquisition purposes’.

### **3.2.4 Empire Building**

Agency problems are conflicts between managers and shareholders. It arises because sometimes managers tend to maximize their own benefit in decision-making, instead of acting in the best interest of stockholders (Jensen and Meckling 1976). Therefore, a firm’s resources might be inefficiently allocated, which could destroy shareholder’s value (Dominguez-Martinez *et al.*, 2008).

Empire building is one of agency problems. Lots of literature documents that increasing firm size could serve manager’s private interest in both tangible and intangible ways (Sudarsanam, 1995). For example, Stulz (1990) suggest that a firm’s executive could have gains in prestige because they control and manage more resources with a larger firm. In addition, manager’s compensation is positive related to firm size (Bebchuk and Grinstein, 2005; Murphy, 1985; Rose and Shepard, 1997). Moreover, Thomsen (2008) documents that growing firm size could reduce the risk of takeover and manager’s unemployment risk (Amihud and Lev, 1999). Following equity issuance, managers are even more likely to expand their firm size due to a higher level of free cash flow (Jensen, 1986). Titman *et al.* (2004) propose the overinvestment hypothesis and suggest that SEO underperformance results from investors reacting to the manager’s overinvesting behaviour.

### 3.3 Hypothesis Development

Prior research shows that the motivation of voluntary disclosure can arise from two conflicting strategies, leading to different potential influence on investment behaviour. On the one hand, firms disclose merger intention at issuance to convey a favourable information that they will efficiently allocate the proceeds to a value-increasing merger (Walker and Yost, 2008; Autore *et al.* 2009). On the other hand, the intention to conduct acquisition is revealed for catering to the preferences of investors on M&A, which is actually aimed at a larger issue size. Based on the above discussion, we first investigate issue size and propose two competing hypotheses:

*H1a: Disclosure of merger intention in the prospectus will have no effect on issue size.*

*H1b: Disclosure of merger intention in the prospectus will positively influence issue size.*

To investigate whether firms in revealed deals spend proceeds on high quality project, we next develop hypotheses on the economic consequences of the disclosed merger intention on follow-on M&As. Walker *et al.* (2016) suggest that a firm disclosing specific investment intention should stick with its plan and achieve it afterwards, which helps the firm build credibility and create a bonding mechanism with investors. On the contrary, firms who reveal future plan without successful action would experience a loss of trust among investors and face a higher cost at future financing activities. As such, there should be a strong will to successfully conduct a project no matter if it creates value or not. Therefore, this lead to our second testable proposition:

*H2: Acquirers of revealed deals have higher success rate than non-revealed deals.*

Previous studies, e.g. Betton *et al.* (2008), point out that the realized benefit of merger transaction is one of the determinants of takeover premium. If acquisition intention is revealed for signalling an above-average performance of subsequent deal, a higher premium will be paid to target firms. In addition, to facilitate merger completion, acquirers would also tend to offer a higher price for target firm. Therefore, we would expect that:

*H3: Acquirers of revealed deals pay higher premiums than non-revealed deals.*

Different motivations behind the disclosed merger intention at issuance can lead to different performance of follow-on mergers. Walker and Yost (2008) find that issuers disclosing specific investment intention have better performance as the disclosed investment opportunity is likely to be more valuable than the average. However, the capital need theory suggests that firms disclose specific investment intention at debt or equity issuance to raise more capital. If firms' management make use of the disclosed merger intention to deceive the market and raise more capital, the quality of subsequent merger transaction may not be a concern. Therefore, we would expect that:

*H4a: Acquirers of revealed deals will enjoy better stock performance in short- and long-run following merger announcement than ones of non-revealed deals.*

*H4b: Acquirers of revealed deals will suffer worse stock performance in short- and long-run following merger announcement than ones of non-revealed deals.*

### **3.4 Data and Methodology**

#### **3.4.1 Dataset Construction**

The sample of mergers and acquisitions includes US mergers and acquisitions over the period between January 1, 1985, and December 31, 2015, which is from SDC via Thomson One database. We restrict acquiring firms to publicly traded companies and require them to have share price information in CRSP from 300 days before the announcement to three years that followed it. In addition, acquirers need to have financial data from the COMPUSTAT database. Moreover, we only consider transactions of at least \$1 million, in which the target is a public firm, a private firm, or a subsidiary of a public firm. The original sample contains 296,745 M&A deals. After excluding transactions that did not satisfy these criteria, we construct a M&A dataset of 62,182 deals.

In terms of the pre-merger issuance, both equity and debt issuing data is from Thomson One as well. We include US public equity and debt offerings over the period from January 1, 1982, to December 31, 2015. The time frame is selected as we consider issuance conducted over three years prior to the first listed deals in the M&A sample. In addition, we identify the issuance with the disclosed merger intention by the SDC data item ‘use of proceeds’ which is labelled ‘Future Acquisitions’. A dummy variable Intention for all observations is constructed, taking the value of one if the firm state the intention to finance future acquisition at issuance, and zero otherwise. Finally, we obtain a sample of 203,839 issuing activities, of which 46,088 offerings are equity issuance.

To match a firm’s acquisition with its pre-deal issuance, we use the CUSIP number of acquirers and issuers respectively. For each acquisition, any issuing

activities following are removed and only the most recent equity or debt issuance is included. Next, as the financing decision prior to merger can have signal effect, we construct a dummy variable Debt for whether the type of pre-merger issuance is debt, and exclude any firms that issued both equity and debt. The union of these data lead to a final sample of 8903 merger deals. Of these deals, 1521 (17%) are carried by an acquirer that has a pre-merger issuance with the disclosed merger intention. Regarding to the remaining 7382 deals, acquirers did not reveal merger plans at their earlier financing activities.

### **3.4.2 Descriptive and Summary Statistics**

*[Insert Table 3.1 Approximately Here]*

Table 3.1 lists the yearly and the industrial composition of the acquirers. Our sample is divided into two groups: revealed deals represent mergers with revealed merger intention at earlier issuance, and non-revealed deals that are without such disclosure. As can be seen, revealed deals account for a much smaller percentage of the full sample, ranging from 9% to 28% over the period from 1985 to 2015. From 2005, the number of revealed deals starts to show a rising trend and the ratio reaches 27.66% by 2014.

In terms of the industrial distribution, this paper employs a Fama-French 12-industry classification. The evidence indicates that firms in business equipment industry and healthcare and medical equipment industry are more willing to disclose their merger plans at pre-merger issuance than that firms in other industries, representing about 20.3% and 21.2% respectively. In contrast, firms in utilities industry and chemicals industry are less likely to be revealed deals. This might be explained by considering that firms in utility industry tend to be large as

they enjoy a natural monopoly (Kumar *et al.* 1999). For large firms, the cost of leaking useful information to rivals could be more expensive than that of small firms. Therefore, we include industry fixed effects in multivariate analyses to control for this imbalance.

*[Insert Table 3.2 Approximately Here]*

Table 3.2 shows the summary statistics for M&A deals and firm characteristics. All variables are defined in Appendix A. To minimize the impact of extreme value and outliers, all continuous variables were winsorized at the 1% level. In addition to reporting the mean and standard deviation, we conduct a Student's t-test to examine whether there were significant differences between revealed and non-revealed deals. In general, the evidence indicates remarkable differences between the sub-groups.

Firm-specific factors that could exert an influence on both debt and equity issuing size are presented in Panel A, including issuer's size (MacKie-Mason, 1990), Tobin's Q, earnings (Lewis *et al.*, 1999), funding deficit (Myers and Majluf, 1984), leverage (Galizia and O'Brien, 2001), and cash flow ratio. Firm statistics that are likely to influence merger outcomes are reported in Panel B, including acquirer's size (Moeller *et al.*, 2004), Tobin's Q (Servaes, 1991), leverage (Maloney *et al.*, 1993), and free cash flow (Harford, 1999).

We observe that firm's characteristics before issuance and before takeover are similar to each other. This can be explained by the fact that most firms conduct merger within one year following the issuance. Specifically, firms of revealed deals significantly show a lower market value (e.g. 6.43 for *I\_LNMV* and 6.53 for *A\_LNMV*) compared to firms in non-revealed deals (e.g. 7.07 for *I\_LNMV* and

7.08 for *A\_LNMV*). In addition, firms of revealed deals exhibit, on average, a remarkable lower *I\_Leverage* and *A\_Leverage* (34.95% and 34.86%, respectively) than firms in non-revealed deals (39.22% and 40.18%, respectively), which implies that they suffer less from financial constraints. Moreover, we observe that firms of revealed deals have a considerably lower cash flow ratio (e.g. 1.89% for *I\_CF2TA* and 2.36% for *A\_CF2TA*) than firms in non-revealed deals (e.g. 3.27% for *I\_CF2TA* and 3.79% for *A\_CF2TA*), indicating that there is less available cash in future periods.

Variables for M&A deal characteristics include the relative size of the deal (Fuller *et al.*, 2002), the form of payment (Travlos, 1987), its public status (Fuller *et al.*, 2002), the deal attitude offer type (Schwert, 2000), whether the acquirer and the target are in related industries, and whether the deal involve more than one bidder (Thaler, 1988).

As shown in the Panel C, the transaction value for revealed deals is considerably smaller. This difference settles to approximately \$205 million, which might be attributed to the significant lower market value of bidders in revealed deals. With smaller deal size, however, the proceeds size (*Proceeds Ratio*) indicates that acquirers in the revealed sample actually raise more capital at pre-merger issuance than acquirers in the non-revealed group (the corresponding ratios for the two groups of acquiring firms are 4.32 and 3.78, respectively). The larger issuing size shown by acquirers of revealed deals might be due to the fact that there is a need for more capital to prepare for a profitable growth opportunity (Ambarish *et al.*, 1987). Alternatively, firms might just simply increase liquidity. Moreover, we find that bidders tend to announce merger intention at the pre-merger equity issuing. This is consistent with the literature on equity issuance, arguing that firms

disclose more information to reduce uncertainty and agency problems. In terms of deal transaction value, proceeds size and pre-merger issuing type, *P*-values related to tests for equality of both sample means (t-test) show that the differences are significant at 1% level. Furthermore, with regard to the public status of the target firms, we observed that revealed deals were 9% more likely to involve private firms and 14% less likely to involve public firms, both of which are significant and far better than the 1% level. Table 2 also shows that the premium paid by bidders of revealed deals was on average 24.54%, which is considerably higher than the corresponding value observed for bidders in non-revealed samples (21.28%). Finally, the statistics show that revealed deals enjoy a remarkable higher completion rate (by 8.6%) compared to the non-revealed group. The evidence is preliminarily in line with hypotheses *H1b*, *H2* and *H3* predicting that firms with revealed merger intention raise more capital at issuance and then undertake mergers with higher completion rate and higher premium.

### **3.5 Empirical Analysis**

#### **3.5.1 Does the Disclosure of Merger Intention in the Prospectus Influence the Size of Offering?**

We begin with studying the link between the disclosed merger intention at debt or equity issuance and issuing size by estimating the following model whereby the dependent variable is the logarithm of total proceeds:

$$Issue\ Size_i = \alpha_0 + \alpha_1 Intention_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

Our main variable of interest *Intention* is coded as one if firms disclose merger intention at issuance, and zero otherwise. In addition, we include a series of potential determinants of debt and equity offering size. In terms of firms

characteristics, we control for issuer size ( $I\_LNMV$ ), market-to-book ratio ( $I\_M2B$ ), earning ratio ( $I\_Earnings$ ), cash flow ratio ( $I\_CF2TA$ ), leverage ratio ( $I\_Leverage$ ), and funding deficit ( $I\_FundingDeficit$ ) which is calculated as the sum of cash dividends, net investment and change in net working capital less internal cash flow (Frank and Goyal, 2003). In addition, the pre-merger offering size will increase in the merger transaction value if a firm plans to use the proceeds to fund following mergers. Therefore, we also include the logarithm of subsequent merger deal value ( $Ln(TransactionValue)$ ). Moreover, variables related to debt financing cost and equity financing are included. Specifically, we control for firm's income taxes to total assets ( $I\_Tax$ ), credit rating ( $I\_Rating$ ), and Treasury Bond yields ( $Yield$ ) which represents market-wide debt financing costs in the regressions of debt issue size. We take into account equity-specific financing cost by including firm's stock price run-up before equity offerings ( $I\_Runup$ ), trading volume ( $Ln(TradingVolume)$ ), and market valuation ( $MV$ ) which is calculated by following Bouwman *et al.* (2009). Finally, the model accounts for year fixed effects  $f_y$  and industry fixed effects  $f_{industry}$ .

*[Insert Table 3.3 Approximately Here]*

Our estimates are presented in Table 3.3. Specifically, the dependent variable is the size of debt offering in specifications 1 and 2 and the size of equity offering in specifications 3 and 4. As shown in the table, after controlling for various related factors, we find that the revealed merger intention significantly positively determines the issue size at the 1% level, regardless of the issuance type. The effect of the disclosed merger intention on issue size is stronger in debt issuance, taking the value of around 0.50, which is about triple that of in equity issuance. Overall, this is consistent with the result in univariate test and with *H1b*.

Focusing on other control variables, we observe that there is a significant and positive relation between firm size and offering size in all specifications, which is supportive of MacKie-Mason (1990) suggesting that asymmetric information and financial distress costs decrease as firm size increase. Next, we find a positive coefficient related to the *I\_FundingDeficit* variable, which is consistent with the pecking order theory of Myers and Majluf (1984). They argue that firms with insufficient retained earnings would turn to external financing, i.e. debt and equity via capital market. Moreover, the coefficient on the variable *I\_Leverage* is significantly positive in the regressions of debt offering size, which indicates that firms issuing more debt have higher leverage ratio. This can be explained by the fact that firms with high level of leverage ratio also have high leverage targets or frequently weak cash flows (Galizia and O'Brien, 2001). Further, we find that issue size is positively associated with the deal value of subsequent merger, and this effect is significant in equity issuance. This suggests that firms would raise external financing, especially external equity, to fund the following acquisition. In terms of debt-related financing cost, we observe that the variable *I\_Rating* exhibits a considerable positive coefficient, which is in line with the literature suggesting that firms with better credit quality enjoy lower financing cost (Kisgen, 2006). As for equity issuance, the issue size is also positively determined by firm's trading volume (*I\_TradingVolume*) which is a proxy for stock liquidity, and the effect is significant at the 1% level. Butler *et al.* (2005) document that higher liquidity leads to a reduction in adverse selection, and thus a lower financing cost.

### 3.5.2 Does the Disclosure of Merger Intention at Pre-Deal Issuance Help Predict the Probability of Takeover Success?

In order to test our second hypothesis (*H2*), in this section, we examine whether the disclosure of merger intention at issuance has influence on the following mergers. In particular, we investigate the link between the revealed merger intention and the chance of completing bids by estimating the following probit model:

$$Pr(Deal\ Completion_i = 1) = \Phi(\alpha_0 + \alpha_1 Intention_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i)$$

where *Prob* denotes probability, and  $\Phi$  is the Cumulative Distribution Function of the standard normal distribution. The dependent variable (*Deal Completion<sub>i</sub>*) takes a value of one if the acquiring firm *i* successfully completes the merger, and zero otherwise. Our key explanatory variable of interest is the disclosure of merger intention at pre-merger issuance (*Intention<sub>i</sub>*), equalling to one if firm *i* discloses the intention to finance future acquisitions at pre-merger issuing activities, and zero otherwise. *Firm<sub>i</sub>* is a vector of acquiring firm characteristics, including the natural logarithm of market value measured 4 weeks before the announcement (*A\_LNMV*), the market-to-book ratio (*A\_TobinQ*), the ratio of total debt by total capital (*A\_Leverage*), the ratio of cash flows by the total assets (*A\_CF2TA*). *Deal<sub>i</sub>* represents a vector of deal explanatory variables, including the ratio of pre-merger issue size by the merger deal value (*Proceeds Ratio*), the ratio of merger transaction value by market value measured 4 weeks before the announcement (*Relative Size*), the indicator of acquisition attitude (*Hostile*), the indicator of payment method (*Stock*), the indicator of competing bids (*Competing Bid*), the indicator of target public status (*Private*), the indicator of tender offer

(*Tender*), the indicator of whether the acquirer and the target are in related industries (*Diversification*). In all models, we also account for year and industry fixed effects ( $f_y$  and  $f_{industry}$ ).

[Insert Table 3.4 Approximately Here]

Table 3.4 presents marginal effects of this analysis. We observe significantly positive coefficients on the variable *Intention* in all specifications, indicating that the probability of completing a merger increases with the presence of revealed intention at pre-merger issuance. Column 1 only includes our main variable of interest. The marginal effect of *Intention* is significant at the 1% level and suggests that acquirers of revealed deals are 11.07% more likely to complete the deal than their counterparts of non-revealed deals. We additionally control for the acquirer's and the deal's characteristics. Although the marginal effect of *Intention* slightly decrease to 0.1025 and 0.0694 in columns 2 and 3 respectively, they remain statistically significant at the 1% level. This finding is in line with our second hypothesis (*H2*). This can be explained by considering that acquirers of revealed deals should be more willing to complete mergers for the purposes of building credibility with the market and avoiding high costs at future issuances (Walker *et al.*, 2016).

Examining the control variables, the results on most of the deal characteristics in specification 3 of Table 4 show significant signs. In particular, the most significant predictor of completion is the private deal indicator (*Private*), which presents a positive coefficient with a z-statistic of 37.27. This suggests that the likelihood of completing a merger increases when the target firm is a private one. In addition to the role played by the private target, the results in column 3 also

show that the coefficients on *A\_LNMV*, *Proceeds Ratio*, *Stock*, *Tender*, and *Diversification* are positive and significant. These results indicate that larger acquirers with larger pre-merger issuing sizes, the choice of stock payment, the choice of tender offer, and the choice of target firms in other industries tend to complete mergers. In contrast, the results on *Hostile* and *Competing Bid* have negative and significant signs, which suggest that acquirers in hostile takeover and deals with multiple bidders are less likely to complete mergers.

### 3.5.3 Does the Disclosure of Merger Intention at Pre-Deal Issuance Have Influence on Takeover Premiums?

To test the third hypothesis (*H3*), this section investigates whether stating the merger intention at the pre-deal issuance has an effect on the takeover premium by conducting the following OLS regression:

$$Takeover\ Premium_i = \alpha_0 + \alpha_1 Intention_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

where the dependent variable, *Takeover Premium<sub>i</sub>*, is measured by the difference between the offer price and the target's stock price four weeks before the announcement divided by the target's stock price four weeks before the announcement. It is expressed as follows:

*Bid Premium*

$$= \frac{\text{offer price} - \text{target stock price 4 weeks before announcement}}{\text{target stock price 4 weeks before announcement}}$$

The independent variables include the key variable *Intention<sub>i</sub>* representing whether or not acquiring firm *i* discloses merger intention at the earlier issuance, acquirer-, target- and deal-specific characteristics. Specifically, factors related to

acquirers and target firms are the natural logarithm of market value measured 4 weeks before the announcement ( $A\_LNMV$  and  $T\_LNMV$ ), the market-to-book ratio ( $A\_TobinQ$  and  $T\_TobinQ$ ), the ratio of total debt by total capital ( $A\_Leverage$  and  $T\_Leverage$ ), and the ratio of cash flows by the total assets ( $A\_CF2TA$  and  $T\_CF2TA$ ). In addition, we also include the target's 52-week high which is calculated as the percentage difference between the target's 52-week high share price and the target's stock price four weeks before the merger announcement ( $T\_52WeekHigh$ ). According to the reference point theory of M&A from Baker *et al.* (2012), bid premium is significantly positively biased by the largely irrelevant target 52-week high. Deal-specific characteristics are the same set of variables employed in the analysis of completion rate, including *Proceeds Ratio*, *Relative Size*, *Hostile*, *Stock*, *Competing Bid*, *Private*, *Tender*, and *Diversification*. Further, year and industry fixed effects are considered in all models ( $f_y$  and  $f_{industry}$ ).

*[Insert Table 3.5 Approximately Here]*

The results of this analysis are displayed in Table 3.5. Consistent with the previous univariate results and the third hypothesis ( $H3$ ), we observe that the coefficient associated with *Intention* is positive and significantly different from zero in all specifications. This suggests that with the disclosure of merger intention at pre-deal issuance, acquirers tend to pay a higher premium to target firms. More specifically, revealing merger intention at debt or equity issuance remarkably increases the offer premium by 2.78% in the specification 3 with the firm and deal characteristics controlled for. This finding can be explained by considering that acquirers of revealed deals pay more to facilitate deal completion. Additionally, if the disclosed merger intention at issuance is driven by signalling

the higher quality of subsequent deal, acquirers of revealed deals will pay more in return for higher synergies than ones in non-revealed deals (Betton *et al.*, 2008).

The results in Table 3.5 also show that there is a significant and positive relationship between *T\_52WeekHigh* and takeover premium, which is consistent with Baker *et al.* (2012). The coefficient suggests that a 10% increase in *T\_52WeekHigh* is related to a 0.47% higher bid premiums. We also observe that the coefficients on other control variables are generally in accordance with prior literature. Specifically, the *Competing Bid* is shown to be a significant and positive coefficient, suggesting that bid premiums tend to be higher in deals with multiple acquirers as there are more firms bidding up the price (Alexandridis *et al.*, 2010; Bulow and Klemperer, 1996). In addition, the coefficient on the deal attitude indicator (*Hostile*) is positive and significant, which suggests that bidders conducting hostile takeover pay a higher price to obtain target shareholder's approval. Another possible explanation may be that the defence strategy employed by target firms can bring new bidders and arouse competition, leading to higher bid premium (Jarrell, 1985; Schwert, 2000). Moreover, the evidence on the method of payment indicates that there is a positive relationship between stock payment and offer premium, which is consistent with the overvaluation hypothesis of Myers and Majluf (1984).

#### **3.5.4 Does the Disclosure of Merger Intention at Pre-Deal Issuance Have Influence on the Valuation Effects of Takeovers?**

Previous sections find positive effects of revealed merger intention at issuance on subsequent takeover success and premium. In order to provide greater insights, we following explore whether such relations represent a value-increasing investment.

### 3.5.4.1 Short-run Analysis

In this section, we employ short-window event study to examine stock market reactions to merger announcements. Both a univariate analysis and a multivariate analysis are conducted.

*[Insert Table 3.6 Approximately Here]*

Table 3.6 presents acquirers' average cumulative abnormal returns (CARs) over the three-, five- and eleven-day windows of a merger announcement between 1985 and 2015. CARs are measured by using the estimation window which is 240 trading days before the deal announcement until 50 days before the deal announcement. A minimum of 100 daily returns is required, or the deal would be deleted. In addition, we use two methods, i.e. market-adjusted return model and Fama-French 5-factor model, to estimate abnormal returns to the event. In terms of market-adjusted return model, the abnormal returns are calculated as follows:

$$AR_{it} = R_{it} - R_{mt}$$

where  $R_{it}$  is the stock return for firm  $i$  on day  $t$  and  $R_{mt}$  is the stock return for the value-weighted CRSP index on day  $t$ .

As for Fama-French 5-factor model, we compute abnormal returns by using the following equation which is induced by Fama and French (2015):

$$AR_{it} = R_{it} - R_{ft} - [\alpha_i + b_i(R_{mt} - R_{ft}) + s_iSMB_t + h_iHML_t + r_iRMW_t + c_iCMA_t + e_{it}]$$

where  $R_{it}$  is the stock return for firm  $i$  for period  $t$ ;  $R_{ft}$  is the risk free return;  $R_{mt}$  is the stock return for the value-weighted CRSP index;  $SMB_t$  is the return spread on a diversified portfolio of small stocks minus large stocks;  $HML_t$  is the return

spread on a diversified portfolio of high book-to-market stocks minus low book-to-market stocks;  $RMW_t$  is the return spread on a diversified portfolio of the most profitable stocks minus the least profitable stocks; and  $CMA_t$  is the return spread on a diversified portfolio of conservative stocks and aggressive stocks.

Next, we calculate CARs as follows:

$$CAR_{i,T_1,T_2} = \sum_{t=T_1}^{T_2} AR_{it}$$

As shown in the Table 3.6, the results generally indicate that acquirers have statistically significant positive CARs across the samples, taking the values ranging from 0.44% to 1.67% over different event windows. After partitioning acquirers based on whether they disclose takeover intention at the pre-merger issuance, we observe that acquirers of revealed deals experience lower abnormal announcement returns than ones in non-revealed deals, regardless of the event windows used.

Panel A in Table 3.6 shows the market-adjusted abnormal returns. The evidence suggests that bidders disclosing merger intention earlier earn, on average, an excess return of 0.41% lower than bidders in non-revealed deals over a three-day window. The difference is statistically significant at the 10% level. In addition, the CARs differences between bidders of revealed deals and bidders of non-revealed deals increase to 0.42% and 0.56% over the event periods of five days and eleven days, though the effects are not statistically significant.

Panel B of Table 3.6 reports CARs based on the Fama-French five-factor model. Compared to the market-adjusted return model, the results indicate that acquirers of revealed deals significantly underperform those in non-revealed deals over all

three event windows. All differences are statistically significant at the 5% level. Specifically, acquiring firms gain 0.55% abnormal returns in the revealed deals, which is less than 0.54% in the non-revealed deals within a three-day period. Similarly, acquirers in the revealed deals have CARs over a five-day period that are 0.55% lower while they are 0.66% lower over an eleven-day period. In short, the univariate analysis is supportive of our hypothesis (*H4b*) which suggests that firms disclosing merger intention at issuance are not trying to signal value-enhancing projects in the future.

As a univariate analysis does not take the interaction of alternative variables into account, the results might be unreliable. Therefore, we test the findings by estimating the following model:

$$CAR_i = \alpha_0 + \alpha_1 Intention_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

where  $CAR_i$  is the cumulative abnormal returns for acquiring firm  $i$  over the period of five days around the announcement.  $Intention_i$  is the main independent variable, taking the value of one if firm  $i$  reveals the intention to finance acquisitions at pre-merger issuing activities. As for other independent variables, we account for a set of acquirer and deal characteristics which has been described in Equation (2), including  $A\_LNMV$ ,  $A\_TobinQ$ ,  $A\_Leverage$ ,  $A\_CF2TA$ ,  $Proceeds\ Ratio$ ,  $Relative\ Size$ ,  $Hostile$ ,  $Stock$ ,  $Competing\ Bid$ ,  $Private$ ,  $Tender$ , and  $Diversification$ . Besides, an indicator of pre-merger issuance type is controlled for ( $Debt$ ), which equals to one if acquirers issue debt before takeover, and zero otherwise. According to signalling theory, the market tends to regard equity issuance as a negative signal due to the potential of overvalued stock, while with debt issuance, a firm is usually regarded to have a profitable opportunity to

finance and has the ability to meet the obligatory payments. Therefore, this signalling effect could exert an influence on the acquirer's announcement return. Last, all models control for year fixed effects and industry fixed effects.

