

**AN EMPIRICAL EXAMINATION OF THE RATIONALE FOR TENDER
OFFERS**

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ABSTRACT

An Empirical Examination of the Rationale for Tender Offers

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This study investigates the rationale behind acquisitions through tender offers by examining unsuccessful tender offers from 1985 to 2010. Four hypotheses are tested: information, synergy, agency and hubris. The study follows the approach in Bradley, Desai and Kim (1983) (BDK) and builds on their analysis by implementing the recent methodological advances in long run analysis. The proportion of unsuccessful acquisitions has declined significantly from 20 percent in 1985 to 5 percent in 2010. Contrary to the evidence presented in BDK, the results support both the information and synergy hypotheses. The study also examines correlations among target gain, total gain and acquirer gain to differentiate between synergy, agency and hubris hypotheses. The results suggest that, in addition to synergy, agency considerations have become increasingly important in explaining the unsuccessful acquisitions via tender offers in our sample period. We find no evidence in support of the hubris hypothesis. Cross-sectional analysis shows that the intensity of M&A activity in the target's industry, pre-announcement price run-up in the target, firm size, and absence of a poison pill provision increase the likelihood of unsuccessful targets being acquired within 5 years of the initial bid. Additionally, this study also finds by comparing unsuccessful initial bidders to their counterpart winning rival bidders that, bidders of larger size, more growth opportunities, and bidders in unrelated industries to that of the target and in less active M&A industries, are more likely to succeed in acquiring the target.

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1. Introduction

Bradley, Desai and Kim (1983) (BDK) examine the returns to shareholders for both target firms that received unsuccessful tender offers and acquiring firms that made failed tender offers, and conclude that the rationale for tender offers is synergy and not the information impact of the revaluation of the targets' value.

According to BDK, there are two main hypotheses which explain the rationale behind tender offers, information and synergy. The information hypothesis posits that the information of the acquisition announcement causes the market to revalue the "undervalued" targets. And, it could also inspire the target's management to implement better operating strategies to increase shareholder value. In either case, the positive abnormal returns should not be influenced whether the acquisition is successful or not. Consequently, the stock price should not decrease after the announcement of the unsuccessful tender offers. On the other hand, the synergy hypothesis states that positive abnormal returns come from the transfer of the target resources and reallocation, such as more efficient management, complementary resources, economies of scale, etc. Hence targets that are successfully acquired in tender offers provide synergistic gains to the acquiring firm, while targets that are not acquired in unsuccessful tender offers should have these potential synergy gains dissipate after the bid fails. Consequently, announcement period abnormal returns will decline after the announcement since there is no synergy in the unsuccessful cases.

In order to determine which hypothesis is the dominant motive for acquisitions through tender offers, BDK test the long-term abnormal returns gained by the unsuccessful targets, which were grouped by whether they were acquired within 5 years after the first unsuccessful bid. The results show that the positive abnormal returns gained from the announcement of tender offers dissipated in cases when

the targets were not acquired within 5 years, suggesting that the continuous improvement of the firm's value occurs only when the target's resources can result in synergistic gains for the acquirer, in which case the initial failed bid could be followed by another higher premium bid. If information hypothesis holds, the stock price of the unsuccessful targets should not decrease back to its preannouncement level even though these firms were not acquired within 5 years. BDK also investigate the failed acquiring firms by categorizing them into two groups based on who they eventually lost to: the management of the targets or a rival bidder. They find that the announcement period cumulative abnormal returns (CARs) for bidders who lost to the management of the target, return to the pre-announcement level, while for failed bidders who lost to rivals, the CARs decrease sharply. These results further support their finding that the acquirers who lost to the rival bidders suffered the loss because the rival bidders gained synergy from the acquisitions. According to these results, the authors conclude that the acquisitions via tender offers were implemented by acquiring firms in order to get synergies, and the positive response on target stock at the announcement is not simply the result of new information about target undervaluation.

The BDK study is now 30 years old and fairly dated. The tender offers investigated in their paper were from 1963-1980. A number of significant changes have occurred both in the merger and acquisition market as well as the methodologies used in the literature. For example, the proportion of tender offers in all M&A transactions has decreased as well as the possibility of unsuccessful bids. Whereas 20 percent of the tender offer bids were unsuccessful in the mid-1980s, that number has dropped to less than 5 percent in the most recent years. The greater likelihood of success may be due to improved diligence on the part of acquirers (due to either improvements in management quality, or greater availability of time and information accuracy of targets) and the trend towards

more related acquisitions compared to the diversifying acquisitions in the 1960s and 1970s. Secondly, there has been a significant shift in the ownership structure of publicly traded corporations in the United States. Institutional ownership has increased from less than 25 percent in the 1980s to over 50 percent, and this has important implications in terms of monitoring managerial decisions. Thirdly, the introduction of anti-takeover provisions, such as poison pills, staggered board, and others introduced in the early 1980s has made acquisitions difficult, particularly if the target's management is not fully on board. The increased success rate for tender offers is also in part a result of the drop in unsolicited offers.

In addition to the changes in the M&A landscape, there have been significant advances made in finance research methodologies. Both the short-run and long-run event studies have evolved substantially in the last three decades. In the BDK study, Cumulative Abnormal Return (CAR) analyses are performed on shares of the target firms to show the long-term effects of unsuccessful tender offers. We now know the shortcomings of using CARs for long event windows. Kothari and Warner (2006) point out that, contrary to short-horizon tests which show little or no sensitivity to model misspecification and have a high power, long-horizon tests are problematic and have low power. Using simple CARs to study long horizon returns is problematic in terms of the distributional assumptions of stock returns and the associated tests statistics. Improved methods such as those introduced by Barber and Lyon (1997), and Lyon, Barber and Tsai (1999) have become standard in long- horizon studies.

There have also been advances in corporate finance theory, such as the development of the agency theory of free cash flow (Jensen (1986)) and the introduction of hubris hypothesis (Roll (1986)) since the BDK study. Agency theory states that the management of acquiring firms implement the acquisition to

maximize their own benefits at the expense of the shareholders. Hubris hypothesis suggests that the management of the bidders making acquisitions make mistakes in valuing the target firms, resulting in overpaying for the acquisition and gain no synergy. According to Berkovitch and Narayanan (1993) (BN), who develop a unique approach using the target gain, acquirer gain and total gain to distinguish the synergy, agency and hubris motives in an acquisition, the rationale is that if the acquisition is motivated by synergy, target gain should be positively related to both acquirer gain and total gain; if the acquisition is motivated by an agency problem, target gain should be negatively related to both total gain and acquirer gain because when the targets' shareholders predict the acquirers' motives, they would try to gain more wealth, which comes from the loss of the acquirers; if the acquisition is motivated by hubris, there would in most cases be no correlation between target gain and total gain because the wealth of the acquirers is transferred simply to target gain since the acquisition are based on erroneous data or assumptions.

Taking into consideration both the developments in the merger and acquisition market as well as the advances in financial research, we re-examine unsuccessful tender offers using a more recent sample between 1985 and 2010. We adopt the basic approach as in BDK and build on it by implementing the more recent techniques to analyze long run returns. For the long horizon returns, we use the buy-and-hold abnormal return (BHAR) approach. Mitchell and Stafford (2000) suggest that the BHAR approach is more reliable since it assumes that multi-year abnormal returns are independent for event firms. Additionally, we consider not only synergy and information hypothesis as in the BDK paper, but also investigate agency and hubris as potential motives for tender offers. Also of note and of significance, BDK investigate all the unsuccessful control-oriented tender offers, including partial acquisitions. In this new investigation, we focus on the

unsuccessful tender offer in which the acquirer attempted to gain 100 percent of the target.

