

Mergers and Acquisitions Deal Initiation and Motivation

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ABSTRACT

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This study examines potential motivations for firms to initiate a merger or acquisition, and investigates the relation between the deal initiator and firm performance, premiums, payment method, and time to completion. Using a sample of U.S. mergers and acquisitions from 2006 – 2012, we find that both target cumulative abnormal returns (CARs) around the announcement date and takeover premiums are significantly lower in target-initiated deals than in bidder-initiated deals (confirming findings of Masulis and Simsir, 2015). Moreover, we find that target-initiated deals utilize more cash as a means of payment (perhaps a byproduct of targets approaching cash-rich bidders), have a shorter time to deal completion, and provide higher long-term buy-and-hold abnormal returns (BHAR) to acquiring firms. Lastly, we show that target firms in target-initiated deals are more financially distressed, providing motivation for such targets to initiate the deal, hurry it along, and accept the lower returns offered.

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1. Introduction

Although an increasing number of studies have been carried out on mergers and acquisitions (M&A), both empirical and theoretical research on the initiation of an M&A deal is very limited. The decision to initiate a deal is an important one for any company. There is an information asymmetry between buyers and sellers on the quality of the target firm, and initiation decisions are signals of this quality. Moreover, initiation decisions affect the bargaining power of both firms. Target firms show a weaker bargaining power when they initiate the deal, and this relatively low bargaining power affects the terms of the deal. In this paper, by investigating the subset of takeovers initiated by the target, we examine whether private information and motives possessed by the target impact merger outcomes. More specifically, we explore the effects of deal initiation on firm returns, merger premiums, means of payment and time to completion, as well as incentives behind targets' actions at the early stages of mergers and acquisitions.

There is no public database from which initiation data is easily displayed. Boone and Mulherin (2007) emphasize the rich information that can be found in Securities and Exchange Commission (SEC) filings about merger transactions. Specifically, the documents filed with the SEC for mergers and acquisitions contain information identifying which party has initiated a deal and what the sales procedure (e.g., negotiation,

auction) is. Therefore, in order to obtain the statistics required for our analysis, we hand collect this initiation data for public firms in the United States from the SEC filings for M&A deals between 2006 and 2012.

According to Masulis and Simsir (2015), target-initiated deals represent about 35% of U.S. M&A deals and there are significant differences between target- and bidder-initiated mergers. Indeed, our empirical results confirm their findings that target firms frequently initiate a merger, and a merger initiated by the target has a lower premium than the merger initiated by the acquirer. First, the average target cumulative abnormal return (CAR) is 38.6% in bidder-initiated deals and 21.6% in target-initiated deals over the three-day period (-1, +1), around the initial deal announcement date. The results still hold over the (-3, +3) and (-5, +5) period. Second, because average target cumulative abnormal returns only look at changes in the target firm valuation around the announcement date, they may not fully show the subsequent change to target firms. Thus, in order to capture merger effects in a broad way, we use the bid premium. The initial bid premium averages 42.2% in bidder-initiated deals and 33.0% in target-initiated deals. The bid premium difference is still persistent when we use three other ways to calculate the premium, which are the final, component and combined premium, as suggested by Officer (2003). In addition to our univariate analyses, we run several multivariate regressions in which we control for variables that have been proven to influence these returns and premiums, such as bidder, target and deal characteristics. We find that target

shareholders enjoy significantly lower CARs and premiums in target-initiated deals than those in bidder-initiated deals.

Next, we test our second hypothesis that target shareholders receive a higher percentage of shares as opposed to cash in target-initiated deals than in acquirer-initiated deals. Considerable studies have argued that acquisitions are suggested as an effective means for resolving financial distress (Baird, 1993; Hotchkiss, 1995; Hensher et al., 2007). Acquirers may be forced into using shares as means of payment in order to save their cash to rescue the failing firm. However, our results find that the proportion of deals with cash payment increases by an average of 9.65 percent when target firms initiate the deal, which is opposite from our hypothesis. In order to examine the reason behind this difference, we compare the financial situation of acquirer firms across the two initiation groups. We discover that acquirer firms are less leveraged and more cash-rich in target-initiated mergers. This is consistent with the literature indicating that a firm's excess cash holdings are positively related with the possibility of a merger (Harford, 1999; Lee and Powell, 2010). Our conjecture is that the larger amount of cash received in a target-initiated deal is actually a byproduct of target firms approaching cash-rich bidders.

Our third hypothesis is that the time needed to complete the deal is reduced when the target firm initiates the deal. Two major incentives for the timely completion of takeovers arise from acquirers taking target initiation as a friendly gesture (i.e. an absence of anti-takeover initiatives) and from the target firm's desperation for a takeover. Compared

with hostile takeovers that involve aggressive public rejection by the target's management, we can expect that friendly mergers initiated by target firms should have fewer impediments to the deal, as management will strive to minimize delays, forgoing possible anti-takeover initiatives and legal tactics to ensure that acquirer needs are promptly met. Regression analysis discovers that it takes 18 days less to make a merger successful in target-initiated deals. This number is significant compared with the fact that the average time to completion in our sample is 104 days, and remains significant after controlling for "friendly" mergers as defined by Thomson Reuters SDC Platinum dataset. We also look at the value creation from the perspective of acquiring firms. Existing literature is divided regarding the performance of acquiring firms, with more recent empirical evidence showing a value reduction associated with M&A activities (Moeller, Schlingemann, and Stulz, 2004; Ahn et al., 2011; Ishii, Joy, and Xuan, 2014), most particularly for large acquirers. In this study, we not only look at the daily stock returns around announcement dates, but also investigate the long-term performance of acquirer firms after the merger. We find evidence that the returns earned by acquirers in target-initiated deals are significantly better than bidder-initiated deals not only in the short term, but in the long-term as well.

Lastly, we consider two hypotheses to explore the motivation behind target firms to initiate the deal. The first hypothesis is that target firm shareholders know their firm better and therefore have superior information about their actual firm value than acquirers.

When target shareholders know that their firm is overvalued by the market, they reach out to a potential buyer and sell the firm. This overvaluation between merger parties puts acquirers at an informational disadvantage. It motivates acquirer firms to offer lower bid premiums to target firms because the risk of purchasing a poorly performing firm increases (Akerlof, 1970). Masulis and Simsir (2015) also emphasize that the information asymmetry between acquirers and targets is a major incentive for target-initiated deals. Our second hypothesis argues that target firms with a higher level of financial constraint will initiate the deal. This is consistent with the findings that when target firms are financially constrained or near bankruptcy, they have strong motives to look for potential buyers (Bulow and Shoven, 1978). Masulis and Simsir (2015) also argue that target firms with financial weaknesses have strong motives to search for potential buyers. Empirically, we find that target firms in target-initiated deals are significantly more distressed, but their stock value is not as overvalued as targets in bidder-initiated deals.

Our study is closely related to the research of Masulis and Simsir (2015), which contributes to the literature that explores the role of deal initiation. We confirm their findings that deal initiation is an important piece of the takeover process, affecting the deal premium and abnormal returns. However, our study also differs from prior works: to the best of our knowledge, this is the first paper to propose that deal initiation can be an important factor in determining the method of payment, time to completion and acquirer firm returns. Specifically, it appears that target shareholders receive more cash in

target-initiated deals than acquirer-initiated deals, and it takes less time to complete the merger in target-initiated deals. As for acquirer firms, their returns are significantly higher in target-initiated deals. Our approach to initiation highlights the impact of initiation on different aspects of deal characteristics. Apart from the literature on initiation, this paper also contributes to the literature on acquisitions under financial constraints. Previous research has largely documented an increased use of M&A deals to resolve financial distress, but few have looked at the target's role in deal initiation and financial constraint. This paper shows that target firms that initiate the deal are more financially distressed and more leveraged, and that acquirer firms that buy these distressed firms earn excess returns. This suggests that a possible incentive behind target shareholders' decision to initiate the sale of the company is to preserve growth options when they are unable to pay back their debt.

The remainder of this paper is organized as follows. Section 2 provides an overview of the related literature. Section 3 proposes the hypotheses. Section 4 presents our data and provides basic statistics. Section 5 describes the methodology. Section 6 presents and discusses the empirical results. Section 7 summarizes and concludes the study.

2. Literature Review

In this section, we review related studies on this topic, which can be grouped as follows:

the related literature on target firm abnormal returns, payment methods, acquirer firm performance, target firm financial distress and misvaluation.

2.1 Literature on Target Firm Abnormal Returns

There is a consensus among the empirical studies that shareholders of target firms gained excess returns around announcement date, while those of bidding firms lose a significant amount or gain a small and insignificant number compared to targets (Langetieg, 1978; Mandelker, 1984; Andrade et al., 2001). A vast number of studies have shown that firm and deal characteristics can explain cross-sectional target abnormal returns, such as the payment form, asset relatedness and form of acquisition. We look at the literature regarding these factors below. The method of payment has a strong impact on target firm cumulative abnormal returns (CAR). CAR is significantly larger if the buyer firm uses its stock as payment to the target firm rather than cash (Huang and Walkling, 1986; Travlos, 1987; Servaes, 1991; Andrade et al., 2001). Tender offers are different from mergers as they offer a significantly higher and positive abnormal return to targets than mergers (Dodd and Ruback, 1977; Jensen and Ruback, 1983; Bhagat et al., 2005). Target and bidder firms in the same industry have a positive impact on bidder's performance as indicated by Morck, Shleifer and Vishny (1990). Schwert (2000) shows that target firms receive a higher premium and abnormal return in a hostile takeover due to an increase in bargaining power. Relative size is another factor that has been widely studied to explain

the merger performance. Davidson and Cheng (1997) find a positive relationship between target firm CAR and relative size, opposite from the findings of Lang, Stulz, & Walkling (1989). Tobin's Q is also examined on target firm abnormal returns. Lang, Stulz, & Walkling (1991) find that a higher Tobin's Q ratio for the buyer compared to the target indicates a better management of the target firm after merger, thus higher returns for target abnormal returns. Bradley, Desai and Kim (1988) prove that an increase in the number of bidders will increase CAR and premium for target firms since multiple bidders indicate a strong interest in the target firm.

However, evidence on the effects of initiation on target firm returns is limited. Masulis and Simsir (2015) investigate the effect of deal initiations on the bid premium and abnormal returns. They show that target-initiated deals are common in mergers and acquisitions. They attribute the lower announcement abnormal returns associated with target-initiated deals to information asymmetry concerning the quality of target firms.

2.2 Literature on Method of Payment

Many studies explored the determinants of payment methods in mergers. Myers and Majluf (1984) develop a model to show that bidders choose to offer shares if their own stocks are overvalued and offer cash if their stocks are undervalued. They emphasize the impact of information asymmetry on the medium of exchange. Wansley et al. (1983) find that in the event of a cash acquisition, shareholders of the acquiring firm earn twice the

corresponding abnormal returns than those in mergers using securities as a method of payment. They attribute this difference to a tax effect and regulatory requirements. Harris et al. (1987) confirm the role of taxation using both UK and US data. They show that the target shareholders in cash offers are often taxed more than in stock offers and argue that a higher premium is needed to compensate for the higher taxation. Moller et al. (2004) find that regardless of the merger financing method or the status of the firm, the announcement returns for acquirers are higher for small acquirers than for large ones. Faccio and Masulis (2005) report that bidders with high financial leverage prefer to use stock than cash when acquiring other companies, primarily because the acquirer wants to avoid debt overhang. Swieringa and Schauten (2008) discover that bidders that acquire a relatively large target tend to use stock financing. Bidders prefer to offer stock when the target knows its value better than the bidder does.

Notably, the determinants of payment forms considered in extant literature are related with target misvaluation, asymmetric information, financial situations and tax effects. Deal initiation has received little attention in the determination of payment methods.