*[Insert Table 3.7 Approximately Here]*

Table 3.7 displays the results of short-run analysis. In all three models, we observe that the coefficient on *Intention* is negative and statistically significant at the 1% level, suggesting that acquirers with revealed merger intention experience lower announcement returns than their counterparts without such disclosure. Specifically, the presence of revealed merger intention markedly reduces the bidder's announcement returns by 0.57% in specification 1. After controlling for bidder- and deal-specific factors, the magnitude of the coefficient in specifications 2 and 3 indicates that the disclosure of merger intention at pre-deal issuance is associated with 1.03% and 0.94% lower announcement returns, respectively. This finding is consistent with *H4b* and confirms the results in the univariate tests.

As for firm-specific factors, the result shows that the announcement returns decrease with the larger size of acquirers in columns 2 and 3 (*A\_LNMV*). This can be explained by the fact that the role of managerial hubris playing in the decisions of large firms may result in value-destroying deals (Moeller *et al.*, 2004). We also observe that the coefficient on *A\_TobinQ* is significant and negative in columns 2 and 3, suggesting that this ratio captures more information on stock overvaluation than investment opportunities (Myers and Majluf, 1984). Another variable significantly negatively associated with the acquirer's CARs is acquirer's cash flow ratio (*A\_CF2TA*). This finding is in line with Harford (1999) who argues that acquiring firms with higher cash flow experience lower abnormal returns.

In terms of deal characteristics, our evidence shows that the use of stock payments in acquisitions is related to 0.94% lower announcement returns, which is consistent with Travlos (1987). In addition, we find that *Debt* is positively related to CARs, which is significant at the 10% level. The finding indicates that a market inferring pre-merger debt issue is a favourable signal. Consistent with Grossman and Hart (1982), this can be explained by the fact that debt financing offers managers a strong incentive to act in the shareholders' interest.

#### **3.5.4.2 Long-run Analysis**

Results from previous section show that acquirers of revealed deals earn lower abnormal announcement returns than ones of non-revealed deals, indicating that the market expects poorer future performance for the former. To acquirer deeper knowledge about the economic influence of the revealed merger intention at pre-deal issuance on M&A, we conduct long-run event studies to investigate the acquirer's long-run abnormal stock returns. Only completed takeover is included and both univariate and multivariate analyses are performed.

*[Insert Table 3.8 Approximately Here]*

Table 3.8 presents long-run abnormal returns for the samples over 12-, 24- and 36-month periods and draws a comparison between the Buy-and-Hold Abnormal Returns (BHARs) of acquirers in revealed deals and non-revealed deals. Barber and Lyon (1997) and Lyon *et al.* (1999) find three sources of bias that could result in misspecified test statistics in a long-term event study. The first two are new listing bias and rebalancing bias, which are associated with asymmetric criteria for sample selection in reference portfolios. Therefore, following Lyon *et al.* (1999),

this paper uses size-adjusted BHARs to eliminate these two biases. Specifically, we calculate 12-, 24-, and 36-month BHARs as follows:

$$BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{pt}]$$

where  $R_{it}$  and  $R_{pt}$  are the monthly stock returns on stock  $i$  and on reference portfolio in month  $t$ , respectively.

Based on the approach of Fama and French (1993), we construct portfolios according to firm size and market-to-book ratio. The specific steps taken follow Bouwman *et al.* (2009). First, in June of each year  $t$  from 1985 to 2015, all NYSE firms are placed into appropriate size decile portfolios. Second, each portfolio is further grouped into quintiles on the basis of their market-to-book ratio in year  $t - 1$ , resulting in 50 benchmark portfolios. Third, after NYSE firms have been sorted as above, NASDAQ and AMEX firms are allocated in the proper benchmark portfolios according to size and market-to-book ratio. Last, firms that conduct mergers during the year the portfolio was created are removed from the portfolios.

The third bias that Barber and Lyon (1997) and Lyon *et al.* (1999) highlight is the skewness bias. Long-term BHARs are exceedingly positively skewed, which might produce misleading results. Therefore, we calculate the bootstrapped  $t$ -statistics by following Lyon *et al.* (1999).

As for the full sample, we observe that there is a remarkable decrease in the acquirer's long-run performance regardless of the event windows used ( $BHAR_{12}=-3.27\%$ ,  $BHAR_{24}=-8.20\%$ ,  $BHAR_{36}=-7.61\%$ ), which is contrary to the results of the short-run performance analysis. After dividing acquirers into two

subsamples, the results show that acquirers of revealed deals generate lower abnormal returns than ones in non-revealed deals. The differences are significant at 10% and 5% over 24- and 36-month event windows, respectively. Specifically, *BHAR24* and *BHAR36* for acquirers that disclose merger intention at the earlier issuing are -12.30% and -14.94%, respectively; while *BHAR24* and *BHAR36* for acquirers in non-revealed deals are -7.26% and -5.97%, respectively. This finding is in line with the short-run analysis and with the hypothesis (*H4b*), suggesting that firms revealing merger intention at issuance might be motivated by raising more capital rather than signalling good investment opportunities.

We next conduct a multivariate regression described as the following equation:

$$BHAR_i = \alpha_0 + \alpha_1 Intention_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

where *BHAR<sub>i</sub>* is buy and hold abnormal returns for acquiring firm *i* over 36 months following the announcement. We use the same set of independent variables as in the short-run analysis, which are our main interest *Intention* in addition to firm characteristics and deal characteristics. Also, year and industry fixed effects are controlled for.

*[Insert Table 3.9 Approximately Here]*

Table 3.9 presents the results of the long-term OLS regression analysis. Overall, we find that the coefficient on *Intention* is negative and significant in all specifications. This suggests that acquirers who revealed merger intention at pre-deal issuance experience significant lower long-run abnormal returns than acquirers in comparative group, which is consistent with the univariate analysis. Specifically, the disclosure of merger intention worsens acquirer's long-run stock performance by 8.8% in column 1. After firm and deal characteristics are

accounted for, the coefficients on the variable *Intention* are -8.76% and -8.08% in columns 2 and 3 respectively, which are significant at the 10% level. This finding indicates that the disclosure of merger intention is not related to a future value-enhancing takeover. Instead, acquirers of revealed deals suffer a worse performance in the long run, suggesting that managers might simply make use of the disclosure to deceive the market and raise more capital. Following the disclosure, acquisitions are carried due to pre-commitment instead of value creation.

With regard to control variables, the result shows a significant positive coefficient on *A\_CF2TA* in regressions 2 and 3, which is in contrast to the evidence of the short-term analysis. This evidence suggest that the market reactions are more favourable to acquirers with better pre-merger operations. In addition, the coefficient on *Debt* is positive and significant at the 1% level, which is consistent with the result in the short-run analysis. This finding indicate that issuing debt before a merger can improve the performance of follow-on mergers, which provides supportive evidence for agency theory that debt issuance leads to effective management (Grossman and Hart, 1982; Jensen and Meckling, 1976).

### **3.6 Endogeneity Issue**

The results of previous sections show that acquirers with the disclosed takeover intention have a higher likelihood of completion but lower short-run and long-run performance. This can be explained by considering that instead of completing deal to increase shareholder value, acquirers completing deal merely to meet the commitment made at earlier financing activity and avoid the loss of investor trust in their disclosure. However, establishing a causal relationship between the



where the first stage is the linear probability model of Intention on the instrumental variable *D\_Experience* in addition to the firm and deal characteristics (*Firm<sub>i</sub>* and *Deal<sub>i</sub>*). According to Angrist and Krueger (2001), the second-stage estimates are inconsistent when both of two stages are nonlinear models. Therefore, it is generally safer to employ a linear model at the first stage. The second stage is the probit model, where *Deal Completion* is regressed against the model-estimated  $\widehat{Intention}_i$  from the first stage and the firm and deal characteristics (*Firm<sub>i</sub>* and *Deal<sub>i</sub>*).

*[Insert Table 3.10 Approximately Here]*

Table 3.10 reports the estimates from the IV regression of deal completion. As expected, the first-stage regression shows that the experience of disclosing merger intention at previous issuance significantly predicts the decision of revealing merger intention at the issuance of our interest. The coefficient on *D\_Experience* is 0.0942, suggesting that every additional disclosure experience is related to a 9.42% higher probability of disclosing merger intention at the new financing activity. In addition, the second-stage regression shows that the probability of takeover success considerably increases with the decision to reveal takeover intention at pre-deal issuance, confirming our previous results. Specifically, the marginal effect indicates that acquirers of revealed deals enjoy a 5.65% higher likelihood of completing merger, which is consistent with *H2*. Moreover, the significant estimates from Wald test and Anderson-Rubin Wald test respectively provide evidence that we can reject the null hypothesis of no endogeneity and that *D\_Experience* is a valid instrument variable. In terms of other control variables, we observe that they have similar coefficients to the previous results of deal completion in Table 3.4.

### **3.7 Conclusion**

This paper investigates the relationship between the disclosure of merger intention at pre-merger issuance and its follow-on M&A. By building the link between pre-merger issuance and merger activity, our paper is able to examine takeovers from their financing stage, which draws a more complete picture. We develop a set of hypotheses to test the influence of the disclosed merger intention on issue size and on subsequent merger behaviour, including deal completion, takeover premium, the acquirer's short-run announcement return, and the acquirer's long-run performance.

Specifically, we find that firms disclosing merger intention tend to have a larger issuing size. Second, our results show that acquirers who disclose merger intention at the earlier issuance are more likely to complete deals and significantly pay a higher premium. Moreover, in contrast to the prior literature on the intention of proceeds usage, our evidence shows that acquirers of revealed deals experience a significant lower short-run and long-run performance than ones of non-revealed deals, even after controlling for the type of pre-merger issuance. This finding suggests that firms disclosing specific investments do not imply value-increasing projects and these firms would simply complete the follow-on merger in order to maintain the credibility with investors.

Overall, our results indicate that disclosing merger intention at pre-merger issuing is largely for the purpose of raising higher proceeds, instead of conveying valuable information regarding the efficiency of the proceeds usage, which is consistent with the capital need theory.

## APPENDIX A

Variable	Definition
<b>Panel A:</b>	
<b>Dependent Variables</b>	
Issue Size	The logarithm of total issuing proceeds.
Deal Completion	Dummy variable that equals 1 if merger transaction is completed.
Takeover Premium	We specify the premium as the difference between offer price and the target's stock price 4 weeks before the announcement divided by the target's stock price 4 weeks before the announcement.
Acquirer CAR [-2, +2]	Cumulative abnormal return of the acquiring firm in the 5-day event window (-2, +2) surrounded on the announcement day. The expected returns are from a Fama-French 5 factors model with the parameters estimated over 240 trading days ending 50 days before the announcement. As benchmark we use the CRSP value-weighted index.
Acquirer BHAR36	Buy-and-hold abnormal return of the acquiring firm from size-adjusted model in the 36-month event window following the announcement.
<b>Panel B:</b>	
<b>Key Variable</b>	<b>Independent</b>
Intention	Dummy variable that equals 1 if acquirers disclose merger intention at pre-merger debt or equity issuance.
<b>Panel C:</b>	
<b>Firm Characteristics</b>	
I_LNMV	The logarithm of the issuer market value measured 4 weeks before the issuance. The market value is calculated as the number of shares outstanding multiplied by the respective stock price at 4 weeks before the issuance announcement.
I_TobinQ	We specify Tobin's Q as the ratio of market value by book value of the issuer's assets.
I_Leverage	The ratio of total debt by total capital at the fiscal year end before the issuance announcement.
I_CF2TA	The ratio of cash flows by the total assets at the fiscal year end before the issuance announcement.
I_Earnings	The ratio of earnings before interest and taxes by total assets at the fiscal year end before the issuance

	announcement.
I_FundingDeficit	Following Frank and Goyal (2003), we specify the funding deficit as the sum of cash dividends, net investment and change in working capital less the internal cash flow at the fiscal year end before the issuance announcement.
I_Rating	The Standards & Poor's long-term credit ratings of the issuers in numerical formal. AAA corresponds to 1, AA+ corresponds to 2, AA corresponds to 3, and so on.
I_Tax	The ratio of income taxes by total assets at the fiscal year end before the issuance announcement.
I_Runup	The market-adjusted return of issuing firms over the period from 200 trading days to 2 months before the issuance announcement.
Ln(TradingVolume)	The logarithm of the average monthly trading volume in the six months before the issuance announcement.
A_LNMV	The logarithm of the acquirer market value measured 4 weeks before the merger announcement. The market value is calculated as the number of shares outstanding multiplied by the respective stock price at 4 weeks before the M&A announcement.
A_TobinQ	We specify Tobin's Q as the ratio of market value by book value of the acquirer's assets.
A_Leverage	The ratio of acquirer's total debt by total capital at the fiscal year end before the M&A announcement.
A_CF2TA	The ratio of acquirer's cash flows by the total assets at the fiscal year end before the M&A announcement.
T_LNMV	The logarithm of the target market value measured 4 weeks before the merger announcement. The market value is calculated as the number of shares outstanding multiplied by the respective stock price at 4 weeks before the M&A announcement.
T_TobinQ	We specify Tobin's Q as the ratio of market value by book value of the target's assets.
T_Leverage	The ratio of target's total debt by total capital at the fiscal year end before the M&A announcement.
T_CF2TA	The ratio of target's cash flows by the total assets at the fiscal year end before the M&A announcement.
T_52WeekHigh	Following Baker <i>et al.</i> (2012), this variable is defined as the percentage difference of the target's 52-week high stock price over the stock price 4 weeks before the M&A announcement.

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**Panel D:****Deal Characteristics**

Proceeds Ratio	The variable was calculated as the value of proceeds raised at pre-merger issuance divided by the transaction value of merger.
Ln(Transaction Value)	The logarithm of the merger transaction value.
Yield	Three-month US Treasury Bill yield before the issuance announcement.
MV	Following Bouwman <i>et al.</i> (2009), we identify high-, neutral- and low-valuation markets by comparing the detrended P/E ratio of the value-weighted market index with its past 5-year average.
Relative Size	The variable was calculated as merger transaction value divided by the acquirer market value of equity 4 weeks before the merger announcement.
Hostile	Dummy variable that equals 1 if the deal attitude is identified as hostile.
Stock	Dummy variable that equals 1 if the deal is 100% paid by stock.
Competing Bid	Dummy variable that equals 1 if there are more than one bidder.
Private	Dummy variable that equals 1 if the target is a private firm.
Tender	Dummy variable that equals 1 if the deal is identified as a tender offer.
Diversification	Dummy variable that equals 1 if the acquirer and the target have the different first two-digit of primary SIC code.
Debt	Dummy variable that equals 1 if the acquirer has issued debt before merger.

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**Panel E:****Instrumental Variables**

D_Experience	The total number of a firm's earlier issuance with disclosed merger intention
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**Table 3.1 - Summary Statistics**

This table reports the number of mergers by year and by industry in Panels A and B, respectively. It also shows the percentage of acquisition number by whether acquirers disclose merger intention as the intended ‘use of proceeds’ at pre-merger debt or equity issuance (revealed versus non-revealed). The summary statistics are provided based on a sample of 8,903 US M&A transactions between January 1 1985 and December 31 2015. Acquirers are public firms and target firms can be public, private, or subsidiary. The deals are valued at least \$1 million. All acquirers have issued debt or equity during the three years before merger announcement. The classification of industry is specified by Fama-French 12-industry categories.

Panel A	Full Sample (II)	Revealed Deals (II)		Non-revealed Deals (III)	
	Number	Number	Percentage (%)	Number	Percentage (%)
1985	67	9	13.43%	58	86.57%
1986	156	20	12.82%	136	87.18%
1987	184	32	17.39%	152	82.61%
1988	153	28	18.30%	125	81.70%
1989	201	36	17.91%	165	82.09%
1990	247	38	15.38%	209	84.62%
1991	172	24	13.95%	148	86.05%
1992	241	37	15.35%	204	84.65%
1993	306	38	12.42%	268	87.58%
1994	395	46	11.65%	349	88.35%
1995	360	34	9.44%	326	90.56%
1996	483	52	10.77%	431	89.23%
1997	542	53	9.78%	489	90.22%
1998	583	57	9.78%	526	90.22%
1999	382	47	12.30%	335	87.70%
2000	327	35	10.70%	292	89.30%
2001	256	50	19.53%	206	80.47%
2002	278	44	15.83%	234	84.17%
2003	255	29	11.37%	226	88.63%
2004	348	63	18.10%	285	81.90%
2005	315	74	23.49%	241	76.51%

2006	320	87	27.19%	233	72.81%
2007	385	86	22.34%	299	77.66%
2008	264	63	23.86%	201	76.14%
2009	148	41	27.70%	107	72.30%
2010	246	60	24.39%	186	75.61%
2011	341	91	26.69%	250	73.31%
2012	258	71	27.52%	187	72.48%
2013	282	66	23.40%	216	76.60%
2014	282	78	27.66%	204	72.34%
2015	126	32	25.40%	94	74.60%
<b>Total</b>	<b>8903</b>	<b>1,521</b>	<b>17.08%</b>	<b>7382</b>	<b>82.92%</b>

	<b>Full Sample (I)</b>		<b>Revealed Deals (II)</b>		<b>Non-revealed Deals (III)</b>	
	<b>Number</b>		<b>Number</b>	<b>Percentage (%)</b>	<b>Number</b>	<b>Percentage (%)</b>
Consumer Non-Durables	460		67	14.57%	393	85.43%
Consumer Durables	167		25	14.97%	142	85.03%
Manufacturing	779		121	15.53%	658	84.47%
Energy, Oil, Gas and Coal	361		69	19.11%	292	80.89%
Chemicals	257		26	10.12%	231	89.88%
Business Equipment	1501		305	20.32%	1,196	79.68%
Telephone and Television	302		46	15.23%	256	84.77%
Utilities	250		31	12.40%	219	87.60%
Wholesale and Retail	798		124	15.54%	674	84.46%
Healthcare and Med. Equip	841		178	21.17%	663	78.83%
Finance	2109		350	16.60%	1759	83.40%
Others	1078		179	16.60%	899	83.40%
<b>Total</b>	<b>8903</b>		<b>1521</b>	<b>17.08%</b>	<b>7,382</b>	<b>82.92%</b>

**Table 3.2 – Descriptive Statistics**

This table reports the summary statistics of 8,903 US M&A samples with acquirers that engaged in debt or equity issuance during the three years before merger announcement. Panel A reporting issuer related firm characteristics. Panel B reporting acquirer related characteristics. Panel C reporting issuance and merger deal related characteristics. All variables are defined in Appendix A. M&A deals are restricted by the following criteria. First, the announcement date is between January 1, 1985 and December 31, 2015. Second, the acquirer is a public firms and the target firm can be public, private or subsidiary. Then, all completed and withdrawn deals with a deal value of at least \$1 million are considered. First, we present the values for the full sample. Next, we sub-divide our sample based on whether acquirers reveal merger intention at pre-merger debt or equity issuance (revealed versus non-revealed). The Student's t-test is used to test for statistical significance. All continuous variables are winsorized at the 1% and 99% levels. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

	Full Sample (I)			Revealed Deals (II)			Non-revealed Deals (III)			(III) – (II) Difference
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	
<b>Panel A – Issuer related</b>										
I_LNMV	8,610	6.96	2.01	1,477	6.43	1.80	7,131	7.07	2.03	0.64***
I_TobinQ	7,263	2.95	3.81	1,249	3.16	4.10	6,014	2.90	3.75	-0.26**
I_Earnings	6,974	9.47%	0.21	1,217	8.11%	0.22	5,757	9.75%	0.21	1.64%**
I_FundingDeficit	2,691	0.10	0.26	519	0.10	0.26	2,172	0.10	0.27	0.00
I_Leverage	8,100	38.48%	0.31	1,402	34.95%	0.33	6,698	39.22%	0.30	4.27%***
I_CF2TA	7,582	3.03%	0.23	1,318	1.89%	0.25	6,264	3.27%	0.22	1.38%*
<b>Panel B - Acquirer related</b>										
A_LNMV	8,610	6.99	2.01	1,477	6.53	1.80	7,133	7.08	2.03	0.55***
A_TobinQ	7,263	2.79	3.40	1,249	2.82	2.93	6,014	2.78	3.48	-0.04
A_Leverage	8,100	39.25%	0.30	1,402	34.85%	0.29	6,698	40.18%	0.30	5.33%***
A_CF2TA	7,582	3.54%	0.23	1,318	2.36%	0.30	6,264	3.79%	0.21	1.44%**
<b>Panel C - Deal related</b>										
Transaction Value (\$million)	8,903	550.12	1530.11	1,521	380	1150	7,382	585.17	1595.05	205.17***

Relative Size	8,610	0.22	0.94	1,477	0.28	1.24	7,133	0.21	0.87	-0.07***
Premium	3,410	21.73%	19.89	468	24.54%	20.55	2,942	21.28%	19.75	-3.26%***
All Cash Deals	5,477	61.52%	0.49	821	53.98%	0.50	4,656	63.07%	0.48	9.09%***
All Stock Deals	1,394	15.66%	0.36	240	15.78%	0.36	1,154	15.63%	0.36	-0.15%
Mixed Deals	2,032	22.82%	0.42	460	30.24%	0.46	1,572	21.30%	0.41	-8.95%***
Public	5,178	58.16%	0.49	704	46.29%	0.50	4,474	60.61%	0.49	14.32%***
Private	2,233	25.08%	0.43	504	33.14%	0.47	1,729	23.42%	0.42	-9.71%***
Subsidiary	1,492	16.76%	0.37	313	20.58%	0.40	1,179	15.97%	0.37	-4.61%***
Competing Bid	159	1.79%	0.13	33	2.17%	0.15	126	1.71%	0.13	-0.46%
Hostile	94	1.06%	0.10	15	0.99%	0.10	79	1.07%	0.10	0.08%
Tender Offer	381	4.28%	0.20	41	2.70%	0.16	340	4.61%	0.21	1.91%***
Diversification	2,202	24.73%	0.43	412	27.09%	0.44	1,790	24.25%	0.43	-2.84%**
Completed	5,498	61.75%	0.49	1,048	68.90%	0.46	4,450	60.28%	0.49	-8.62%***
Proceeds Ratio	8,899	3.87	7.34	1,519	4.32	7.76	7,380	3.78	7.25	-0.54***
Debt	4,071	45.72%	0.50	430	28.27%	0.45	3,641	49.32%	0.50	21.05%***

**Table 3.3 - OLS Regressions of Firm's Pre-Merger Issue Size**

This table reports results of OLS regressions of acquirer's pre-merger issue size for the sample of debt issuance (Specifications 1 and 2) and equity issuance (Specifications 3 and 4). In these models this chapter regresses the logarithm of the proceeds value against a vector of explanatory variables. The key explanatory variable is *Intention* equals to one if issuers include future acquisition as one of the proceeds usage, zero otherwise. All variables are defined in Appendix A. All models include industry and year fixed effects. For brevity, their coefficients are not reported in the table. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

<b>Issue Size</b>	<b>Debt (1)</b>	<b>Debt (2)</b>	<b>Equity (3)</b>	<b>Equity (4)</b>
Intention	0.4966*** (4.86)	0.3869*** (3.29)	0.1875*** (4.38)	0.1303** (2.01)
I_LNMV	0.3407*** 1(2.76)	0.3897*** (9.67)	0.6568*** 4(1.43)	0.5373*** 1(7.91)
I_TobinQ	-0.003 (-0.49)	-0.0017 (-0.25)	-0.0046* (-1.80)	-0.0035 (-0.84)
I_Earnings	-0.668 (-1.23)	0.3393 (0.34)	0.2819* (1.94)	0.2205 (0.99)
I_FundingDeficit	0.1854 (0.67)	-0.1485 (-0.42)	0.2160*** (2.82)	0.1367 (1.20)
I_Leverage	0.3846*** (3.09)	-0.0603 (-0.38)	0.1374** (2.50)	0.0653 (0.87)
I_CF2TA	-0.0281 (-0.06)	-1.0042 (-1.19)	0.1875 (1.59)	0.2165 (1.24)
Ln(TransactionValue)	0.0179 (0.79)	0.0025 (0.10)	0.0552*** (4.11)	0.0688*** (3.33)
Yield		-0.002 (-0.07)		
I_Rating		-0.1779*** (-3.53)		
I_Tax		-1.6235 (-0.76)		
I_Runup				-0.058 (-1.49)
Ln(TradingVolume)				0.1327*** (4.79)
MV				0.0478 (1.24)
Constant	-150.2455*** (-15.41)	127.7381*** (-6.31)	13.6711** (2.33)	9.0462 (0.94)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Observations	796	588	1,528	608
Adjusted R <sup>2</sup>	0.537	0.480	0.720	0.735

**Table 3.4 - Probit models of deal completion**

This table reports results of probit regressions of deal completion. All models regress the *Deal Completion* dummy against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. *Deal Completion* dummy equals one if the takeover transaction is completed, and zero otherwise. Model 1 only includes the key independent variable *Intention*; Models 2 and 3 further control for firm and deal characteristics. All models include industry and year fixed effects. For brevity, their coefficients are not reported in the table. All variables are defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. The table reports marginal effects and t-statistics (in parentheses). Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

<b>Deal Completion</b>	<b>Model (1)</b>	<b>Model (2)</b>	<b>Model (3)</b>
Intention	0.1107*** (8.50)	0.1025*** (6.66)	0.0694*** (5.03)
Acquirer Ln(MV)		-0.0027 (-0.81)	0.0149*** (4.13)
Acquirer Tobin's Q		0.0094*** (4.83)	0.0021 (0.97)
Acquirer Leverage		-0.0418** (-2.00)	0.0166 (0.75)
Acquirer Cash Flows to Total Assets		-0.1225*** (-3.90)	0.0498 (1.57)
Proceeds Ratio			0.0016* (1.71)
Relative Size			-0.0102 (-1.44)
Hostile			-0.6007*** (-17.27)
Stock			0.2324*** (15.75)
Competing Bid			-0.1048* (-1.80)
Private			0.3871*** (37.27)
Tender			0.2975*** (26.08)
Diversification			0.3281*** (29.09)
Yearly fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	8,903	6,632	6,628
Chi <sup>2</sup>	246.5234	227.8177	2427.826