To distinguish between the different motives for acquisitions, we follow the methodology described in BN's study and measure the correlation among target gain, total gain and acquirer gain in order to investigate the synergy, agency and hubris motives. In a second stage, we also investigate firm characteristics that determine if the unsuccessful targets have a stronger likelihood of being acquired shortly after initial unsuccessful tender offer. Like in the BDK study, we also compare the unsuccessful acquirers and the successful rival bidders to determine which characteristics influence the success of the acquisitions.

Our empirical results show that in tender offers, on average, the shareholders of target firms that rejected the initial tender offers gain positive abnormal returns. In the short term, firms that were 100 percent acquired within 1 year of the initial unsuccessful tender offers gained more wealth than the firms that were not acquired within a year. These results support both information and synergy hypotheses. Additionally, our empirical results indicate that the stock price starts to decrease after the gain around the announcement month. In the long term, the stock price of targets that were acquired within 5 years only increases in the period around announcement month, while it subsequently decreases in the next 5 years. Meanwhile for firms that were not acquired within 5 years, the trend shows the stock price increases at announcement month and subsequently keeps its high level for the next 5 years. These results differ from the results in the BDK study, which shows that the stock price of the firms that were acquired within 5 years kept a high level in the next 5 years, while the stock price of the firms that were not acquired within 5 years decreases to the pre-announcement level. In contrast to the evidence presented in BDK, our result supports the information hypothesis in the "not acquired within 5 years" sample, because if information hypothesis

holds, the stock price of targets should not decrease after the revaluation of the firms, even if the tender offers are rejected.

We also observe that acquirers that made unsuccessful tender offers suffer from shareholder wealth losses. The stock price of unsuccessful acquirers, irrespective of whether they lost to the target management or a rival bidder, increases around announcement period, but then decreases quickly once the likelihood of the bid succeeding diminishes. Additionally, stock price in neither group returns to pre-announcement level. This appears to support synergy hypothesis, as unsuccessful acquirers lost wealth when market realizes the bid will fail. Again, contrary to the evidence in the BDK study, in our sample the acquirers that lost to management (“no change in control” sample) lost more than the acquirers that lost to the rival bidders (“change in control” sample). It suggests that synergy is not the dominant motive for tender offers since if synergy dominates, the acquirers that lost to rival bidders should suffer more as the rival bidders gain the beneficial resources of the target. The evidence indicates a shift in the motives for the acquisition in the more recent period. We then investigate if agency has become a more important reason for unsuccessful tender offers in the recent period. Noting that the proportion of unsuccessful acquisitions has declined to 5 percent from 20 percent in the 1980s, it is possible that most acquisitions where synergy plays a more important role are successful where acquirers exercise more due diligence, leaving agency as a significant motive in the small proportion of unsuccessful acquisitions. The regressions of the target gain against acquirer gain and total gain, according to BN, explain our results. For the firms that made unsuccessful bids, target gain is positively related to total gain and negatively related to acquirer gain. After we implement the regressions in “positive total gains” and “negative total gains” groups, we find the correlation between target gain and acquirer gain are even more negative in the “negative total gains” sample, while it is not significantly

different to zero in the “positive total gains” sample. We conclude that agency problem is a major reason for unsuccessful tender offers during our sample period. The significant and positive correlation between target gain and total gain rejects the hubris hypothesis since hubris suggests no correlation between target gain and total gain. For the rival bidders that made successful acquisitions, the positive correlations between target gain and acquirer gain and between target gain and total gain suggest that the motive behind the successful acquisitions is synergy. Thus, while the initial bidder lost, the successful rival bidder gained control of the target and realized the potential synergy gains from the combination.

Furthermore, we also find that if the unsuccessful target firms belong to an industry where the M&A activity is high, or if the target firms have more price run-up in 11 to 210 days before announcement date of the tender offers, they have a greater likelihood of getting acquired within 12 months, while absence of poison pills, greater firm size and a more active M&A industry make the unsuccessful targets more likely to be acquired within 5 years. On the other hand, the comparison of the unsuccessful acquirers to the rival bidders suggests that the likelihood of the success of tender offer is also related to the characteristics of the acquirers. On average, larger firms, firms with higher Tobin’s q and higher diversification in less active M&A industry have a greater chance for a successful bid.

The rest of the paper is organized as follows. In the next section, we provide an overview of the related literature on tender offers, followed by the hypotheses. Section 4 provides the description of the data. Section 5 describes the methodology and section 6 presents and discusses the empirical results. Section 7 summarizes and concludes the study.

2. Literature Review

2.1 Rationale for tender offers

Numerous empirical researches investigate the rationales for tender offers and state four main hypotheses: information, synergy, agency and hubris. Shleifer and Vishny (2003) argue that the theory of acquisitions improving efficiency is considerable but also incomplete. Since the financial market is not always efficient, some firms are undervalued at some points in time. Therefore, some transactions are also motivated by market valuation. According to this theory, the acquisition bid could result in the market revaluing the targets, referred to as the information hypothesis. Hence, according to information hypothesis, the gain from acquisitions through tender offers has a relation to the undervaluation of the stock or the management of the targets, regardless of acquisition success or failure. In addition, Cotter, Shivdasani and Zenner (1997) conclude that the independent outside directors improve the return for the target shareholders. Cotter, Shivdasani and Zenner also conclude, the greater the number of independent directors, the greater the possibility of anti-takeover provisions.

However, Brush (1996) calculates the predictions of changes in performance for each target from 1980 to 1984 and puts importance on the resource sharing and activity sharing in the acquisitions. Sudarsanam, Holl and Salami (1996) investigate the impact of the synergy in acquisition and confirm that synergy, which comes from the “operational, financial and managerial” sources, creates abnormal returns for targets, acquiring firms, or sometimes both. Seth, Song and Pettit (2000) examine the foreign acquisition of US firms and argue that the synergy hypothesis is the principal explanation for the improvement of value for targets and bidders.

Furthermore, some studies find evidence to support in favour of the agency hypothesis. Jensen and Meckling (1976) emphasize the important of agency problem. Holl and Kyriazis (1997) investigate 178 successful takeover bids in UK, and find that managers have preference on the diversification, where diversification has quadratic relation with profitability. Hence when management chooses too much diversification over the point where marginal cost of diversification equals to marginal benefits, the profitability falls. They in turn conclude that considerable synergy was found in their sample, while agency problem exists in takeovers. Gondhalekar and Sant (2004) find that over-invested firms pay higher premium to win the acquisitions while under-invested firms pay less, and the premium is inversely related to the returns for the acquirers which indicates that agency rather than synergy or hubris has a stronger influence on merger premium.

In addition, hubris is also an important potential reason for takeovers. Hayward and Hambrick (1997) investigate a sample of 106 large acquisitions and find that CEO hubris is highly associated with the premium in acquisitions. The greater the CEO hubris, the greater the premium paid by acquirers and the greater the cost to the shareholders. Seth, Song and Pettit (2000) study foreign acquisitions of US firms and point that synergy is the dominant motive for acquisition, while hubris exists when total gains are negative and agency exists when total gains are positive. Furthermore, Raj and Forsyth (2003) examine the performance of the bidders with hubris management in the United Kingdom during 1990s and use accounting ratios and bid premium to show that hubris acquirers make mistakes in valuing new investment and lose wealth in the announcement of the acquisitions significantly.

2.2 Shifts in the M&A Market

BDK study the tender offers from 1963 to 1980, which is quite dated. Much has changed in the market for corporate control since then.

Prior to 1980, the proportion of institutional investor ownership was low. For instance “by 1950, [institutional investors] owned only 7% of US equities and [the percentage was] certainly even less in other countries.” (Google). According to Duggal and Millar (1999), institutional ownership improved rapidly and institutional investors “may now be holding [as much as] 46.5% of the outstanding common stock of U.S. corporations.” The role of institutional investors is very important because they hold a considerable amount of capital and they have more investment knowledge. Taking this into consideration, they tend to have tremendous influence on other investors. Empirical evidence also shows that the gains for efficient bidders are greater than those for inefficient bidders [Lang (1989), Servaes (1991)]. Thus, it is reasonable for us to expect for the last three decades that when the percentage of the institutional ownership increased, it would potentially impact the acquisition decisions of firms as well.