2.3 Literature on Acquirer Firm Performance

Previous studies on the performance of acquiring firms provide complex and inconsistent evidence. Most theories regarding M&A find a negative and statistically significant announcement effect for acquirer firms (Thaler, 1988; Hendrikse, 2003), although there is

some evidence supporting positive abnormal returns around announcement days for company acquirers (Mandelker, 1974; Andrade, 2001). Asquith (1983), and Magenheim and Mueller (1988) calculate the abnormal return over one to three years as the measure of performance, and find that shareholders acquiring firm experience negative return after the takeover. However, Bradley and Jarrell (1988) find no evidence that supports the long-run negative returns of acquiring firms by implementing a different methodology. In addition, Franks, Harris, and Titman (1991) employ a benchmark based on a multi-factor model and document that there is no empirical evidence of long-term underperformance of acquiring firms. In addition, Hitt, Harrison, and Ireland (2001), Ravenscraft and Long (2000) find that an adequate proportion of takeovers is proved to be good for the shareholders of acquirers. The empirical study on long-term performance of acquirers suffers from a methodology problem. Many researches calculate the BHAR (buy and hold abnormal return) and use it as the measurement of long-run performance of acquirers (Ritter, 1991). Barber and Lyon (1997) find that the BHAR is a proper measurement since it simulates and measures what the shareholders experience by investing the acquirer.

Many researchers are concerned with the question of what factors drive and influence the performance of acquirers. Empirical evidence suggests that relative size is an important determinant of the long-term post-acquisition performance. Linn and Switzer (2001) provide evidence that takeovers of relatively large targets outperform those of small

targets. However, Clark and Ofek (1994) document that acquirer firms that buy a relatively large target may face difficulties in integrating the target firm. Private or public targets may also be associated with the long-term performance of the acquiring firm. Hansen and Lott (1996) find that bidders have an average of two percent higher returns when purchasing a private firm rather than a public firm. Similarly, Fuller, Netter and Stegemoller (2002) find that bidder shareholders gain when they purchase a private firm, but they lose when they buy a public firm. Anand and Singh (1997) find that the Tobin's Q, that is proxy for the long-run performance, is positively related to the focus strategy of a company, even the industry declines generally. Bouwman, Fuller and Nain (2003) argue that the overall level of the stock market affects the short-term and long-term merger performance. In the end, however, the high-valuation acquirers when the takeover is announced experience relatively bad performance and low-valuation acquirers outperform others. In addition, factors such as the method of payment and whether the deal is friendly or hostile are explored. Sorescu, Chandy and Prabhu (2007) provide evidence that product capital that is a firm-specific variable, has a significant effect on the performance of acquisitions, and find that acquiring firms with high product capital (greater product development and support assets) are more likely to select the targets with stronger innovation potential. Thus, such firms obtain a competitive advantage and good performance in the capital market.

2.4 Literature on Acquisitions in Financial distress

Firms with financial constraints are more likely to be compelled to sell at a discount when facing a liquidation situation. Pastena, Victor and Ruland (1986) argue that bankruptcy represents only a small fraction of many possible outcomes for the distressed firm, and a timely merger is preferable to filing for bankruptcy protection. Hotchkiss (1995) argues that an acquisition can serve as a bankruptcy alternative as a means of redeploying financially distressed firm assets. They provide evidence that acquirers typically improve the performance of financially distressed firms, while those distressed firms that remain independent continue to underperform. Almeida et al. (2011) find that financially distressed firms are acquired by bidders in the same industries with high liquidity, even though there may not be any synergy associated with the merger. They call it “liquidity merger” because the purpose of this sort of merger is to reallocate liquidity to firms that might otherwise fail. Senbat and Wang (2012) look at the resolution mechanisms after the financial crisis. They indicate that corporate restructuring, such as mergers and acquisitions and buyouts, can help companies solve poor performance and avoid bankruptcy.

2.5 Literature on Misvaluation

Studies in recent years have examined whether market misvaluation is an important driver of the takeover market. Matthew, Rhodes-Kropf and Viswanathan (2002) suggest

that merger waves are partly driven by stock misvaluation. A target company is more likely to accept an offer when the overall market is overvalued, even when there is no synergy related with the merger. Shleifer and Vishny (2003) present a model based on stock market misvaluations of combining firms. They posit that overvalued bidders use stock swaps to acquire targets and they tend to behave better in the long term, which also proves that the market is inefficient. Dong et al. (2003) define misvaluation as the ratio of book value of equity to price and the ratio of residual income value to price. They find that misvaluation of stocks influences the volume of takeover over the years and character of merger activity. Specifically, when the overall stock market is overvalued, takeover activity booms. Rhodes-Kropf, Robinson, and Viswanathan (2005) decompose the misvaluation into two parts: market wide and firm specific misvaluation and develop a model to compute the misvaluation. Ang and Chen (2006) also find similar results. They conclude that probability of a successful takeover is positively related to the degree of overvaluation of bidder to target firms. They support the hypothesis that acquirer firms have an incentive to use the overpriced stock to buy a target firm even if the target is also overvalued. As long as the gap between the degree of overvaluation of target and bidder firms exists, the stock is more likely to be used as payment.

3. Hypotheses

3.1 Initiation, Target Firm Abnormal Returns and Bid Premiums

According to Masulis and Simsir (2015), target bid premium and announcement CARs depend on whether a merger deal is initiated by the acquirer or the target. There are several explanations for this phenomenon. First, because an acquisition is a consuming process that can be very costly in terms of time, energy and resources, if the acquirer does not think the target as a great fit, it will not approach the target in the first place. Besides, a difficult integration of an acquired business that takes too much time would have an adverse effect on the performance of the acquiring company. So, once the acquirer initiates the deal, they may be more committed to getting the deal done if they themselves initiate it. The firm may pay a high premium in order to prevent the target and other bidders to run an auction (Fishman, 1988). Second, when the transaction is initiated by the target, the target is in a weak bargaining position. Target initiation conveys that the target firms themselves lack alternative options, and their ability to resort to these options is limited. When a target is more dependent upon a buyer and needs the acquirer to make a purchase decision, it has less bargaining power, and hence will suffer a loss (Ahern, 2009). Third, compared with the bidder-initiated deals where the acquirer is ready to make a deal, the acquirer approached by the target may not be prepared to make a deal. To compensate for the above inconvenience, the targets have to accept a lower premium

to ensure the completion of a deal.

Hypothesis 1: Target firms receive lower abnormal return around announcement date and lower premium in target-initiated deals than in bidder-initiated deals.

3.2 Initiation and Method of Payment

Many studies have been done regarding determinants of the payment form in a merger, such as asymmetric information (Myers and Majluf, 1984; Linn and Switzer, 2001; Shleifer and Vishny, 2003), taxation (Harris, Franks, and Mayer, 1987; Huang and Walking, 1987), managerial control (Eckbo et al., 1990; Faccio and Masulis, 2005), relative size (Grullon, Michaely, and Swary, 1997; Moeller, Schlingemann, and Stulz, 2004; Swieringa and Schauten, 2008), growth opportunities (Martin, 1996; Ghosh and Ruland, 1998), and hostile takeover (Martin, 1996; Zhang, 2003; Swieringa and Schauten, 2008). However, no study has ever investigated the impact of deal initiation on the method of payment. Prior studies have proved that a firm's level of financial constraint is positively related with the possibility of a merger (Hensher et al., 2007; Sahut and Mili, 2009). When a target is not able to meet its debt obligations, acquirers can be worried about the increasing debt level. Therefore, acquirer firm managers may use stock to pay for the merger in order to better allocate cash for further use. An alternative view is that target shareholders receive a higher percentage of cash as opposed to shares in target-initiated deals than in acquirer-initiated deals. Paying cash is faster than paying

stock, because paying stock often requires issuing new shares, and paying in shares over 20% of the value of the acquiring firm requires a merger vote by the acquiring firm. In this study, we take the first view as our null hypothesis. We continue to fill the gap in the available literature by analyzing the impact of initiation on the method of payment and explain why it happens.

Hypothesis 2: Target firms receive more stock in target-initiated deals than in bidder-initiated deals.

3.3 Initiation and Time to Completion

M&A can vary considerably in terms of the time needed to complete a merger, which can take from months to years. The reason for this considerable amount of time is that a series of procedures must be fulfilled, such as due diligence and SEC staff review. Usually, a traditional merger starts with one party making an offer to another and both companies signing a confidentiality agreement if they see each other as a potential. Following this agreement, there is a due diligence to review operations, strategies, financials and other aspects of the company. When an acquirer firm has chosen a certain target firm, they will start negotiating in order to reach an agreement. In cases where the target managers and board of directors fight against a takeover attempt, a tender offer will be made to target shareholders. After the required votes are obtained from shareholders and both parties agree to merge, government agencies will review the materials to

determine if the merger conforms to the laws of that country. Therefore, the length of time a merger takes can vary greatly from one to another depending on the firm size, industry difference, the manner of financing and the culture of the companies involved.

When a deal is initiated by the target, it is always taken as a friendly gesture. Compared with mergers initiated by acquirers where target managers and shareholders may fight against the merger and involve aggressive public rejection, the responsiveness of target-initiated deals leads to quicker facilitation on the target side. In addition, when a target is facing financial constraint, it is more eager to ensure that the acquiring company's needs are promptly met, in the hopes of resolving their financial difficulties. Consequently, target shareholders may reach a consensus about the merger decision more quickly, thereby facilitating the negotiation process. Moreover, paying cash is faster than paying stock and it reduces the overall time needed to complete the merger. Stock deals often requires issuing new shares, and paying in shares over 20% of the value of the acquiring firm requires a merger vote by the acquiring firm.

Hypothesis 3: It takes less time to complete the deal in target-initiated deals than in bidder-initiated deals.

3.4 Initiation and Acquirer Performance

Masulis and Simsir (2015) posit that target firms in target-initiated deals receive significantly lower bid premium and announcement CARs. They do not look, however, at

the impact of deal initiation on the acquiring firm's performance, so it would be interesting for us to examine how deal initiation affects the short-term and long-term performance of acquiring firms. A number of studies have examined what could affect acquirer long-term performance, such as type of acquisition (Loughran and Vijh, 1997; Agrawal and Jaffe, 2000), method of payment (Martin, 1996; Holmstrom and Kaplan, 2001), type of target (Chang, 1998; Fuller et al., 2002), asset relatedness (Agrawal et al., 1992; Agrawal et al., 2004), growth opportunity (Rau and Vermaelen, 1998; Andre et al., 2004) and length of time of merger (Nelson, 1995; Jovanovic and Rousseau, 2001). Here we suppose that when a target approaches a buyer first, the buyer firm will perform better compared to bidder-initiated deals. There are two main explanations for this phenomenon. On the one hand, compared with bidder-initiated deals, buyer firms do not show strong interest in the targets. Moreover, as we discussed earlier, target firms that initiate the deal show a weak bargaining power. This gives the acquiring firms an advantage to negotiate the deal; thereby paying a low premium in target-initiated transactions. This is good news for purchasing firms, as a merger would not cost as much as bidder-initiated arrangements, which provides grounds for future growth. On the other hand, firms that acquire distressed and bankrupt companies or assets of these targets earn higher excess returns than when they make regular acquisitions. The higher returns for bidders after the merger are just compensation for higher risk associated with fire sales.

Hypothesis 4: Acquirer firms involved in target-initiated deals outperform acquirers in

bidder-initiated deals.