**Table 3.5 - OLS Regressions of Takeover Premium**

This table reports results of OLS regressions of takeover premium. All models regress takeover premium against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. Takeover premium is computed as the difference between offer price and the target's stock price 4 weeks before the announcement divided by the target's stock price 4 weeks before the announcement. Model 1 only includes the key independent variable *Intention*; Models 2 and 3 further control for firm and deal characteristics. 52-week high, as a variable affecting the premium, is calculated as the percentage difference between the 52-week high share price and the target's stock price 4 weeks before the deal announcement. All models include industry and year fixed effects. For brevity, their coefficients are not reported in the table. All variables are defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

Takeover Premium	Model (1)	Model (2)	Model (3)
Intention	0.0347*** (3.49)	0.0330*** (3.17)	0.0278*** (2.93)
A_LNMV		0.0585*** (21.95)	0.0493*** (16.74)
A_TobinQ		0.0044** (2.45)	0.0033** (2.04)
A_Leverage		-0.0303 (-1.53)	-0.0107 (-0.59)
A_CF2TA		-0.0077 (-0.23)	0.019 (0.62)
T_LNMV		-0.0743*** (-28.11)	-0.0653*** (-21.87)
T_TobinQ		0.0019 (0.96)	0.0026 (1.44)
T_Leverage		0.0315* (1.72)	0.0212 (1.27)
T_CF2TA		0.0247 (1.03)	0.009 (0.41)
T_52WeekHigh			0.0471*** (5.01)
Proceeds Ratio			-0.0042*** (-7.19)
Relative Size			0.0304*** (8.20)
Hostile			0.1208*** (5.35)
Stock			0.0445*** (4.42)
Competing Bid			0.1269*** (6.74)
Private			-0.0613 (-0.92)
Tender			0.0802***

			(7.40)
Diversification			0.0239**
			(2.23)
Constant	2.0398**	-2.0928**	-3.6674***
	(2.25)	(-2.09)	(-3.99)
Yearly fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	3,410	2,214	2,212
Adjusted R <sup>2</sup>	0.004	0.293	0.418

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**Table 3.6 – CAR Analysis**

This table reports acquirer’s announcement performance over three event windows on our sample of 8,903 M&A deals. First, we present the values for the full sample. Next, sub-divide our sample based on whether acquirers disclose merger intention at pre-merger debt or equity issuance (revealed versus non-revealed). Abnormal returns are calculated using market-adjusted model and Fama-French five-factor model:

$$\text{Market-adjusted model: } AR_{it} = R_{it} - R_{mt}$$

$$\text{Fama-French five-factor model: } AR_{it} = R_{it} - R_{ft} - [\alpha_i + b_i(R_{mt} - R_{ft}) + s_iSMB_t + h_iHML_t + r_iRMW_t + c_iCMA_t + e_{it}]$$

where  $R_{it}$  is the stock return for firm  $i$  on day  $t$ ;  $R_{mt}$  is the stock return for the value-weighted CRSP index on day  $t$ ;  $R_{ft}$  is the risk free return;  $R_{mt}$  is the stock return for the value-weighted CRSP index;  $SMB_t$  is the return spread on a diversified portfolio of small stocks minus large stocks;  $HML_t$  is the return spread on a diversified portfolio of high book-to-market stocks minus low book-to-market stocks;  $RMW_t$  is the return spread on a diversified portfolio of the most profitable stocks minus the least profitable stocks; and  $CMA_t$  is the return spread on a diversified portfolio of conservative stocks and aggressive stocks. CAR [-1, +1], CAR [-2, +2] and CAR [-5, +5] respectively represent cumulative abnormal returns (CARs) to acquirers during the 3-day window, the 5-day window, and the 11-day window surrounding the announcement date. The Student’s t-test is used to test for statistical significance. For brevity, we do not report the t-statistics. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

	Full Sample (I)		Revealed Deals (II)		Non-revealed Deals (III)		(III) - (II)
	Obs.	Mean	Obs.	Mean	Obs.	Mean	Difference
<b>Panel A: Market-adjusted return model</b>							
CAR [-1, +1]	8,903	0.0115***	1,521	0.0081***	7,382	0.0122***	0.0041*
CAR [-2, +2]	8,903	0.0118***	1,521	0.0083***	7,382	0.0125***	0.0042
CAR [-5, +5]	8,903	0.0167***	1,521	0.0121***	7,382	0.0177***	0.0056
<b>Panel B: Fama-French 5 factors model</b>							
CAR [-1, +1]	8,903	0.0100***	1,521	0.0055***	7,382	0.0109***	0.0054**
CAR [-2, +2]	8,903	0.0093***	1,521	0.0047*	7,382	0.0102***	0.0055**
CAR [-5, +5]	8,903	0.0044***	1,521	-0.001	7,382	0.0056***	0.0066**

**Table 3.7 - OLS Regressions of Acquirer Short-Term Performance**

This table reports results of OLS regressions of acquirer's announcement performance. All models regress the five-day CAR against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. Model 1 only includes the key independent variable *Intention*; Models 2 and 3 further control for firm and deal characteristics. All models include industry and year fixed effects. For brevity, their coefficients are not reported in the table. All variables are defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

Acquirer CAR [-2, +2]	Model (1)	Model (2)	Model (3)
Intention	-0.0057** (-2.22)	-0.0103*** (-3.37)	-0.0094*** (-3.06)
A_LNMV		-0.0046*** (-7.42)	-0.0052*** (-6.99)
A_TobinQ		-0.0013*** (-3.93)	-0.0010*** (-2.87)
A_Leverage		0.0038 (0.95)	0.001 (0.24)
A_CF2TA		-0.0166*** (-3.03)	-0.0204*** (-3.69)
Proceeds Ratio			0.0000 (0.18)
Relative Size			0.0019 (1.34)
Hostile			-0.0197* (-1.66)
Stock			-0.0163*** (-4.69)
Competing Bid			-0.0286*** (-2.98)
Private			0.0012 (0.43)
Tender			0.0104* (1.83)
Diversification			-0.0059** (-2.12)
Debt			0.0057* (1.94)
Constant	-0.1251 (-0.50)	-0.6274** (-1.99)	-0.3166 (-0.96)
Yearly fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	8,903	6,632	6,628
Adjusted R <sup>2</sup>	0.000	0.015	0.021

**Table 3.8 - BHAR Analysis**

This table reports acquirer's long-run performance over three event windows on completed M&A samples. First, we present the values for the full sample. Next, sub-divide our sample based on whether acquirers disclose merger intention at pre-merger debt or equity issuance (revealed versus non-revealed). To eliminate biases related to long-run event study, we employ size-adjusted buy-and-hold abnormal returns (BHARs) which is calculated as follows:

$$BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{pt}]$$

where  $R_{it}$  and  $R_{pt}$  are the monthly stock returns on stock  $i$  and on reference portfolio in month  $t$ , respectively.  $BHAR12$ ,  $BHAR24$  and  $BHAR36$  respectively represent long-run returns for the samples over 12-, 24-, and 36-month period following the announcement date. The Student's t-test is used to test for statistical significance. For brevity, we do not report the t-statistics. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

	Full Sample (I)		Revealed Deals (II)		Non-revealed Deals (III)		(III) - (II)
	Obs.	Mean	Obs.	Mean	Obs.	Mean	Difference
<b>Size-adjusted BHARs</b>							
BHAR12	5,433	-0.0327***	1,029	-0.0363**	4,404	-0.0319***	0.0044
BHAR24	5,283	-0.0820***	980	-0.1230***	4,303	-0.0726***	0.0503*
BHAR36	5,123	-0.0761***	937	-0.1494***	4,186	-0.0597***	0.0897**

**Table 3.9 - OLS Regressions of Acquirer Long-Term Performance**

This table reports results of OLS regressions of acquirer's long-run performance. All models regress the 36-month BHARs against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. Model 1 only includes the key independent variable *Intention*; Model 2 and 3 further control for firm and deal characteristics. All models include industry and year fixed effects. For brevity, their coefficients are not reported in the table. All variables are defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

Acquirer BHAR36	Model (1)	Model (2)	Model (3)
Intention	-0.0880*** (-2.76)	-0.0876* (-1.81)	-0.0808* (-1.78)
A_LNMV		0.0142 (1.17)	-0.0025 (-0.17)
A_TobinQ		-0.0103* (-1.79)	-0.0059 (-1.02)
A_Leverage		0.0185 (0.25)	-0.0448 (-0.64)
A_CF2TA		0.1911* (1.95)	0.1858** (2.03)
Proceeds Ratio			0.0041 (0.72)
Relative Size			0.0305 (0.8)
Hostile			-0.0022 (-0.01)
Stock			-0.0653 (-1.33)
Competing Bid			-0.033 (-0.34)
Private			0.0012 (0.03)
Tender			-0.0685 (-1.04)
Diversification			-0.0622 (-1.47)
Debt			0.1631*** (3.19)
Constant	1.3459 (0.43)	-0.2622 (-0.06)	-0.6694 (-0.16)
Yearly fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	5,123	3,758	3,755
Adjusted R <sup>2</sup>	0	0.002	0.004

**Table 3.10 - IV Regression of Deal Completion**

This table reports results of IV regression of deal completion. The model regresses the *Deal Completion* dummy against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. The instrumental variable is *D\_Experience*, which represents the total number of merger intention that a firm disclosed before the issuance of our interest. All regressions include industry and year fixed effects. All variables are defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

<b>Deal Completion</b>	<b>First Stage</b>	<b>Second Stage</b>
Intention		0.0565*** (4.19)
A_LNMV	-0.0268*** (-10.09)	0.0157*** (4.91)
A_TobinQ	0.0022 (1.5)	-0.0001 (-0.08)
A_Leverage	-0.0621*** (-3.84)	0.0135 (0.72)
A_CF2TA	0.0548** (2.44)	0.0292 (1.11)
Proceeds Ratio	0.0015** (2.31)	0.0005 (0.67)
Relative Size	0.0151*** (2.71)	-0.0113* (-1.94)
Hostile	0.0106 (0.22)	-0.5259*** (-9.07)
Stock	-0.0262* (-1.88)	-0.2184*** (11.64)
Competing Bid	0.0970** (2.46)	-0.1150** (-2.56)
Private	0.0633*** (5.47)	0.3887*** (26.37)
Tender	-0.0312 (-1.35)	0.3827*** (11.90)
Diversification	0.0020 (0.18)	0.3179*** (21.87)
D_Experience	0.0942*** (21.70)	
Constant	-3.0361** (-2.16)	
Yearly fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Observations	6,005	6,005
Wald test of exogeneity		0.00***
Anderson-Rubin Wald test		0.00***
Chi <sup>2</sup>		1,567.68

# **CHAPTER FOUR: DO MEGA-MERGERS CREATE VALUE? THE ACQUISITION EXPERIENCE AND MEGA-DEALS OUTCOMES**

Existing literature shows that mega-M&A deals valued over \$500mil end up destroying the shareholder value of acquirers on a significant scale. This chapter considers mega-deal as a dependent event and examines the role of acquirer's previous acquisition experience playing in the outcome of mega-deals. We find that mega-deals conducted by firms with a high level of acquisition experience, i.e. a firm completed at least 12 transactions before, are more likely to be completed. In addition, more experienced acquirer of mega-deals generate positive abnormal stock returns for shareholders in both short-run and long-run, with a dollar value gain of \$50.6 million around deal announcement. We also find that more experienced acquirers are better at managing the post-acquisition integration process and enjoy a significant improvement in operating performance.

## 4.1 Introduction

It has been well documented that acquirers tend to destroy shareholders' wealth in mergers and acquisitions (M&A),<sup>10</sup> especially in large deals with transaction value in excess of \$500 million (henceforth "mega-deals").<sup>11</sup> Several reasons have been given in the literature to explain this puzzling evidence including the overpayment hypothesis (Loderer and Martin, 1990), the hubris hypothesis (Roll, 1986), the empire building hypothesis (Grinstein and Hribar, 2004), and the integration complexity hypothesis (Alexandridis *et al.*, 2013). However, considering its value-destructive feature, mega-deals have become an increasingly important factor behind the recent M&A boom. In 2015, mega-deals reached an all-time record for the US market. There were 547 announced mega transactions with a total value of over \$2 trillion, which accounted for approximately 85% of overall US M&A value and 10% of US GDP that year, according to Thomson Reuters data.

With such large deal value, mega-deals play a significant role in firms' operation, generally receive widespread publicity and are under more investor scrutiny and corporate governance (Alexandridis *et al.*, 2017). Specifically, mega-deals are usually undertaken as a strategic move by those largest and most successful firms who expect to accumulate more revenues beyond the established patterns (Davidson, 1987). For example, from the deals of IBM-Lotus, ExxonMobil-XTO, and more recently Facebook-WhatsApp, Bayer-Monsanto, acquirers have used target firms as a springboard into a new market and to obtain the augmentation of

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<sup>10</sup> A survey by Betton *et al.* (2008) shows that bidders on average experience negative abnormal returns in most of the acquirer returns studies.

<sup>11</sup> For example, Moeller *et al.* (2004) document a negative relationship between acquirer size and shareholder gains. Alexandridis *et al.* (2017) summarize considerable research suggesting that sizeable takeover ends up costing shareholders on a significant scale, including Cools *et al.* (2007), Henry and Jespersen (2002), Rehm *et al.* (2012), Saigol (2015), and Alexandridis *et al.* (2013).

business ranges. Besides the influence on the firm itself, following a mega acquisition the industry will be reshaped in terms of competition. Moreover, the economy of a country could depend significantly on the performance of these large entities. Given the fact that mega-mergers continue at a rapid pace and play an important role, the lack of evidence concerning their value creation is quite surprising.

Another important consideration regarding mega-deals is the deal completion, but most studies only focus on the valuation effect of transaction. Unlike small deals, mega-deals tend to draw more antitrust scrutiny and are expected to cope with more regulation issues, which greatly challenges acquirers to choose the right target and the right time. Also, as a strategic move with significant influence, a mega-deal requires large amounts of resources and is prepared over a long time and with great effort. If the transaction fails to complete, acquirers are required to pay a huge amount of breakup fee to compensate the cost incurred by the target.<sup>12</sup> Take the deal of AT&T-T-Mobile as an example: T-Mobile was paid \$3 billion in cash as well as \$1 billion in wireless assets after AT&T ditched the \$39 billion transaction. In addition to large failure costs, the previous literature also documents that acquirers of failed M&A underperform those whose deal was successful, and continue to suffer following the deal announcement (Masulis *et al.*, 2012; Savor and Lu, 2009).

Previous research findings that large deals destroy value consider each mega-deal as an independent event. However, mega transactions are conducted with considerable difficulty by first time bidders due to a high degree of uncertainty

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<sup>12</sup> According to the reports by Practical Law Corporate & Securities (2016), the average fee paid by acquirers is around 5% of the deal value.

and the complexities of integration. Consulting firms, e.g. Boston Consulting Group and Bain & Company, have normally suggested that instead of directly engaging in mega-deals, top acquirers first hone skill through smaller deals. With more experience, acquirers are capable of mitigating the risk of failure and realizing synergies as they are more skilful at transforming the deal's complexity into value (Kengelbach and Roos, 2011). Based on this view, this paper investigates whether mega-deals conducted by an experienced acquirer will have a greater likelihood to complete and generate wealth for acquirer shareholders.

Our study employs a data set of 3,544 US mergers and acquisitions priced over \$500 million (2016 dollars), with the announcement date between 1980 and 2016. Following Zollo and Singh (2004), we measure acquisition experience with the total number of mergers and acquisitions that a sample acquirer completed before the mega-deal of interest.<sup>13</sup> Our main findings show first, that mega-deals carried by a more experienced acquirer are more likely to be done successfully. The existence of a more experienced acquirer significantly increases the likelihood of mega-deal success by 5.95%. In addition, it is worth noting that mega-deals conducted by more experienced acquirers generate value for acquiring shareholders in the short-run, and this result only holds in the successful sample. Specifically, the median cumulative abnormal return for a more experienced acquirer is 0.14% in successful mega-deals during the three-day window around the deal announcement, corresponding to a value creation of \$19.39 million or 1.5 cents per dollar spent. In terms of inexperienced acquirers in the successful sample, the median cumulative abnormal announcement return is -0.25%, with a

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<sup>13</sup> As Hayward (2002) suggests that experience gained long while ago might be unavailable, we also measure acquirer experience by using the sum of mergers and acquisitions that a sample firm made during the 10 years before the announcement of mega-deal and the results still hold.

loss of \$4.71 million or 0.44 cents per dollar spent. Compared to successful mega-deals across the sample, although failed deals earn lower abnormal returns, the difference is not significant. This suggests that as of the deal announcement the successful and the failed deals cannot be clearly distinguished by the market.

Moreover, our long-run analysis suggests that mega-deals made by more experienced bidders have a better stock performance and a greater improvement in operating performance for a 3-year horizon following the deal announcement. This positive relation is only significant in the successful sample. Specifically, our results show that mega-deals completed by more experienced acquirers is subject to an excess 36-month stock return of 15.13% and *ROA* increase of 2.61% from -3 to +3 year relative to the deal announcement. The findings of the successful sample can be explained by considering that more experienced bidders excel at the integration process, e.g. cultural-alignment and goal-setting, and therefore helps mega-deals deliver a better performance, which is consistent with the view of consulting firms (Kengelbach and Roos, 2011).

By comparing the long-run stock performance of successful mega-deals with failed ones in the univariate analysis, an important finding is that failed acquirers continually underperform successful acquirers. However, this result only applies to inexperienced acquirer and there is no systematic difference between successful and failed deals made by more experienced acquirer. The buy and hold abnormal returns for inexperienced acquirers in the failed sample becomes gradually worse and drops from -10.72% in the 12-months window to -22.26% in the 36-months window following the deal announcement. This suggests that although mega-deals completed by inexperienced acquirers destroy value for shareholders, their failed counterparts do much worse.

Our study provides important contributions to the existing evidence. With the exception of Bayazitova *et al.* (2012), (Alexandridis *et al.*, 2013) and Alexandridis *et al.* (2017), few papers have investigated the wealth effects of mega-deals, which account for over two-thirds of all the money spent on M&A. Consistent with previous findings, our results show that most mega-deals fail to create value for acquirer shareholders. However, by creating subsamples, it is evident that mega-deals can create value and deliver synergies when executed by more experienced acquirers. Alexandridis *et al.* (2017) document for the first time that mega-deals generated value between 2010 and 2015. Our paper suggests that there could also be gains generated by mega-deals across other time periods, which compliments the existing evidence.

Second, for the first time in the literature we underscore the importance of mega-deals completion and examine the probability of completing mega-deals. By investigating a combination of deal completion and acquirer experience, our study provides a new potential explanation for value-destroying mega-deals. We suggest that the large value destruction of mega-deals is because of a number of acquisitions of poor quality carried by inexperienced firms with poor management. We observe that mega-deals announced by inexperienced acquirer not only destroy value in the successful sample, but also perform even worse in the failed sample. This suggest that mega-deals could be desperate moves for inexperienced acquirers who lack the ability to handle the complexity involved and have poor growth opportunity, and the failure to complete indicates the acquiring firms' incompetent management concerning investors.

Third, to the best of our knowledge, our paper is the first to underscore the importance of acquisition experience in the management of mega-deals, especially

in the post-deal integration management, thus contributing to the organizational learning literature. Although consulting firms suggest the function of experience to turn deal complexity into value, the empirical research has not yet been able to find consistent results. The mega-deals sample offers a fertile testing ground for examining the role of experience because of its high degree of integration complexity.

The remainder of this paper is structured as follows. The next section reviews related literature. Section 4.3 presents the hypotheses development. Section 4.4 describes our sample. We start our formal analysis in Section 4.5, where the empirical results are reported and analysed. Section 4.6 conducts robustness checks. We conclude in Section 4.7.

## **4.2 Literature Review**

### **4.2.1 The Valuation Effect of Large M&A**

It has been largely documented in empirical research and practical experience that acquisitions with larger deal size tend to destroy more shareholder value. Henry and Jespersen (2002) suggest that 61% of bidders conducting large deals priced over \$500 million destroy the wealth of shareholders. Moeller *et al.* (2004) investigate a comprehensive sample of 12,023 acquisitions and suggest that large deals conducted by large bidders lead to large wealth losses. Their findings show that deals with small bidders create \$9 billion for acquirer shareholders between 1980 and 2001, whereas large bidders destroy shareholder's value by \$312 billion. Cools *et al.* (2007) documents that mergers worth over \$1 billion on average destroy twice as much value compared to smaller transactions and 58% of them end up costing acquirer shareholders. Rouse *et al.* (2007) show that only 30% of

deals priced more than \$250 million generate meaning gains over a period of 1995-2001 and more than half of them destroy shareholder value. Similarly, Rehm *et al.* (2012) investigates 15,000 mergers conducted by the world's top 1,000 firms from non-banking industry between 1999 and 2010, and suggests that large deals, i.e. deals are valued at over 30% of bidder's market capitalization and conducted for a transformation, on average deliver negative abnormal returns of -1.7% to acquirer shareholders and only 44% of them generate gains. Alexandridis *et al.* (2013) include a sample of 3,691 US completed mergers over a period from 1990 to 2007 and document that acquirers of large deals experience significantly negative returns of -2.82% and -4.50% over a 3- and 41-day event windows, respectively. In contrast, the 3- and 41-day cumulative abnormal returns to acquirers of small deals are -0.45% and 0.33%, respectively. Additionally, there is also a negative relationship between the abnormal returns to combined firms and deal size. Saigol (2015) suggest that mega-deals combining greed, hubris, and too much money are bad for everyone, other than chief executives and financial advisors. Alexandridis *et al.* (2017) include a large sample of 26,076 acquisitions announcement during the period of 1990-2015 and mainly investigate 3,150 of them that are priced at least \$500 million. By comparing the deal performance among different time period, they find that mega-deals create significant gains of \$42 billion and abnormal announcement returns of 2.54% between 2010 and 2015, whereas over the period of 1990-2009, acquirers are subject to significant dollar losses of \$530 billion and negative abnormal returns of -0.36%.

#### 4.2.2 Acquisition Experience

Based on the organizational learning literature, M&A research suggests that acquisition experience has an impact on M&A wealth effect. There are various measurement on acquisition experience employed in the previous studies, where can be divided into three main groups: (1) a dummy variables indicating whether or not a firm has acquisition experience; (2) the number of takeovers conducted by the sample firm during a specific period before the deal of interest; and (3) the total number of takeovers conducted by the sample firm prior to the deal of interest.

Previous studies have provided mixed evidence on the relationship between acquisition experience and merger performance. Some literature documents a positive effect of merger experience and suggests that acquirers can learn from previous experience. For example, an earlier research Fowler and Schmidt (1989) include a small sample of 42 M&A in manufacturing industry and use the number of acquisitions during the four-year period before the focal deal as a measurement of acquisition experience. Their results show that acquisition experience is positively related to market-based merger performance, suggesting that acquirers with more acquisition experience are likely to improve the effectiveness and efficiency of the M&A process. Bruton *et al.* (1994) employ the same measure as in Fowler and Schmidt (1989) and examine the role of acquisition experience playing in 51 financial distressed and 46 non-distressed deals over a period of 1979-1987. Their findings imply that bidders of financial distressed deals could benefit from previous experience and achieve a better merger performance. This evidence is also confirmed in Markides and Ittner (1994) who investigate the effect of international acquisition experience. More recently, Rovit and Lemire

(2003) examine a sample of 7,475 takeovers between 1986 and 2001 and document that the abnormal returns to acquirers undertaking 20 or more deals preceding the focal acquisition are around 1.7 times and 2 time higher than the returns to those with only 1 to 4 deals and those without any acquisition experience, respectively.

In addition, insignificant evidence on the relationship between takeover experience and deal performance has also been documented in literature. For instance, Kroll *et al.* (1997) include a sample of 209 deals between 1982 and 1991 and document an insignificant effect of acquisition experience on acquirers' short-run stock performance by using a dummy variable indicating if bidders conduct mergers in the past 3-5 years to measure acquisition experience. This evidence is further confirmed in Wright *et al.* (2002) who employ the same proxy for acquisition experience and in Hayward (2002). Zollo and Singh (2004) examine a sample of 228 US mergers from banking industry and suggest that acquisition performance cannot be significantly explained by bidder's experience accumulation.

Further, some studies suggest that there is a U-shaped relationship existing between acquisition experience and acquisition performance. Halebian and Finkelstein (1999) suggest that acquisition experience is negatively related to deal performance at the beginning and then has a positive impact. The rationale behind is based on the transfer theory from cognitive psychology (Cormier and Hagman, 1987; Ellis, 1965) and imply that the acquisition routines from earlier deals cannot be transferred to the new deal immediately but the expertise required to conduct a successful deal will be developed after a certain amount of experienced accumulated. In contrast to Halebian and Finkelstein (1999), Hayward (2002)

include a sample of 214 M&A announced between 1990 and 1995 and find an inverted U-shaped relationship between the timing of acquisition experience and focal acquisition performance, suggesting that bidders might not be able to learn from too-distant or too-recent experience.

Finally, some studies argue that more experienced acquirers actually underperform ones with less experience. For example, Loderer and Martin (1990) suggest that the first acquisition conducted by a firm create higher returns than the following ones. Specifically, acquirers of the first-order merger earn abnormal returns of 1%, which is 2% and 3% higher than acquirers of second- and third-order mergers. More recently, Doukas and Petmezas (2007) find that more experienced acquirers, i.e. acquirers that carry out at least five acquisitions during the three-year period before the focal acquisition, destroy more value than less experienced ones that complete less than five deals within three years. In addition, for more experienced acquirers, they enjoy more gains in the earlier deals than the later ones. Their results imply that instead of learning from previous experience, managers are likely to be overconfident as they conduct more acquisitions. Although the similar evidence is documented in Aktas *et al.* (2009), they argue that as firms conduct more acquisitions, they are likely to make a better and more careful choice on the target firm. Therefore, the underperformance of experienced acquirers is because of the less deal risk involved.