Furthermore, several anti-takeover provisions, such as poison pill, staggered board, Pac-Man defense, etc., have been implemented broadly following the 1980s. For example, the Poison Pill and Pac-Man were invented in 1982 as a defense to hostile takeovers. Following this, takeover defenses were broadly used to resist the tender offers. Anti-takeover provisions have a significant impact acquisition decisions. Cotter, Shivdasani and Zenner (1997) point that the existence of poison pill and other anti-takeover provisions increased the premium and shareholders’ gains for targets.

In addition, in the evolving M&A landscape, the type of acquisitions has changed tremendously since the 1980s. According to Shleifer and Vishny (2003), whereas in the 1960s, mergers usually involved firms in different industries, which is

called “conglomerate” wave; in the 1980s, many acquirers were financiers, and they usually paid by cash, which is referred to as the “hostile” takeover; in the 1990s, the acquisitions occurred within the same industry, an emphasis on corporate focus, and the type of the payment was mostly by stock. Studies also find that the acquisitions in the later period are more successful than the earlier period [Lichtenberg and Siegel (1989)].

2.3 Advances in finance methodologies

Of great importance, long-term event study has been significantly improved over time. According to Kothari and Warner (2006), over the past 30 years significant improvements have occurred in the long-horizon event study. The change primarily relates to how abnormal returns are estimated and their significance tested. This change also reflects a new finding in the late 1990s. Even though the short-term event study shows “cleanest evidence we have on efficiency” [Fama (1991)], Brown and Warner (1980) warned about the reliability of long-horizon event study. While short-horizon event studies are well-specified, the same is not the case with long-term event studies.

There are two widely used modified methods for long-term event study at current, Calendar-time Portfolio approach and BHAR (buy-and-hold abnormal returns) approach. The Calendar-time Portfolio approach [Fama (1998)] has been used, for example by Eckbo, Masulis and Norli (2000). The BHAR approach, which is also called the characteristic-based matching approach, is widely used in the recent years, such as in Ritter (1991), Ikenberry, Lakonishok and Vermaelen (1995) and Mitchell and Stafford (2000).

Since the BDK approach makes use of returns to shareholders of unsuccessful targets and acquirers over the long-term, it is important to address methodological

issues related to long horizon studies. We employ the current advances in estimating long horizon returns to study the rationale of tender offers.

2.4 Methods to distinguish different motives

A number of empirical studies investigate the motives of takeovers. BN (1993) implement a new method to distinguish between the different motives. They calculate the correlation between the target gain, acquirer gain and total gain in pars to distinguish the three motives of takeovers: synergy, agency and hubris. According to BN, the target gain, acquirer gain and total gain are calculated by:

“The target gain is [calculated] by multiplying the target’s CAR [with] the market value of the target firm’s equity [at] the end of six trading days prior to the first announcement for the target, minus the value of the target shares held by the acquirer. The acquirer gain is [calculated] by multiplying the acquirer’s CAR [with] the market value of the acquiring firm [at] the end of six trading days prior to the announcement [being] made by the acquiring firm. The total gain is the sum of the target [gain] and acquirer [gain].”

Following the examination of 330 tender offers in the time period between 1963 and 1988, they find that in the acquisitions in which the total gains are positive, the most important motive is synergy, while in the acquisitions in which the total gains are negative, the primary motive is agency.

In our paper, we borrow the BN’s method to determine the motives of tender offers.

2.5 Characteristics of the firms

The characteristics of the firms involved may be a major factor in the success or failure of acquisition bids. Masulis, Wang and Xie (2007) show that firms with more antitakeover provisions gain lower abnormal returns during the announcement period. They state that in addition to antitakeover provisions, other firms' characteristics can influence the abnormal returns for firms as well, such as firm size, Tobin's q, leverage, free cash flow and stock price run-up, where stock price run-up is calculated for the time period 11 to 210 days prior to the announcement day. Moeller, Schlingemann and Stulz (2004) examine 12,023 acquisitions made by public firms and find that small firms have better performance in acquisitions than large firms. Large firms tend to provide higher premium for the bid. Stulz and Walkling (1989) argue that shareholders of the bidders with higher Tobin's q gain more wealth than the shareholders of the bidders with lower Tobin's q from an investigation of successful tender offers. Jensen (1986) points out a free cash flow theory about takeovers. Masulis, Wang and Xie (2007) (MWX) suggest that leverage could reduce free cash flow and limit the targets' premium, and it could encourage the management to improve the performance of acquirers. Additionally, MWX also control the stock price run-up before the announcement in order to separate the effect of the antitakeover provisions.

Following on MWX, we also measure these characteristics to investigate which characteristics influence the performance of the unsuccessful targets and acquirers in our sample.

3. Hypotheses

In this paper, four hypotheses are tested for the sample of unsuccessful tender offers. These include information, synergy, agency and hubris. The empirical implications for shareholder wealth for each is discussed below.

3.1 Information hypothesis:

Information hypothesis posits that abnormal return on the announcement date is due to revelation of new information on the undervalued target and inspiration to the target's management to improve their operating strategies of increasing shareholder's wealth. Therefore, if the targets' stock price increase is due to revaluation of targets or improved operating strategies, stock price should not decrease back to the pre-announcement level even if the acquisitions are not successful.

3.2 Synergy hypothesis

Synergy hypothesis is often cited as one of the main motives of tender offers. Synergy hypothesis posits that the positive abnormal returns from tender offers derive the transfer of target's resources. Hence, unsuccessful tender offers should not create positive abnormal returns since there is no target's resources relocated to acquirers. Following BDK, the stock price of unsuccessful targets, which were not acquired within 5 years, should decrease to pre-announcement level because unsuccessful bids can create no synergy. Furthermore, unsuccessful acquirers who lost to rival bidders should suffer more loss than unsuccessful acquirers who lost to management of targets because rival bidders gain synergy from the successful tender offers. In addition, per BN, synergy hypothesis assumes that managers of both targets and acquirers engage acquisitions in order to maximize wealth of

shareholders. Thus acquisitions would occur only if there are positive gains for both side of shareholders. Therefore, target gain, acquirer gain and total gain should be positively related to each other.

3.3 Agency hypothesis

Agency hypothesis suggests that management of acquirers engage takeover activities in order to maximize their self-interest at the expense of shareholders. According to BN when the targets realize that the management of acquirers implement tender offers with the purpose of increasing their own benefits but not shareholder's wealth, they will try to gain more wealth from the tender offers. This will give targets more bargaining power to obtain more value from the management of acquirers. Therefore, the more serious agency problem is, the more value targets will gain through the tender offers. Also greater appropriation of acquirers' management will intrigue greater loss of total gain and acquirer gain. Thus target gain should be negatively related to both total gain and acquirer gain.

3.4 Hubris hypothesis

The hubris hypothesis suggests that acquirers attempt acquisitions based on mistakenly estimation of target's value and that there is no synergy created by acquisitions. As stated by BN, since synergy is assumed to be zero, the value that targets gain is simply the value transferred from acquirers to targets. Therefore, if hubris is the main motive of tender offers, total gain should be zero, and target gain should be negatively related to acquirer gain. Consequently, target gain should have no correlation with total gain.

4. Data

Following BDK, we investigate returns from the unsuccessful control-oriented tender offers for target firms and acquiring firms for the time period between 1985 and 2010. Of notable difference from the BDK study, the control-oriented tender offers is defined as one in which the acquiring firms held less than 50% of target shares, and wanted to own 100% of shares after acquisition. Additionally, the subsequent successful acquisitions are the ones in which the bidders gained 100% of shares of acquired firms.