3.5 Initiation Motives

We consider two hypotheses to explain the motivation behind target's behavior to initiate the deal. The first hypothesis rests on the existence of information asymmetry between merger partners. By using the car market as an example, Genesove (1993) finds that (i) during the transaction, one party is better informed than the other about the true value of the product, usually the sellers, (ii) buyers cannot fully protect themselves from the effects of information asymmetry by employing any market mechanism. These two conditions are likely to hold in takeover markets. Moreover, the misvaluation hypothesis implies that firms that are overvalued by stock market are more likely to make takeover bids (Loughran and Vijh, 1997; Rau and Vermaelen, 1998; Shleifer and Vishny, 2003). Regarding target firms, it is common that target firm managers are expected to possess superior information about their firm's market values, financial conditions and risks, which a typical bidder's due diligence process is unlikely to uncover fully. In this case, when the target shareholders find that target firm's stock is overvalued by the market, they have the incentive to find a buyer so that they could sell the firm and cash out to take advantage of this window of opportunity.

The other reason behind targets approaching bidders is that they are financially constrained firms. Such financially constrained firms may not be generating enough cash

flows from their existing operations, which would have negatively influenced their future production and investment unless they have substantial cash and liquid assets available. They may also be facing high borrowing or share issuing costs, due to high financial leverage and asymmetric information. In either case, a merger may be initiated because the target wants to keep itself from bankruptcy. Mergers should preserve the firm's growth options from bankruptcy from a shareholder's view. Therefore, it is possible that financially constrained target firms initiate deals with cash-rich bidders to gain access to their financial resources. A timely sale on the target firm side is usually preferable to potential liquidation.

Hypothesis 5: Target firms initiate the deal to take advantage of their overvalued stock.

Hypothesis 6: Target firms initiate the deal to avoid the costs associated with financial distress.

4. Data

First, we obtain the merger and acquisition data from Thomson Reuters Securities Data Corporation (SDC) Platinum. The criteria used to select the sample are:

- 1) The acquisition is announced between 2006 and 2012, resulting in 23,059 mergers.
- 2) Deal value is greater than \$5 million, reducing our sample to 12,346 mergers.
- 3) Both acquirer and target are public firms listed on the New York Stock Exchange, American Stock Exchange or NASDAQ, reducing our sample to 5,777 mergers.

- 4) The acquisition is completed, reducing our sample to 1,576 mergers.
- 5) The form of transaction is merger, acquisition or acquisition of majority interest, where acquirer acquires at least 50 percent of target's share, reducing our sample to 971 mergers.
- 6) No financial or utility firms were chosen, reducing our sample to 605 mergers.

Second, we obtain the stock returns and trading volume from the Center for Research in Security Prices (CRSP) all for target firms in our sample. We require each target firm to have at least 301 trading days of data available in CRSP. After this screening procedure, there are 469 mergers satisfying our requirements.

Third, we impose the restriction that financial data of both target and acquirer firms must be available in the Standard & Poor's COMPUSTAT Database. Only 321 mergers satisfy this requirement.

As a final step, we need information about who initiates the merger. By using the SEC EDGAR database, we look into the company filings of either the bidder or target firms to get the initiation data for each of the 321 mergers. The data can usually be found in the following forms issued by either party:

- DEFM14A, which is also known as "definitive proxy statement relating to merger or acquisition"

- PREM14A, which is also known as "preliminary proxy statement relating to merger or acquisition"
- TOT, third party tender offer statements
- 14D9, which is filed with the SEC whenever a tender offer is made
- S-4, which must be submitted for exchange offers

Generally, the “Background of the merger” or “Background of the offer” section of the forms summarizes the past negotiations between the bidder and target firm, from which we can tell which party initiated the merger. Usually when a target is interested in selling, it will hire an investment bank to evaluate its options and prepare for a potential sale process. Then, the target firm management or its investment bankers, under the approval of target shareholders, contacts potential acquirers and solicits interest in its businesses. In this type of deal, target firms reach out to the bidder first, with intent to sell, before any offers have been made. Thus, we define these deals as “target-initiated” deals. In some cases, the target firm will use an auction to attract potential bidders and more than one bidder may sign a non-disclosure agreement. However, as long as a target firm is eventually bought by the bidder and it is the target that makes the initial offer, even if competing bidders are involved in the process, we classify it as a “target-initiated” deal. We define the deal as “bidder-initiated” when the final acquirer initiates the deal.

Unfortunately, for some mergers, initiation information is either not available or is vague.

For instance, in one example a target was interested in selling itself without any prior

offer by a bidder. The target reached out to the acquirer firm but the top management of the acquirer firm did not express interest in a combination. The target firm gave up. However, one year later, the acquirer contacted the target and made an offer to buy the target. Under these circumstances, we still consider it as initiation information not available because it is debatable as to which party initiated the deal. Therefore, a total of 240 mergers are selected, among which 97 mergers are clearly target-initiated and 143 mergers are clearly bidder-initiated. Figure 1 shows the distribution of bidder- and target-initiated mergers over the years.

From Figure 1, we can see that targets initiate 40.4% of the identified deals, and bidders initiate the remaining 59.6%. Before 2008, a decreasing number of target-initiated deals existed. After the financial crisis, we see a pick-up trend in target-initiated transactions, excepting 2011. The variation is consistent with that of Masulis and Simsir (2015).

5. Methodology

5.1 Short-horizon Event Study for Target Firms

Firstly, we examine the CAR (cumulative abnormal return) for target firms, including both target-initiated deals and bidder-initiated deals, to check whether there is significant influence of the deal on the valuation of a company. The methodology used here is the short-horizon event study and we used the daily timeframe to obtain the abnormal return.

Here we use three test windows to calculate the CAR (cumulative abnormal return): 1 day before to 1 day following the announcement day (CAR (-1, +1)), 3 days before to 3 days following the announcement day (CAR (-3, +3)) and 5 days before to 5 days following the announcement day (CAR (-5, +5)), respectively. The announcement day of the merger is denoted with event day 0.

Here, we use returns from day -301 to -46 to estimate the parameters for market model:

$$R_{it} = \alpha_i + \beta_i R_{mit} + \varepsilon_{it}, t = -255, \dots, -46$$

Where:

R_{it} = daily stock return for firm i in day t;

R_{mit} = daily stock return for market portfolio in day t relative to the failed tender offer i;

α_i, β_i = parameters;

ε_{it} = error term, which is assumed to have mean 0 and variance σ_i^2

The abnormal return for firm i should be calculated as:

$$AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mit}$$

Where $\hat{\alpha}_i$ and $\hat{\beta}_i$ are estimated of α_i, β_i separately.

Then we calculate the CAR (cumulative abnormal return) for the target firms in the sample:

$$CAR = \sum_{t=t_0}^T \frac{1}{N_t} \sum_{i=1}^N AR_{it}$$

Where

t_0 = first event day;

T = event days through which the CAR is calculated;

N_t = number of firms in day t.

Panel A of Table 1 shows average CARs for target stocks over the (-1, +1), (-3, +3) and (-5, +5) event window are 33.3%, 33.4% and 35.6%, respectively.

5.2 Acquisition Premium

Following Officer (2003), we employ four ways to calculate the premium to avoid inconsistent results. Specifically, we first estimate the component value by calculating the total value of each form of payment (cash, stock, and other securities), using the data as reported by SDC. We then obtain the initial price and the final price per share of stock. Furthermore, we measure the market value of target firm using 42 trading days prior to the takeover announcement date. Thereafter, the component premium is defined as component value divided by market value of target firm; initial premium is defined as initial price multiplied by shares outstanding, then divided by market value of target firm; and final premium is defined as final price multiplied by shares outstanding, then divided

by market value of target firm. To eliminate the extremes of component premium and price premium, we also calculate the “combined premium”. If the component premium is greater than zero and is less than two, the combined premium equals the component premium. Otherwise, the combined premium is taken as the initial price premium (or the final price measure if initial price data are missing).

Panel A of Table 1 shows that the average component premium, initial premium, final premium and combined premium in our sample are 38.4%, 39.8%, 48.9% and 45.5%, respectively.

In order to control for information leak before the announcement date, we also calculate these four premiums based on the market value of the target firm 120 trading days before the takeover announcement date.

5.3 Factors That Influence Firm Returns

Market reactions to the announcement of mergers have been extensively examined in the M&A literature. We use many of these variables as controls in our study of target announcement returns including deal characteristics such as method of payment (Travlos, 1987; Chang, 1998), form of acquisition (Jensen and Ruback, 1983; Berkovitch and Khanna, 1990), hostility (Schwert, 2000), asset relatedness (Morck, Shleifer, and Vishny, 1990), competition (Bradley, Desai and Kim, 1988), pre-bid runup (Meulbrock, 1992), acquirer and target paid termination fees (Bates and Lemmon, 2003; Officer, 2003),

financial crisis (Jaroslav, 2012) and financial characteristics of the merger partners such as Tobin's Q (Lang, Stulz and Walkling, 1991; Servaes, 1991), financial leverage (Maloney, McCormick and Mitchell, 1993), relative deal size (Asquith, Bruner, and Mullins, 1983). We use these control variables in our analysis of target abnormal announcement returns and its relationship to the deal initiation party.

Deal and merger partner characteristics are reported in Panels B, C, D and E of Table 1. Of our deal sample, 26.3% are tender offers, 69.6% are within-industry deals, 65.8% deals are paid in 100% cash, 92.1% of targets employ a termination fee, 21.7% of acquirers pay a termination fee and 42.9% occur during the crisis period. Consistent with the earlier literature, target firms are smaller, less profitable, and have lower Tobin's Q ratios compared to acquirers. We also use the Fama and French (1997) 12-industry classification to divide target firms into more homogenous groups, excluding financials and utilities. We find that around 40.8% of target firms are from the business equipment industry (Computers, Software, and Electronic Equipment).

5.4 Long Term Performance of Acquirers

In order to determine whether target-initiated acquisitions increase the value of the acquiring company, we will closely examine the shareholders' return of acquirers in the one to three years following the effective date of a merger (Mitchell and Stafford, 2000; Andre et al. 2004).

We use the BHAR (Buy-and-Hold Abnormal Return) to get the cumulative abnormal returns in long-horizon. BHAR has been defined as the return on buy-and-hold portfolio for the acquiring firm minus the return on a buy-and-hold portfolio for a matching sample with an appropriate expected return. For each acquirer firm in the sample, the monthly holding period returns are obtained from the announcement month to the 36th month following on CRSP. The monthly data is used to perform the long-term event study within this 3-year time block. For each firm, two methods are implemented to find a firm that is most like the acquirer firm, or “matching firm”. The first method is to choose the firm in the same industry as the acquirer whose market value is closest to that of the acquirer. In the second method, we choose the firm that is in the same industry as the acquirer whose book-to-market value is closest to that of the acquirer. Within these ten firms, the matching firm is the one who has the closest market value or the book-to-market value. The market value of equity comes from the database of CRSP and the book value of equity is obtained from COMPUSTAT. The industry information is the SIC code on the CRSP, grouped by Fama-French 12 industries.

After getting the matching firms for each acquirer firm, the monthly holding period return is collected for each of them for the same period as the acquirer firm, and this is retained as a benchmark. Then a T-month BHAR for event firm is defined with the following formula:

$$BHAR_{i(i,t)} = \prod_{t=1}^T (1 + R_{i,t}) - \prod_{t=1}^T (1 + R_{benchmark,t})$$

Where $BHAR_{i(i,t)}$ is the buy-and-hold abnormal return for acquirer firm i in window (t,T);

$R_{i,t}$ is the monthly holding period return for the acquiring firm i;

$R_{benchmark,t}$ is the monthly holding period return for the matching firm

Where the mean buy-and-hold abnormal return should be calculated by:

$$\overline{BHAR}(t, T) = \frac{\sum_{i=1}^N BHAR_i(t, T)}{N}$$

Where $\overline{BHAR}(t, T)$ is the average buy-and-hold abnormal return for window (t,T);

N is the number of firms in window (t,T)

5.5 Overvaluation of Target Firms

In order to examine Hypothesis 5, we will look at the stock price of target firms for a period of 42 trading days before the announcement day. We follow the method of Rhodes-Kropf, Robinson and Viswanathan (2005) and estimate the measure of overvaluation. By this measurement, we are able to confirm whether target firms are overvalued before the acquisition.