### **4.3 Hypothesis Development**

Studies focused on the success of mega-deals mostly investigate the stock performance following a deal announcement. However, we argue that more attention to the completion of a mega-deal is also required. Compared to small

deals, mega-deals with a larger transaction deal value which requires much more preparations during the pre-acquisition period and therefore could takes more time and effort. The time to resolution is around 120 days for mega-deals, while it only takes about 70 days for non-mega-deals (Alexandridis *et al.*, 2017). For example, Pfizer and Allergan merger, the largest pharmaceuticals deal in history, was advised by six investment banks and the time the two firms spent working on the deal is 135 days, and the withdrawn decision made all the efforts in vain. In addition, acquirers are on average subject to a termination fee which is around 5% of the transaction value (Practical Law Corporate & Securities, 2016). In the case of mega-deals, the break-up fee can be huge. Luo (2005) also suggests that a firm's reputation and credibility can be severely damaged by withdrawing from an announced deal. This damage would be great in the case of mega-deals as they generally receive more publicity i.e. media coverage.

To examine the completion of mega-deals, we follow organizational learning literature on M&A suggesting that acquirers can learn from previous acquisition experience (Barkema and Schijven, 2008; Lei *et al.*, 1996; Levitt and March, 1988). With the complexity related to mega-deals, this paper argues that acquirers' experience plays a significant role in both the pre-acquisition negotiation and decision-making process. As Dikova *et al.* (2010a) point out, more experience would help acquiring firms efficiently communicate with stockholders, employ the right integration strategy, implement an announcement plan, and meet the requirements set out by antitrust policy. Therefore, in the context of mega-deals, we would expect that:

*H1: Mega-deals conducted by more experienced acquirers will have a higher likelihood to successfully complete.*

In terms of deal performance, it is largely suggested by consulting firms that large deals made by experienced acquirers who have developed skills through small deals are more likely to realize synergies and achieve better performance (Kengelbach and Roos, 2011). However, the empirical evidence concerning the role that acquisition experience plays in M&A is mixed. On the one hand, the organizational learning hypothesis predicts that the ability to generate shareholder value increases with the number of merger deals done before (Hayward, 2002; Levitt and March, 1988). On the other hand, the advantage of learning will be cancelled if a more experienced acquirer becomes overconfident, leading to a worse deal performance (Billett and Qian, 2008).

Given such conflicting predictions, we would normally expect to find that acquirers' previous experience has a positive influence on mega-deals performance. Two reasons have been put forward, suggesting that acquirers in mega-mergers tend to be more cautious rather than overconfident. First, as a crucial strategic move involving a huge amount of money, mega-deals could have significant influence on firms' future operations and CEOs' future careers. Second, there would be more public attention given to mega-deals, and therefore acquirers face stricter investor and corporate governance. Therefore, we hypothesize that:

*H2: Mega-deals conducted by more experienced acquirers will create more value for acquirer's shareholders.*

## **4.4 Data and Methodology**

### **4.4.1 Sample Selection Criteria**

The sample of mergers and acquisitions includes completed and failed US mergers and acquisitions between January 1980 and December 2016, from the

Thomson Financial SDC database. We apply the following filters that are common in the literature: (1) the acquirer is a US publicly traded company and the target is a public, private or subsidiary firm; (2) the transaction value is an inflation adjusted value of at least \$500 million in 2016 dollar terms and exceeds 1% of the acquiring firm's market value of equity 11 days before the announcement;<sup>14</sup> (3) the acquirer owns less than 10% of the target's shares prior to the deal announcement and more than 50% after the deal; (4) the acquirer has stock price data and accounting data available on Centre for Research in Security Prices (CRSP) and Compustat, respectively; (5) the acquirer is not from the financial industry (SIC code 6000-6999) nor the utilities industry (SIC code 4900-4949) as these two industries have unique regulatory requirements. These restrictions result in a final sample of 3,544 M&A deals.

#### **4.4.2 Measure of Acquisition Experience**

Following Zollo and Singh (2004), acquisition experience is measured as the total number of acquisitions that a sample acquiring firm completed before the mega-deal of interest. The data is obtained from Thomson SDC, and therefore it is available back to the 1970s. Then we divide the mega-deals sample into three groups based on acquisition experience: mega-deals conducted by acquirers with high experience (the top 25%), with moderate experience (the middle 50%), and with low experience (the bottom 25%). We also construct a dummy variable *High Experience Dummy*, equalling one if a mega-deal is carried out by an acquirer with high experience, and zero otherwise. Within our sample, 857 of mega-deals with more experienced acquirers have completed more than 12 deals before, 1476

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<sup>14</sup> The deal value decile cut-off at the 90<sup>th</sup> percentile of all US transactions during our sample period is about \$500mil. Our results remain similar if we define mega-merger size of at least \$750 million or \$1 billion.

with moderate experience acquirers have completed 5 to 12 deals, and the rest are conducted by inexperienced acquirer who have completed less than 5 acquisitions earlier.

#### **4.4.3 Descriptive and Summary Statistics**

*[Insert Table 4.1 Approximately Here]*

Table 4.1 provides the summary deal and firms' statistics for mega-deals conducted by acquirers with different levels of experience. Panel A reports statistics for the successful sample and Panel B for the failed sample. An extensive list of variables likely to influence acquisition outcome are employed, and the definition of each variable is listed in Appendix B. We perform the Student's t-test and the Wilcoxon test respectively, to examine whether there are significant differences of mean and median between mega-deals with more experienced acquirers and ones with less experienced acquirers. In general, the evidence shows significant differences between the sub-groups.

In terms of successful mega-deals, we observe that both transaction value (*Deal Value*) and acquirer size (*Market Cap*) significantly increase with acquisition experience. The average deal value and acquirer's market value are nearly \$5 billion and \$70 billion respectively for mega-deals made by a more experienced acquirer, which is about \$2.7 billion and \$58 billion larger than ones made by an inexperienced acquirer. With a larger absolute deal size, however, mega-deals carried by more experienced acquirers are considerably smaller when comparing the relative size of the deal to acquirer's size (*Relative size* for the two groups are 37% and 99%). This might be explained by considering that acquirers make a

trade-off between synergy gains and integration costs as they become larger (Ahern, 2010).

In addition, the statistics show that mega-deals conducted by more experienced acquirers tend to be paid in cash rather than stock, which might be explained by the fact that the cash flow ratio ( $A\_CF2TA$ ) is significantly higher for firms with high experience. Specifically, 57% of mega-deals conducted by more experienced acquirers are paid entirely with cash and 14% are paid entirely with stock in comparison with 33% and 21% for ones conducted by inexperienced acquirer, respectively. Moreover, the evidence suggests that mega-deals carried out by more experienced acquirers are more likely to involve a public target in different industries and are less likely to be competing bid and hostile offers than the counterparts carried out by inexperienced acquirers.

Similar findings are found for failed mega-deals, but several other statistics deserve attention. Specifically, we observe that the *Relative size* for mega-deals conducted by inexperienced acquirers is considerably high, with an average value of 197%. This provides a potential explanation for their failure, suggesting that the deal is too big and therefore too complex for these inexperienced firms to complete. Additionally, the evidence shows that failed mega-deals generally have a higher likelihood of involving more than one bidder and being a hostile offer than in the successful sample, which is consistent with literature, e.g. Schwert (2000).

## 4.5 Empirical Analysis

### 4.5.1 Do Mega-Deals Undertaken by More Experienced Acquirers Have a Higher Likelihood to Be Successfully Completed?

We begin by investigating whether a mega-deal conducted by a more experienced acquirer enjoys a higher completion rate by estimating the following probit model:

$$Pr(Deal\ Completion_i = 1) = \Phi(\alpha_0 + \alpha_1 AcquisitionExperience_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i)$$

where  $Pr$  denotes probability, and  $\Phi$  is the Cumulative Distribution Function of the standard normal distribution. The dependent variable ( $Deal\ Completion_i$ ) takes a value of one if the mega-deal  $i$  is successfully completed, and zero otherwise. Our key explanatory variable of interest is the acquisition experience. In addition to the total number of acquisitions that an acquiring firm  $i$  completed before ( $Experience$ ), we also construct a dummy variable  $High\ Experience\ Dummy$ , taking the value of one if the acquiring firm conducted more than 12 acquisition before, and zero otherwise.  $Firm_i$  is a vector of the acquiring firm's characteristics, including the natural logarithm of its market value measured 4 weeks before the announcement ( $A\_LNMV$ ), the market-to-book ratio ( $A\_TobinQ$ ), the ratio of total debt by total capital ( $A\_Leverage$ ) and the ratio of cash flows by the total assets ( $A\_CF2TA$ ).  $Deal_i$  represents a vector of deal explanatory variables, including the ratio of deal value by the acquirer's market value measured 4 weeks before the announcement ( $Relative\ Size$ ), the indicator of target public status ( $Public$ ), the indicator of competing bids ( $Competing\ Bid$ ), the indicator of payment method ( $Stock$ ), the indicator of acquisition attitude ( $Hostile$ ), the indicator of tender offer ( $Tender$ ) and the indicator of whether the acquirer and

the target are in related industries (*Diversification*). In all models, we also control for year and industry fixed effects ( $f_y$  and  $f_{industry}$ ).

*[Insert Table 4.2 Approximately Here]*

Table 4.2 reports the marginal effects of this analysis. The coefficients on *Experience* and *High Experience Dummy* are positive and highly statistically significant at the 1% level in all specifications, suggesting that the probability of completing a mega-deal increases with acquisition experience. The magnitude of the coefficient indicates that every additional previous acquisition experience of an acquirer is associated with a 0.5% higher likelihood to complete the mega-deal. Overall, the involvement of acquirers with high experience increases the probability of success by 5.95%. Our results are consistent with our first hypothesis (*H1*). This can be explained by considering that more experienced acquirers excel at dealing with complexities during the pre-acquisition process, which might include selecting the right strategy to avoid antitrust violation and negotiating with target firms (Dikova *et al.*, 2010a).

In terms of the control variables, the two most important predictors are the hostile offer indicator (*Hostile*) and the competing bid indicator (*Competing bid*), with significant and positive coefficients of -0.5452 and -0.2114 respectively. This suggests that the probability of completing a mega-deal drops when the deal attitude is hostile and involves more than one bidder. In addition, the results also show that mega-deals with a relative large size are less likely to be completed, which is consistent with the evidence presented in descriptive statistics.

#### **4.5.2 Do Mega-Deals Undertaken by More Experienced Acquirers Create Value for Acquirer Shareholders in the Short-Run?**

This section examines acquirer value creation around the announcement of mega-deals across different levels of acquisition experience. Both univariate analysis and multivariate analysis are conducted.

*[Insert Table 4.3 Approximately Here]*

Table 4.3 shows results from the univariate analysis, which is divided by the level of acquisition experience and the status of deal completion. Three measures of announcement performance are employed. First, we report acquirers' average cumulative abnormal returns over the three-day (-1, +1) announcement window (*ACAR3*). *ACAR3* are calculated by using the market-adjusted return model,<sup>15</sup> with the estimation window [-301, -51] relative to the deal announcement. Overall, acquirers of mega-deals have negative mean *ACAR3*, measuring -0.47% and -1.18% in the successful sample and the failed sample, respectively. The higher *ACAR3* of successful mega-deals suggests that the market can distinguish between deals that will be completed or terminated at the deal announcement. After partitioning the sample by acquisition experience level, our results indicate that in the successful sample, mega-deals conducted by more experienced acquirers on average generate a positive return around the deal announcement (0.09%), which is 0.74% higher than those with inexperienced acquirers, and the difference is significant at the 5% level. However, acquisition experience seems not to play a major role in the failed sample as there is an insignificant difference of *ACAR3* between mega-deals undertaken by more experienced and less experienced acquirers.

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<sup>15</sup> Our results are robust when we use other models to measure *ACAR3*, e.g. Fama-French 5-factor model and estimate the model with 5-day event window.

In addition, we display the results for three-day dollar returns ( $\$Return$ ) and returns per dollar spent ( $\$Return/DealValue$ ) in 2016 dollars around deal announcements. The results show a similar pattern as the results on  $ACAR3$ . Following Malatesta (1983) and Moeller *et al.* (2005), we obtain dollar returns for each deal through multiplying the acquirer's three-day CARs (-1, +1) by the acquirer's market capitalisation two trading days before the deal announcement (event day -2). In the full sample, acquirers of mega-deals, on average, lose approximately \$97 million in the three days over the announcement period. By comparing sub-samples, the results show that in the successful sample, mega-deals carried out by acquirers with high experience on average create value of \$50 million or \$18 cents per dollar spent, while those carried out by inexperienced acquirers incur large losses of \$93 million or 6 cents per dollar spent. In the failed sample, mega-deals are subject to shareholder wealth loss regardless of the level of acquisition experience, and the dollar losses even increase with the experience level which might be due to the high valuation of the more experienced acquiring firm.

Overall, the results of the univariate analysis is consistent with the second hypothesis ( $H2$ ), suggesting that mega-deals generate gains for shareholders under the execution of more experienced acquirers.

To take related factors into account, we further investigate the relationship between mega-deal short-run performance and acquisition experience by conducting the following models:

$$ACAR3_i = \alpha_0 + \alpha_1 AcquisitionExperience_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

$$Return_i = \alpha_0 + \alpha_1 AcquisitionExperience_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

where the dependent variables are three-day acquirer cumulative abnormal returns and three-day acquirer dollar gains, respectively. Like our analysis on deal completion, we examine acquisition experience with a continuous variable *Experience* which is the total number of acquisitions that an acquiring firm *i* completed before, and a dummy variable which equals one if the acquiring firm conducted more than 12 acquisitions before, and zero otherwise (*High Experience Dummy*). In addition to the control variables employed in previous equation, we also control for market valuations and an acquirer's stock run-up which could exert influence on announcement returns (Bouwman *et al.*, 2009; Petmezas, 2009).

*[Insert Table 4.4 Approximately Here]*

Table 4.4 presents the results of this analysis. In models of Panel A we regress *ACAR3* on acquisition experience and in Panel B the dollar gain is regressed on acquisition experience. Both analyses are conducted within the full sample, successful sample, and failed sample. In Panel A, the coefficients of measures on acquisition experience are positive in all specifications but only statistically significant in the full sample and the successful sample. This suggests that acquisition experience has a greater impact on the short-run performance of successful mega-deals. Specifically, the evidence in specifications 1 and 3 shows that every additional acquisition experience significantly helps mega-deals create 0.04% and 0.05% more abnormal announcement returns in the full sample and the successful sample, respectively. In terms of the coefficient on *High Experience Dummy*, our results suggest that mega-deals carried by more experienced

acquirers generally enjoy a higher announcement return of 0.58% in the full sample and 0.61% in the successful sample. Regarding failed mega-deals, the evidence indicates that the market reactions are little different to acquirers with different levels of acquisition experience, with the coefficient of 0.02% on *Experience* and 0.37% on *High Experience Dummy*.

Panel B shows the results of the relationship between dollar returns and acquisition experience, which is consistent with evidence on abnormal stock returns. We find that *\$Return* is significantly positively related to acquisition experience in the overall sample and successful sample, while the effects of acquirer experience are insignificant in failed mega-deals. Specifically, the coefficients on *Experience* suggest that with an additional previously completed acquisition, mega-deals generate more values of \$16 million and \$15 million for acquirer shareholders in the full sample and the successful sample respectively. For *High Experience Dummy*, the magnitude of the coefficient in model 2 and 4 indicates that mega-deals conducted by acquirers with high experience are associated with \$344 million and \$308 million more dollar gains in the full sample and the successful sample respectively. Overall, our results of short-run analysis are consistent with the second hypothesis, indicating that mega-deals will generate value for shareholders if the deal is conducted by acquirers with more experience.

With regard to control variables in all regressions, the coefficients on the logarithm of the bidders' market capitalization one month before the deal announcement (*A\_LNMV*) are significantly negative, suggesting that the market is less in favour of mega-deals involving larger bidders, which is consistent with Moeller *et al.* (2004). In addition, *ACAR3* is significantly higher if the acquirer

has a higher leverage ratio ( $A\_Leverage$ ) and a higher cash flow ratio ( $A\_CF2TA$ ), which supports the study of Maloney *et al.* (1993) and Harford (1999). Moreover, in line with Travlos (1987), mega-deals that are fully paid for in stock considerably destroy more abnormal returns for acquirers' shareholders.

#### **4.5.3 Do Mega-Deals Undertaken by More Experienced Acquirers Create Value for Acquirer's Shareholders in the Long-Run?**

In the previous section, our results indicate that acquirers make use of previous successful experience and more experienced acquirers are rewarded at the announcement of mega-deals. To investigate whether a more experienced acquirer eventually helps a mega-deal create more value, this section assesses long-run performance based on bidders' abnormal stock returns and post-merger operating performance. Stock price returns are employed to examine the market valuation of the mega transaction while the accounting-based approach investigates the achieved operational changes during the same period. If acquirers with high experience are more proficient at the integration process, we would expect to find a better long-run performance. Both univariate and multivariate analyses are displayed.

##### **4.5.3.1 Long-Run Stock Performance**

*[Insert Table 4.5 Approximately Here]*

Table 4.5 presents the mean buy-and-hold abnormal returns (BHARs) for bidders over 12-, 24- and 36-month periods and draws a comparison between the BHARs of more and less experienced acquirers based on deal completion status. Acquirer BHARs are computed by using size-adjusted returns and the t-Statistics are bootstrapped in order to eliminate the new listing bias and rebalancing bias (Lyon

*et al.*, 1999). In terms of the full sample, we observe that mega-deals remarkably destroy value for acquirer shareholders in the long term, regardless of the completion status and event windows employed. The average *BHAR12*, *BHAR24*, and *BHAR36* for successful mega-deals are -3.20%, -7.08%, and -6.59%, respectively, while acquirers in failed mega-deals earn abnormal returns of -7.50%, -10.23%, and -17.46% during the 12-, 24-, and 36-month periods following the deal announcement. By comparing the successful sample with the failed sample, we find that acquirers who fail to complete mega-deal significantly and continually underperform ones that successfully conduct deals, which is consistent with Savor and Lu (2009).

After dividing the sample based on the level of acquirer experience, we find a significant positive relationship between BHARs and acquisition experience in both the successful sample and the failed sample, which supports our hypothesis suggesting that acquirer experience plays an essential role in helping mega-deals create value. For successful mega-deals, those with more experienced acquirers generate abnormal returns of -0.13%, -2.19%, and 0.95% over the 12-, 24-, and 36-month period after the deal announcement, which are 3.94%, 5.80%, and 8.97% higher than their counterparts with less experienced acquirers and the differences are significant at the 5% level. The evidence might be explained by considering that more experienced acquirers are skilled at dealing with issues during the integration process, such as, balancing the cultural compatibility and the cultural tolerance of the two merged firms and building relational stability. This is particularly important for a mega-deal as it usually involves two large established firms, and therefore the integration process would be more complicated than with smaller deals. The difference between mega-deals carried out by more

experienced acquirers and inexperienced acquirers becomes even larger in the failed sample, reaching 8.19%, 12.83%, and 23.36% for *BHAR12*, *BHAR24*, and *BHAR36*, respectively. This finding is mainly because terminated mega-deals by inexperienced acquirers destroy value considerably. Failing to complete the deal might show the market that acquirers are incompetent but nevertheless overconfident, and therefore the market will punish these firms in the long-run.

*[Insert Table 4.6 Approximately Here]*

To confirm the superior performance of mega-deals conducted by more experienced acquirer, in Table 4.6, we perform the long-term OLS regression analysis as follows:

$$BHAR36_i = \alpha_0 + \alpha_1 AcquisitionExperience_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

where *BHAR36* is modelled as a function of the acquisition experience measures. A set of firm, deal, and market characteristics is controlled, which is described in the analysis on short-run performance, and we also include year fixed effects and industry fixed effects.

In accordance with the univariate results and our hypothesis, a mega-deal's long-run performance is positively associated with both experience measurements in all regressions. Specifically, in terms of the successful sample, *Experience* and *High Experience Dummy* remarkably increase the long-run abnormal returns by 0.44% and 15.13% in specifications 1 and 2, respectively. Both estimates are significant at the 5% level. Regarding the failed sample, the coefficients of *Experience* and *High Experience Dummy* are positive but insignificant. Overall, our evidence

suggests that more experienced acquirers are rewarded by the market if they successfully conduct mega-deals.

Consistent with the evidence of short-term analysis, we find that the 36-month BHARs are remarkably higher if the bidder has a higher cash flow ratio (*A\_CF2TA*), while the coefficient of *Stock* is negative and significant in all specifications. In addition, the coefficient on *Market Valuation* suggests that acquirers would suffer lower long-run returns if they undertake mega-deals during the high valuation stock market, which is in line with Petmezas (2009).

#### **4.5.3.2 Long-Run Operating Performance**

Previous analyses show that mega-deals with more experienced acquirers deliver significantly more returns to shareholders than ones with less experienced acquirers. If the reason behind is that more experienced acquirers can manage the complexity of mega transactions better than ones with less experience, we should also expect to find a better long-run operating performance for mega-deals carried by more experienced acquirers.

*[Insert Table 4.7 Approximately Here]*

Following Healy *et al.* (1992), Ramaswamy and Waagelein (2003), and Alexandridis *et al.* (2013), we employ the return on assets (*ROA*) adjusted by industry to measure the operating performance for bidders. *ROA* is the ratio of net income to the book value of total assets,<sup>16</sup> and then we adjust the ratio by deducting the median *ROA* of peers in the same industry in a given year. Table 4.7 reports the bidder's operating performance characterized by different levels of experience for up to three years relative to the year of the deal announcement.

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<sup>16</sup> The results are robust when we use operating income rather than net income to calculate *ROA*.

Panel A shows the results of successful mega-deals. Overall, we observe different levels of operating performance across the acquisition experience levels. Acquirers with high experience exhibit superior operating performance than inexperienced acquirers both before and after the announcement of mega-deals. In addition, for all acquirers completing mega-deals, there is a general decreasing performance from year -1 to year +3 around the deal announcement. This suggests that firms typically choose a time of good operating performance to prepare a mega-deal but it is difficult to improve or even sustain that level of performance over a long-run period following a mega-transaction. Compared to acquirers with high experience, however, inexperienced acquirers show a bigger drop in post-merger performance. Specifically, the median ROA of acquirers with low experience for the three years pre-acquisition is 2.97% and decrease to 2.81% over the three-year period after the mega-deal announcement, where the difference is 0.15% and significant at the 5% level. For acquirers with high experience, on the other hand, the post-merger operating performance decreases insignificantly, by 0.10%. This pattern also exists in the operating performance for the failed sample in Panel B. The outperformance of more experienced acquirers indicates a higher level of ability in management during the post-merger period, which is consistent with the hypothesis and our previous findings of the better short-run and long-run stock performance.

To further investigate the relationship between operating performance following mega-deals and acquisition experience, this paper conducts the multivariate regression as follows:

$$\Delta ROA_i = \alpha_0 + \alpha_1 AcquisitionExperience_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

where the dependent variable is the difference in the acquirer's *ROA* between the pre- and post-merger period. Our key variable of interest is *AcquisitionExperience<sub>i</sub>*, while the regressions also control for firm and deal factors that can determine operating performance and are described in previous equations.

*[Insert Table 4.8 Approximately Here]*

Table 4.8 displays the regression results, showing that the changes in post-merger operating performance are positively associated with acquisition experience, and the coefficients on acquisition experience are significant at the 5% level in models (1) and (2) of successful sample. Specifically, the coefficient on *Experience* in column (1) suggests that every additional completed acquisition is related to 0.14% *ROA* improvement over the three-year period following a mega-deal announcement. In addition, the magnitude of acquisition experience impact increases to 2.61% when the  $\Delta ROA$  is regressed on *High Experience Dummy*, suggesting that acquirers with high experience generally have a better operating performance improvement than less experienced acquirers after the completion of mega-deals. In the failed sample, we find that acquisition experience has only an insignificant effect on an acquirer's post-merger operating performance changes. Overall, the evidence is supportive of our hypothesis and indicates that to deal with the complexity of mega-deals and achieve better performance, it is essential for acquiring firms to gather more experience before conducting mega transactions.

In terms of firm and deal characteristics, our analysis shows that there is a greater operating performance improvement after mega-deals when acquirers are with high leverage ratio (*A\_Leverage*), which is an indication that more financially constrained bidders under better creditor monitoring tend to conduct good deals.

In addition, acquirers with a high cash flow ratio ( $A\_CF2TA$ ) are also significantly related to a larger  $\Delta ROA$ , which is inconsistent with Jensen (1986) free cash flow theory suggesting that large free cash flows can lead to agency problem. Moreover, consistent with the regression of short-run and long-run stock performance, we observe a significant and negative sign of *Stock* in the successful sample.

## **4.6 Robustness Checks**

### **4.6.1 Endogeneity Issue**

Previous sections suggest a positive relationship between mega-deals performance and acquirer's acquisition experience, but our results could also be driven by self-selection based endogeneity. As strategic corporate decisions, mergers and acquisitions are discrete choices driven by manager's anticipated performance instead of a random pattern (Castañer *et al.*, 2014; Hamilton and Nickerson, 2003; Sampson, 2004). There could be omitted variables driving such expectations of performance, e.g. managerial skill and social pressure, which are likely to influence both the takeover decision and the performance outcome. As every takeover decision is subject to self-selection bias, the accumulation of acquisition experience also tends to be endogenous (Haleblian *et al.*, 2006). For example, a firm that has the capability of conducting a value-increasing takeover will have a high level of acquisition experience and also enjoy better performance with mega-deals.

To account for the potential endogeneity issue, our study employs the Instrumental Variable (IV) approach and conducts the two-stage least squares (2SLS) regression to analyze the effect of acquisition experience on mega-deals'



largest metropolitan statistical areas and increases with firm age, regardless of whether we use continuous variable *Experience* or dummy variable *High Experience Dummy* to measure a firm's acquisition experience. In addition, the existence of endogeneity, the validity and the strength of instrument variable are tested and reported. Specifically, the p-value of 0.0229 from the Hausman test is the 5% level of significance where the null hypothesis can be rejected, suggesting that acquisition experience is not exogenous in our analysis. The significant estimate from the Sargan test and the Cragg-Donald Wald *F*-statistic that is greater than 10 imply that the instruments are valid and our IV regression is not affected by the weak instrument issue.