The primary database of the study in this paper includes 2,669 tender offers in the time period between 1985 and 2010. Among the tender offers, CRSP data was available for 2,356 of tender offers, 1619 of which were control-oriented tender offers with either the target or bidder public. The tender offers were collected from the SDC Platinum database, which provides information about Mergers & Acquisitions. Relative data for our tender offers were obtained from Nexis-Lexis, CRSP (Centre for Research in Security Prices of the University of Chicago) and COMPUSTAT.

Of particular note, in our study we concentrate on the pure complete acquisitions, in other words we focus on the acquisitions in which acquiring firms sought to own 100% of their target's shares firstly in failed bids, and secondly rival acquiring firms owned 100% of target's shares in subsequent successful bids. In the sample of the target firms, the unsuccessful target firms that were sought for full acquisition is 240, of which 113 are completely acquired within 1 year and 145 are completely acquired within 5 years.

In the sample of bidders, the sample of public acquiring firms yields 1,190 tender offers, 874 of which are control-oriented tender offers. Some acquirers made multiple tender offers at the same time and were deleted. The sample of unique

tender offers is 774. If an acquiring firm initially failed but subsequently succeeded to gain the control of targets, it is treated as a multi-bid successful acquisition effort, or success on the part of the acquirer. Overall, we have a sample of 137 unique firms that made 147 unsuccessful bids (6 firms made two different unsuccessful acquisitions and 2 firms made three different unsuccessful acquisitions). Only 139 cases have data on CRSP.

In this analysis, the unsuccessful bidders are categorized into two groups. In one group, 76 bidders lost to the management of targets, which means the control of targets did not change; in another group, 63 bidders lost bids to rival bidders, meaning that control of targets was lost to rival bidders. The rival bidding firms are defined as the firms that won the bid within the unsuccessful bidders' tender offer period. The tender offer period is from the day of the announcement of unsuccessful tender offer bid to 3 weeks following the expiration day of the unsuccessful tender offers. In this analysis, either the announcement date or the effective date of the successful acquisition was in the tender offer period, we treat the bidder as rival bidder.

To put the proportion of unsuccessful tender offers into context, we also collect all control-oriented M&As and group them as successful and unsuccessful for each year during the period between 1985 and 2010. The trend for successful and unsuccessful M&As is demonstrated in Figure 1.

(Insert Figure 1 here)

From Figure 1, we can see that the success rate of the M&A is increasing over time, which accounts for relatively a small number of 240 unsuccessful target firms in the sample. Additionally, though not shown, we also observed that the number of M&A increased from 1112 (1985) to 7042 (1998) and then decreased to 2696 (2010).

From the control-oriented tender offers from the control-oriented M&A each year in the same period, it can also be seen that the percentage of tender offers decreased dramatically from prior period and up to 1988, and after. This can be observed in Figure 2:

(Insert Figure 2 here)

It can be seen from Figure 2 that the percentage of tender offers in M&A generally increases from 1985 to 1989, then decreases quite sharply after 1989. Notably since the tender offers in this analysis are from 1985 and 2010, it explains the small number of unsuccessful tender offers in our sample.

5. Methodology

5.1 Buy-and-hold abnormal returns to unsuccessful targets

In order to determine whether synergy or information that more greatly impacts tender offers, we closely examine the returns to shareholders of firms in the following 5 years after announcement of the failed bid.

In order to obtain the returns of unsuccessfully target firms, this study uses the BHAR (Buy-and-Hold Abnormal Return) method to obtain the cumulative abnormal returns in long-horizon. For each firm in the sample, the monthly holding period returns are obtained from the announcement month to the 60th month following on CRSP. The monthly data is used as we want to perform the long-term event study with this 5-year time block. For each firm, 3 methods are implemented to find a firm that is most like the target firm, or “matching firm”. In the first method we select the firm that is in the same industry as the target and whose market value (size) is closest to that of the target firm. In the second method we select the firm that is in the same industry as the target and whose

book-to-market (b/m) value is closest to that of the target firm. In the third method firms which are simple in the target firm's industry are chosen first. Then, we select the ten firms that have closet market value with the targets'. Within these ten firms, the matching firm is the one that has closest book-to-market value. The market value of equity is measured 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 factories.

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

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

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

$R_{i,t}$ is the monthly holding period return for the unsuccessful target;

$R_{benchmark,t}$ 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).

5.2 Short-horizon event study for sample of unsuccessful acquirers

For the firms that made unsuccessful tender offers, we examine the CAR (cumulative abnormal returns) in order to distinguish between information and

synergy hypotheses. The methodology used here is the short-horizon event study and we use the daily time-frame to obtain the abnormal return. The cumulative abnormal returns are measured by 20 days prior to the announcement of the unsuccessful bid to 180 days following. The announcement day of the initial unsuccessful tender offer is event day 0.

Here, we use returns from day -255 to -46 to estimate the parameters for market model:

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

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.

The CAR (cumulative abnormal return) for the portfolio of the failed acquiring firms is defined by:

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

Where

t_0 = first event day;

T= event day through which the CAR is calculated;

N_t = number of firms in day t.

5.3 Cross Section Regression Analysis

In this part of the analysis, the unsuccessful targets are divided into two groups. In one group, the targets are 100% acquired within 1 year or 5 years; in the second group, the targets are not acquired within 1 year or 5 years. In order to discern which characteristic(s) influence the unsuccessful targets being acquired subsequently after the initial unsuccessful bids, we perform logit regression as follows:

$$Y = \frac{1}{1 + e^{-(b_0 + b_1 SB + b_2 Poison + b_3 Size + b_4 Q + b_5 LEVR + b_6 FCF + b_7 Industry + b_8 runup)}}$$

According to Masulis, Wang and Xie (2007), the variables are defined as follows:

Y: Dummy variable, which equals to 1 when the target was 100% acquired within 1 year or 5 years, separately, after the announcement of the initial unsuccessful bid; 0 otherwise;

SB: Dummy variable of Staggered Board, which equals to 1 when the board of target firm is classified; 0 otherwise;

Poison: Dummy variable of Poison pill, which equals to 1 when the firm has poison pill as antitakeover provision; 0 otherwise;

Size: Log of book value of total assets;

Q: Tobin's q, which is market value of assets divided by book value of assets;

Besides, the market value of asset is calculated by:

Market value of asset = book value of assets – book value of common equity + market value of common equity.

LEVR: Leverage, which is book value of (long term debts + short term debts) divided by market value of total assets;

FCF: Free Cash Flow, which is measured as: (Operating income before depreciation – interest expenses-income taxes-capital expenditures) / book value of total assets;

Industry: Industry M&A, which is defined as the deal value of all M&A deals in the initial unsuccessful target's industry and year / total book value of assets of all COMPUSTAT firms in the same industry in the same year.

Runup: is stock price runup, which is defined as the target's buy-and-hold abnormal return during the period (-210,-11);

Then we compare the characteristics of the unsuccessful acquiring firms and the successful rival firms in order to discern which factors mostly influence the successful acquisitions.

The main characteristics considered are staggered board, firm size, Tobin's q, leverage, free cash flow, industry M&A, stock price runup, diversification, relative size and management quality.

Diversification is defined as dummy variable, which equals to 1 if the bidder and the target do not share a Fama-French 12 industry and 0 otherwise;

Relative size is defined as deal value over bidder market value of equity. (Market value of equity= shares outstanding * stock price)

Management quality is measured by the operating income growth rate, which is defined as $(EBITDA_{t-1} - EBITDA_{t-4})/EBITDA_{t-4}$, adjusted for the industry median.

Other variables are defined as same as what they are defined in the target firm regression part.