Firstly, a firm's market-to-book equity ratio in natural logarithm ($\text{Ln}(M/B)$) is decomposed into two components, one for misvaluation ($\text{Ln}(M/V)$), and the other for growth potential ($\text{Ln}(V/B)$).

$$\text{Ln}(M/B) = \text{Ln}(M/V) + \text{Ln}(V/B) \quad (1)$$

Where M is the market value of equity of target firm, B is the book value of equity of target firm, and V is the true value of equity.

The true value of a firm (V) is unobservable, but we can evaluate it through a linear regression function as follows.

$$\text{Ln}(V_{it}) = \alpha_{0jt} + \alpha_{1jt}\text{Ln}(B_{it}) + \alpha_{2jt}\text{Ln}(|NI_{it}|) + \alpha_{3jt}I^*\text{Ln}(|NI_{it}|) + \alpha_{4jt}\text{Lev} + \varepsilon_{it} \quad (2)$$

Where $|NI_{it}|$ represents the absolute value of net income of company i at year t . I is an indicator variable which equals 1 if the company i is with negative net income at year t , and 0 otherwise. Lev is the market leverage ratio, defined as total debt divided by total equity. We also control for the industry, thus the subscript j represents for industry. We follow industry classification derived by Fama and French (1997) to classify all companies into twelve industries. Therefore for each industry, we will have different α_j . ε_{it} is the deviation of true value of target firm from the observed market value, therefore, it is a proxy for misvaluation.

We use a regression model to estimate the coefficients in the equation (2).

$$\ln(M_{it}) = \alpha_{0jt} + \alpha_{1jt}\ln(B_{it}) + \alpha_{2jt}\ln(|NI_{it}|) + \alpha_{3jt}I^*\ln(|NI_{it}|) + \alpha_{4jt}\text{Lev} + \varepsilon_{it} \quad (3)$$

The cross-sectional regressions for each industry and each year are employed to estimate the α_{jt} . After getting the estimated coefficient for every industry j and every year t , we take the times series average of α_{jt} . In this way, we are likely to have coefficients that are more accurate, as mispricing for a company is composed of two levels of mispricing: firm level and industry level.

Finally, for each merger, we calculate the true value of each target using their own industry coefficient and we get the final mispricing using the following equation.

$$\ln\left(\frac{M}{V_{it}}\right) = \ln(M_{it}) - \{\alpha_{0j} + \alpha_{1j}\ln(B_{it}) + \alpha_{2j}\ln(|NI_{it}|) + \alpha_{3j}\ln(|NI_{it}|) + \alpha_{4j}\text{Lev}\} \quad (4)$$

5.6 Degree of Financial Constraints

We adopt several ways to test whether target firms are in financial distress and the probability of bankruptcy. Following many studies, we use Altman's Z-Score (1968), Ohlson's O-Score derived from Ohlson's (1980) Model 1 and KZ Index (Kaplan and Zingales, 1997) as a proxy for probability of bankruptcy. The last two proxies used are "Composite I Index" and "Composite II Index", whose definitions are introduced by Campello and Chen (2010).

We first sort firms based on four different criteria: the dividend payout ratio, size, interest

coverage ratio and KZ index. KZ index is defined as follows,

$$\text{KZ Index} = -1.002 * \text{Cash Flow/Assets} + 0.283 * Q + 3.139 * \text{Leverage} - 39.368 * \\ \text{Dividends/Assets} - 1.315 * \text{Cash Holdings/Assets}$$

Next, we rank firms in quintiles and assign a score of 1 to 5 to each of those three rankings, with a higher number indicating lower degree of financing constraints. It works opposite for the KZ Index. We then assign a score of 0 (5) to those companies without (with) commercial paper ratings and bond ratings separately. Finally, we add the total score for each firm based on all six characteristics and call it “Composite I Index”. The method used to compute “Composite II Index” is similar to that of “Composite I Index”, except that we only use four criteria (coverage ratio, dividend payout ratio, commercial paper rating, and bond rating). We exclude the KZ Index and size because they have been considered separately. Firms with lower “Composite I Index” or “Composite II Index” are more financially constrained.

6. Results

6.1 Target Firm Abnormal Returns and Takeover Premiums

By comparing target firm CARs and bid premiums across the two deal initiation groups, we will test whether deal initiation reveals important information about the merging firms and how merger synergies are affected. As defined in the previous section, CAR (-1, +1),

CAR (-3, +3) and CAR (-5, +5) represent the cumulative abnormal returns 1, 3 and 5 days prior to the announcement of merger to 1, 3 and 5 days following, separately. The four ways that are used to calculate bid premium are component, initial, final and combined premium.

There are several important observations. As shown in Table 2, bidder- and target-initiated deals differ significantly in terms of average target CARs for all three windows. The average target CAR (-1, +1) is 21.6% in target-initiated deals and 38.6% in bidder-initiated deals. Similarly, the average target CAR (-3, +3) is 21.9% in target-initiated deals and 38.5% in bidder-initiated deals and the average target CAR (-5, +5) is 25.1% in target-initiated deals and 29.5% in bidder-initiated deals. All three differences in average returns are statistically significant at the 1% level. The result indicates that target firm returns are significantly higher when deals are initiated by the bidder.

Then, we compare initiating party samples with respect to our four measures of bid premium. Unlike target firm CARs that simply measure the market reaction to the merger around announcement date, acquisition premiums represent the actual cost of buying a target company. It represents the premium that target shareholders receive because of the merger rather than selling the firm in a stock market. In Table 2, the average initial premium is 33.0% in target-initiated deals and 42.2% in bidder-initiated deals. The average final premium is 35.5% in target-initiated deals and 42.8% in bidder-initiated

deals. Similarly, the average component premium is 41.1% in target-initiated deals and 54.3% in bidder-initiated deals. All three premiums in mean returns are statistically significant at the 5% level. The average combined premium is 42.0% in target-initiated deals and 47.8% in bidder-initiated deals. Although it is not statistically significant, we can still see the difference in two initiation groups. Furthermore, when we use the market value of the target firm 120 trading days prior to the takeover announcement date to calculate premiums, the results still hold. The above results indicate that bid premiums are significantly higher when deals are bidder initiated.

In addition to the mean test, we also run a nonparametric test to see the median difference of the two deal initiation groups. The median differences of both target CARs and bid premiums are statistically significant at the 5% level.

Overall, we show that the deal initiating party has a significant association with target firm returns and offer premiums. We now reexamine the results in a multiple regression analysis to find out whether this difference in returns and premiums persists. We run several regressions controlling for the factors that are shown to influence these returns. With respect to the control variables, we follow the literature and include form of acquisition, pre-bid runup, hostility, asset relatedness, method of payment, competition, target termination fees, financial crisis, leverage, Tobin's Q, ROA, Composite I index and relative deal size. The variable "Initiation" takes a value of 1 if the deal is target initiated, or a value of 0 if the merger is bidder initiated.

Table 3 summarizes the multiple regression results for target firm returns. The dependent variables in columns (1) to (3) are target CAR (-1, +1), target CAR (-3, +3) and target CAR (-5, +5), respectively. The regression estimates indicate that deal initiation significantly affects target returns, and this result holds across different estimation windows. In column (1), we see that the target CAR (-1, +1) is significantly reduced in target-initiated deals. The coefficient estimate of -0.182 indicates that target firms on average receive 18.4% smaller CAR when they initiate deals relative to bidders making unsolicited offers. The target-initiated deal indicators in columns (2) and (3) have coefficients of -0.180 and -0.212 respectively, which are also statistically significant at the 1% level. The results are consistent with our earlier univariate findings

Table 4 contains the regression results where we examine the influence initiation has on bid premium. We include the same set of control variables from target abnormal returns regression. The dependent variables in columns (1) to (4) are component, initial, final and combined premium, respectively. The regression estimates indicate that deal initiation significantly affects bid premium, and this result holds across different bid premium measures. In column (1), we see that the initial premium is significantly reduced in target-initiated deals. The coefficient estimate of -23.100 indicates that target firms on average receive 23.10% smaller premium when they initiate deals relative to bidders making unsolicited offers. The target-initiated deal indicators in columns (2), (3) and (4) have coefficients of -22.210, -22.374 and -10.833 respectively, which are also statistically

significant at the 1% level. The results are also consistent with our earlier univariate findings.

Table 5 shows the correlation coefficients between our independent variables. Most of the correlation coefficients are relatively small with absolute values lower than 0.40. Thus, there is only a slight possibility that our regression results are distorted by the potential multi-collinearity. There is just one correlation coefficient greater than 0.5, which is the coefficient between mixed payment and cash payment. This figure is reasonable, as most of the mergers are either payed with 100% cash or mixed.

From Table 3 and 4, we see that the target-initiated variable negatively affects its direct relation to target abnormal returns and bid premium, controlling for deal characteristics, target's financial constraints, competitiveness of the target's industry and economic shocks that can also motivate deal initiation by targets. Thus, we can confirm our Hypothesis 1. This is consistent with the findings of Masulis and Simsir (2015) that deal initiating target firms receive significantly lower bid premiums and announcement CARs compared to target firms in bidder-initiated deals.

6.2 Method of Payment

To address potential consequences regarding the initiating party's choice of the method of payment, we estimate a multivariate regression model and a logistic regression, respectively. Control variables that we use in the regressions are: deal characteristics

(pre-bid run-up, hostility, asset relatedness, value of transaction, relative size), financial performance measures (Composite I index, leverage, Tobin's Q, sales growth, cash richness) and finally market conditions (overvaluation, financial crisis).

The results of our regressions are summarized in Table 6. The significant variables in the column (1) are initiation, friendliness, target leverage, crisis period, value of transaction, Composite I index, target cash richness, target overvaluation and target leverage indicator. Holding all of the other variables at their means, a one standard deviation increase in the initiation variable towards the target-initiated deal, the percentage of cash payment increases by 9.647 percentage points, which is statistically significant at the 5% level. In the column (2), the significant variables are initiation, value of transaction, Composite I index, target cash richness, target overvaluation, target leverage and acquirer leverage indicator. Similar to the results of multivariate regression, we also find the positive relationship between deal initiation and cash payment.

Given these results, we conclude that target firms receive more cash as payment in target-initiated deals than acquirer-initiated deals, and we fail to support Hypothesis 2.

Recent empirical studies examine the role that excess cash plays in acquisitions (Harford, 1999; Harford et al., 2008; Dittmar and Mahrt-Smith, 2007). We test whether target firms receive more cash because their acquirers are cash-rich firms. As shown in Table 7, the absolute value of cash of acquirer firms is not significantly different across deal initiation

groups. However, after we divide the amount of cash by sales and standardize the indicator measuring cash richness, acquirer firms in target-initiated deals have 11% and 17.5% higher average cash rich ratio for one and two years prior to the initial merger announcement date than those in bidder initiated ones, statistically significant at the 5% level. The same holds for acquirer leverage ratio and current ratio. Thus, we support that target firms reach out for acquirers that are more cash-rich and less leveraged.

6.3 Time to Complete the Deal

To test the effect of deal initiation on time to completion, we estimate a multivariate regression model. Control variables that we use in the regressions are: deal characteristics (form of acquisition, hostility, asset relatedness, value of transaction, relative size, percentage of cash), financial performance measures (asset, leverage, Tobin's Q, sales growth), and finally market conditions (financial crisis).