Regarding the second-stage results, the coefficient on *Predicted Experience* is 0.0053 in Model (2) and on *Predicted High Experience Dummy* is 0.0828 in Model (4), and both are significant at the 5% level. This suggests that mega-deals with more experienced acquirers create more value for acquirer's shareholders, which confirms our previous results.

#### **4.6.2 Threshold Model of Short-Run Stock Performance**

This paper tests the robustness of our results on the relationship between firm's acquisition experience and mega-deal's performance by conducting a threshold model following Hansen (2000). The fundamental advantage of the threshold regression is that the existence of breakpoint can be endogenously detected and determined, and therefore this enables us to examine that to what extent the acquisition experience could translate into the capability of successfully conducting a mega-merger. The threshold model is constructed as follows:

$$ACAR3_i = \begin{cases} \alpha_0 + \alpha_1 Experience_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i & \text{if } Experience_i \leq \gamma \\ \beta_0 + \beta_1 Experience_i + \beta_2 Firm_i + \beta_3 Deal_i + f_y + f_{industry} + \varepsilon_i & \text{if } Experience_i > \gamma \end{cases}$$

where  $ACAR3_i$  represents acquirer's three-day cumulative abnormal return;  $Experience_i$  is the number of acquisitions completed by an acquirer before the mega-deal of our interest, which is the key explanatory variable and also the threshold variable;  $Firm_i$  and  $Deal_i$  are vectors of acquirer's and deal's characteristics, respectively;  $f_y$  is year fixed effects and  $f_{industry}$  is industry fixed effects;  $\gamma$  represents the threshold value to be estimated.

*[Insert Table 4.10 Approximately Here]*

Table 4.10 reports the results of the threshold regression. It is confirmed that there is a single threshold on acquisition experience equalling to four. The coefficients confirm our previous results that mega-deals with more experienced acquirers significantly generate more abnormal gains for shareholders around deal announcement. Interestingly, the evidence shows that the coefficient of *Experience* is significantly positive when acquirers completed more than 4 acquisitions before (0.0005), whereas it is insignificant when *Experience* is less than or equal to the threshold value (-0.0007). This could be explained with the transfer theory from cognitive psychology suggesting that earlier acquisition experience cannot be transferred to the new deal immediately (Cormier and Hagman, 1987; Ellis, 1965). Firms with four or less than four completed acquisitions have not accumulated enough experience for mega-deal and are incapable of successfully conduct a value-increasing transaction. In contrast, for acquirers with more than four completed acquisitions, their accumulated experience is able to turn into sophisticated skills and therefore, following the

fourth acquisition, the performance of mega-deal increases with every additional acquisition experience.

#### **4.6.3 Comparison Between Mega Mergers and Non-Mega Mergers**

*[Insert Table 4.11 Approximately Here]*

To confirm that mega-deals are related to a higher degree of uncertainty and integration complexity, Table 4.11 compares the summary deal statistics for mega mergers and non-mega mergers. We run the Student's t-test to examine whether there are significant differences of mean between mega-deals and non-mega-deals. In general, the evidence shows significant differences. Transaction value (*Deal Value*) and relative deal size (*Relative Size*) for mega deals are significantly larger than for non-mega deals, which could result in more integration complexity. In addition, we observe that mega-deals are less likely to be completed (*Completion*), which might be explained by considering that large deal value tends to draw more regulation issues. Moreover, mega-deals significantly show a longer time from deal announcement to completion (*Time to Completion*), with an average 70.48 days more than that of non-mega deals. The longer the time is required to complete the deal, the more uncertainty the acquirer faces. Overall, the statistics provide supportive evidence on the complexity of mega-deals.

#### **4.7 Conclusion**

Mega-deals, as a strategic move, play an essential role in firm's development which could also reshape the industry and even influence the whole economy. However, prior literature has investigated mega-deals as an independent event and suggests that large deals generally destroy value for acquirer shareholders except

ones conducted after 2009. This paper provides evidence on how mega-deals can enjoy a bright outcome, showing that firms with more acquisition experience make better mega-deal decisions. Specifically, we conduct several analyses of mega-deals' outcomes, including deal completion, acquisition announcement returns and long-run returns, as well as post-deal operating performance.

Our main findings show that mega-deals carried out by acquirers with a higher level of experience are more likely to complete and enjoy a better stock and operating performance in both the short- and long-run, regardless of whether the deal is completed or failed. In particular, the average abnormal announcement return of successful mega-deals translate into a shareholder value gain of \$50.6 million. For failed mega-deals, inexperienced acquirers suffer from the continuing decline in a firm's performance while more experienced acquirers recover from the failure over the three-year following the mega-deal's announcement. Overall, our evidence suggests that although mega-deals involve great uncertainty and integration complexity, the whole process can be better facilitated by acquirers with a higher level of acquisition experience, and eventually create value for acquirer shareholders.

## APPENDIX B

Variable	Definition
<b>Panel A:</b>	
<b>Dependent Variables</b>	
Completion	Dummy variable that equals 1 if merger transaction is completed.
ACAR3	Cumulative abnormal return of the acquiring firm in the 3-day event window (-1, +1) surrounded on the announcement day. The expected returns are from a market-adjusted return model with the parameters estimated over 301 trading days ending 51 days before the announcement. As benchmark we use the CRSP value-weighted index.
\$Return	Following Malatesta (1983) and Moeller <i>et al.</i> (2005), \$Return is obtained by multiplying the acquirer's three-day CARs (ACAR3) by the acquirer's market capitalisation two trading days before the deal announcement (event day -2).
BHAR36	Buy-and-hold abnormal return of the acquiring firm from size-adjusted model in the 36-month event window following the announcement.
$\Delta$ ROA	The difference in the acquirer's industry-adjusted ROA between -3 and +3 years relative to deal announcement. ROA is calculated as the ratio of net income to total assets. Industry-adjusted ROA is calculated by subtracting the median ROA of the corresponding industry from the firm ROA.
<b>Panel B:</b>	
<b>Key independent variable</b>	
Experience	The total number of acquisitions that a sample acquiring firm completed before the mega-deal of interest.
High Experience Dummy	Dummy variable that equals 1 if mega-deals conducted by acquirers with high experience (more than 12 acquisitions completed before).
<b>Panel C:</b>	
<b>Firm characteristics</b>	
A_LNMV	The logarithm of the acquirer market value measured 4 weeks before the merger announcement. The market value is calculated as the number of shares outstanding multiplied by the respective stock price at

	4 weeks before the M&A announcement.
A_M2B	The ratio of market value by book value of the acquirer's assets.
A_Leverage	The ratio of acquirer's total debt by total capital at the fiscal year end before the M&A announcement.
A_CF2TA	The ratio of acquirer's cash flows by the total assets at the fiscal year end before the M&A announcement.

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**Panel D:**

**Deal characteristics**

Relative Size	The variable was calculated as merger transaction value divided by the acquirer market value of equity 4 weeks before the merger announcement.
Hostile	Dummy variable that equals 1 if the deal attitude is identified as hostile.
Stock	Dummy variable that equals 1 if the deal is 100% paid by stock.
Competing Bid	Dummy variable that equals 1 if there are more than one bidder.
Public	Dummy variable that equals 1 if the target is a public firm.
Tender	Dummy variable that equals 1 if the deal is identified as a tender offer.
Diversification	Dummy variable that equals 1 if the acquirer and the target have the different first two-digit of primary SIC code.
Market Valuation	Following Bouwman <i>et al.</i> (2009), we identify high-, neutral- and low-valuation markets by comparing the detrended P/E ratio of the value-weighted market index with its past 5-year average.

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**Panel E:**

**Instrumental variables**

Urban	Dummy variable that equals 1 if the acquiring firm is headquartered in the 10 largest metropolitan statistical areas on the US government list.
Age	The difference between the year of acquiring firm listed in Compustat and the year of mega-deal announcement.

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**Table 4.1 - Summary Statistics**

This table reports the summary statistics of 3,544 US M&A samples with the transaction value of at least \$500 million in 2016 dollar terms. Panel A and Panel B show deal related characteristics and acquirer related characteristic, respectively. All variables are defined in Appendix B. M&A deals are restricted by the following criteria. First, the announcement date is between January 1, 1980 and December 31, 2016. Second, the acquirer is a public firms and the target firm can be public, private or subsidiary. Third, the inflation-adjusted deal value is at least \$500 million. Fourth, the acquirer owns less than 10% of target's shares prior to the deal announcement and more than 50% after the deal. Fifth, the acquirer is not from financial industry (SIC code 6000-6999) and utilities industry (SIC code 4900-4949). Lastly, the acquirer has stock price data and accounting data available on Centre for Research in Security Prices (CRSP) and Compustat, respectively. First, we present the mean and median values for the full sample. Next, we sub-divide our sample based on whether the deal is completed and the level of acquisition experience. The t-test and Wilcoxon test are used to test for statistical significance of means and medians, respectively. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

		Successful sample					Failed sample			
		Full sample	Firm experience				Firm experience			
			Low (1)	Moderate (2)	High (3)	Dif. (3)-(1)	Low (4)	Moderate (5)	High (6)	Dif. (6)-(4)
<b>Panel A - Deal characteristics</b>										
Deal value (\$mil)	Mean	3,465.62	2,315.37	2,673.56	4,984.78	2,669.41***	3,558.86	5,230.15	10,078.00	6,519.14***
(adjusted by 2016)	Median	1,194.28	1,002.37	1,142.12	1,571.99	569.62***	1,236.64	1,877.70	1,803.60	566.96***
	N	3,544	1,002	1,282	758		209	194	99	
Relative size	Mean	0.74	0.99	0.50	0.38	-0.62***	1.97	1.32	0.34	-1.63***
	Median	0.23	0.38	0.22	0.09	-0.29***	0.83	0.42	0.12	-0.71
	N	3,911	991	1,272	755		208	192	99	
All stock %	Mean	18.43%	21.26%	19.03%	13.98%	-7.27%***	18.18%	20.62%	12.12%	-6.06%
	N	3,544	1,002	1,282	758		209	194	99	
All cash %	Mean	43.40%	33.43%	42.04%	57.12%	23.69%***	33.49%	46.91%	70.71%	37.21%***
	N	3,544	1,002	1,282	758		209	194	99	

Competition %	Mean	7.25%	4.79%	4.60%	2.77%	-2.02%**	26.32%	32.99%	10.10%	-16.21%***
	N	3,544	1,002	1,282	758		209	194	99	
Public %	Mean	67.61%	60.18%	66.07%	67.28%	7.10%***	84.21%	86.08%	93.94%	9.73%***
	N	3,544	1,002	1,282	758		209	194	99	
Hostile %	Mean	5.56%	2.30%	2.03%	0.92%	-1.37%**	31.10%	28.87%	20.20%	-10.90%***
	N	3,544	1,002	1,282	758		209	194	99	
Diversified %	Mean	30.70%	29.24%	30.81%	33.51%	4.27%*	34.93%	27.84%	19.19%	-15.74%***
	N	3,544	1,002	1,282	758		209	194	99	
Time to completion	Mean	163.30	153.05	164.57	174.68	21.63*				
	Median	95.00	97.00	96.00	93.50	-3.50				
	N	3,042	1,002	1,282	758					
Tender %	Mean	16.62%	17.07%	17.00%	15.44%	-1.63%	22.97%	13.92%	8.08%	-14.89%***
	N	3,544	1,002	1,282	758		209	194	99	
Market Valuation	Mean	0.94	1.02	0.94	0.79	-0.22***	1.00	0.94	0.96	-0.05
	N	3,544	1,002	1,282	758		209	194	99	
Premium %	Mean	45.13%	45.39%	44.63%	45.15%	-0.25%	49.36%	45.17%	40.06%	-9.30%
	Median	36.14%	36.14%	35.28%	35.75%	-0.39%	43.10%	38.26%	35.61%	-7.49%
	N	1,607	393	680	365		90	108	38	
<b>Panel B - Acquirer characteristics</b>										
Market cap (\$mil) (adjusted by 2016)	Mean	27802.92	11281.65	19038.11	69550.51	58268.86***	7195.21	14398.54	56712.38	49517.17***
	Median	6564.12	3522.24	6409.02	24899.02	21376.78***	2180.43	5311.66	16156.92	13976.49***
	N	3,517	991	1,272	755		208	192	99	
Market-to-book	Mean	5.77	6.59	5.08	5.27	-1.32	8.95	5.20	6.09	-2.86
	Median	2.88	2.40	2.91	3.37	0.97***	2.32	3.01	3.43	1.11***

	N	2,565	669	936	603		146	133	78	
FCF-to-asset	Mean	0.09	0.07	0.09	0.09	0.02***	0.08	0.08	0.08	0.01
	Median	0.09	0.08	0.09	0.09	0.01***	0.08	0.08	0.08	0.00
	N	2,553	671	925	597		147	134	79	
Leverage	Mean	0.37	0.37	0.36	0.37	0.00	0.42	0.42	0.37	-0.05
	Median	0.34	0.32	0.35	0.34	0.02	0.38	0.42	0.35	-0.02
	N	2,573	677	937	601		147	133	78	
Acquirer stock run-up %	Mean	0.09	0.12	0.09	0.06	-0.06***	0.06	0.06	0.05	-0.01
	Median	0.05	0.08	0.06	0.05	-0.03***	0.03	0.03	0.04	0.02
	N	3,439	929	1,271	753		194	193	99	
Number of acquisition	Mean	7.89	2.02	6.54	19.59	17.57***	0.97	5.00	15.25	14.28***
	Median	5.00	2.00	6.00	17.00	15.00***	1.00	5.00	13.00	12.00***
	N	3,544	1002	1282	758		209	194	99	

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**Table 4.2 - Probit Models of Deal Completion**

This table reports results of probit model of mega-deal completion. The key variable in Models (1) – (3) is *Experience* and in Model (4) is *High Experience Dummy*. *Experience* is the sum of acquisition completed before the mega-deal of our interest. *High Experience Dummy* takes the value of 1 if the mega-deals is carried by acquirers with a high level of experience, i.e. more than 12 completed acquisitions, and 0 otherwise. All models include industry and year fixed effects. For brevity, their coefficients are not reported in the table. Detailed variable definitions are shown in the Appendix B. All continuous variables are winsorized at the 1% and 99% levels. The table reports marginal effects and *p*-value (in parentheses). Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

<b>Completion</b>	<b>Model (1)</b>	<b>Model (2)</b>	<b>Model (3)</b>	<b>Model (4)</b>
Experience	0.0055*** (0.000)	0.0052*** (0.000)	0.0050*** (0.000)	
High Experience Dummy				0.0595*** (0.000)
A_LNMV		0.0055 (0.251)	-0.0076 (0.157)	-0.0016 (0.760)
A_M2B		-0.0001 (0.630)	0 (0.655)	-0.0001 (0.544)
A_CF2TA		0.0349 (0.662)	0.0706 (0.325)	0.0624 (0.400)
A_Leverage		-0.0244 (0.150)	-0.0072 (0.670)	-0.0081 (0.640)
RTV			-0.0242*** (0.010)	-0.0223** (0.020)
Public			-0.1140*** (0.000)	-0.1162*** (0.000)
Competing Bid			-0.2114*** (0.000)	-0.2195*** (0.000)
Stock			0.0254* (0.077)	0.0265* (0.072)
Diversification			0.0173 (0.205)	0.0207 (0.135)
Tender			0.0994*** (0.000)	0.1036*** (0.000)
Hostile			-0.5452*** (0.000)	-0.5544*** (0.000)
Year effect	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes
N	3,544	2,498	2,498	2,498
r <sup>2</sup> <sub>p</sub>	0.029	0.030	0.244	0.237

**Table 4.3 - Acquirer Short-Run Performance Analysis**

This table reports mean and median values on measures of acquirer's announcement performance, including *ACAR3*, *\$Return*, and *\$Return/DealValue*. *ACAR3* is acquirer's cumulative abnormal return over 3-day event window surrounding the announcement date. Abnormal returns are calculated using market-adjusted model:

$$AR_{it} = R_{it} - R_{mt}$$

where  $R_{it}$  is the stock return for firm  $i$  on day  $t$ ;  $R_{mt}$  is the stock return for the value-weighted CRSP index on day  $t$ . *\$Return* is dollar gains calculated through multiplying *ACAR3* by the acquirer's market capitalisation two trading days prior to the announcement day. *\$Return/DealValue* is dollar gains per dollar spent, which is the ratio of *\$Return* and deal value. First, we present the values for the full sample. Next, we subdivide our sample based on whether the deal is completed and the level of acquisition experience. The t-test and Wilcoxon test are used to test for statistical significance of means and medians, respectively. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

<b>Full sample</b>			
	<b>ACAR3</b>	<b>\$Return</b>	<b>\$Return/DealValue</b>
Panel A: Successful sample			
Mean	-0.0047***	-97.8839**	0.0065
Median	-0.0005	-1.6892	-0.0014
N	2,970	2,940	2940
Panel B: Failed sample			
Mean	-0.0118***	-97.4907	-0.0214
Median	-0.0042	-10.6411	-0.0087*
N	495	490	490
Diff (B)-(A)			
Mean	-0.0071*	0.3933	-0.0278
Median	-0.0037*	-8.9519	-0.0073
<b>Low experience</b>			
	<b>ACAR3</b>	<b>\$Return</b>	<b>\$Return/DealValue</b>
Panel C: Successful sample			
Mean	-0.0065**	-93.2032*	-0.0372
Median	-0.0025	-4.7123	-0.0044
N	958	947	947
Panel D: Failed sample			
Mean	-0.0097	-63.5130***	-0.0374
Median	-0.0039	-6.0548	-0.0058
N	204	203	203
Diff (D)-(C)			
Mean	-0.0032	29.6901	-0.0002
Median	-0.0014	-1.3425	-0.0014
<b>Moderate experience</b>			
	<b>ACAR3</b>	<b>\$Return</b>	<b>\$Return/DealValue</b>
Panel E: Successful sample			
Mean	-0.0066***	-156.8446***	-0.0514

Median	-0.0016	-5.1310	-0.0039
N	1,260	1,250	1,250
Panel F: Failed sample			
Mean	-0.0176***	-111.9517***	-0.0268
Median	-0.0057	-19.8914	-0.0124
N	192	190	190
Diff (F)-(E)			
Mean	-0.0110*	44.8929	0.0247
Median	-0.0041	-14.7604	-0.0085
<b>High experience</b>			
	<b>ACAR3</b>	<b>\$Return</b>	<b>\$Return/DealValue</b>
Panel G: Successful sample			
Mean	0.0009	50.6119	0.1596
Median	0.0014	19.3941	0.0155
N	752	749	749
Panel H: Failed sample			
Mean	-0.0047	-140.2728	0.0229
Median	-0.0028	-13.8302	-0.0112
N	99	99	99
Diff (H)-(G)			
Mean	-0.0055	-190.8847	-0.1367
Median	-0.0042	-33.2243	-0.0267
<b>The difference between low experience and more experience</b>			
	<b>ACAR3</b>	<b>\$Return</b>	<b>\$Return/DealValue</b>
Panel I: Successful sample			
Diff (G)-(C)			
Mean	0.0074**	143.8151	0.1968*
Median	0.0039	24.1063	0.0199**
Panel J: Failed sample			
Diff (H)-(D)			
Mean	0.0050	-76.7598*	0.0603
Median	0.0011	-7.7755	-0.0053

**Table 4.4 - OLS Regressions of Acquirer Short-Term Performance**

This table reports OLS regressions of acquirer's short-term performance. *ACAR3* is the dependent variable in models of Panel A, which is acquirer's cumulative abnormal return over 3-day event window surrounding the announcement date. *\$Return* is the dependent variable in models of Panel B, which is the product of *ACAR3* and acquirer's market capitalisation on event day -2. *Experience* is the sum of acquisition completed before the mega-deal of our interest. *High Experience Dummy* takes the value of 1 if the mega-deals is carried by acquirers with a high level of experience, i.e. more than 12 completed acquisitions, and 0 otherwise. Models (1) and (2) include the sample of all mega-deals. Models (3) and (4) utilise the sample of successful mega-deals. Models (5) and (6) examine the sample of failed mega-deals. All models include industry and year fixed effects. Detailed variable definitions are shown in the Appendix B. All continuous variables are winsorized at the 1% and 99% levels. We report *p*-value in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

Panel A	ACAR3					
	Full Sample		Successful		Failed	
	(1)	(2)	(3)	(4)	(5)	(6)
Experience	0.0004* (0.060)		0.0005** (0.047)		0.0002 (0.852)	
High Experience Dummy		0.0058* (0.071)		0.0061* (0.081)		0.0037 (0.687)
A_LNMV	-0.0025** (0.050)	-0.0044*** (0.000)	-0.0031** (0.026)	-0.0048*** (0.000)	0.0008 (0.833)	-0.0025 (0.391)
A_M2B	-0.0006 (0.192)	0.0002 (0.664)	-0.0008 (0.107)	0.0001 (0.748)	0.0006 (0.675)	0.0004 (0.707)
A_CF2TA	0.0541*** (0.003)	0.0310* (0.051)	0.0589*** (0.003)	0.0348** (0.045)	0.023 (0.676)	0.011 (0.792)
A_Leverage	0.0129*** (0.002)	0.0065* (0.075)	0.0136*** (0.001)	0.0068* (0.074)	0.0029 (0.872)	0.0048 (0.726)
RTV	-0.0061**	-0.0021	-0.0077***	-0.0031	-0.0024	0.0004

	(0.015)	(0.321)	(0.007)	(0.205)	(0.677)	(0.923)
Public	-0.0147***	-0.0154***	-0.0141***	-0.0157***	-0.0178	-0.0121
	(0.000)	(0.000)	(0.000)	(0.000)	(0.226)	(0.280)
Competing Bid	-0.0102*	-0.0083	-0.0177**	-0.0129*	-0.0014	-0.0019
	(0.092)	(0.113)	(0.026)	(0.067)	(0.899)	(0.819)
STOCK	-0.0332***	-0.0258***	-0.0339***	-0.0253***	-0.0302**	-0.0274***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.016)	(0.004)
Diversification	-0.0124***	-0.0111***	-0.0120***	-0.0117***	-0.0177	-0.0073
	(0.000)	(0.000)	(0.000)	(0.000)	(0.112)	(0.378)
Tender	0.0074*	0.0067*	0.0088*	0.0081**	-0.0016	-0.0002
	(0.078)	(0.067)	(0.052)	(0.043)	(0.910)	(0.985)
Hostile	0.0028	-0.005	0.0004	-0.0061	0.0065	-0.0063
	(0.676)	(0.393)	(0.976)	(0.567)	(0.565)	(0.461)
Market Valuation	-0.0036*	-0.0032*	-0.0033	-0.0035*	-0.0045	-0.0007
	(0.085)	(0.069)	(0.124)	(0.068)	(0.510)	(0.888)
Run-up	-0.0280***	-0.0153**	-0.0246***	-0.0151**	-0.0445**	-0.0173
	(0.000)	(0.011)	(0.001)	(0.021)	(0.031)	(0.268)
Constant	-0.3707	-0.7040**	-0.5894	-0.7801**	1.1213	-0.2873
	(0.293)	(0.023)	(0.116)	(0.021)	(0.325)	(0.741)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
N	2,432	2,432	2,090	2,090	342	342
Adjusted R-Square	0.077	0.071	0.086	0.075	0.006	0.001

Panel B	\$Return					
	Full Sample		Successful		Failed	
	(1)	(2)	(3)	(4)	(5)	(6)
Experience	16.4585*** (0.002)		15.5287*** (0.007)		21.9553 (0.215)	
High Experience Dummy		344.5325** (0.023)		308.3289* (0.063)		482.5047 (0.228)
A_LNMV	-117.0070** (0.011)	-93.5418** (0.035)	-98.2369* (0.058)	-73.2072 (0.148)	-248.0400*** (0.008)	-225.8504** (0.012)
A_M2B	-6.0519 (0.712)	-9.154 (0.575)	-12.1667 (0.503)	-15.5279 (0.391)	40.5586 (0.259)	38.9648 (0.277)
A_CF2TA	164.6818 (0.797)	194.677 (0.762)	217.5957 (0.763)	265.449 (0.713)	52.0525 (0.968)	-89.3659 (0.945)
A_Leverage	12.8992 (0.930)	8.9788 (0.951)	42.2159 (0.789)	37.9127 (0.810)	-351.6169 (0.408)	-351.0502 (0.409)
RTV	-102.6338 (0.237)	-88.225 (0.308)	-136.2826 (0.198)	-118.4485 (0.262)	-117.9048 (0.375)	-106.4404 (0.424)
Public	-73.7838 (0.523)	-78.3864 (0.497)	-87.1854 (0.491)	-90.2838 (0.476)	-296.1812 (0.390)	-297.6367 (0.388)
Competing Bid	-272.778 (0.194)	-276.4837 (0.188)	-544.5396* (0.061)	-550.2348* (0.059)	-38.2096 (0.882)	-35.4396 (0.890)
STOCK	-189.9428 (0.199)	-173.8185 (0.240)	-162.0452 (0.331)	-146.3126 (0.380)	-314.8969 (0.286)	-297.847 (0.312)
Diversification	-153.134 (0.172)	-125.6298 (0.261)	-189.5971 (0.125)	-160.8203 (0.192)	11.4216 (0.965)	14.6633 (0.955)

Tender	152.5443 (0.297)	147.1446 (0.315)	228.0919 (0.168)	219.6732 (0.185)	73.5324 (0.822)	86.3025 (0.791)
Hostile	-292.3047 (0.213)	-313.631 (0.182)	-909.5411** (0.038)	-927.5070** (0.035)	-184.6904 (0.488)	-199.5545 (0.455)
Market Valuation	-189.6319*** (0.008)	-189.7136*** (0.008)	-168.9980** (0.034)	-169.3304** (0.034)	-271.7792* (0.090)	-267.0582* (0.095)
Run-up	-604.4235** (0.013)	-610.3134** (0.012)	-769.7939*** (0.005)	-779.0825*** (0.004)	361.6207 (0.452)	371.6374 (0.440)
Constant	6949.775 (0.574)	4588.1279 (0.709)	5485.6256 (0.693)	3188.5613 (0.818)	14470.9256 (0.592)	11265.8483 (0.673)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
N	2,384	2,384	2,045	2,045	339	339
Adjusted R-Square	0.012	0.010	0.015	0.013	0.004	0.004