6. Results

6.1 Unsuccessful targets acquired within 1 year

(Insert Table 1 here)

Table 1 shows the number of unsuccessful targets in total sample, “subsequently acquired within 1 year” and “not acquired within 1 year” subsamples in each month after announcement of unsuccessful tender offers. Column 2, 3 and 4 show the number of the firms in each month after announcement of the initial tender offer for each sample. Total sample in column 1 includes 240 unsuccessful targets in tender offers between 1985 and 2010. The total sample are divided into “subsequently acquired within 1 year” sample, which includes 109 targets, and “not acquired within 1 year” sample, which includes 131 targets. From column 3 we see that the number of firms decreases with time from 109 to 1 (event month 11) because the targets, which were acquired, are absorbed after the second successful acquisition since we concentrate on the 100% acquisitions for the subsequently successful deals.

The BHARs to shareholders of unsuccessful targets in total sample, “acquired within 1 year” and “not acquired within 1 year” subsamples are shown in Table 2. In Table 2, the matching firms are selected by the market value of equity (size) and industry here. The matching firm is selected when the acquiring firm was in the same industry as the unsuccessful target and had the closest market value to the target in the 3 months before the tender offer announcement month. Column 5 is the comparison of BHAR to the unsuccessful targets in both subsamples.

(Insert Table 2 here)

The data in Table 2 is plotted in Figure 3.

(Insert Figure 3 here)

In this part, we only present the results to 11 months following the announcement date because the targets which were acquired within 1 year are absorbed after the second successful tender offer since we concentrate on the 100% acquisitions for the subsequently successful deals. Table 1 shows that the number of firms left in each time window decreases sharply, clearly indicating that the acquisitions happen fairly soon following the initial failed by the initial bidder. There is only 1 firm which is acquired 100% in the 11 month up to announcement month. We focus our discussion only on the results of the first 8 months for accuracy purposes because we can see there were only 7 firms left by the month 9 and fewer subsequently.

Similar to the evidence reported in BDK, the results above show that on average, the target firms all gained significant positive abnormal returns in the first 8 months from the month of the announcement of the tender offers. In the sample of total unsuccessful targets, the buy-and-hold abnormal return is significantly positive in the next 8 months after the announcement month (event month) of the tender offers but there is a decreasing trend. Table 2 Column 1 shows that BHAR increases from 33.72% (0 to 0) to 35.53% (0 to +1), while decreases subsequently to 17.87% (0 to +8). However, even though the BHAR decreases persistently after the announcement month, it is still significantly above 0. These results show that shareholders of targets realize significant positive abnormal return through tender offers, regardless of tender offer success. This indicates that the information of the announcement of tender offers causes revaluation of target firms, which results in the persistent run-up of the target stock price.

If the target firm anticipates subsequent bids from rival bidders and receive a higher premium after the initial tender offer bid, they are more likely to reject the initial tender offers. In this way, the shareholders of the targets, which have been acquired subsequently after the initial unsuccessful bid, will retain high abnormal returns even if they rejected the first bid because the second successful tender offer provided a higher premium. We sort all of the unsuccessful targets into two groups. In the first group, the unsuccessful targets were acquired 100% within 1 year; while in the second group, the unsuccessful targets were not acquired within 1 year. In our results, the targets in both samples gained significant positive abnormal returns, but the abnormal returns in two groups are visibly different. In Table 2 and Figure 3, the BHAR of unsuccessful targets, which were acquired within 1 year, are clearly higher than the BHAR of the targets that were not acquired within 1 year. For group 1, the BHAR is 45.92% in (0, +1), while for group 2, the BHAR is only 27.06%, which is significantly lower than that in group 1. For the period (0, +6), shareholders of targets which were acquired within 1 year gained 40.89% of abnormal returns, which is significantly more than 22.31% of abnormal returns that were realized by shareholders of targets not acquired within 1 year. In Column 5, the differences stop being significant from month 7 because only 23 firms left in month 7 from Column 2 Table 1. These results differ from those reported by BDK. For the sample that were not acquired within 1 year, the abnormal returns did not return to the pre-announcement level within 11 months. The evidence suggests that synergy and information are important and the bid reveals useful information about the target's value. BDK do not find evidence for the information hypothesis.

We next use two other methods to match the firm that is most similar to the unsuccessful target. First, we choose the firm that is in the same industry as the target and has the closest book-to-market value one year before the announcement

year of the unsuccessful tender offer. Secondly, the matching firm is chosen from the firms that are in the same industry as the unsuccessful target, closest firm size and book-to-market ratio. In the same industry, the 10 firms that have closest market value to the unsuccessful target are chosen first. Then among these 10 firms, we choose the firm that had closest book-to-market value to the unsuccessful target as the matching firm. After the matching firm is found for each unsuccessful target, we use buy-and-hold methodology to calculate the buy-and-hold abnormal returns in our sample. The results are demonstrated in Figure 4 and Figure 5, separately.

(Insert Figure 4 here)

(Insert Figure 5 here)

In Figure 4 and 5, the trends are similar for each sample of the unsuccessful targets to the trends observed in Figure 3. The shareholders of the unsuccessful targets gained positive abnormal returns after the announcement month of the tender offers for 8 months. For the sample of total unsuccessful targets, the buy-and-hold abnormal return (BHAR) increases from the announcement month of the tender offers to the first month after announcement (0, +1), while decreases continuously for the subsequent months. Also, the BHAR of the sample “acquired within 1 year” is quite clearly higher than that of the sample “not acquired within 1 year”. The targets of both samples realized stock price run-up in the period of announcement month and 8 months following. The results are robust to the choice of the benchmark firm under different matching criteria.

The evidence reported thus far is consistent with both the synergy and information hypothesis. Although the BHARs decline for the not acquired group, they do not drop to the pre-announcement levels. We note, however, that the evidence is not directly comparable with BDK so far as we have restricted the subsequent success

or failure to within 1 year of the failed initial bid. BDK examine the success or failure over a 5-year period. We do this next.

6.2 Unsuccessful targets acquired within 5 years

(Insert Table 3 here)

Table 3 represents the number of unsuccessful targets in total sample, “subsequently acquired within 5 years” and “not acquired within 5 years” subsamples in each month after announcement of unsuccessful tender offers. The unsuccessful targets are also investigated through two subsamples: the sample of “Subsequently acquired within 5 years” and the sample “Not acquired within 5 years”. The number of firms in each event month are shown in columns 2, 3 and 4 for each sample of failed targets. Because the subsequently successful acquisitions following the first unsuccessful tender offers are for complete acquisitions, the number of the firms in the sample “acquired within 5 years” decreased sharply from 145 in the announcement month to 2 in the 48 month, which is shown in column 4 of Table 3. The numbers of targets that are not acquired within 5 years dropped because some firms’ information cannot be found in CRSP for the 5 years after the initial unsuccessful tender offer.

From column 2 in Table 3, the percent of firms that are acquired within 1 year is 76.55% $[(145-34)/145]$, while in BDK study, notably, the number is 68.6% $[(86-27)/86]$. This shows that the unsuccessful targets of the tender offers are acquired faster in our sample period. One possible explanation could be a more robust and active M&A market in the more recent time period.

The percentage buy-and-hold abnormal returns to the unsuccessful targets in total sample, “acquired within 5 years” and “not acquired within 5 years” subsamples are shown in Table 4. In this part of our study, the market value (size) method is

used to locate the firms that match the unsuccessful targets. The matching firms that have the most similar market value 3 months before the announcement month are chosen as the benchmark to calculate the buy-and-hold abnormal returns.

(Insert Table 4 here)

Figure 6 shows the trend of BHAR from the announcement month of the tender offers through 60 months following the announcement month in Table 4.