The results of our regressions are summarized in Table 8. The significant variables in the column are initiation, friendliness, tender offer, value of transaction, relative size and target leverage indicator. Holding all of the other variables at their means, a one standard deviation increase in the initiation variable towards target initiated deal, the time to complete the deal decreases by around 18 days, which is statistically significant at the 10% level.

Given these results, we conclude that it takes less time to complete a merger in

target-initiated deals than acquirer-initiated deals (Hypothesis 3).

In order to examine whether the level of financial constraints affect time to completion, we break down the Altman's Z-score into four quartiles. The lowest quartile represents target firms that are most financially distressed, whereas the highest quartile represents target firms that are least financially distressed. Table 9 shows that the difference in time to completion between the lowest and highest quartiles is around 20 days, statistically significant at the 10% level. This provides additional evidence that the reason behind the shorter time to completion in target-initiated deals is that those deal-initiating target firms are financially distressed. Perhaps they are more eager to ensure that the acquiring company's needs are promptly met in the hopes of resolving their own financial difficulties.

6.4 Short-term and Long-term Performance of Acquirer Firms

So far, we have proved that deal initiation affects the target firm performance, method of payment and time to completion. We are also interested in investigating the effect of initiation on acquirer firms. As defined in the previous section, CAR (-1, +1), CAR (-3, +3) and CAR (-5, +5) represent the cumulative abnormal returns 1, 3 and 5 days prior to the announcement of merger to 1, 3 and 5 days following, separately. As shown in Table 10, bidder- and target-initiated deals differ in terms of average acquirer CARs for all three windows. The average acquirer CAR (-1, +1) is -0.13% in target-initiated deals and

-0.21% in bidder-initiated deals. Similarly, the average acquirer CAR (-3, +3) is -0.69% in target-initiated deals and -1.46% in bidder-initiated deals and the average acquirer CAR (-5, +5) is -0.75% in target-initiated deals and -1.58% in bidder-initiated deals. None of these three differences in average returns are statistically significant, but we can still see that acquirer firm returns are higher when deals are target initiated.

By computing buy-and-hold abnormal return (BHAR), it can provide some evidence of the overall wealth changes associated with these transactions over the long term. Table 10 contains univariate statistics on BHAR of acquirer firm for 1 year, 2 years and 3 years after the merger, respectively. Acquirer 1-year BHAR is -1.06%, on average, for target-initiated deals compared with -0.07% for bidder-initiated deals. This result is consistent with previous literature that acquiring firms experience negative abnormal returns one to three years after the merger (Langetieg, 1978; Franks et al., 1991). When we look at acquirer BHAR over 2 and 3 years periods, however, the difference is dramatic. Target-initiated deals have 4.27% and 2.70% higher returns than bidder-initiated ones, significant at 5% and 10% level separately. Not only do acquirers in target-initiated deals earn more returns than bidder-initiated ones, their mean returns are positive. Furthermore, we run several multivariate regressions to test the impact of initiation on BHAR. As shown in Table 11, the coefficient estimate of 0.045 and 0.050 indicates that acquirer firms on average receive 4.5% and 5.0% higher BHAR in two years and three years separately after the completion of the deal when the targets initiate

deals relative to bidders making unsolicited offers. In this case, we have evidence to support Hypothesis 4.

6.5 Motivation behind Deal Initiation

From our previous results, we can conclude that when a target firm initiates the deal, their abnormal return and bid premium associated with the deal are significantly less than those of bidder-initiated deals. In addition, target firms receive more cash than stocks and the merger process takes a shorter time. In the following parts, we provide possible explanations for this difference.

Shleifer and Vishny (2003) argue that once a firm finds their stocks are overvalued, it gets motivated to make a deal. In this case, acquirers with overvalued stock have more incentive to use stock rather than cash to finance acquisitions. In this study, we will test this theory on target firms. When a target firm is overvalued, managers have the incentive to be bought by another company. In addition, target shareholders will prefer cash rather than stock since target shareholders do not know if bidder firm is over- or underpriced. As a result, target shareholders have the incentive to reach out to a bidder and pursue acquisitions that would benefit themselves. We employ the measure of overvaluation introduced by Rhodes-Kropf, Robinson, and Viswanathan (2005) to compute the level of misvaluation of target firms.

Table 12 shows univariate statistics on overvaluation of target firms across the two deal

initiation groups. Although target firms in both bidder- and target-initiated deals are overvalued on average before announcement date (day -42), targets in bidder-initiated deals tend to be more overvalued than in target-initiated ones, although the difference is not statistically significant. We fail to support Hypothesis 5.

Previous studies predict that the bankruptcy avoidance motive is the most articulated of all merger motives. Target firms that are financially constrained would prefer cash to stock since it pays back the debt and avoids adverse selection. To assess whether a target firm is experiencing financial distress, we analyze its Altman's Z-score (Altman, 1968), Ohlson's O-Score (1980), KZ Index, Composite I Index, Composite II index, current ratio, debt ratio, liquidity, Tobin's Q and leverage ratio at the financial year end prior to the merger announcement date. In addition, we estimate the changes in a target's Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS) and sales growth figures the year prior to the initial merger announcement date to identify underperforming targets.

Table 13 shows univariate statistics on the financial situation of target firms across the two deal initiation groups. The variables that show significant difference are target Altman's Z-score, Ohlson's O-Score, KZ Index, leverage, current ratio, debt ratio, change in ROA indicator. The result confirms that target firms in target-initiated deals are more financial distressed than in bidder-initiated deals, thus supporting Hypothesis 6.

This is consistent with the findings of Masulis and Simsir (2015) that financially

distressed target firms are willing to accept lower premiums to avoid potential bankruptcy costs.

7. Conclusion

While mergers and acquisitions are some of the most frequently studied areas of companies, we know little about how deal initiation can influence those transactions. Our paper investigates mergers during the period 2006-2012, with a total of 40.4% of such deals initiated by targets. In target-initiated deals, target firms contact potential bidders first and express their willingness to be sold. Our study sheds light on the effects of deal initiation on firm performance, payment method and time to completion, and we also explore the motivations to initiate the deal.

We find that in target-initiated deals, acquirer firms pay a lower price to target firms than bidder-initiated deals. Cross-sectional analysis suggests that the target firm abnormal return around the announcement date is at least 18% lower when the target initiates the deal. When we look at the merger premium received by target shareholders, the results are very similar. Bid premiums are smaller by around 22% in target-initiated deals. Our findings are consistent with the results found by Masulis and Simsir (2015).

Our unique findings are that deal initiating target firms receive more cash as payment and it takes less time for both parties to complete the merger in target-initiated deals. Target shareholders receive a higher percentage of cash as opposed to shares because paying

cash is faster than paying stock. It is also possible that the large amount of cash received by deal initiating target firms is a by-product of cash-rich acquirers. Financially distressed target firms initiate deals with cash-rich bidders to gain access to their financial resources and to preserve growth opportunities. Time to completion is reduced in target-initiated deals, mainly due to acquirers taking target initiation as a friendly gesture. In addition, distressed target firms are more eager to ensure that acquirer needs are promptly met and facilitate the merger process.

We consider two hypotheses to explain why target firms want to initiate deals. We reject our first hypothesis indicating that target shareholders want to sell the firm when target stock is overvalued. Indeed, we find that the merger is actually proposed by financially distressed target firms. We confirm the findings of Masulis and Simsir (2015) that financially troubled target firms look to make deals quickly to save themselves from bankruptcy and are willing to sacrifice premium for this.

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FIGURE 1: Deal initiation over time

The sample consists of all completed acquisitions listed on the SDC database announced over the period 2006-2012 that meet the following criteria: (1) Both the acquirer and the target are publicly traded firms that are listed on the New York Stock Exchange, the American Stock Exchange or the NASDAQ, (2) the deal value is greater than \$5 million, (3) the form of transaction is a merger, acquisition, or acquisition of majority interest, where the acquirer acquires at least 50 percent of the target's shares, (4) neither the target or acquirer are financial or utility firms. The resulting sample is then matched with the CRSP and COMPUSTAT databases. Deal initiation data is collected from the SEC filings of the merging firms.

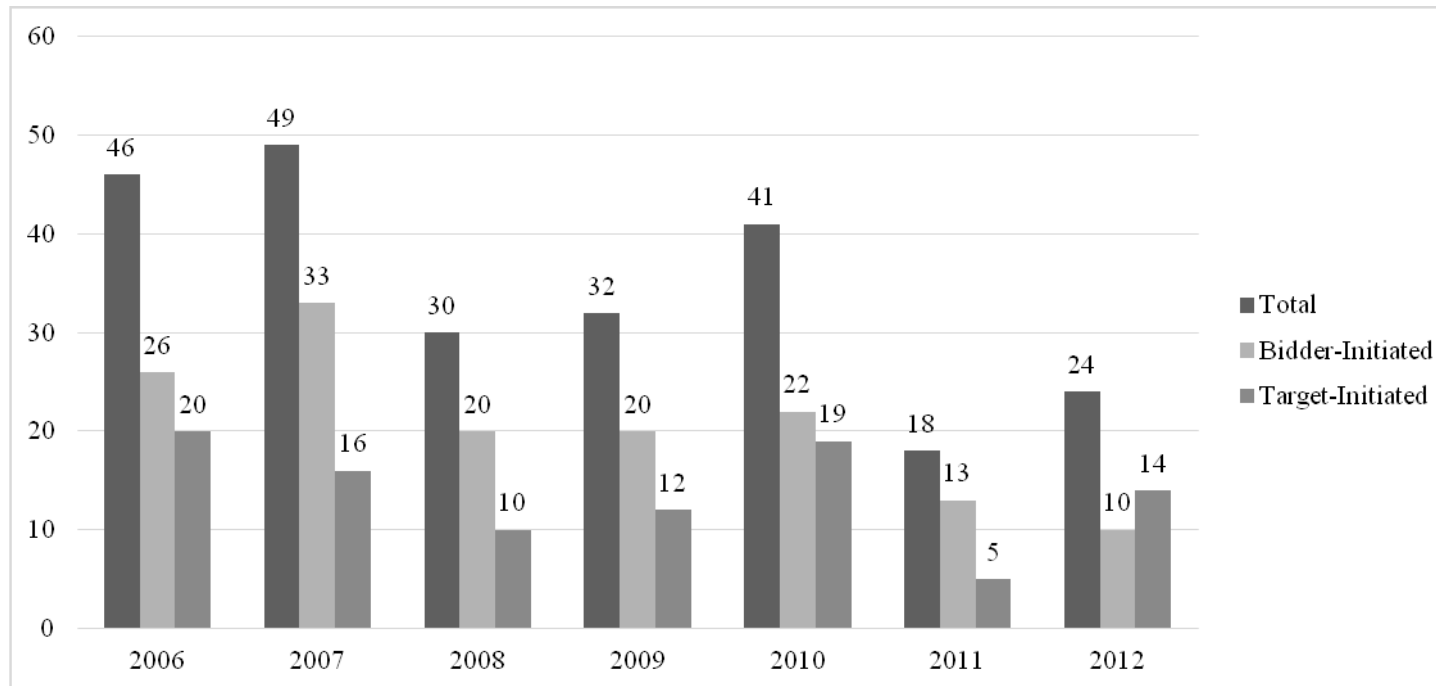


TABLE 1: Summary Statistics

This table summarizes the selected variables used in our study. The sample consists of 240 U.S. mergers and acquisitions during the period 2006 to 2012. The cumulative abnormal returns we used here are measured with 1, 3 and 5 days around the merger announcement. The market model is estimated over a 255-day period starting 301 days to 46 days before the announcement, with the CRSP equally-weighted market index employed as the market proxy. The component premium is based on component data using the aggregate value of each form of payment offered by the bidder to target shareholders (cash, stock, and other securities) as reported by SDC. Initial and final premiums are based on initial and final price data, respectively. All three premium measures are deflated by the target's market value of equity 42 trading days prior to the bid announcement. The combined premium integrates the component and price premium measures in a way that eliminates the extremes of both distributions. It is based on the component measure if it is greater than zero and less than two. Otherwise, the premium relies on the initial price measure (or on the final price measure if initial price data are missing). Details on the definitions and calculations of deal and financial characteristics of our sample firms are explained in Appendix A.