**Table 4.5 - BHAR Analysis**

This table reports the mean and median values of acquirer's buy and hold abnormal returns over three event windows. To eliminate biases related to long-run event study, we employ size-adjusted buy-and-hold abnormal returns (BHARs) which is calculated as follows:

$$BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{pt}]$$

where  $R_{it}$  and  $R_{pt}$  are the monthly stock returns on stock  $i$  and on reference portfolio in month  $t$ , respectively.  $BHAR12$ ,  $BHAR24$  and  $BHAR36$  respectively represent long-run returns for the samples over 12-, 24-, and 36-month period following the announcement date. First, we present the values for the full sample. Next, we sub-divide our sample based on whether the deal is completed and the level of acquisition experience. The t-test and Wilcoxon test are used to test for statistical significance of means and medians, respectively. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

<b>Full Sample</b>			
	<b>BHAR12</b>	<b>BHAR24</b>	<b>BHAR36</b>
Panel A: Successful sample			
Mean	-0.0320***	-0.0708***	-0.0659***
Median	-0.0419***	-0.0882***	-0.1311***
N	2,824	2,824	2,824
Panel B: Failed sample			
Mean	-0.0750***	-0.1023***	-0.1746***
Median	-0.0748***	-0.0963***	-0.2212***
N	443	443	443
Diff (B)-(A)			
Mean	-0.0430**	-0.0315	-0.1087***
Median	-0.0329**	-0.0081	-0.0901***
<b>Low experience</b>			
	<b>BHAR12</b>	<b>BHAR24</b>	<b>BHAR36</b>
Panel C: Successful sample			
Mean	-0.0407***	-0.0799***	-0.0802***
Median	-0.0638***	-0.1343***	-0.1954***
N	925	925	925
Panel D: Failed sample			
Mean	-0.1072***	-0.1365***	-0.2226***
Median	-0.1370***	-0.1831***	-0.3247***
N	173	173	173
Diff (D)-(C)			
Mean	-0.0664*	-0.0567	-0.1423**
Median	-0.0732**	-0.0488	-0.1293**
<b>Moderate experience</b>			
	<b>BHAR12</b>	<b>BHAR24</b>	<b>BHAR36</b>
Panel E: Successful sample			

Mean	-0.0430***	-0.0920***	-0.0984***
Median	-0.0518***	-0.1078***	-0.1668***
N	1,204	1,204	1,204
Panel F: Failed sample			
Mean	-0.0694**	-0.1176***	-0.2245***
Median	-0.0654**	-0.0897*	-0.2218***
N	178	178	178
Diff (F)-(E)			
Mean	-0.0264	-0.0256	-0.1261**
Median	-0.0136	0.0181	-0.0550**
<b>High experience</b>			
	<b>BHAR12</b>	<b>BHAR24</b>	<b>BHAR36</b>
Panel G: Successful sample			
Mean	-0.0013	-0.0219	0.0095
Median	0.0014	-0.0196	-0.0024
N	695	695	695
Panel H: Failed sample			
Mean	-0.0253	-0.0082	0.0121
Median	-0.0416	0.0058	-0.0516
N	92	92	92
Diff (H)-(G)			
Mean	-0.0240	0.0137	0.0026
Median	-0.0429	0.0254	-0.0491
<b>The difference between low experience and high experience</b>			
	<b>BHAR12</b>	<b>BHAR24</b>	<b>BHAR36</b>
Panel I: Successful sample			
Diff (G)-(C)			
Mean	0.0394**	0.0580**	0.0897**
Median	0.0652***	0.1147***	0.1930***
Panel J: Failed sample			
Diff (H)-(D)			
Mean	0.0819	0.1283*	0.2346**
Median	0.0954**	0.1888**	0.2732***

**Table 4.6 - OLS Regression of Acquirer Long-Run Stock Performance**

This table reports OLS regressions of acquirer's long-run stock performance. BHAR36 is the dependent variable in all models, which is acquirer's buy-and-hold abnormal return from size-adjusted model in the 36-month event window following the mega-deal announcement. *Experience* is the sum of acquisition completed before the mega-deal of our interest. *High Experience Dummy* takes the value of 1 if the mega-deals is carried by acquirers with a high level of experience, i.e. more than 12 completed acquisitions, and 0 otherwise. Models (1) and (2) include the sample of successful mega-deals. Models (3) and (4) examine the sample of failed mega-deals. All models include industry and year fixed effects. Detailed variable definitions are shown in the Appendix B. All continuous variables are winsorized at the 1% and 99% levels. We report *p*-value in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

BHAR36	Successful Sample		Failed Sample	
	(1)	(2)	(3)	(4)
Experience	0.0044** (0.037)		0.0081 (0.167)	
High Experience Dummy		0.1513** (0.036)		0.1523 (0.103)
A_LNMV	-0.0242 (0.173)	-0.0297 (0.131)	-0.0246 (0.559)	-0.0069 (0.839)
A_M2B	-0.0006 (0.270)	-0.0006 (0.298)	0.0001 (0.914)	0 (0.981)
A_CF2TA	1.5554** (0.026)	1.5609* (0.058)	1.3392** (0.040)	1.2767** (0.030)
A_Leverage	-0.0412 (0.653)	-0.0528 (0.553)	0.0127 (0.950)	0.0166 (0.909)
RTV	0.0508 (0.461)	0.049 (0.533)	-0.0688 (0.147)	-0.0521 (0.233)
Public	0.0066 (0.876)	0.0017 (0.970)	-0.0641 (0.640)	-0.1057 (0.358)
Competing Bid	-0.02 (0.845)	-0.0162 (0.875)	0.0426 (0.650)	0.0746 (0.433)
STOCK	-0.1964*** (0.002)	-0.1902*** (0.009)	-0.3392*** (0.003)	-0.2880*** (0.005)
Diversification	-0.0338 (0.296)	-0.0342 (0.345)	0.1294 (0.228)	0.1284 (0.152)
Tender	-0.0277 (0.694)	-0.0269 (0.704)	-0.1409 (0.357)	-0.1239 (0.410)
Hostile	0.0775 (0.659)	0.072 (0.651)	-0.1184 (0.223)	-0.0897 (0.391)
Market Valuation	-0.0740*** (0.005)	-0.0718*** (0.006)	-0.0324 (0.625)	-0.013 (0.796)
Constant	-0.0082 (0.998)	1.5331 (0.673)	-15.1504 (0.246)	-14.8275 (0.151)
Year effect	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes

N	2032	2032	313	313
Adjusted R-Square	0.029	0.031	0.037	0.059

**Table 4.7 - Operating Performance Analysis**

This table reports acquirer's median industry-adjusted return on assets (*ROA*) from -3 to +3 years relative to the mega-deal announcement. *ROA* is calculated as the ratio of net income to total assets. Industry-adjusted *ROA* is calculated by subtracting the median *ROA* of the corresponding industry from the firm *ROA*. The sample is divided based on the level of acquisition experience and whether the deal is completed. The Wilcoxon test is used to test for statistical significance. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

Industry-adjusted ROA Year relative to merger		Firm experience		
		Low (1)	Moderate (2)	High (3)
<b>Panel A: Successful Sample</b>				
-3	Median	2.22%	4.14%	7.69%
	N	680	919	589
-2	Median	2.73%	4.23%	7.86%
	N	680	921	589
-1	Median	3.35%	4.87%	8.05%
	N	679	920	589
1	Median	2.67%	3.84%	7.82%
	N	660	908	586
2	Median	2.55%	4.06%	7.79%
	N	664	835	586
3	Median	2.79%	3.54%	7.49%
	N	664	756	586
Pre-merger 3 years median		2.97%	4.63%	7.68%
Post-merger 3 years median		2.81%	4.02%	7.58%
Difference [-3, +3]		-0.15% **	-0.62% **	-0.10%
<b>Panel B: Failed Sample</b>				
-3	Median	2.29%	3.99%	4.43%
	N	142	132	77
-2	Median	3.43%	3.80%	3.92%
	N	142	133	77
-1	Median	2.89%	3.75%	4.41%
	N	142	133	77
1	Median	3.04%	3.81%	4.75%
	N	130	127	76
2	Median	2.92%	3.00%	5.36%
	N	131	119	76
3	Median	2.34%	3.00%	5.17%
	N	131	110	76
Pre-merger 3 years median		3.44%	3.81%	4.41%
Post-merger 3 years median		2.81%	2.87%	5.58%
Difference [-3, +3]		-0.63%	-0.94%	1.17% *

**Table 4.8 - OLS Regression of Acquirer Long-Run Operating Performance**

This table reports OLS regressions of acquirer's long-run operating performance. The changes in industry-adjusted *ROA* is the dependent variable in all models, which is the difference between the pre-merger and post-merger 3-year median industry-adjusted *ROA*. *Experience* is the sum of acquisition completed before the mega-deal of our interest. *High Experience Dummy* takes the value of 1 if the mega-deals is carried by acquirers with a high level of experience, i.e. more than 12 completed acquisitions, and 0 otherwise. Models (1) and (2) include the sample of successful mega-deals. Models (3) and (4) examine the sample of failed mega-deals. All models include industry and year fixed effects. Detailed variable definitions are shown in the Appendix B. All continuous variables are winsorized at the 1% and 99% levels. We report *p*-value in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

$\Delta ROA$	Successful Sample		Failed Sample	
	(1)	(2)	(3)	(4)
Experience	0.0014** (0.037)		0.0002 (0.898)	
High Experience Dummy		0.0261** (0.025)		0.0076 (0.751)
A_LNMV	-0.0052 (0.226)	-0.0047 (0.261)	0.0134* (0.083)	0.0131* (0.088)
A_M2B	-0.0001 (0.294)	-0.0001 (0.305)	-0.0002 (0.256)	-0.0002 (0.260)
A_CF2TA	0.1274** (0.031)	0.1350** (0.022)	0.0583 (0.576)	0.0592 (0.570)
A_Leverage	0.0683*** (0.001)	0.0651*** (0.002)	0.0366 (0.359)	0.0367 (0.357)
RTV	-0.0166 (0.280)	-0.0142 (0.354)	-0.0168 (0.493)	-0.0164 (0.502)
Public	0.0098 (0.332)	0.0087 (0.390)	-0.018 (0.528)	-0.019 (0.509)
Competing Bid	-0.0079 (0.739)	-0.0086 (0.717)	0.0036 (0.873)	0.0041 (0.858)
STOCK	-0.0798*** (0.000)	-0.0769*** (0.000)	0.0034 (0.891)	0.0039 (0.875)
Diversification	-0.0058 (0.560)	-0.0046 (0.641)	-0.0308 (0.148)	-0.0307 (0.145)
Tender	0.004 (0.763)	0.0039 (0.770)	0.0023 (0.935)	0.0026 (0.927)
Hostile	0.0059 (0.862)	0.0044 (0.898)	0.0447** (0.044)	0.0451** (0.042)
Constant	0.3402 (0.753)	0.8297 (0.456)	1.0805 (0.617)	1.1676 (0.592)
Year effect	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes
N	1909	1909	307	307
Adjusted R-Square	0.031	0.031	0.010	0.010

**Table 4.9 - IV Regression of Short-Run Stock Performance**

This table reports 2SLS regression of acquirer's short-run stock performance. Models (1) and (2) test the relationship between *Experience* and *ACAR3*. Models (3) and (4) test the relationship between *High Experience Dummy* and *ACAR3*. The instrumental variables are *Urban* and *Age*. *Urban* is a dummy variable that equals 1 if the acquiring firm is headquartered in the 10 largest metropolitan statistical areas on the US government list, and 0 otherwise. *Age* is measured by the duration between the earliest year of the acquirer listed in Compustat and the year of the acquirers announcing mega-deals. All models include industry and year fixed effects. Detailed variable definitions are shown in the Appendix B. All continuous variables are winsorized at the 1% and 99% levels. We report p-value in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

Full Sample	First-stage regression	Second-stage regression	First-stage regression	Second-stage regression
	Experience (1)	ACAR3 (2)	High Experience Dummy (3)	ACAR3 (4)
Predicted Experience		0.0053** (0.038)		
Predicted High Experience Dummy				0.0838** (0.030)
Instrumental variables:				
Urban	1.0015** (0.017)		0.0420* (0.090)	
Age	0.0501*** (0.000)		0.0035*** (0.000)	
A_LNMV	3.0629*** (0.000)	-0.0226*** (0.008)	0.1134*** (0.000)	-0.0159*** (0.002)
A_M2B	-0.0106* (0.055)	0 (0.755)	-0.0002 (0.503)	-0.0001 (0.396)
A_CF2TA	-2.5991 (0.212)	0.0651** (0.027)	-0.1299 (0.291)	0.0627** (0.028)
A_Leverage	0.484 (0.383)	0.0091 (0.237)	0.007 (0.830)	0.0109 (0.138)
RTV	1.1539*** (0.000)	-0.0119*** (0.009)	0.0415*** (0.008)	-0.0092** (0.015)
Public	-1.0539** (0.028)	-0.0178*** (0.002)	-0.0228 (0.420)	-0.0219*** (0.000)
Competing Bid	-0.037 (0.953)	-0.0142* (0.094)	-0.0449 (0.226)	-0.0107 (0.207)
STOCK	-0.3238 (0.484)	-0.0384*** (0.000)	-0.0167 (0.541)	-0.0384*** (0.000)
Diversification	2.0647*** (0.000)	-0.0214*** (0.003)	0.0431** (0.034)	-0.0142*** (0.004)
Tender	0.1477	0.0049	0.0026	0.0054

	(0.723)	(0.383)	(0.917)	(0.326)
Hostile	0.0955	-0.0026	0.0055	-0.0026
	(0.888)	(0.779)	(0.892)	(0.776)
Market Valuation	-0.0044	-0.0058**	-0.0217*	-0.0041
	(0.984)	(0.048)	(0.092)	(0.171)
Run-up	-2.0824***	-0.0339***	-0.0421	-0.0412***
	(0.006)	(0.006)	(0.351)	(0.000)
Constant	-319.2938***	0.9036	-21.3379***	1.0004
	(0.000)	(0.329)	(0.000)	(0.282)
Year effect	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes
N	1,899	1,899	1,899	1,899
<i>p</i> -value for Wu-Hausman's test	0.0229		0.0302	
Cragg-Donald Wald <i>F</i> -statistic	13.99		16.72	
<i>p</i> -value for Sargan's test	0.6393		0.9131	

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**Table 4.10 - Threshold Regression of Short-Run Stock Performance**

This table reports threshold model of acquirer's short-term performance. *ACAR3* is the dependent variable in models of Panel A, which is acquirer's cumulative abnormal return over 3-day event window surrounding the announcement date. *Experience* is the sum of acquisition completed before the mega-deal of our interest. Two regimes are defined by threshold model: inexperienced acquirer ( $Experience \leq 4$ ) and experienced acquirer ( $Experience > 4$ ), of which the results are presented in Model (1) and (2), respectively. All models include industry and year fixed effects. Detailed variable definitions are shown in the Appendix B. All continuous variables are winsorized at the 1% and 99% levels. We report *t*-statistics in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

ACAR3	Regime1: Experience $\leq$ 4 (1)	Regime 2: Experience $>$ 4 (2)
Experience	-0.0007 (-0.45)	0.0005** (2.37)
A_LNMV	-0.0032 (-1.59)	-0.0061*** (-4.15)
A_M2B	-0.0003 (-0.37)	0.0005 (0.80)
A_CF2TA	0.0630** (2.01)	-0.0002 (-0.01)
A_Leverage	0.0101** (2.41)	0.0096 (1.24)
RTV	-0.0003 (-0.09)	-0.0098** (-2.37)
Public	-0.0135** (-2.33)	-0.0118*** (-2.48)
Competing Bid	-0.0046 (-0.57)	-0.0205*** (-2.85)
STOCK	-0.0385*** (-5.42)	-0.0227*** (-4.01)
Diversification	-0.0192*** (-3.91)	-0.0054 (-1.48)
Tender	0.0115** (1.99)	-0.0027 (-0.57)
Hostile	-0.0074 (-0.80)	-0.0052 (-0.72)
Market Valuation	-0.0065** (-2.01)	-0.0031 (-1.38)
Run-up	-0.0257** (-2.25)	-0.0214** (-2.27)
Constant	0.0439** (2.40)	0.0660*** (4.49)
Year effect	Yes	Yes
Industry effect	Yes	Yes
N	1,074	1,358
R-Square	0.086	0.068

**Table 4.11 – Descriptive Statistics for Mega Mergers and Non-Mega Merger**

This table reports the summary statistics of 3,544 mega mergers and 48,988 non-mega mergers. Mega deals are M&A transactions with the deal value of at least \$500 million in 2016 dollar terms. Non-mega deals are M&A transactions with the deal value between \$1 million and \$500 million in 2016 dollar terms. All variables are defined in Appendix B. The t-test is used to test for statistical significance of means. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

		<b>Mega Merger</b>	<b>Non-mega Merger</b>	<b>Difference</b>
		<b>(1)</b>	<b>(2)</b>	<b>(1)-(2)</b>
<b>Deal characteristics</b>				
Deal value (\$mil)	Mean	3465.62	66.79	3398.83***
	N	3,544	48,988	
Relative size	Mean	0.74	0.19	0.55***
	N	3,911	45,487	
All stock %	Mean	18.43%	0.15	0.04***
	N	3,544	48,988	
All cash %	Mean	43.40%	58.13%	-0.14***
	N	3,544	48,988	
Competition %	Mean	7.25%	1.31%	0.06***
	N	3,544	48,988	
Public %	Mean	67.61%	52.78%	0.15***
	N	3,544	48,988	
Completion	Mean	56.31%	64.12%	-0.08***
	N	3,544	47,600	
Hostile %	Mean	5.56%	1.14%	0.05***
	N	3,544	48,988	
Diversified %	Mean	30.70%	27.09%	0.04***
	N	3,544	48,988	
Time to completion	Mean	163.30	92.82	70.48***
	N	3,042	30,507	
Tender %	Mean	16.62%	4.03%	0.12***
	N	3,544	48,988	

# **CHAPTER FIVE: THE ROLE OF TARGET CEOs' ACQUISITION EXPERIENCE IN M&A NEGOTIATION OUTCOMES**

This chapter examines whether target CEOs' acquisition experience has an influence on M&A negotiation outcomes. We find that acquirers tend to pay lower bid premiums to target firms with more experienced CEOs. In addition, target shareholders earn lower abnormal announcement returns when their CEOs have more experience in acquisition negotiation and management. Moreover, our results show a positive relationship between stock payments and target CEOs' acquisition experience. Our evidence suggests that more experienced target CEOs tend to bargain for more personal benefits related to the voting influence in the combined firm instead of negotiating better terms on behalf of their shareholders.

## 5.1 Introduction

The Chief Executive Officers (CEOs) of target firms play one of the most critical roles in the process of negotiations in mergers and acquisitions (M&As). As the top managers, target CEOs actively engage in a series of informal and formal merger discussions with the potential buyer that leads up to a takeover bid.<sup>18</sup> With more exposure to acquisitions, their negotiation ability should be able to improve with experience and results in a better negotiation outcome (Mohite, 2017; Thompson, 1990). While prior research has examined the role of CEO's acquisition experience playing in merger transactions (Field and Mkrtchyan (2017)), most has focused on the acquirer's CEO and there is little empirical evidence on the target's CEO. This study is motivated to fill this gap.

In terms of merger talks, it is arguable that target executives face a conflict between private benefits and shareholders' interests during the process of bargaining and negotiation (Hartzell *et al.*, 2004; Jenter and Lewellen, 2015; Qiu *et al.*, 2014; Wulf, 2004). By learning from previous acquisition experience, on the one hand, target CEOs may be more skilful at negotiating and achieving better takeover terms on behalf of their shareholders, such as higher takeover premiums and favourable announcement returns.

On the other hand, with better negotiation skill, experienced target CEOs might become more capable of reaching compromises over their own interest. Previous literature suggests that target directors tend to lose their position following the completion of deal (Harford, 2003), and only a small percentage of directors can be retained in the combined firm (Agrawal and Walkling, 1994; Martin and

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<sup>18</sup> Boone and Mulherin (2007); Graham *et al.* (2013); Hartzell *et al.* (2004); Jenter and Lewellen (2015); Masulis and Simsir (2015)

McConnell, 1991a). With more acquisition experience, therefore, target management may perform better at the bargaining table and conduct a successful negotiation to decrease the risk of losing their job. Unlike CEOs having aligned interest with shareholders, the existing literature suggests that a target CEO with personal incentives may bargain less hard on purchase premium and target shareholder gains in exchange for post-merger retention (Becher *et al.*, 2017; Brewer *et al.*, 2006; Wulf, 2004). Target executives might also put more effort into the negotiation of payment method. The rationale behind is that receiving equity payment can increase a target CEO's voting influence in combined firm and therefore the likelihood of target CEOs continuing in the combined firms (Ghosh and Ruland, 2002).

Given the conflicting predictions in terms of the relationship between target CEOs' acquisition experience and M&A outcomes, this study empirically addresses the following questions: Does target CEOs' previous acquisition experience lead to higher abnormal announcement returns and higher premium for target shareholders? Is there a positive relationship between stock payment and the level of target CEOs' acquisition experience?

This paper employs a sample of 710 US public mergers and acquisitions with the announcement date from 1980 to 2016. Based on organizational learning literature (Haleblian and Finkelstein, 1999; Mohite, 2017; Zollo and Singh, 2004), we collect the data on CEO's employment record from Execucomp and measure target CEOs' acquisition experience with the total number of completed mergers and acquisitions that a target CEO carried out before the deal in our sample. Our analysis first shows that target shareholders with a more experienced CEO receive significant lower bid premiums. With every additional deal increases in the target

CEOs' acquisition experience, the premiums offered by bidders drop by 1.06%. Second, we investigate the valuation effect of target shareholders and find a considerable negative relationship between target firm's abnormal returns around the deal announcement and target CEOs' acquisition experience. The average 3-day abnormal announcement returns to target shareholders who have a CEO with 5 or more completed deals is 11.98%, while it is 14.97% when target CEOs are without any acquisition experience. Third, our evidence shows that the likelihood of acquirers using stock as the payment method significantly increase with target CEOs' acquisition experience. Each merger in the target CEOs' experience is related to around 5% more stock offered in deals with the mix payment and 0.54% higher likelihood to pay with pure stock. Taken as a whole, our findings are supportive of the view that there are interest conflicts existing between firm's CEO and shareholders. The evidence indicates that target CEOs tend to use their acquisition experience for their own purposes and to bargain for better terms that are beneficial to their future career following the deal completion.

Our study contributes to both the organizational learning and M&A literature in several ways. Firstly, it provides evidence consistent with the organizational learning-by-doing context (e.g. Levitt and March (1988) and (March, 1991)). By learning from previous acquisition experience, target CEOs are able to translate experience into specialised knowledge and skills that can bring benefits. Secondly, our paper provides contribution to the literature by introducing target CEOs' acquisition experience to the existing framework of CEO's private incentives in mergers and acquisitions (Brewer *et al.*, 2006; Hartzell *et al.*, 2004; Moeller *et al.*, 2005; Wulf, 2004). The findings show that target CEOs' conflict of interest can become more severe when they have more experience in acquisition. This has

significant implications for target shareholders that more external monitoring may be required in the process of negotiation involving experienced target CEOs. Thirdly, this paper contributes to the existing evidence on the effect of CEO's previous acquisition experience on M&A negotiation outcomes. With the exception of Mohite (2017), studies have mainly investigated the relationship between acquirer's acquisition experience and M&A performance, and have focused on firm's experience rather than CEO's. Our paper adds to this line of literature by examining how target CEOs' experiential learning influence takeover premium, abnormal gains to target shareholders, and payment methods. To our knowledge, this is the first study introducing acquisition experience to the analysis of the means of payment in takeover literature. Most of the research tries to explain the choice of payment from the view of bidders, while our paper shows that target CEOs also play a critical role in acquirers' payment decision.

The rest of paper is structured as follows. Section 5.2 reviews related literature. Section 5.3 shows the development of hypotheses. Section 5.4 provides details about our sample. In section 5.5, we present the empirical results of our analysis on deal completion, target shareholders gains, takeover premium, and target CEO retention. Finally, we conclude in Section 5.6.

## **5.2 Literature Review**

### **5.2.1 Target CEOs Turnover Following M&A**

It is suggested that target CEOs tend to lose their job following acquisitions. Agrawal and Walkling (1994) examine large firms that are listed on the Forbes magazine during the period of 1980-1986 and defines unemployed CEO as the loss of the CEO position and the lack of senior executive position in any public

company after a successful acquisition. Their findings show that 55% target CEOs are replaced and unable to find a senior executive position at another publicly listed firm, which is similar to the evidence in Martin and McConnell (1991b) who investigates successful tender offers. By dividing the full sample into successful and unsuccessful deals, Agrawal and Walkling (1994) show that the unemployment rates are 65% and 44%, respectively, which suggests that target CEOs of successful mergers are subject to higher risk of unemployment. Mikkelsen and Partch (1997) investigate the influence of merger on CEO turnover by comparing the more active and the less active M&A market. They include a sample of US deals between 1989 and 1993 and document that the CEO turnover rate is 5% higher in the active market than in the inactive market. Similar evidence is also found by Hadlock *et al.* (1999) who identify a turnover rate of 53.6% for target CEOs during the two years following the acquisition. Harford (2003) includes a sample of 1,091 target executives from boards of Fortune 1000 firms from 1988 to 1991 and suggests that only 27% of target CEOs are retained on the board of combined firms subsequent the merger completion. Hartzell *et al.* (2004) examine a sample of 311 mergers in the US market that are completed during the period of 1995-1997. Their findings show that over 50% of target executives are retained and given a position either in the firm or board. Similarly, Wulf and Singh (2011) document a retention rate of 50% for target CEOs during the first year subsequent to merger completion, but the number drops to 22% when the time frame extends to the second year.