(Insert Figure 6 here)

From Table 4 and Figure 6, the patterns are different in these findings than the findings of the BDK analysis. In Figure 6, the BHAR in the sample of total unsuccessful targets increases from the announcement month of the initial unsuccessful tender offers to the first month. Then it decreases consistently until the end of the second year (24 months). As reported in Table 4, the BHAR of total targets in column 2 increases from 33.72% (event month 0) to 35.53% (0 to +1) and then decreases to 15.17% (0, +60). However, in the BDK study, the CAR performs steadily after it runs up from the announcement month to 5 years after. Further, the CAR of the firms that are taken over within 5 years, per BDK, “show a further positive revaluation over the one-year period”, while the BHAR in the same sample in our analysis runs up at the announcement month, and goes down consistently in the next few years. We only pay attention to the pattern until the end of the second year because most of the firms are acquired within 2 years and there are only 14 firms that were acquired after 24 months (Column 4 Table 3). It is seen in Table 4 that BHAR of the sample “acquired within 5 years” increases from 35.57% (0, 0) to 40.07% (0, +1) and decreases to 2.81% (0, +24), which shows no evidence for synergy. Further, the BDK study finds that the shareholders of the targets that are not acquired within 5 years gain positive abnormal returns with the announcement of the tender offers, but the gains are

completely wiped out two years after the announcement. In contrast, in this study's findings, the BHARs in the sample "not acquired within 5 years" does decrease in the first 2 years after the announcement of unsuccessful tender offers, but they increase again in the next 3 years. These results support the information hypothesis, which posits that the run-up of the stock price for the targets occurs because of revaluation of the "undervalued" firms. Hence it should not decrease even if the tender offers are unsuccessful. Additionally, Column 5 shows that the differences of BHAR in "subsequently acquired within 5 years" sample and "acquired within 5 years" sample are significant for the first 3 months following the announcement month of tender offers.

(Insert Figure 7 here)

(Insert Figure 8 here)

Similar to the analysis in the "acquired within 1 year", we also use the book-to-market value and B/M & market value to match the benchmark firms to the unsuccessful targets. The results are plotted in Figures 7 and 8, respectively. These two figures show similar patterns for three samples of unsuccessful targets separately, which suggests that the findings are robust to the benchmark choice.

6.3 Targets acquired within 1 year versus targets acquired within 5 years but after 1 year

(Insert Table 5 here)

In order to verify the market assessment of the forthcoming higher premium tender offer, we further divided the sample into three groups: "targets acquired within 1 year", "targets acquired after 1 year but within 5 years", and "targets not acquired within 5 years". The results of BHAR for each sample are reported in

Table 5. The BHAR in the sample of targets that are acquired within 1 year starts from 37.86% in the announcement month, and goes up to 45.92% in the first month after announcement. Meanwhile, in the sample of the “acquired within 5 years but after 1 year”, the BHAR is 28.63% in month (0, 0) and 22.84% in month (0, +1). From column 5 we see that the difference (23.08%) of BHAR between these two subsamples is significant on 1% level in month 1 following the announcement month. The “within 1 year” BHAR is almost always twice as much as the “within 5 after 1 year” BHAR until month 8 (25.94% vs.11.89%) up to announcement month. Furthermore, column 5 shows that the differences are large and significant on 5% level. Additionally, the BHAR of “not acquired within 5 years” sample shows no enormous difference with the BHAR of “acquired within 5 years but after 1 year” sample.

These results indicate that the firms that are acquired within 1 year are more certain about the forthcoming high-valued tender offer when they rejected the initial one. For the firms that are acquired within 5 years but after 1 year, the certainty of receiving a higher premium tender offer is much less than firms that are acquired within 1 year. This provides strong evidence that the market has an unbiased prediction for future higher-valued acquisition after the initial unsuccessful ones.

6.4 Analysis of the returns to unsuccessful acquirers

In this section, we investigate the firms that made unsuccessful tender offers to distinguish between the synergy or information hypotheses. In the related BDK study, the unsuccessful acquirers are divided into two basic samples. The first sample includes the acquiring firms that lost to the competing acquirers, which means the control of the targets has been changed to the rival bidders; the second sample includes the acquiring firms that lost to the managers of targets, which

means the control of the targets has not been changed. In this study, the rival bidding firms are defined as the firms that made successful acquisitions in which either the effective date or announcement time is within the tender offer period. The tender offer period here is defined as the period that starts from the announcement date of the tender offer to 3 weeks after the expiration of the tender offer by the unsuccessful acquiring firms.

The methodology used here is of the short-horizon event study because we are interested in the short term return of the unsuccessful acquirers. The time frame used is daily instead of monthly for the acquirers. Event day 0 is the announcement day, and we investigate the returns for the acquirers 20 days before the announcement date to 180 days after.

Table 6 presents the abnormal return (AR) and cumulative abnormal returns (CAR) gained by the shareholders of the 139 firms that made unsuccessful control-oriented tender offers between 1985 and 2010.

(Insert Table 6 here)

In Table 6, the AR and CAR of all the unsuccessful bidders are shown in columns 3 and 4 respectively. Columns 6 and 7 show the AR and CAR for the acquiring firms which lost to managers of targets, while columns 9 and 10 show the AR and CAR for the acquiring firms that lost to rival bidders, respectively.

The CAR of the unsuccessful acquirers over time is plotted in Figure 9, and the summary for each event window is presented in Table 7.

(Insert Table 7 here)

(Insert Figure 9 here)

Figure 9 demonstrates that the unsuccessful acquiring firms gained significant positive abnormal returns from 4 days before the announcement day to 9 days

after. In Table 6, the CAR starts to be positive at 0.26% in (-20,-4) and it goes up to 1.18% in the first day after announcement day (-20, 1), after which it starts to disappear. At day 10 after the announcement day, the CAR is -0.4%, where the CAR is close to 0 and after that, the CAR continues to decrease in the next 170 days.

After dividing into two samples, 63 firms are in the “change in control” sample, since they lost their bids to the rival bidders, and 76 left are in the “no change in control” sample, which means these acquiring firms lost the bid to the management of the targets. For the unsuccessful acquiring firms in the sample “no change in control”, the CAR is 0.12% up to 10 days after announcement while it is -1.11% for the firms that are in the “change in control” sample.

From day 30 after the day 0, the CAR for the firms in the “no change in control” sample is -3.59%, which is more negative than the CAR (-2.72%) for the firms in the “change in control” sample. Following that, the CAR of the “no change in control” sample becomes more greatly less than the CAR of “change in control” sample. At the end of the event day (-20,180), the CAR is -18.46% and -6.62% for the sample “no change in control” and “change in control” respectively, and none of their stock price returns back to their pre-announcement level before the tender offers.

These findings differ again from the findings of BDK study. In the BDK study, the CAR of the firms that lost to the management of the targets goes down to 0 after the run-up around the announcement date and the CAR of the firms that lost to the rival bidders is more negative. BDK interpret their results for the “change in control” sample as the lost synergy benefits for the unsuccessful acquirer. Our results reveal that synergy is one of the motives of tender offers since the positive revaluation of unsuccessful acquirers disappears quickly as it appears that the bid will fail and the stock price in both samples does not come back to pre-

announcement level. While synergy is not dominant motive of tender offers, since if synergy hypothesis dominates, the “lost to rival bidders” acquirers should lose more greatly as the rival bidders gain the synergy through the acquisitions.

6.5 Synergy, agency or hubris?

The findings in this study to this point appear to support both synergy and information hypotheses. We next implement another methodology to examine the three hypotheses for tender offers. Using the approach described in Berkovitch and Narayanan (1993), we use target gain, acquirer gain and total gain to determine the rationale behind tender offers. We define the target gain, acquirer gain and total gain in the same fashion as in their paper.

The acquisitions in which both the targets and acquiring firms are public are selected for this analysis since we need to compute the gains to acquirers and targets. The market values of the targets and acquirers are computed 6 days prior to the announcement date. The CARs in time window (-5, 5) are calculated for each firm using the event study approach.

After obtained CARs and market values 6 days before the announcement date for all the targets and acquirers in our sample, we calculate the total gain as the sum of the target gain and acquirer gain. Then the target gain is regressed against the total gain and acquirer gain, independently, as follows:

$$\text{Target gain} = \alpha + \beta(\text{Total gain})$$

$$\text{Target gain} = \alpha + \beta(\text{Acquirer gain})$$

The firms are categorized into two groups: in one group the total gain is positive, and in another group the total gain is negative. The regression is implemented in each group and the results presented in Table 8.