	N	Mean	Median	Min	Max	Std.dev..
PANEL A: Return and premium						
CAR (-1,+1)	240	0.333	0.250	-0.149	3.043	0.341
CAR (-3,+3)	240	0.334	0.247	-0.186	2.913	0.335
CAR (-5,+5)	240	0.356	0.270	-0.095	2.694	0.368
Initial premium	229	38.447	30.261	-4.350	229.341	34.140
Final premium	230	39.815	31.097	-5.230	229.341	35.990
Component premium	232	48.993	38.822	-48.829	634.171	54.446
Combined premium	232	45.484	38.175	0.216	186.336	33.727
PANEL B: Deal characteristics						
Value of transaction (\$million)	240	2068.998	686.220	8.349	67285.700	5690.739
Runup	240	0.028	0.038	-1.569	0.601	0.193
Time to completion	240	104.738	84.000	29.000	445.000	68.589
Same industry	240	0.702	1	0	1	0.458

Target termination fee	240	0.932	1	0	1	0.251
Tender offer	240	0.266	0	0	1	0.443
Crisis period	240	0.429	0	0	1	0.496
Friendly	240	0.979	1	0	1	0.144
Cash payment	240	0.749	1	0	1	0.435
Mixed payment	240	0.179	0	0	1	0.384

PANEL C: Acquirer characteristics

Acquirer size	240	18088.665	4419.462	55.873	228052.126	3597.918
Acquirer leverage	240	0.576	0.312	0.210	7.918	1.011
Acquirer Tobin's Q	240	3.193	2.711	0.703	14.082	2.108
Acquirer ROA	240	0.057	0.067	-0.681	0.341	0.114
Acquirer sales (\$million)	240	16646.060	3869.100	7.456	425071.000	37339.510

PANEL D: Target characteristics

Target size (\$million)	240	1452.770	325.894	11.462	44032.958	4341.610
Target leverage	240	0.251	0.130	0.621	6.144	2.375
Target Tobin's Q	240	2.249	2.187	0.909	59.184	8.937
Target ROA	240	-0.029	0.030	-1.715	0.307	0.223
Target sales (\$million)	240	1290.378	258.615	0.591	44578.000	3915.580
Target overvaluation	240	0.215	0.162	-2.291	2.811	0.704
Altman's Z score	240	4.523	3.525	-15.168	98.210	7.808

PANEL E: Target firm industry clarification

Consumer Non-Durables	8
Consumer Durables	3
Manufacturing	25
Energy	17
Chemicals and Allied Products	7
Business Equipment	98
Wholesale, Retail, and Some Services	12
Healthcare, Medical Equipment, and Drugs	46
Other	22

TABLE 2: Cumulative Abnormal Returns and Bid Premiums

This table compares the CARs and bid premiums received by target firms in bidder and target-initiated deals. The sample consists of 240 U.S. mergers and acquisitions during the period 2006 to 2012. CAR (-1,+1) denotes the abnormal return to the target firm centered within -1 days to +1 days around the announcement of the merger. Similarly, CAR (-3,+3) and CAR (-5,+5) represent the cumulative abnormal returns to the target firm within (-3,+3) and (-5,+5) days around the announcement, respectively. The normal returns are calculated using the market model with an estimation window of (-301, -46). The premium is calculated using four ways described in Table 1, i.e. the initial, final, component and combined premium, respectively. We use the market value of the target firm 42 and 120 trading days prior to the takeover announcement date to calculate the premium. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

Variable	Bidder-Initiated						Target-Initiated						Difference		Difference in	
	N	Mean	Median	Min	Max	Std.dev.	N	Mean	Median	Min	Max	Std.dev.	in means	T-stat	medians	Z-stat
CAR(-1,+1)	143	0.386	0.277	0.020	3.043	0.394	97	0.254	0.216	-0.149	1.143	0.224	0.131	3.28***	0.061	3.04**
CAR(-3,+3)	143	0.385	0.273	-0.001	2.913	0.386	97	0.257	0.219	-0.186	0.989	0.223	0.129	3.27***	0.053	2.88**
CAR(-5,+5)	143	0.414	0.295	-0.027	2.694	0.426	97	0.269	0.251	-0.095	1.288	0.235	0.145	3.38***	0.044	3.07**
Initial premium	136	42.163	32.141	1.744	229.341	38.769	93	33.013	28.150	-4.350	109.790	25.154	9.151	2.43**	3.990	1.76**
Final premium	137	42.766	32.554	1.744	229.341	38.729	93	35.466	29.878	-5.230	215.363	31.222	7.300	2.16**	2.675	1.58*
Component premium	142	54.286	41.252	-18.038	634.171	62.673	95	41.082	35.136	-48.829	186.336	38.014	13.205	2.44**	6.115	2.12**
Combined premium	139	47.807	39.423	1.964	174.523	33.417	93	42.012	33.794	0.216	186.336	34.071	5.795	1.28	5.629	1.94**
Initial premium2	136	40.776	33.063	1.517	217.600	35.59	93	32.192	26.076	-63.397	169.200	29.897	8.584	1.97**	6.987	2.49**
Final premium2	137	44.568	34.604	6.987	236.900	38.842	93	34.917	27.413	-63.397	198.600	33.755	9.651	2.00**	7.191	2.17**
Component premium2	142	53.617	42.767	-16.685	231.010	42.173	95	41.448	30.771	-62.577	216.300	43.256	12.169	2.15**	11.996	2.27**
Combined premium2	139	47.376	39.379	1.811	169.900	33.356	93	40.760	36.942	-62.757	195.700	36.942	6.616	1.42	2.437	2.05**

TABLE 3: OLS Regressions Used to Predict Target Firm Abnormal Announcement Returns

This table reports the results for a series of multivariate regressions to test whether differences in deal initiation affects abnormal returns of the target firms in M&A transactions. The sample consists of 240 U.S. mergers and acquisitions during the period 2006 to 2012. Initiation is a dummy variable that takes on a value of 1 if the deal is target initiated and a value of 0 if it is buyer initiated. Cash payment is a dummy variable that equals one if the merger is paid 100 percent in cash and zero otherwise. Mixed payment is a dummy variable that equals one if the merger is paid with both cash and stock, zero otherwise. Tender offer is a dummy variable that equals one if the bid involves a tender offer and zero if it is a merger. Friendly is a dummy variable that equals one if merger is considered a friendly merger and zero if hostile. Crisis period is a dummy variable that equals one if merger is announced between 2008-2010 and zero otherwise. Target termination fee is a dummy variable that equals one if target pays a termination fee and zero otherwise. Number of bidders is the number of bidders that propose a merger to the target firm. Runup is the change in the target firm's stock price from -45 to -6 trading days prior to the bid announcement. Value of transaction is the total value paid by the acquirer less fees and expenses in USD millions. Relative size is the market value of equity of the target firm divided by the market value of equity of the buyer firm, evaluated 42 trading days before the merger announcement date. ROA is net income divided by book value of total assets. Leverage is total debt divided by total equity. Tobin's Q is the market value of the firm divided by the book value of assets. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

DEPENDENT VARIABLES	CAR (-1,+1)	CAR (-3,+3)	CAR (-5,+5)
Initiation	-0.182*** (-3.98)	-0.180*** (-4.02)	-0.212*** (-3.88)
Same industry	-0.072 (-1.28)	-0.068 (-1.22)	-0.062 (-0.95)
Cash payment	0.102 (1.34)	0.098 (1.37)	0.123 (1.48)
Mixed payment	0.027 (0.30)	0.012 (0.14)	0.064 (0.55)
Tender offer	0.017 (0.33)	0.032 (0.63)	0.027 (0.49)
Friendly	-0.192** (-2.00)	-0.208** (-2.27)	-0.181 (-1.52)
Crisis period	0.098**	0.095**	0.118**

	(2.08)	(2.03)	(2.31)
Target termination fee	0.022	0.011	0.177
	(0.25)	(0.11)	(1.14)
Number of bidders	-0.036	-0.057	0.078
	(-0.50)	(-0.78)	(0.55)
Runup	-0.282	-0.246	-0.137
	(-1.64)	(-1.41)	(-0.64)
Value of transaction	-0.049***	-0.045***	-0.055***
	(-3.07)	(-2.95)	(-2.69)
Relative size	0.005***	0.005***	0.004**
	(3.22)	(3.67)	(2.43)
Composite I index	-0.059	-0.060	-0.033
	(-0.97)	(-1.00)	(-0.41)
Target ROA	-0.549***	-0.566***	-0.571***
	(-4.10)	(-4.26)	(-3.94)
Target leverage	0.020	0.022	0.034
	(0.82)	(0.87)	(1.16)
Target Tobin's Q	-0.004***	-0.004***	-0.004*
	(-2.70)	(-2.85)	(-1.95)
Acquirer ROA	0.508*	0.521*	0.239
	(1.66)	(1.83)	(0.49)
Acquirer leverage	-0.013	-0.009	-0.031
	(-0.64)	(-0.49)	(-0.86)
Acquirer Tobin's Q	-0.005	-0.007	-0.002
	(-0.52)	(-0.76)	(-0.12)
Constant	0.864***	0.886***	0.615*

	(3.49)	(3.62)	(1.67)
Observations	240	240	240
Adjusted R-squared	0.256	0.26	0.22

TABLE 4: OLS Regressions Used to Predict the Bid Premium

This table reports the results for a series of multivariate regressions to test whether difference in deal initiation affects merger premiums in M&A transactions. The sample consists of 240 U.S. mergers and acquisitions during the period 2006 to 2012. Initiation is a dummy variable that takes on a value of 1 if the deal is target initiated and a value of 0 if it is buyer initiated. Cash payment is a dummy variable that equals one if the merger is paid 100 percent in cash and zero otherwise. Mixed payment is a dummy variable that equals one if the merger is paid with both cash and stock, zero otherwise. Tender offer is a dummy variable that equals one if the bid involves a tender offer and zero if it is a merger. Friendly is a dummy variable that equals one if merger is considered a friendly merger and zero if hostile. Crisis period is a dummy variable that equals one if merger is announced between 2008-2010 and zero otherwise. Target termination fee is a dummy variable that equals one if target pays a termination fee and zero otherwise. Number of bidders is the number of bidders that propose a merger to the target firm. Runup is the change in the target firm's stock price from -45 to -6 trading days prior to the bid announcement. Value of transaction is the total value paid by the acquirer less fees and expenses in USD millions. Relative size is the market value of equity of the target firm divided by the market value of equity of the buyer firm, evaluated 42 trading days before the merger announcement date. ROA is net income divided by book value of total assets. Leverage is total debt divided by total equity. Tobin's Q is the market value of the firm divided by the book value of assets. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

DEPENDENT VARIABLES	Initial premium	Final premium	Component premium	Combined premium
Initiation	-23.100*** (-3.40)	-22.210*** (-3.19)	-22.374*** (-3.31)	-10.833** (-2.36)
Same industry	-10.866 (-1.24)	-10.601 (-1.22)	-19.658** (-2.21)	-10.347* (-1.70)
Cash payment	12.634 (1.31)	15.478 (1.62)	16.429* (1.72)	10.593 (1.39)
Mixed payment	20.838 (1.30)	29.367* (1.81)	17.633 (1.20)	3.126 (0.38)
Tender offer	-2.061 (-0.33)	-0.349 (-0.06)	-6.066 (-0.92)	-8.104* (-1.66)
Friendly	-13.980 (-0.64)	-13.642 (-0.64)	-77.604 (-1.46)	-77.972 (-1.63)
Crisis period	15.755**	14.934**	11.653*	9.273*