### **5.2.2 The Side Payment Received by Target CEOs**

Besides change-of-control benefits (or golden parachute) that is included in the CEO's employment contract before the takeover, target CEOs are likely to

bargain for a personal side payment during the negotiation process with the bidding firm (Broughman, 2017). There are four types of the side payments examined in previous literature. First, the amount of golden parachutes might be increased at the time of deal approval. Hartzell *et al.* (2004) include a sample of 311 US mergers during the period from 1995 to 1997 and document that 12% of target executives are subject to an increased amount of golden parachute, with an average value of \$394,000. Second, Hartzell *et al.* (2004) also document that around 27% of target CEOs receive additional payment for signing consulting agreements or non-competition agreements or for giving up certain contract rights, with a mean increased wealth of \$1.2 million. Third, Fich *et al.* (2011) document that there are unscheduled stock options given to target CEOs by target shareholders during the negotiation of mergers. With 196 US acquisitions with the option granting targets between 1999 and 2006, they report that 13% of target executives are granted unscheduled options with an average values of \$455,000. The last type of side payment is the opportunity of staying in the combined firm or joining the board of directors, which is related to a target CEO's future career.

### **5.2.3 Target CEOs and M&A Negotiation**

Studies have developed two conflicting hypotheses and have shown that target CEOs with different incentives could exert different influence on the outcomes of M&A negotiation and therefore on the shareholder value. The first is the incentive alignment hypothesis suggesting that the interests of target CEOs and target shareholders can be aligned by the additional benefits and therefore target executives will achieve better offers for their shareholders. Alternatively, the rent extraction hypothesis argues that the additional payment or career opportunity

benefits target CEOs but not necessarily shareholders, as target CEOs with personal incentives might bargain for more personal benefits related to their power or compensation at the cost of shareholder interest.

There is significant evidence to support the rent extraction hypothesis instead of the incentive alignment. For example, Hartzell *et al.* (2004) include a sample of 311 US acquisitions between 1995 and 1997 and investigate the effect of target executive personal benefits on bid premium received by target shareholders. By constructing seven dummy variables indicating if target CEOs receive additional benefits during the M&A negotiation, e.g. augmented golden parachute, merger bonus, executive position, and board seat, their findings show significant negative relationship between all dummy variables and target shareholder stock premium. Wulf (2004) focuses on a sample of 53 ‘mergers of equals’ (MOEs) and documents that target executives give up higher takeover premium in exchange for post-acquisition control rights.

However, Fich *et al.* (2016) include a sample of 355 mergers over a period from 1999 and 2008 and document insignificant relationship between target executive retention and takeover premium. Barger *et al.* (2017) examine the impact of target CEO retention in 252 private equity acquisitions during 1994-2009 in the US market. Their results show that target premiums are 10% to 18% higher if target CEOs are retained in the combined firms and the effect is significant.

#### **5.2.4 CEOs Acquisition Experience**

Both practical and academic evidence suggests that CEO’s previous experience of participating in acquisitions is valuable. For example, the president of Asura Development Group, Inc. gave a speech regarding the appointment of a director:

*'we are pleased to have Masazumi Ishii join the board of directors. He brings extensive experience in mergers and acquisitions...'*. Harford and Schonlau (2013) document that previous acquisition experience and skills are highly considered and valued in the labour market for firm directors. To measure CEOs acquisition experience, they use data from Execucomp and IRRC/Riskmetric to identify a CEO's start and end date at a firm and then match the career information with acquisition data from Thomson Reuters' SDC database between 1996 and 2009. By including a sample of CEOs and directors with acquisition experience, they find a positive relationship between CEOs acquisition experience and the number of board seats gained in the future, which is consistent with the Gain Experience hypothesis suggesting that CEOs can learn from the experience. Their results also show that firms hiring experienced CEOs tend to conduct mergers soon thereafter, indicating that experienced directors are recruited for their expertise. Following Harford and Schonlau (2013), Field and Mkrtchyan (2017) examine the relationship between board acquisition experience and merger performance and find supportive evidence that acquisition experience is valuable. The evidence shows an increase of 0.53% announcement returns earned by acquirer shareholders is related to one standard deviation increased in acquisition experience.

### **5.3 Hypothesis Development**

Organizational learning literature suggests that skills and abilities can be developed and improved from past experience and lead to more favourable results (Arrow, 1962; Henderson, 1968; Lucas, 1988). Studies applying the idea of learning-by-doing in the context of M&A document that acquisition experience is

highly valued in the CEO job market (Harford and Schonlau, 2013), and that acquirers with more acquisition experience would be better at communicating with shareholders and target firms and implementing the strategy of deal announcement (Barkema and Schijven, 2008; Dikova *et al.*, 2010b; Levitt and March, 1988). Nevertheless, there is little empirical evidence on the role of acquisition experience from target party playing in mergers and acquisitions. With more experience involved in merger transactions, target CEOs should also be able to develop better negotiation skills and greater bargaining power, which enables them to get a stronger position in negotiation and achieve favourable merger terms (Song and Walkling, 1993).

In terms of deal negotiation outcomes, however, the existing literature largely suggests that target executives are subject to agency problems and might act in favour of themselves instead of their shareholders during the process of negotiation with the potential acquirer. This is because there could be a large career costs incurred to target CEOs following the acquisition completion. Previous research, for example, Agrawal and Walkling (1994), Hartzell *et al.* (2004), Hadlock *et al.* (1999), Harford (2003), Martin and McConnell (1991a), Walkling and Long (1984), and Wulf and Singh (2011), finds that target CEOs tend to have high turnover rates during or following a deal completion, and that most departing CEOs subsequently have a poor career prospects and are difficult to find a new position comparable to their old one.

Target CEOs with different incentives can result in two competing outcomes. Target executives whose incentives are aligned with their shareholders would negotiate aggressively to drive up takeover premium and transfer more gains available from the transaction to target shareholders. Alternatively, target CEOs

with private incentives are more likely to trade personal benefits for lower premium and less wealth transfer, which is at the expense of target shareholders. Prior studies show that target shareholders receive smaller takeover premiums and lower announcement returns when target CEOs are retained by the bidder (Becher *et al.*, 2017; Brewer *et al.*, 2006; Wulf, 2004), when they get unusual private benefits related to the deal (Hartzell *et al.*, 2004; Moeller *et al.*, 2005), or when they are offered unscheduled stock options as an extra compensation during private merger talks (Fich *et al.*, 2011).

By combining the organizational learning literature and M&A literature, the influence of target CEOs' acquisition experience on acquisition outcomes can be different based on the different incentives, and therefore suggest competing hypotheses. If experienced target CEOs with superior negotiation skills and knowledge bargain aggressively on behalf of target shareholders, we would predict that:

*H1a: Takeover premiums are higher in deals with more experienced target CEOs.*

*H2a: Announcement abnormal returns to target shareholders are higher in deals with more experienced target CEOs.*

Alternatively, if target CEOs with more acquisition experience extract private benefits from negotiation and bargain on behalf of themselves, we would expect that:

*H1b: Takeover premiums are lower in deals with more experienced target CEOs.*

*H2b: Announcement abnormal returns to target shareholders are lower in deals with more experienced target CEOs.*

In addition to takeover premiums and target shareholder gains, method of payment is another important issue of the negotiation between buyers and sellers. Prior literature, e.g. Ghosh and Ruland (2002), documents that there is a positive relationship between the possibilities of target CEO retention by bidders and an equity payment. By receiving premiums in stock payment, target executives would gain more voting influence in the combined firms following the deal completion. With more experience in merger talks, target executives willing to keep their job should be better at encouraging equity offer instead of cash offer. Therefore, our third hypothesis is that:

*H3: The likelihood of equity payment is higher in deals with more experienced target CEOs.*

## **5.4 Data and Methodology**

### **5.4.1 Sample Selection Criteria**

Our sample consists of US mergers and acquisitions with the announcement date between January 1980 and December 2016, which is obtained from Thomson One's M&A database. The following criteria is applied to sample selection, which is common in the previous studies: (1) both acquirers and targets are publicly traded companies; (2) less than 10% of the target firm's outstanding shares are owned by bidders before the deal announcement date and more than 50% are acquired following the deal completion; (3) both acquirers and targets are required to have share price data available from the Centre for Research in Security Prices (CRSP) and accounting information from the Compustat; (4) the value of merger transaction is at least \$1 million; (5) the deal status is completed; (6) target CEOs

are required to have employment history information available in Execucomp. These restrictions yield a final sample of 710 M&A deals.

#### **5.4.2 The Measurement of Target CEOs' Acquisition Experience**

The main interest of this study is target CEOs' previous experience related to mergers and acquisitions. To construct this variable, we collect the record of CEO employment history from Execucomp. Then we match this sample of CEOs with the sample of mergers and acquisitions. Prior literature provides various definitions of acquisition experience. For example, Halebian and Finkelstein (1999) measure firms' acquisition experience by the number of deals carried out before with the deal value more than \$10 million. Zollo and Singh (2004) identify acquisition experience as the total number of deals completed by acquirers. Mohite (2017) employs the number of acquisitions made by firms during the last five years before the merger of interest. This study follows Zollo and Singh (2004) and use the total number of M&A transactions that a target CEO worked on in the past as the measurement of acquisition experience.<sup>19</sup>

#### **5.4.3 Descriptive and Summary Statistics**

*[Insert Table 5.1 Approximately Here]*

The descriptive statistics of target CEOs' M&A experience are presented in Panel A of Table 5.1. Across the 710 completed public deals, 26.90% (191) transactions have a target CEO without prior acquisition experience, and 73.10% (519) deals have a target CEO involving in acquisitions at least once before. The mean

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<sup>19</sup> Our empirical results are robust when we measure acquisition experience as the number of M&A deals undertaken by a target CEO during the last five years before the merger of our interest.

(median) number of previous deals is 2.96 (2) for the full sample is 2.96 (2) and 4.05 (3) for the sample with target CEOs having acquisition experience is 4.05 (3).

Summary statistics for the full sample and for three subsamples of deals with different levels of target CEOs' takeover experience are shown in Panel B of Table 5.1. The Appendix C lists the definition for all variables employed in this study. To limit the influence of extreme value and outliers on the analysis, we winsorized all continuous variables at the top and bottom one percent. For subsamples, we use the top quantile (75%) of acquisition experience to represent the high-level of experience. Target CEOs with acquisition experience between 25% and 75% are grouped into the sample of mid-level experience. Samples in the bottom quantile (25%) are target CEOs with no prior M&A experience. Within our sample, 209 deals include a target CEO with high-level experience that made more than 4 deals in the past, and 191 deals include a target without any acquisition experience. The Student's t-test and the Wilcoxon rank-sum test are respectively conducted to investigate the mean difference and the median difference of deals and firms' characteristics between target CEOs without acquisition experience and with high-level experience.

First it presents the value of transaction, method of payment, purchase premium, deal attitude, and other characteristics related to the M&A deal and expected to have an impact on M&A outcomes. Specifically, deal size significantly increases with target CEO acquisition experience, with the mean (median) *Deal Value* for more experienced and inexperienced target CEOs at \$4,077.34 million (1,164.63) and \$2,371.46 million (376.40), respectively. The average difference settles to around \$1,705 million, which can be attributed to the larger size of both acquirers and target firms in the deals with target CEOs having high-level of acquisition

experience. In addition, 17% of M&A deals with a more experienced target executive are paid with pure stock, which is 5% higher than ones with a target executive having no previous acquisition experience. This evidence is preliminarily consistent with our third hypothesis *H3* and with Ghosh and Ruland (2002), suggesting that target directors would like to receive stock instead of cash as payment if they are willing to gain influence in the combined firm and negotiate better terms for themselves following the deal completion. Moreover, the evidence shows that target CEOs with high-level experience are less likely to have a hostile attitude towards bidders' offer than their counterparts without any acquisition experience. This might be explained by the fact that inexperienced target CEOs lack negotiation skill to gain a new position in the combined firms, and therefore they are more likely to reject the offer in order to keep their current job (Schwert, 2000; Stulz, 1988). We also observe that the takeover premium received by targets with a more experienced CEO is on average 20%, which is remarkably lower than the corresponding value for targets with an inexperienced CEO (28%). This is in line with the hypothesis *H1b* indicating that more experienced target executive might not bargain for higher purchase premiums on behalf of their shareholders.

This study further report descriptive statistics related to acquirers and target firms that are likely to influence M&A outcomes, including firm size, Tobin's q, leverage ratio, and cash flow ratio (Alexandridis *et al.*, 2013; Harford, 1999; Harford *et al.*, 2009; Maloney *et al.*, 1993; Moeller *et al.*, 2004). In addition to the larger firm size mentioned above, it appears that in deals with more experienced target CEOs both acquirers and target firms tend to be overvalued (Jensen, 2005; Moeller *et al.*, 2005), or have higher management efficiency (Lang *et al.*, 1989;

Servaes, 1991) or more growth opportunities (Billett and Qian, 2008). Moreover, the free cash flow ratio is significantly higher for target firms with CEOs having high-level acquisition experience relative to ones with inexperienced CEOs.

## 5.5 Empirical Analysis

This section investigates the relationship between target CEOs' previous acquisition experience and M&A outcomes, including takeover premium, announcement abnormal returns to target shareholders, and the method of payment.

### 5.5.1 Does Target CEOs' Prior Acquisition Experience Have an Influence on Deal Premium?

We begin by examining the relationship between target CEOs' acquisition experience and deal premium. Takeover premium is arguably one of the most critical issues during the process of negotiating M&A agreements between bidders and targets. To test the conflicting predictions *H1a* and *H1b*, we conduct a multivariate analysis to control for other documented determinants of deal premium. The ordinary least squares (OLS) regression is as follows:

$$\begin{aligned} \textit{Takeover Premium}_i & \\ &= \alpha_0 + \alpha_1 \textit{Experience}_i + \alpha_2 \textit{Firm}_i + \alpha_3 \textit{Deal}_i + f_y + f_{\textit{industry}} \\ &+ \varepsilon_i \end{aligned}$$

where *Takeover Premium<sub>i</sub>* is measured by the price offered by the bidder in transaction *i* divided by the target firm's share price four weeks prior to the deal announcement minus one; *Experience<sub>i</sub>* is the key independent variable which represents target CEOs acquisition experience and is defined in the above section;

$Firm_i$  is a set of control variables related to acquirers and target firms; and  $Deal_i$  is a set of deal-related control variables. To consider the potential biases result from year- and industry-clustering of M&A activities, we also control for year fixed effect  $f_y$  and Fama-French 12 industry fixed effect  $f_{industry}$ . Deal premium is expressed as follows:

*Takeover Premium*

$$= \frac{\text{offer price} - \text{target stock price 4 weeks before announcement}}{\text{target stock price 4 weeks before announcement}}$$

*[Insert Table 5.2 Approximately Here]*

Table 5.2 displays estimates from OLS regression described in the above equation. We include only target CEOs' acquisition experience and fixed effects in specification (1), and additionally control for deal characteristics and firm characteristics in specifications (2) and (3), respectively. In line with our previous univariate evidence, we find that the estimated effect of *Experience* is negative and considerably different from zero across all the specifications. This suggests that target firms tend to receive a lower premium when their CEOs have more experience in mergers and acquisitions, which is consistent with the hypothesis (*H1b*). In specification (1), the evidence indicates that every additional deal in target CEOs' prior acquisition experience is related to a 1.19% lower deal premium paid to the target shareholders. The magnitude of the coefficients on *Experience* remain similar after we add deal- and firm-related control variables, with -1.30% in specification (2) and -1.06% in specification (3). Taking the evidence in specification (3) as an example, the -1.06% would translate into \$38.45 million decline in dollar value of takeover premium received by target shareholders if we consider the average size of target firms (\$3,626.95 million).

By accounting for other control variables, this model performs better and the R-squared increases from 0.040 in specification (1) to 0.274 in specification (3). Consistent with Schwert (2000) and Bates and Becher (2017), we find a significant positive relationship between offer premium and the hostile offer indicator (*Hostile*), suggesting that bid resistance is employed to bargain for a better term. In addition, our evidence shows that bid premium is more likely to be higher in tender offers and the coefficient on Tender is statistically significant at the 1% level, which is supportive of Huang and Walking (1987) and Fich *et al.* (2016). Moreover, we find that higher bid premium tend to be paid in diversified deals, which is inconsistent with Officer (2003). This might be explained by considering the fact that bidders face greater difficulty valuing target firms in other industries (Fee and Thomas, 2004), and this results in a higher premium in inter-industry deals. Furthermore, the results show that using pure stock as the method of payment in mergers and acquisitions is associated with 10.18% higher premiums. This evidence is consistent with Alexandridis *et al.* (2013) who suggest that there is little tax compensation effect related to stock payment, and cash payment could lead to a premium discount. Lastly, the coefficient associated with *Relative Size* is positive and significant at 1%, indicating that bid premiums tend to be higher as the relative size of deal value to acquirer market value increases.

In terms of firm-related control variables, our results suggest that acquirers with larger firm size are more likely to offer a higher premium to target shareholders, which is supportive of Moeller *et al.* (2004) and Alexandridis *et al.* (2013) suggesting that larger bidders tend to overpay. However, there is an inverse relationship between target size and takeover premium, which is consistent with

Schwert (2000), Alexandridis *et al.* (2013) and Mohite (2017). The lower premium received by the larger target might be explained by the greater complexity and the higher uncertainty in regard to deal synergies. As larger target firms tend to hire CEOs with high-level acquisition experience, this evidence also supports our hypothesis *H1b*. In line with Lang *et al.* (1989), Lang *et al.* (1991) and Gondhalekar *et al.* (2004) who test Jensen (1986) free cash flow theory, our evidence further shows that bid premiums significantly increase with acquirer's free cash flows (*A\_CF2TA*). This suggests that bidders with a higher level of free cash flow tend to be overconfidence and therefore pay more to target firms. Moreover, the coefficient related to acquirers' Tobin's q (*A\_Tobinq*) is positive and significant, which indicates that overvalued bidders or bidders with more growth opportunities are more likely to offer a higher premium.

### **5.5.2 Does Target CEOs' Prior Acquisition Experience Have an Influence on Target Firms' Acquisition Performance?**

This section examines the relationship between target CEOs' acquisition experience and abnormal announcement returns to target shareholders. We conduct both univariate analysis and multivariate analysis. Overall, our evidence is supportive of the hypothesis *H2b* and shows a decline in target firm's announcement performance as target CEOs have more acquisition experience.

#### **5.5.2.1 Univariate Analysis**

*[Insert Table 5.3 Approximately Here]*

Table 5.3 reports target firms' average cumulative abnormal returns (CARs) around the deal announcement for the full sample and subsamples with different levels of target CEOs' acquisition experience. Target's CARs over the three, five,

and eleven days are presented. We estimate CARs with the market-adjusted return model. The estimation window starts 240 trading days prior to the announcement date and runs to 50 trading days before the deal announcement. We require that there are at least 100 daily returns available over the estimation window, otherwise that the deal should be dropped. Based on the market-adjusted return model, the abnormal return is measured as follows:

$$AR_{it} = R_{it} - R_{mt}$$

where  $AR_{it}$  is the abnormal return for an individual stock  $i$  on time  $t$ ;  $R_{it}$  is the return for stock  $i$  on time  $t$ ; and  $R_{mt}$  is the return for the value-weighted CRSP stock index  $m$  on time  $t$ .

Next, CAR for stock  $i$  is calculated by adding abnormal returns over the event window together, which is expressed as follows:

$$CAR_{i,T_1,T_2} = \sum_{t=T_1}^{T_2} AR_{it}$$

where  $CAR_{i,T_1,T_2}$  is the cumulative abnormal return for an individual stock  $i$  over the event window  $(T_1, T_2)$  and  $AR_{it}$  is the abnormal return for stock  $i$  on time  $t$ .

Our evidence in Table 4 shows that the mean target CARs are positive and statistically significant at the 1% level across the samples, which is consistent with previous studies by Schwert (1996) and Goergen and Renneboog (2004). The target CARs for the full sample are, on average, 14.47%, 14.76%, and 26.01% over the event windows of 3-, 5-, and 11-day, respectively. After partitioning the deals based on target CEOs' prior acquisition experience, the results indicate a negative relationship between the levels of CEO experience and target CARs,

regardless of the event windows employed. Specifically, with a CEO having high-level acquisition experience, target shareholders earn excess abnormal returns of 14.97% over a three-day period, while the corresponding abnormal returns to target shareholders with an inexperienced CEO equal 11.98%. The difference settles at 2.99% and is statistically significant at the 5% level. Similar results are observed for target CARs over five- and eleven-day windows. The evidence of the univariate test affirms the important role of target CEOs' acquisition experience playing in target shareholder gains. Consistent with the hypothesis *H2b*, our results suggest that more experienced target CEOs do not act on behalf of their shareholders during the negotiation with potential buyers.

### 5.5.2.2 Multivariate Analysis

To confirm the results from the univariate analysis, this study further examines the influence of target CEOs' acquisition experience on target shareholder returns by conducting the multivariate analysis. To account for firms and deals characteristics that could drive the results, we perform the OLS regression as follows:

$$TCAR_i = \alpha_0 + \alpha_1 Experience_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

where  $TCAR_i$  is the cumulative abnormal returns for target firm  $i$  over the 3-day event window around deal announcement;  $Experience_i$  is the number of deals carried out by a target CEO; and  $Firm_i$  and  $Deal_i$  are the same set of firms and deals characteristics as mentioned in the analysis of takeover premium. Year and industry fixed effects,  $f_y$  and  $f_{industry}$ , are also considered.

*[Insert Table 5.4 Approximately Here]*

Table 5.4 presents the OLS regression results. Across all the specifications, we observe that the coefficients associated with target CEOs' acquisition experience are negative and significant. Our evidence shows that every additional acquisition of target CEOs leads to a decrease of 0.76% in abnormal announcement returns to target shareholders in specification (1), with only year and industry effects controlled for. After accounting for deal-related determinants in specification (2) and firm-related determinants in specification (3), target shareholders are respectively subject to a 0.65% and 0.43% lower announcement returns with every additional deal in target CEOs' experience. The evidence of multivariate analysis confirms the results of univariate analysis and is supportive of hypothesis *H2b*. This indicates that there is no extraordinary target CARs related to more experienced target CEOs who are expected to have better negotiation skill and bargain for more wealth gain to target shareholder. On the contrary, there are actually smaller returns to target shareholders when they have a CEO with high-level acquisition experience, which might be explained by the fact that more experienced CEOs bargain for private benefits at the cost of target shareholders' interest.

In terms of control variables, our evidence shows that the announcement of hostile takeover and tender offer generate significant and positive abnormal returns to target shareholders, which is consistent with Dodd and Ruback (1977), Bradley *et al.* (1983), Lang *et al.* (1989), and Loughran and Vijh (1997). In addition, the coefficients on *A\_LNMV* and *T\_LNMV* indicate that target shareholder gains increase significantly with acquirer firm size but decrease with target firm size, which is supportive of the evidence in Alexandridis *et al.* (2013).

### 5.5.3 Does Target CEOs' Prior Acquisition Experience Have an Influence on Deal Payment Method?

In this section, we test the hypothesis *H3* by investigating whether target CEOs' acquisition experience can exert influence on the choice of takeover payment methods. Two dependent variables are employed to examine this relation. First, this study uses the fraction of stock offered in the method of payment. As it is a variable with the value between 0 and 1, we follow Papke and Wooldridge (1996) and conduct a Generalized Linear Model (GLM) regression, which is expressed as follows:

$$Stock\%_i = \alpha_0 + \alpha_1 Experience_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} + \varepsilon_i$$

where  $Stock\%_i$  is the percentage of stock received by target firm  $i$ ,  $Experience_i$  measures target CEOs' acquisition experience; and  $Firm_i$  and  $Deal_i$  are defined in the prior section. In addition to the control variables included in previous equations, we also control for the taxation of target shareholder capital gains. Prior literature, e.g. Erickson (1998), suggests a negative relationship between cash payment and the potential capital gains due to the taxation effect. Based on Fuller (2003) and Boone *et al.* (2014), this study calculate the cumulative stock performance for the target firm over the two years before the deal announcement as a proxy for the size of capital gain. The year and industry effects are also considered in the model.

Second, we construct a dummy variable  $Stock$  as the dependent variable and estimate the influence of target CEOs' acquisition experience on the probability of paying with 100% stock. The following probit model is conducted:

$$\begin{aligned}
Pr(Stock_i = 1) & \\
&= \Phi(\alpha_0 + \alpha_1 Experience_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_y + f_{industry} \\
&\quad + \varepsilon_i)
\end{aligned}$$

where *Prob* denotes probability;  $\Phi$  represents the Cumulative Distribution Function of the standard normal distribution; *Stock<sub>i</sub>* equals one if the deal is fully paid by stock and zero otherwise. In terms of the independent variables, we include the same set of explanatory variables as in last equation.

*[Insert Table 5.5 Approximately Here]*

Table 5.5 presents the results of GLM and probit models. The first three specifications regress the fraction of stock offered by bidders on target CEOs' prior acquisition experience, while the last three examine the relationship between pure stock payment and the acquisition experience of target CEOs. In all the models, we find that the coefficients on *Experience* are positive and significant, suggesting that the use of stock payment increases with target CEOs' acquisition experience. Specifically, the estimate in specification (1) indicates that every additional acquisition experience of target CEOs is related to an increase of 6.62% in the proportion of stock used in the total payment. The coefficient on *Experience* slightly decrease to 5.58% in specification (3) after controlling for firm- and deal-related determinants. Specifications (4) – (6) reports the marginal effects and the magnitude of the coefficients, which suggests that every additional deal in target CEOs' prior experience is associated with a 0.54% higher likelihood of acquirers paying with 100% stock. Our evidence is consistent with the hypothesis *H3*, indicating that target CEOs acquisition experience plays an important role in the bidder's payment choice. This might be explained by the fact that more

experienced target CEOs are more capable of negotiating deal terms that could benefit themselves. To increase the possibility of retention, target CEOs would be concerned with their voting influence following deal completion (Ghosh and Ruland, 2002). Consequently, they would be willing to receive bidder's stock as the payment method to gain more influence in the combined firm.