(Insert Table 8 here)

In Table 8, the coefficients of total gain and acquirer gain are shown in column 4 while columns 5 has the P-value from the regression. Column 2 shows the number of firms in each sample.

In Panel A of Table 8, the target gain is positively related to the total gain for the whole sample and has coefficient of 0.46 and p-value <0.0001 . From Panel B, we find that the target gain is negatively related to the acquirer gain. The coefficient of the acquirer gain is -0.16 and p-value 0.05. These results suggest that the main motive for the acquirer in initial bid appears to be agency related. When it comes to the negative total gains sample, the coefficient is even more negative (-0.27) and is significant at a 1%-level (p-value = 0.01). In “positive total gains” sample, the negative correlation is not different to zero with p-value 0.98. There is some evidence for synergy as a motive when we look at the subsample of positive total gains. So far, the results reject the hubris hypothesis, by showing the significant correlation between the target gains and total gains since, if hubris holds, there should be no correlation. Overall, the analysis in Table 8 suggests that agency is an important consideration in the unsuccessful bids.

We further examine whether the successful rival bidder who wins is motivated by agency, hubris or synergy. If the rival bidder benefits from synergy gains, it will provide evidence why the returns to failed acquirers in the “change in control” sample are higher than the “no change in control” sample. We perform the two regressions on the rival bidders that made successful acquisitions. The results are demonstrated in Table 9:

(Insert Table 9 here)

In column 2 of Table 9, the size of the sample is 33 because either targets or acquirers in 6 acquisitions lack data on CRSP. As expected, in column 4, the

coefficient for total gain is 0.01, which is positive and significant on 10%-level with p-value 0.08. This significant positive relation between target gain and total gain indicates that synergy exists in these successful acquisitions. Additionally, the coefficient for acquirer gain is 0.01, with p-value 0.13. The positive coefficient (although not significant at conventional levels) further suggests that rival bidders stand to realize potential synergy benefits from acquiring the target.

In summary, both synergy and information are motives for acquisitions through tender offers, while agency problem has become an important factor in unsuccessful ones. Perhaps in the BDK study, agency problem also exists but synergy is so strong that this minimizes the agency problem. The proportion of unsuccessful tender offers has decreased from 20% to 5% since the early 1980s. One important implication from this trend is that most tender offers motivated by synergy are successful. In the small proportion of unsuccessful tender offers, agency considerations seem to have become more important.

This result explains the trends of stock price for unsuccessful targets and unsuccessful acquirers seen above. For the unsuccessful targets, the returns for shareholders of the firms that are acquired within 5 years decrease as the acquirers made the tender offer based on the agency problem which makes the tender offer destroy the profits of the firms involved. Also, for the unsuccessful acquirers, firms lost to the management of the targets further because they did not choose the right targets, which is consistent with the agency hypothesis. This explains why the returns for the acquirers in the “no change control” sample goes down even more.

6.6 Cross Section Regression Analysis

After distinguishing the four motives for the tender offers in our sample, we are further interested in understanding the determinants of successful acquisition after the initial unsuccessful bid. Following Masulis, Wang and Xie (2007), we utilize staggered board, poison pill, firm size, leverage, Tobin's q, free cash flow, industry activities and price run-up before announcement of tender offers to measure the dominant characteristics of the next successful acquisition.

The definition of each characteristic is shown in the methodology section and the statistics of each characteristic is shown in Table 10 as below.

(Insert Table 10 here)

Some of these characteristics may be correlated, which could potentially bias the coefficient estimates of the analysis. For example, staggered board and poison pill are both antitakeover provisions (ATPs); Tobin's q, pre-announcement price run-up, leverage and free cash flow are all related to the performance of firms. Therefore, we compute the Pearson correlation among the variables. The result of the Pearson correlation matrix is shown in Table 11:

(Insert Table 11 here)

Table 11 shows that the correlation coefficients between any two variables among all characteristics is less than 0.23, which is the correlation between the free cash flow and the firm size. Hence, we feel reassured that the variables in the next regression are free of associations with each other.

We implement cross section regressions using the variables above to investigate which characteristic(s) of target firms influence the success of subsequently being taken over in following years. The dependent value (Y) in this regression is a dummy variable that equals to 1 when the unsuccessful targets are 100% taken

over within 1 or 5 years, independently, and 0 otherwise. The coefficients of each variable in the regressions are presented in Table 12.

(Insert Table 12 here)

In Table 12, column 2 shows the coefficient of each independent variable when the subsequent acquisition happens with 1 year while Column 3 shows the coefficients where the targets are 100% acquired within 5 years. The number of observations is 143 for both regressions as the information of staggered board is limited on either SDC or CRSP.

In the first regression, the probability of being acquired within 1 year for unsuccessful targets is positively related to the industry M&A activities and the stock price run-up in the period (-210 to -11) before the announcement day of the initial unsuccessful tender offers. For the variable industry M&A, the coefficient estimated is 7.23 with p-value 0.05, which means unsuccessful targets becoming acquired within 1 year is significantly and positively related to the M&A activities in the industry on a 5% significance level. This result indicates that for the targets operating in an industry where the M&A is more active it is more likely to receive a subsequent higher-valued tender offer after the initial failed offer. For the variable stock price run-up, the coefficient estimated is 0.60, which means that the stock price increases by 1 in 11 to 210 days prior to the announcement date of the initial tender offers, the probability of being taken over within 1 year after the unsuccessful tender offer increases 0.60. The P-value for this estimation is 0.07, which shows significance on a 10%-level. Additionally, takeover provision, such as poison pill and staggered board, is negatively related to unsuccessful targets being acquired within 1 year with coefficients -0.14 and -0.52 (respectively), which is expected. Coefficient 0.17 for size indicates the larger the targets, the more likely they are to get acquired within 1 year. The unexpected result is that the coefficient of Tobin's q is negative and the coefficient of leverage is positive,

while the p-value of 0.34 and 0.42 shows that the results are not significant though. Further, unsuccessful targets with more cash flow are more likely to be acquired within 1 year, but the coefficient is not significant.

For the targets that are acquired within 5 years, the picture is different from that of the targets that are taken over within 1 year. From column 3 we find that the probability of being acquired within 5 years is negatively related to the poison pill and positively to the firm size and industry M&A activities. The coefficient of poison pill is -0.71, which is significant on a 10%-level (p-value=0.07). That means the targets are less likely to be acquired within 5 years if the targets have the poison pill as antitakeover provisions (ATPs). Furthermore, when the firm size increases by 1, the probability of the target being taken over within 5 years increase by 0.5, which is significant on a 10%-level with the p-value 0.06. Similar to the situation in the first regression, the targets are more likely to be taken over within 5 years when the industry that they belong to has more M&A activities. Additionally, the signs of other variables are all the same as the same variables in the first regression, while not significant.

In conclusion, the unsuccessful targets are easier to be acquired within 1 year, when the firm belongs to a more active industry with more M&A activity, or has more stock price run-up 11 to 210 days before announcement; meanwhile to predict if targets will be acquired within 5 years, poison pill, firm size and industry M&A are more related variables.

6.7 Characteristics that influence the success of the acquirers

After the analysis of the characteristics that influence the subsequent acquisition of the unsuccessful targets, we further analyze which characteristics lead the unsuccessful bidders to lose to rival bidders. Hence, we choose several

characteristics and compare them from initial unsuccessful acquiring firms to successful rival bidders. Those characteristics chosen are defined in the methodology section.

In the total sample, the unsuccessful bidding firms that lost to rival firms counted 63, while among 63 rival bidders, only 39 have information on CRSP or Bloomberg as the other firms are not public. Hence, we attempt to obtain the data of each characteristic of each firm both in the sample of “failed bidders” and “rival bidders”, and analyze the data in pairs. Those results are shown in Table 13.