	(2.46)	(2.28)	(1.94)	(1.94)
Target termination fee	4.485	-12.548	-10.318	-13.071
	(0.42)	(-0.61)	(-0.53)	(-0.68)
Number of bidders	9.210	35.931**	36.156**	27.840**
	(0.96)	(2.03)	(2.55)	(2.08)
Runup	-69.179***	-54.823**	-42.426*	-46.556***
	(-3.10)	(-2.36)	(-1.94)	(-2.87)
Value of transaction	-6.528**	-6.728**	-6.821**	-2.448
	(-2.25)	(-2.29)	(-2.28)	(-1.31)
Relative size	0.570	0.690*	1.205**	-0.031
	(1.42)	(1.77)	(2.00)	(-0.06)
Target ROA	-74.952***	-73.560***	-77.495***	-72.813***
	(-4.27)	(-4.11)	(-5.51)	(-6.33)
Target leverage	0.409	0.997	0.238	-2.545
	(0.11)	(0.28)	(0.06)	(-1.21)
Target Tobin's Q	-0.642***	-0.595**	-1.013***	-0.713***
	(-2.65)	(-2.50)	(-4.23)	(-4.95)
Acquirer ROA	-5.060	14.050	-7.442	52.795**
	(-0.07)	(0.21)	(-0.11)	(2.07)
Acquirer leverage	-3.846	-3.579	-3.868	-0.458
	(-0.75)	(-0.70)	(-0.74)	(-0.24)
Acquirer Tobin's Q	0.173	-0.173	0.601	-0.036
	(0.09)	(-0.09)	(0.30)	(-0.03)
Composite I index	-5.989	-7.525	-15.351	-1.536
	(-0.60)	(-0.75)	(-1.64)	(-0.24)
Constant	90.059**	75.874*	156.710**	128.658**

	(2.48)	(1.78)	(2.43)	(2.19)
Observations	229	230	232	232
Adjusted R-squared	0.263	0.243	0.254	0.335

TABLE 5: Correlation Matrix of Control Variables

This table demonstrates the correlation coefficients between independent variables. The sample consists of 240 U.S. mergers and acquisitions during the period 2006 to 2012. Initiation is a dummy variable that takes on a value of 1 if the deal is target initiated and a value of 0 if it is buyer initiated. Cash payment is a dummy variable that equals one if the merger is paid 100 percent in cash and zero otherwise. Mixed payment is a dummy variable that equals one if the merger is paid with both cash and stock, zero otherwise. Tender offer is a dummy variable that equals one if the bid involves a tender offer and zero if it is a merger. Friendly is a dummy variable that equals one if merger is considered a friendly merger and zero if hostile. Crisis period is a dummy variable that equals one if merger is announced between 2008-2010 and zero otherwise. Target termination fee is a dummy variable that equals one if target pays a termination fee and zero otherwise. Number of bidders is the number of bidders that propose a merger to the target firm. Runup is the change in the target firm's stock price from -45 to -6 trading days prior to the bid announcement. Value of transaction is the total value paid by the acquirer less fees and expenses in USD millions. Relative size is the market value of equity of the target firm divided by the market value of equity of the buyer firm, evaluated 42 trading days before the merger announcement date. ROA is net income divided by book value of total assets. Leverage is total debt divided by total equity. Tobin's Q is the market value of the firm divided by the book value of assets.

	Initiation	Same industry	Cash payment	Mixed payment	Tender offer	Friendly	Crisis period	Target termination fee	Number of bidders	Runup	Value of transaction	Relative size	Target ROA	Target leverage	Target Tobin's Q	Acquirer ROA	Acquirer leverage	Acquirer Tobin's Q	Composite I index	
Initiation	1.000																			
Same industry	0.084	1.000																		
Cash payment	0.065	-0.079	1.000																	
Mixed payment	-0.059	0.048	-0.827	1.000																
Tender offer	-0.005	0.014	0.160	-0.214	1.000															
Friendly	-0.079	-0.080	0.219	-0.265	-0.005	1.000														
Crisis period	0.017	-0.058	0.047	0.063	0.289	0.023	1.000													

Target																				
termination fee	-0.040	-0.008	-0.004	-0.021	-0.140	-0.020	-0.100	1.000												
Number of bidders	0.104	0.135	-0.020	0.003	0.229	0.029	0.169	-0.415	1.000											
Runup	-0.058	-0.003	0.047	-0.032	0.104	-0.061	0.183	-0.219	0.139	1.000										
Value of transaction	-0.223	-0.028	-0.174	0.144	-0.062	-0.125	-0.109	-0.049	0.163	-0.060	1.000									
Relative size	-0.065	-0.037	0.049	-0.040	0.008	0.544	-0.107	-0.016	-0.032	-0.095	-0.050	1.000								
Target ROA	-0.079	-0.008	-0.024	0.021	-0.100	-0.054	-0.178	-0.076	0.071	-0.090	0.367	-0.006	1.000							
Target leverage	0.145	0.015	-0.228	0.190	-0.094	0.055	-0.143	0.021	-0.020	-0.034	0.196	0.036	0.080	1.000						
Target Tobin's Q	-0.145	-0.096	-0.045	0.030	-0.073	-0.003	-0.071	-0.005	0.006	-0.058	0.021	-0.006	0.085	-0.085	1.000					
Acquirer ROA	-0.057	0.032	0.112	-0.099	0.016	-0.053	-0.033	-0.079	0.143	-0.063	0.241	-0.010	0.243	-0.073	-0.203	1.000				
Acquirer leverage	-0.084	-0.015	0.151	-0.039	0.036	-0.002	-0.029	0.033	-0.012	-0.091	0.115	0.009	0.012	0.073	0.004	0.100	1.000			
Acquirer Tobin's Q	-0.191	-0.112	0.108	-0.077	0.066	-0.123	-0.014	0.078	-0.008	-0.002	0.117	0.030	-0.047	0.031	0.029	0.257	0.632	1.000		
Composite I index	0.075	-0.100	0.108	-0.070	0.108	0.065	0.107	-0.113	0.000	0.219	-0.340	0.067	-0.328	-0.210	-0.116	-0.113	-0.037	-0.024	1.000	

TABLE 6: Regressions Used to Predict Method of Payment

This table reports the results for a multivariate regression and a logistic regression to examine whether difference in deal initiation affect the method of payment in M&A transactions. Percentage of cash is the percentage of total payments to the target firm that is in cash. Cash payment is a dummy variable that takes on a value of 1 if the deal is paid 100% in cash and 0 otherwise. Initiation is a dummy variable that takes on a value of 1 if the deal is target initiated and a value of 0 if it is buyer initiated. Same industry is a dummy variable that equals one if the first two digit SIC codes of the merging firms match and zero otherwise. Friendly is a dummy variable that equals one if merger is considered a friendly merger and zero if hostile. Crisis period is a dummy variable that equals one if merger is announced between 2008-2010 and zero otherwise. Runup is calculated as the change of stock price for target firms from day -45 to day -6 trading prior to the bid announcement. Value of transaction is the total value paid by the acquirer less fees and expenses in USD millions. Relative size is the market value of equity of the target firm divided by the market value of equity of the buyer firm, evaluated 42 trading days before the merger announcement date. The measure of overvaluation we use is derived by Rhodes-Kropf, Robinson, and Viswanathan (2005), which is described in our methodology section. Leverage is total debt divided by total equity. Tobin's Q is the market value of firm divided by the book value of assets. Sales growth is the percentage increase in sales from last year. Cash richness is the amount of cash divided by total assets. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

DEPENDENT VARIABLES	Percentage of cash	Cash payment
Initiation	9.647** (2.51)	1.230** (2.13)
Same industry	0.871 (0.21)	-0.028 (-0.05)
Friendly	55.760** (2.58)	
Crisis period	-6.665* (-1.88)	-0.370 (-0.68)
Runup	9.969 (0.91)	1.180 (0.91)
Value of transaction	-4.183*** (-2.64)	-0.697*** (-2.88)
Relative size	-0.505	-0.095

	(-1.28)	(-1.14)
Composite I index	-10.273*	-1.208*
	(-1.74)	(-1.67)
Overvaluation	7.647*	1.398**
	(1.79)	(2.12)
Target leverage	-4.142*	-0.812***
	(-1.96)	(-2.76)
Target sales growth	2.270	0.438
	(0.40)	(0.49)
Target Tobin's Q	-1.537	-0.247
	(-0.92)	(-1.33)
Acquirer cash richness	4.763***	0.660***
	(4.25)	(3.59)
Acquirer leverage	0.922	0.386*
	(0.55)	(1.82)
Acquirer sales growth	-3.104	-0.982
	(-0.37)	(-1.26)
Acquirer Tobin's Q	0.455	-0.024
	(0.50)	(-0.18)
Constant	35.872	3.729**
	(1.43)	(2.26)
Observations	232	232
Adjusted R-squared/Pseudo R-squared	0.22	0.33

Table 7: Univariate Analysis of the Financial Situation of Acquirer Firms Before Merger Announcements

This table compares the financial situation of acquirer firms between the two deal initiation groups one year and two years before the announcement date. Cash equals the amount of cash in USD millions. Cash richness equals the amount of cash of acquirers divided by total sales. Dividend payout ratio equals to total dividends divided by net income. Current ratio equals to current assets divided by current liabilities. Debt ratio equals to total debt divided by total assets. Leverage equals to total debt divided by total equity. Tobin's Q equals to market value of firm divided by the book value of assets. Earnings per share (EPS) equals to total earnings divided by the number of outstanding shares. ROA equals to net income divided by book value of total assets. ROE equals to net income divided by shareholder's equity. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

	Two years before merger							One year before merger					
	Bidder-initiated		Target-initiated		Difference			Bidder-initiated		Target-initiated		Difference	
	Obs.	Mean	Obs.	Mean	in means	T-stat		Obs.	Mean	Obs.	Mean	in means	T-stat
Cash	143	3042.804	97	2646.652	396.152	0.56	Cash	143	3332.180	97	2809.993	522.187	0.72
Cash richness	143	0.219	97	0.394	-0.175	-2.10**	Cash richness	143	0.241	97	0.351	-0.11	-2.31**
Current ratio	143	2.081	97	2.462	-0.38	-2.20**	Current ratio	143	2.221	97	2.566	-0.345	-1.57
Debt ratio	143	0.194	97	0.158	0.036	1.78*	Debt ratio	143	0.195	97	0.152	0.043	1.97**
Leverage	143	0.777	97	0.402	0.375	1.95*	Leverage	143	0.681	97	0.420	0.261	2.10**
Tobin's Q	143	3.410	97	3.083	0.326	1.05	Tobin's Q	143	3.292	97	3.047	0.245	0.83
EPS	143	1.797	97	1.034	0.763	1.79*	EPS	143	2.217	97	1.794	0.423	0.97
Dividend payout	143	0.142	97	0.326	-0.184	-1.33	Dividend payout	143	0.132	97	0.280	-0.148	-1.29
ROA	143	0.066	97	0.064	0.002	0.07	ROA	143	0.061	97	0.058	0.003	0.21
ROE	143	0.277	97	0.123	0.154	0.63	ROE	143	0.115	97	0.111	0.004	0.05