For other determinant variables, we find that a higher level of shareholder capital gains leads bidders to use more stock as the payment method and increases the probability of paying with 100% stock, which is supportive of the tax hypothesis indicating that bidders use stock payment to reduce tax burdens (Erickson, 1998; Huang and Walking, 1987; Ismail and Krause, 2010). Next, our evidence shows that the mode of acquisition plays an important role in the means of payment. The coefficients associated with tender offer are negative and statistically significant at the 1% level in all specifications, which is consistent with Gilson (1986) and Martin (1996) suggesting that cash is the major method of payment in tender offers to preclude target managerial resistance. Moreover, in line with Grullon *et al.* (1997) and Moeller *et al.* (2004), we observe a positive relationship between the use of stock payment and the relative size of deal value to acquirer value. This indicates that it might be difficult to obtain a large amount of cash for a relatively large deal. Furthermore, our results show that both acquirer's and target firm's Tobin's Q are positively related to the use of stock as payment, suggesting that overvalued bidders are more likely to offer stock and bidders are less likely to pay with cash if target firms are overvalued. This is supportive of the asymmetric information hypothesis (Eckbo *et al.*, 1990; Hansen, 1987; Linn and Switzer, 2001; Rhodes-Kropf and Viswanathan, 2004; Shleifer and Vishny, 2003; Travlos, 1987). Lastly, our results show that the coefficient on *A\_CF2TA* is negative and

significant, suggesting that acquirers having less free cash flow available tend to offer stock to target firms.

## **5.6 Conclusion**

Target CEOs play an important role in the negotiation with bidders. During the process of negotiation, however, there might be different negotiation outcomes given the different negotiation incentives and different levels of negotiation skills based on target executives' previous exposures to M&A. This paper investigates the influence of target CEOs' previous acquisition experience on M&A terms, including bid premium, abnormal announcement returns to target shareholders, and method of payment.

Our findings show that there are lower bid premiums received by target shareholders when their firm's CEO has more acquisition experience. In addition, we find that the abnormal announcement returns to target shareholders are also negatively correlated to target CEOs' previous acquisition experience. Moreover, in terms of the method of payment, our paper provides evidence that the likelihood of using stock as payment method increases with the number of deals carried out by target CEOs.

Overall, our results suggest that more experienced target CEOs are less likely to bargain for better terms for target shareholders during the negotiation with the potential buyers, i.e. higher bid premiums and more shareholder gains around deal announcement. Instead, target CEOs with high-level of acquisition experience tend to bargain for more stock payment, which could increase the voting influence in the combined firm and benefit their future career after deal completion. These findings are in line with the view that there are interest conflicts between target

CEO and shareholders (Hartzell *et al.*, 2004; Jenter and Lewellen, 2015; Qiu *et al.*, 2014; Wulf, 2004) and indicate that the conflict could be severe when target CEOs have more acquisition experience.

## APPENDIX C

Variable	Definition
<b>Panel A:</b>	
<b>Dependent Variables</b>	
Bid Premium	We specify the premium as the difference between offer price and the target's stock price 4 weeks before the announcement divided by the target's stock price 4 weeks before the announcement.
TCAR3	Cumulative abnormal return of the target firm in the 3-day event window (-1, +1) surrounded on the announcement day. The expected returns are from a market-adjusted return model with the parameters estimated over 240 trading days ending 50 days before the announcement. As benchmark we use the CRSP value-weighted index.
TCAR5	Cumulative abnormal return of the target firm in the 3-day event window (-2, +2) surrounded on the announcement day. The expected returns are from a market-adjusted return model with the parameters estimated over 240 trading days ending 50 days before the announcement. As benchmark we use the CRSP value-weighted index.
TCAR11	Cumulative abnormal return of the target firm in the 3-day event window (-5, +5) surrounded on the announcement day. The expected returns are from a market-adjusted return model with the parameters estimated over 240 trading days ending 50 days before the announcement. As benchmark we use the CRSP value-weighted index.
Stock%	The fraction of stock in the method of payment offered by the acquiring firm.
All Stock	Dummy variable that equals 1 if the deal is 100% paid by stock.
<b>Panel B:</b>	
<b>Key variable</b>	<b>independent</b>
Experience	The total number of acquisitions that a target CEO carried out before the deal of interest.
<b>Panel C:</b>	
<b>Firm characteristics</b>	
A_LNMV	The logarithm of the acquirer market value measured 4 weeks before the merger announcement. The market

	value is calculated as the number of shares outstanding multiplied by the respective stock price at 4 weeks before the M&A announcement.
A_TobinQ	The ratio of market value by book value of the acquirer's assets.
A_Leverage	The ratio of acquirer's total debt by total capital at the fiscal year end before the M&A announcement.
A_CF2TA	The ratio of acquirer's cash flows by the total assets at the fiscal year end before the M&A announcement.
T_LNMV	The logarithm of the target firm market value measured 4 weeks before the merger announcement. The market value is calculated as the number of shares outstanding multiplied by the respective stock price at 4 weeks before the M&A announcement.
T_TobinQ	The ratio of market value by book value of the target firm's assets.
T_Leverage	The ratio of target firm's total debt by total capital at the fiscal year end before the M&A announcement.
T_CF2TA	The ratio of target firm's total debt by total capital at the fiscal year end before the M&A announcement.

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**Panel D:**

**Deal characteristics**

RTV	The variable was calculated as merger transaction value divided by the acquirer market value of equity 4 weeks before the merger announcement.
All Cash	Dummy variable that equals 1 if the deal is 100% paid by cash.
Hostile	Dummy variable that equals 1 if the deal attitude is identified as hostile.
Competing Bid	Dummy variable that equals 1 if there are more than one bidder.
Tender	Dummy variable that equals 1 if the deal is identified as a tender offer.
Diversification	Dummy variable that equals 1 if the acquirer and the target have the different first two-digit of primary SIC code.
Capital Gain	Following Fuller (2003) and Boone et al. (2014), we measure the size of capital gain with the cumulative stock performance for the target firm over the two years before the deal announcement.

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**Table 5.1 – Descriptive Statistics**

Panel A of this table reports the descriptive statistics of target CEOs' previous acquisition experience for a sample of 710 target CEOs. Following Zollo and Singh (2004), we measure acquisition experience with the total number of deals carried out by a target CEO before the acquisitions in our sample. Panel B of this table presents the descriptive statistics of 710 US public mergers and acquisitions. The sample selection criteria on M&A deals is as follows. First, the deal announcement date is during the period from January 1, 1980 to December 31, 2016. Second, the deal status is completed. Third, both acquirers and target firms are publicly traded companies. Fourth, the acquirer owns less than 10% of target's shares prior to the deal announcement and more than 50% after the deal. Fifth, both acquirers and targets have stock price data available from the Centre for Research in Security Prices (CRSP) and accounting information from the Compustat. Sixth, the deal value is at least \$1 million. Last, target CEOs have employment history data available in Execucomp. We firstly present the mean and median values for the full sample. Next, we sub-divide our sample based on the level of target CEOs' acquisition experience. Specifically, the high-level of acquisition experience represents the top quantile (75%) of the data on the total number of completed deals by target CEOs. Target CEOs with acquisition experience between 25% and 75% of the full sample are grouped into the sample of moderate-level experience. Samples below or equal to the bottom quantile (25%) are target CEOs with low-level of M&A experience. The t-test and Wilcoxon test are used to test for statistical significance of means and medians, respectively. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

<b>Panel A</b>		<b>Full sample</b>			<b>Target CEO with no acquisition experience</b>		<b>Target CEO with acquisition experience</b>					
<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>25%</b>	<b>75%</b>	<b>N</b>	<b>Percentage</b>	<b>N</b>	<b>Percentage</b>	<b>Mean</b>	<b>Median</b>	<b>Min.</b>	<b>Max.</b>
710	2.96	2	0	4	191	26.90%	519	73.10%	4.05	3	1	16

<b>Panel B</b>		<b>Target CEOs' Acquisition Experience</b>					<b>Difference (4)-(2)</b>	
		<b>Full sample (1)</b>	<b>Low (2)</b>	<b>Moderate (3)</b>	<b>High (4)</b>			
<b>Deal characteristics</b>								
Deal Value (\$mil)	mean	2896.48	2371.46	2423.84	4077.34	1705.88	**	
	median	773.04	376.40	802.06	1164.63	788.23	***	
	n	710	191	310	209			
All Cash	mean	0.58	0.57	0.60	0.56	-0.01		
	n	710	191	310	209			
All Stock	mean	0.14	0.12	0.14	0.17	0.05	*	
	n	710	191	310	209			
Competing Bid	mean	0.03	0.04	0.03	0.03	0.00		
	n	710	191	310	209			
Hostile	mean	0.02	0.03	0.03	0.00	-0.03	**	
	n	710	191	310	209			
Diversification	mean	0.22	0.21	0.23	0.21	0.00		
	n	710	191	310	209			
Tender	mean	0.23	0.27	0.24	0.18	-0.09	**	
	n	710	191	310	209			
Bid Premium	mean	0.25	0.28	0.27	0.20	-0.08	**	
	median	0.23	0.26	0.23	0.20	-0.06	**	
	n	655	176	286	193			
<b>Acquirer characteristics</b>								
Market Cap (\$mil)	mean	17780.87	11259.08	20394.60	19864.15	8605.07	**	
	median	3351.00	1889.74	3493.95	4721.96	2832.22	***	
	n	710	191	310	209			
Tobin's Q	mean	3.47	3.33	3.46	3.62	0.29		
	median	2.46	2.43	2.40	2.64	0.21		
	n	710	191	310	209			

FCF-to-asset	mean	0.09	0.08	0.09	0.09	0.01	
	median	0.09	0.09	0.08	0.09	0.00	
	n	710	191	310	209		
Leverage	mean	0.33	0.32	0.33	0.34	0.02	**
	median	0.32	0.31	0.33	0.32	0.02	
	n	710	191	310	209		
<b>Target characteristics</b>							
Market Cap (\$mil)	mean	3626.95	2433.72	3323.73	5167.16	2733.44	***
	median	989.06	669.62	914.49	1694.79	1025.16	***
	n	710	191	310	209		
Tobin's Q	mean	3.02	2.96	3.11	2.94	-0.02	
	median	2.18	1.93	2.16	2.33	0.41	**
	n	710	191	310	209		
FCF-to-asset	mean	0.07	0.05	0.07	0.09	0.04	***
	median	0.08	0.07	0.08	0.09	0.01	***
	n	710	191	310	209		
Leverage	mean	0.31	0.32	0.29	0.32	0.00	
	median	0.30	0.31	0.26	0.34	0.03	
	n	710	191	310	209		

**Table 5.2 - OLS Regressions of Bid Premium**

This table reports results of OLS regressions of bid premium. All models regress deal premium against the key explanatory variable *Experience* that is measured by the total number of acquisitions carried out by a target CEO prior to the deal of interest. Bid premium is computed as the difference between offer price and the target's stock price 4 weeks before the announcement divided by the target's stock price 4 weeks before the announcement, which is expressed as follows:

$$\text{Bid Premium} = \frac{\text{offer price} - \text{target stock price 4 weeks before announcement}}{\text{target stock price 4 weeks before announcement}}$$

Model (1) only includes the key independent variable *Experience*; Models (2) and (3) further control for deal and firm characteristics, respectively. All models include industry and year fixed effects. All variables are defined in Appendix C. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

Bid Premium	Model (1)	Model (2)	Model (3)
Experience	-0.0119*** (-3.09)	-0.0130*** (-3.50)	-0.0106*** (-3.02)
Hostile		0.1657* (1.93)	0.1451* (1.82)
Tender		0.1369*** (4.49)	0.1274*** (4.46)
Diversification		0.1432*** (4.66)	0.0277 (0.87)
All Stock		0.1640*** (4.47)	0.1018*** (2.87)
Competing Bid		0.0594 (0.87)	0.0111 (0.17)
RTV		0.0897*** (3.55)	0.1884*** (7.08)
A_LNMV			0.0804*** (8.07)
A_TobinQ			0.0041* (1.78)
A_Leverage			-0.0211 (-0.34)
A_CF2TA			0.3456** (2.00)
T_LNMV			-0.0927*** (-6.45)
T_TobinQ			-0.0014 (-0.62)
T_Leverage			0.0412 (0.75)
T_CF2TA			-0.4469***

			(-4.04)
Constant	-14.4413***	-12.2269***	-4.4854
	(-3.94)	(-3.41)	(-1.23)
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
N	655	655	655
R <sup>2</sup>	0.040	0.148	0.274
Adjusted R <sup>2</sup>	0.036	0.136	0.255

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**Table 5.3 - Abnormal Announcement Returns to Target Firms**

This table reports target firm’s announcement performance over three event windows on our sample of 710 M&A deals. First, we present the mean values for the full sample. Next, we divide our samples into three subsamples based on the level of target CEOs’ acquisition experience. Specifically, the high-level of acquisition experience represents the top quantile (75%) of the data on the total number of completed deals by target CEOs. Target CEOs with acquisition experience between 25% and 75% of the full sample are grouped into the sample of moderate-level experience. Samples below or equal to the bottom quantile (25%) are target CEOs with low-level of M&A experience. Abnormal returns are calculated using market-adjusted model:

$$AR_{it} = R_{it} - R_{mt}$$

where  $R_{it}$  is the stock return for firm  $i$  on day  $t$ ;  $R_{mt}$  is the stock return for the value-weighted CRSP index on day  $t$ . TCAR3, TCAR5, and TCAR11 respectively represent cumulative abnormal returns (CARs) to target shareholders during the 3-day window, the 5-day window, and the 11-day window surrounding the announcement date. The Student’s t-test is used to test for statistical significance. For brevity, we do not report the t-statistics. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

		Full sample	Target CEOs’ acquisition experience				
			Low (1)	Moderate (2)	High (3)	Difference (3)-(1)	
<b>Target CAR</b>							
Market-adjusted model							
TCAR3	mean	0.1447	0.1497	0.1588	0.1198	-0.0299	**
	n	710	191	310	209		
TCAR5	mean	0.1476	0.1494	0.1621	0.1250	-0.0244	**
	n	710	191	310	209		
TCAR11	mean	0.2601	0.2718	0.2828	0.2168	-0.0550	**
	n	710	191	310	209		

**Table 5.4 - OLS Regressions of Target Firm's Announcement Performance**

This table reports results of OLS regressions of target firm's cumulative abnormal returns (CARs). All models regress the target three-day CAR against the key explanatory variable *Experience* that is measured by the total number of acquisitions carried out by a target CEO prior to the deal of interest. Model (1) only includes the key independent variable *Experience*. Models (2) and (3) further control for deal and firm characteristics, respectively. All models include industry and year fixed effects. All variables are defined in Appendix C. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

<b>TCAR3</b>	<b>Model (1)</b>	<b>Model (2)</b>	<b>Model (3)</b>
Experience	-0.0076*** (-3.74)	-0.0065*** (-3.33)	-0.0043** (-2.40)
Hostile		0.1015** (2.23)	0.0877** (2.14)
Tender		0.0719*** (4.57)	0.0529*** (3.69)
Diversification		0.1039*** (6.54)	0.0259 (1.61)
All Stock		0.0398** (2.10)	0.0072 (0.41)
CompetingBid		0.0069 -0.19	-0.0187 (-0.57)
RTV		-0.0169 (-1.18)	0.0517*** (3.54)
A_LNMV			0.0509*** (10.26)
A_TobinQ			0.0018 (1.49)
A_Leverage			-0.0066 (-0.24)
A_CF2TA			0.1318 (1.59)
T_LNMV			-0.0779*** (-10.97)
T_TobinQ			-0.0052** (-2.16)
T_Leverage			0.0326 (1.08)
T_CF2TA			-0.1244** (-2.30)
Constant	-10.1308*** (-5.45)	-8.8951*** (-4.90)	-6.9866*** (-3.93)
Year fixed effects	Yes	Yes	Yes

Industry fixed effects	Yes	Yes	Yes
R <sup>2</sup>	0.059	0.158	0.327
Adjusted R <sup>2</sup>	0.055	0.147	0.311
N	710	710	710

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**Table 5.5 - GLM Regressions and Probit Models of the Methods of Payment**

This table shows results of GLM regressions of the fraction of stock offered by bidders in models (1) – (3), and shows results of probit models of the full stock payment in models (4) – (6). The key explanatory variable *Experience* is measured by the total number of acquisitions carried out by a target CEO prior to the deal of interest. Models (1) and (4) only include the key independent variable *Experience*. Models (2) and (5) control for deal characteristics. Models (3) and (6) further include firm characteristics. All models consider industry and year fixed effects. All variables are defined in Appendix C. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by \*\*\*, \*\* and \* respectively.

	<b>Stock%</b> <b>(1)</b>	<b>Stock%</b> <b>(2)</b>	<b>Stock%</b> <b>(3)</b>	<b>All Stock</b> <b>(4)</b>	<b>All Stock</b> <b>(5)</b>	<b>All Stock</b> <b>(6)</b>
Experience	0.0662** (2.52)	0.0517* (1.76)	0.0558* (1.72)	0.0075** (2.03)	0.0057* (1.75)	0.0054* (1.86)
Capital Gain		0.1339 (0.97)	0.1702 (1.05)		0.0025 (0.12)	0.0049 (0.28)
Hostile		0.9614 (1.51)	0.9969 (1.50)		0.044 (0.42)	0.0479 (0.50)
Tender		-1.7339*** (-5.15)	-1.9046*** (-5.25)		-0.1387*** (-6.87)	-0.1164*** (-6.51)
Diversification		0.9182*** (4.05)	0.1396 (0.53)		0.0806** (2.31)	-0.0141 (-0.64)
Competing Bid		0.4491 (0.82)	0.0423 (0.07)		-0.0203 (-0.32)	-0.0588** (-2.32)
RTV		0.9057*** (4.50)	1.5530*** (6.17)		0.021 (1.04)	0.0690*** (3.66)
A_LNMV			0.5973*** (6.49)			0.0467*** (5.48)

A_TobinQ			0.0335*			0.0041**
			(1.77)			(2.42)
A_Leverage			-0.3725			-0.0443
			(-0.70)			(-0.91)
A_CF2TA			-3.1613**			-0.4213***
			(-2.27)			(-3.48)
T_LNMV			-0.3975***			-0.0360***
			(-3.81)			(-3.75)
T_TobinQ			0.0682			0.0043
			(1.38)			(1.01)
T_Leverage			0.3805			-0.0261
			(0.96)			(-0.71)
T_CF2TA			0.5177			0.076
			(0.52)			(0.85)
Constant	35.0141	67.2383**	133.1516***			
	(1.44)	(2.44)	(4.10)			
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
r <sup>2</sup> <sub>p</sub>				0.028	0.097	0.196
N	710	655	655	710	655	655

## **CHAPTER SIX: CONCLUSION**

## 6.1 Summary

The primary purpose of this thesis is to provide a comprehensive understanding of M&A outcomes including deal completion, bid premium, method of payment, and deal performance in both short- and long-run. Previous literature has identified a large number of explanatory factors. However, there are many facets remaining puzzling, and the motivation and performance of M&A are still under extensive discussion. This thesis extends the existing research and provides further empirical evidence by focusing on the factors at pre-acquisition planning stage in explaining M&A activities. Specifically, Chapter Three examines whether the disclosure of acquisition intention at pre-acquisition debt/equity issuance has influences on the following merger transaction. Chapter Four and Five investigate whether firms or CEOs can learn from their previous acquisition experience and generate gains from acquisition for their shareholders.

Information disclosure, e.g. earning and synergy forecast, has been suggested to have influence on market reaction and takeover premium (Kimbrough and Louis, 2011; Dutordoir et al. 2014; Amel-Zadeh and Meeks, 2016). However, most studies have focused on the information released around deal announcement. Chapter Three of this thesis focuses on the information voluntarily disclosed at financing activities before M&A. More specifically, Chapter Three investigates the intended ‘use of proceeds’ disclosure in the pre-acquisition debt or equity issuance and its influence on the following acquisition. To capture whether a firm reveals its intention to conduct acquisition at issuance activity, this thesis constructs a dummy variable *Intention* which is equal to one if the ‘use of proceeds’ is for ‘Future Acquisitions’ or ‘Acquisition Financing’, and zero otherwise.

The main findings of Chapter Three suggest that the disclosed acquisition intention is only related to a large issuing size but not to the quality of subsequent acquisition. First, we document that issuers including merger-related purposes in the ‘use of proceeds’ significantly raise more funds after adjusting the proceeds size for the transaction value of subsequent merger. We also control for various variables that have been proven to have impacts on the proceeds value, such as a firm’s funding deficit, credit rating, tax rate, the size and growth opportunity, cash flow ratio, and leverage ratio, and the results still hold. Second, by building a link between this pre-merger information disclosure and the following M&A transaction, our results show that the disclosed acquisition intention has significantly positive effect on the likelihood of deal completion. Acquirers who reveal merger intention at earlier financing activity are 6.94%-11.07% more likely to complete. Third, the disclosed acquisition intention at pre-merger issuance is shown to result in considerably higher bid premium, which could be explained by the fact that acquirers pay higher premium to facilitate deal completion and realize higher synergies.

When examining acquirer’s short- and long-run performance, however, we find that acquirers with revealed acquisition intention significantly underperform their counterparts without such disclosure. Specifically, the disclosure of acquisition intention at pre-acquisition issuance significantly lower acquirer’s announcement and three-year abnormal returns by 0.94% and 8.08%, respectively. Overall, our evidence is supportive of the capital need theory (Diamond and Verrecchi, 1991; Botosan, 1997) and is inconsistent with its competing hypothesis suggesting that voluntary disclosure at issuance activity is used to convey credible information

and signal the efficiency of capital allocation in the future (Walker and Yost, 2008; Autore et al., 2009).

Chapter Three provides contributions to previous studies on the valuation effect of M&A by linking M&A with pre-acquisition issuance activity. The revealed acquisition intention when firms issue debt or equity does not appear to indicate the efficiency of capital allocation, i.e. a value-increasing merger project. In contrast, our evidence shows that the disclosed acquisition intention has significantly positive effect on proceeds size, which has implications for policy makers that there is a need to strengthen the regulation of voluntary disclosure.

Chapter Four and Five investigate the role of acquisition experience playing in M&A management and outcomes. Although consulting firms largely suggest that acquisition experience is valuable during the whole M&A process from planning to integration, empirical findings are mixed. Chapter Four focuses on a sample of M&A valued at least \$500mil and examines the impact of acquirer's acquisition experience on mega-deals outcomes. To measure acquisition experience, we follow Zollo and Singn (2004) and use the number of mergers completed by an acquirer before the deal in our sample.

The main evidence of Chapter Four suggests that mega-deals conducted and managed by more experienced acquirers can be value-increasing investment, which complements the literature documenting the significant value destruction in sizeable deals. First, we find a positive relationship between acquisition experience and the likelihood of mega-deal completion. Our evidence shows that with every additional number in completed acquisition, acquirers are 0.5% more likely to complete mega-deal. After we dividing sample into three groups, i.e.

deals conducted by acquirers with high, moderate, and low level of experience, the results show that the high level of acquisition experience significantly increase the likelihood to complete mega-deals by 5.95%. Second, our findings suggest that there are more favourable reactions to mega-deals announced by more experienced acquirers. In terms of long-run performance, we document that 36-month buy-and-hold abnormal returns are also positively influenced by acquirer's acquisition experience. In addition to stock performance, Chapter Four examines operating performance in the long-run and find that the management of more experienced acquirers leads to a large improvement in a firm's post-acquisition return on assets ratio.

Chapter Four sheds new light on the value destruction in large acquisitions documented in the existing literature. With a high level of complexity and integration difficulty in mega-deals, our evidence suggests that acquirers can learn from the previous experience in acquisition and more experienced acquirers are skilled at mega-deals management and create value for shareholders.

Chapter Five provides further evidence on acquisition experience by focusing on target CEO's acquisition experience. There is little evidence on the learning process of target side in M&A and Chapter Five contributes to the literature by examining whether or not target CEOs with more acquisition experience perform better in M&A negotiation and bargain for better terms for their shareholders. Similar to Chapter Four, we measure a target CEO's acquisition experience by summing the number of deals completed by a CEO during his or her earlier career.

The results of Chapter Five mainly suggest that more experienced target CEOs are better at negotiating with acquirers but they tend to act on behalf of themselves

instead of target shareholders. First, we document that the acquisition experience of target CEOs has significantly negative effect on bid premium. With every additional completed acquisition in a target CEO's previous career, takeover premium received by target shareholders is reduced by 1.06%. Second, the evidence shows that target shareholders with a more experienced CEO earn lower abnormal returns of 2.99% around deal announcement than their counterparts with a less experienced executive. Third, our results show a positive relationship between stock payment and target CEO's acquisition experience, suggesting that acquisition experience also plays a role in deal's method of payment. This could be explained by considering that target CEOs prefer stock payment as they can gain more voting influence in the merger company (Ghosh and Ruland, 2002).

Chapter Five contributes to the organizational learning literature by providing evidence on target CEO's learning process. Previous research mainly focuses on the acquisition experience of acquirer side and there is little evidence on whether target CEOs can learn from experience and exert influence on M&A outcomes. In addition, we contribute to the M&A literature by finding supportive evidence on the conflict of interest existing between target CEOs and target shareholders during M&A negotiation. This provides implications for target shareholders that there is a requirement of more external monitoring on the behaviour of more experienced target CEOs.

## **6.2 Limitations and Future Research**

There are several limitations encountered in this thesis that can be addressed in future research. First, only mergers and acquisitions in the US market are considered in this study and the evidence should be revisited in other markets.

Second, Chapter Three only examines the effect of the disclosed acquisition intention at pre-deal issuance on acquirer's announcement returns. However, the market reaction to issuance announcement could also have an impact on acquirer's announcement performance. The reason behind is that after firms disclosing their intention to conduct merger, information related to a firm's value could be incorporated into stock price and therefore lead to lower market reactions to subsequent acquisition announcement. Third, Chapter Four focuses on a sample of mega-deals, it would be valuable if future research could compare the effect of acquisition experience in non-mega- and mega-deals. Fourth, Chapter Five suggests that target CEOs with more acquisition experience are related to lower premium that destroys shareholder value. However, we do not investigate whether target CEOs actually receive more personal benefits, e.g. board seat or additional payments. Future research should conduct this analysis and could also control for CEO-related characteristics, such as age, gender, and social connection. Last but not least, Chapter Five attributes lower bid premium and lower announcement returns to inexperienced acquirers. However, this could also be explained by considering that target firms are managed poorly by more experienced CEOs due to hubris. Future studies should examine whether target firms with experienced CEOs have poor performance before acquisitions and whether experienced CEOs are overconfident.

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