TABLE 8: The Effect of Deal Initiation on the Time to Completion

This table reports the results for a multivariate regression in which we examine the impact of different types of deal initiation on the time to complete a merger. Time to completion represents the time between the merger announcement date and the effective merger date. Initiation is a dummy variable that takes on a value of 1 if the deal is target initiated and a value of 0 if it is buyer initiated. Same industry is a dummy variable that equals one if the first two digit SIC codes of the merging firms match and zero otherwise. Friendly is a dummy variable that equals one if merger is considered a friendly merger and zero if hostile. Crisis period is a dummy variable that equals one if merger is announced between 2008-2010 and zero otherwise. Tender offer is a dummy variable that equals one if the bid involves a tender offer and zero if it is a merger. Value of transaction is the total value paid by the acquirer less fees and expenses in USD millions. Leverage is total debt divided by total equity. Tobin's Q is the market value of firm divided by the book value of assets. Sales growth is the percentage increase in sales from last year. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

DEPENDENT VARIABLES	Time to completion
Initiation	-17.706* (-1.66)
Same industry	15.950 (1.45)
Friendly	-148.061** (-2.47)
Crisis period	13.879 (1.27)
Tender offer	-42.345*** (-3.69)
Percent cash	-0.278 (-1.25)
Value of transaction	14.922*** (3.93)
Relative size	2.018** (2.13)

Target leverage	12.837**
	(2.34)
Target sales growth	-10.062
	(-0.53)
Target Tobin's Q	0.123
	(0.23)
Acquirer leverage	4.245
	(1.16)
Acquirer sales growth	34.323
	(1.56)
Acquirer Tobin's Q	-1.495
	(-0.66)
Composite I index	-4.780
	(-0.36)
Constant	136.770**
	(1.99)
Observations	232
Adjusted R-squared	0.270

TABLE 9: Univariate Analysis of Time to Completion

This table reports the results for a comparison where we examine the impact of different degrees of financial constraint on the time to complete a merger. Time to completion represents the time between the merger announcement date and the effective merger date. We break down Altman's Z-score into four quartiles. The lowest quartile represents the most financially constrained firms, whereas the highest quintile represents the least financially constrained firms. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

	The lowest quintile		The highest quintile		Difference in means	T-stat
	Obs.	Mean	Obs.	Mean		
Time to completion	56	89.68	57	109.68	-20.00	-1.69*

TABLE 10: The Stock Price Performance of Acquirer Firms

This table reports the short- and long-term returns of acquirer firms 1, 2 and 3 years after the merger. CAR(-1,+1) represents the abnormal return to the acquirer firm centered within -1 to +1 days around the announcement of the merger. Similarly, CAR(-3,+3) and CAR(-5,+5) measure the cumulative abnormal returns to the acquirer firm (-3,+3) and (-5,+5) days around the announcement, respectively. The normal returns are calculated using the market model with an estimation window of (-301,-46). The way to calculate the buy and hold abnormal returns is described in our methodology section. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

Acquirer firm	Bidder-initiated		Target-initiated		Difference in means	T-stat
	Obs.	Mean	Obs.	Mean		
CAR(-1,+1)	143	-0.21%	97	-0.13%	-0.08%	-0.25
CAR(-3,+3)	143	-1.46%	97	-0.69%	-0.77%	-0.75
CAR(-5,+5)	143	-1.58%	97	-0.83%	-0.75%	-0.77
BHAR-1 year	132	-0.07%	90	-1.06%	0.99%	1.60
BHAR-2 year	129	-0.71%	86	3.56%	-4.27%	-2.17**
BHAR-3 year	112	1.49%	69	4.18%	-2.70%	-1.82*

TABLE 11: The Effect of Deal Initiation on BHARs

This table reports the impact of different forms of deal initiation on the acquiring firm BHARs. Initiation is a dummy variable that takes on a value of 1 if the deal is target initiated and a value of 0 if it is buyer initiated. Same industry is a dummy variable that equals one if the first two digit SIC codes of the merging firms match and zero otherwise. Percentage of cash is the percentage of total payments to the target firm that is in cash. Time to completion represents the time between the merger announcement date and the effective merger date. Relative size is the market value of equity of the target firm divided by the market value of equity of the buyer firm, evaluated 42 trading days before the merger announcement date. Sales growth is the percentage increase in sales from last year. ROA is net income divided by book value of total assets. Tobin's Q is the market value of the firm divided by the book value of assets. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

DEPENDENT VARIABLES	BHAR-1year	BHAR-2year	BHAR-3year
Initiation	-0.200** (-1.97)	0.044* (1.81)	0.051*** (2.71)
Same industry	-0.097 (-1.36)	0.093*** (3.63)	-0.001 (-0.06)
Percentage of cash	-0.002 (-1.39)	-0.000 (-0.08)	0.000 (0.11)
Time to completion	-0.001* (-1.90)	-0.000 (-0.25)	0.000* (1.84)
Composite I index	0.003 (0.04)	0.028 (0.88)	0.007 (0.30)
Relative size	0.001 (0.20)	0.002 (1.30)	0.001*** (3.96)
Target sales growth	0.057 (0.41)	-0.030 (-0.66)	0.028 (1.04)
Target Tobin's Q	-0.002 (-0.60)	0.004*** (3.12)	0.000 (0.74)
Target ROA	-1.000***	0.007	-0.010

	(-5.79)	(0.12)	(-0.26)
Acquirer sales growth	-0.084	-0.045	0.001
	(-0.59)	(-0.91)	(0.03)
Acquirer Tobin's Q	-0.012	-0.001	0.009**
	(-0.92)	(-0.18)	(2.09)
Acquirer ROA	0.959**	0.128	-0.108
	(2.20)	(0.79)	(-0.55)
Constant	0.839***	-0.024	-0.043
	(3.80)	(-0.30)	(-0.64)
Observations	187	180	157
Adjusted R-squared	0.211	0.162	0.112

TABLE 12: Overvaluation Analysis of Target Firms

This table reports the degree of overvaluation of target firms between target-initiated deals and bidder-initiated deals. Overvaluation is measured as proposed by Rhodes-Kropf, Robinson, and Viswanathan (2005) and described in the methodology section. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

	Bidder-initiated		Target-initiated		Difference in means	T-stat
	Obs.	Mean	Obs.	Mean		
Overvaluation	143	0.26	97	0.16	0.09	1.06

Table 13: Analysis of Target Firm Financial Constraint

This table compares the financial situation of the target firm between the two deal initiation groups. The financial constraint index including Altman's Z-Score, Ohlson's O-Score, KZ Index, Composite I Index and Composite II Index as described in the methodology section. Leverage equals total debt divided by total equity. The debt ratio equals total debt divided by total assets. The current ratio equals current assets divided by current liabilities. Earnings per share (EPS) equals total earnings divided by the number of outstanding shares. ROA equals net income divided by book value of total assets. ROE equals net income divided by shareholder's equity. Sales is the total amount collected for providing goods and services in USD millions. Tobin's Q equals the market value of firm divided by the book value of assets. Significance levels are denoted by asterisks, * for the 10%, ** for the 5% and *** for the 1% level.

	Bidder-initiated		Target-initiated		Difference in means	T-stat
	Obs.	Mean	Obs.	Mean		
Altman's Z-Score	143	5.429	97	3.065	2.364	2.63***
Ohlson's O-Score	143	0.180	97	0.271	-0.091	-2.01**
KZ Index	143	-18.713	97	-7.492	-11.221	-1.62*
Composite I Index	137	2.441	95	2.361	0.080	0.77
Composite II Index	137	2.137	95	1.976	0.162	1.03
Leverage	143	0.423	97	0.793	-0.370	-2.50**

Debt ratio	143	0.426	97	0.510	-0.083	-1.90*
Sales	143	1346.87	97	1207.096	139.774	0.25
Current ratio	143	3.623	97	2.547	1.076	2.70***
Tobin's Q	143	2.792	97	1.445	1.347	0.93
Sales growth	143	0.284	97	0.140	0.144	1.32
ROA	143	-0.004	97	-0.066	0.062	2.13**
ROE	143	0.034	97	-0.309	0.343	0.97
EPS	143	0.676	97	-1.686	2.362	1.19

Appendix A. Variable Definitions

Unless otherwise stated, deal and financial variables are calculated using the most recent annual financial statements (at the financial year end prior to the merger announcement).

VARIABLE	DEFINITION	SOURCE
Initiation	Dummy variable, equal to 1 if the deal is target initiated and 0 if it is buyer initiated	SEC
Target termination fee	Dummy variable, equal to 1 if target will pay termination fee when the target backs out of a deal, 0 otherwise	SDC
Friendly	Dummy variable, equal to 1 if the merger is friendly, 0 if it is hostile	SDC
Tender offer	Dummy variable, equal to 1 if the merger is tender offer, 0 otherwise.	SDC
Percent cash	Percent of total payment to the target firm that is in cash	SDC
Cash payment	Dummy variable, equal to 1 if payment to target firm is in 100% cash, 0 otherwise	SDC
Mixed payment	Dummy variable, equal to 1 if the payment to the target firm is in both cash and stock, 0 otherwise	SDC
Value of transaction	Total value paid by the acquirer less fees and expenses in USD million	SDC
Same industry	Dummy variable, equal to 1 if 2-digit SIC codes of the merging firms match, 0 otherwise	SDC
Time to completion	Time between the merger announcement date and the completion date	SDC
Crisis period	Dummy variable, equal to 1 if the merger is announced between 2008 and 2010, 0 otherwise	SDC
Runup	The target firm's cumulative abnormal return over the (-45,-6) period	CRSP
Relative size	Market value of equity of the target firm divided by the market value of equity of the buyer firm, evaluated 43 trading days before the merger announcement date	CRSP
Leverage	Total debt divided by total equity	COMPUSTAT
Tobin's Q	Market value divided by the book value of assets	COMPUSTAT
Sales	Total amount collected for providing goods and services in USD millions	COMPUSTAT
Sales growth	The percentage increase in sales from last year	COMPUSTAT

ROA	Net income divided by the book value of total assets	COMPUSTAT
ROE	Net income divided by shareholder's equity	COMPUSTAT
KZ-index	$-1.002 * \text{Cash Flow/Assets} + 0.283 * Q + 3.139 * \text{Leverage} - 39.368 * \text{Dividends/Assets} - 1.315 * \text{Cash Holdings/Assets}$	COMPUSTAT
Altman's Z-score	$1.2 * (\text{working capital/total assets}) + 1.4 * (\text{retained earnings/total assets}) + 3.3 * (\text{EBIT/total assets}) + 0.6 * (\text{market value of equity/book value of debt}) + 0.999 * (\text{total sales/total assets})$. Based on Altman (1968).	COMPUSTAT
Ohlson's O-Score	$-1.32 - 0.407 * \ln(\text{total assets}) + 6.03 * \text{total liabilities/total assets} - 1.43 * \text{working capital/total assets} + 0.757 * \text{current liabilities/current assets} - 2.37 * \text{net income/total assets} - 1.83 * \text{funds from operations/total liabilities} - 1.72 * (1 \text{ if } TL > TA, 0 \text{ otherwise}) + 0.285 * (1 \text{ if a net loss for the last two years, } 0 \text{ otherwise}) - 0.521 * (\text{Netincome}(t) - \text{Netincome}(t-1)) / (\text{Netincome}(t) + \text{Netincome}(t-1))$	COMPUSTAT
Debt ratio	Total debt divided by total assets	COMPUSTAT
Current ratio	Current assets divided by current liabilities	COMPUSTAT
EPS	Total earnings divided by the number of outstanding shares	COMPUSTAT
Cash	Amount of cash in USD million	COMPUSTAT
Cash richness	Amount of cash divided by total sales	COMPUSTAT
Dividend payout ratio	Total dividends divided by net income	COMPUSTAT