(Insert Table 13 here)

Table 13 shows the results of comparing the characteristics between the paired bidders (the unsuccessful acquirers vs. the successful rival acquirers). Column 1 shows the characteristic, columns 2 and 3 show the average of the characteristics in the samples for “failed bidders” and “rival bidders” respectively, with the variance is shown in parentheses, and columns 4 and 5 show the T-value and P-value for each statistics analysis independently.

From the results, we find that the failure of the initial bidders is significantly related to some characteristics of the firms. Firstly, the average firm size of the rival bidders is 3.31, which is significantly larger than the size (2.96) of the unsuccessful bidders on a 1%-level ($P=0.01$). This result indicates that the greater the size of the bidder firm, the greater the chance for it to win the bid. Secondly, the average Tobin’s q (1.92) for rivals is significantly larger than the value (1.41) of the failed acquirers on 5%-level ($p=0.05$). This suggests that the greater the growth opportunities of the acquirer, the greater the chance of success of the tender offer. Furthermore, the acquirer’s industry also plays an important role in the success of the tender offers. The average of 0.13 for rivals versus 0.18 for failed acquirers indicates that it is more likely for acquirers to achieve a

successful tender offer if they belong to an industry where the M&A activities are less active. The last finding in the results is somewhat unexpected. In the analysis of diversification, diversification is defined as the acquirer and the target each belonging to a different industry. In the results, it can be seen that the average of the diversification index is higher in rival bidders, at 0.67 than in unsuccessful bidders at 0.46 on 5% significance level ($p=0.02$). That signifies that if the acquirer is in different industry than the target for the tender offer, the more likely it is for it to win the acquisition. There is no significant difference between the two groups in terms of staggered board, leverage, cash flow, relative size and management quality.

In summary, the success of the tender offers is significantly related to several characteristics of bidders. The results demonstrate that firm size, Tobin's q , industry M&A activity and diversification of the acquiring firms are all the vital factors in tender offer success.

7. Conclusion

The BDK analysis examines the unsuccessful tender offers from 1963 to 1980 in order to determine the rationale behind tender offers. There are two hypotheses in their study: information and synergy. BDK conclude that acquirers make acquisitions through tender offers to gain the potential synergy, and target gains at announcement do not reveal any information about their undervaluation. The BDK study is fairly dated given the time frame of the tender offers utilized in their sample. Not only has the mergers and acquisitions market changed significantly since then, but also notably have finance research methodologies in the last thirty-five years. In this new analysis, we re-examine the motives behind tender offers by investigating unsuccessful tender offers by utilizing data over a

more recent time period from 1985 to 2010 to distinguish information from synergy. The analysis uses the basic approach described in the BDK paper but adopts the current buy-and-hold abnormal returns methodology to investigate the returns to targets and acquirers of unsuccessful tender offers.

The results of BHAR to unsuccessful targets show that targets who rejected the initial tender offers gain positive abnormal returns in the announcement period. Additionally, shareholders of targets that were acquired within twelve months gained more wealth than targets that were not acquired within twelve months. This suggests synergy is one of the motives for tender offers. However, the results show that over a larger time frame, the abnormal returns to shareholders of targets acquired within 5 years are sharply eliminated following the announcement month, while stock prices of targets not acquired within 5 years maintain a consistently high level for the following 5 years. BDK examine the eventual outcome only over a 5 year period. Our results differ from BDK's finding and suggest that new information on the target's value is revealed when it receives a bid that subsequently fails.

Furthermore, the results show that the short term CARs to unsuccessful acquirers initially increase around the announcement but subsequently decrease quickly when the likelihood of a successful bid diminishes, and the CARs do not return to the pre-announcement level. Overall, this appears to support the synergy hypothesis. However, further analysis shows that acquirers who lose to rival bidders have less negative CARs compared to bidders who lose to target management, which suggests that synergy is not quite as dominant a motive for tender offers, loss to rival bidders should incur greater losses to losing bidders as they would not benefit from the combination.

In addition to synergy and information, two new hypotheses, agency and hubris, proposed since the BDK study, have been found to explain acquisition motives.

Following the approach in Berkovitch and Narayanan (1993), in this study we also examine agency and hubris, along with synergy, by utilizing the correlations between target gain, total gain and acquirer gain. The significant positive correlations between target gain and total gain reject the hubris hypothesis. However, the target gain is negatively related to the acquirer gain. Further, we find that in the negative total gains subsample, the negative correlation between the target gain and the acquirer gain is significantly more pronounced, while in the positive total gains subsample, the negative correlation becomes not significant from zero. Thus, we conclude that while synergy is a motive for the positive total gains subsample, the evidence is more consistent with the agency motive for unsuccessful tender offers. A further examination of the correlations among the successful rival's bids shows that the target gain is positively related to both total gain and acquirer gain, further supporting this claim.

The cross-sectional regressions among unsuccessful targets' characteristics show that greater M&A industry activity, higher price run-up before announcement for the target, larger firm size, and the absence of a poison pill provision increase the likelihood of unsuccessful targets being acquired within 5 years following the initial announcement. In addition, a comparison between unsuccessful bidders and rival bidders shows that firms with greater size, more growth opportunities, firms that belong to industries different from those of the targets, and firms that are in a lesser active M&A industry have a higher likelihood to win the bid.

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Appendices

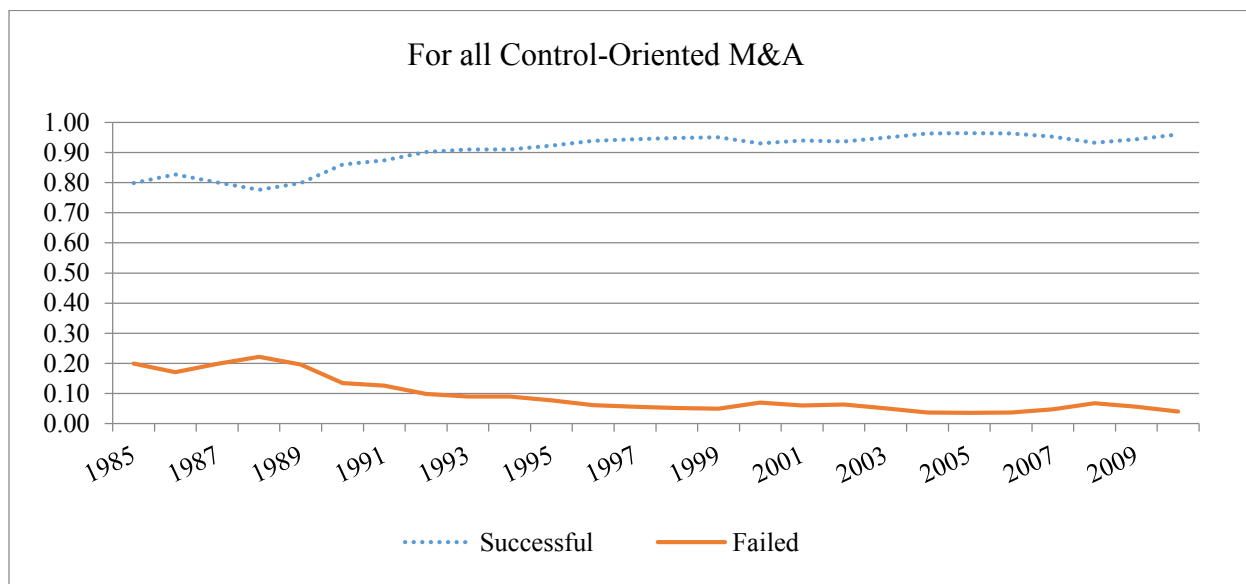


Figure 1. Percentage of the successful control-oriented M&A and failed control-oriented M&A out of all control-oriented M&A happened in 1985-2010

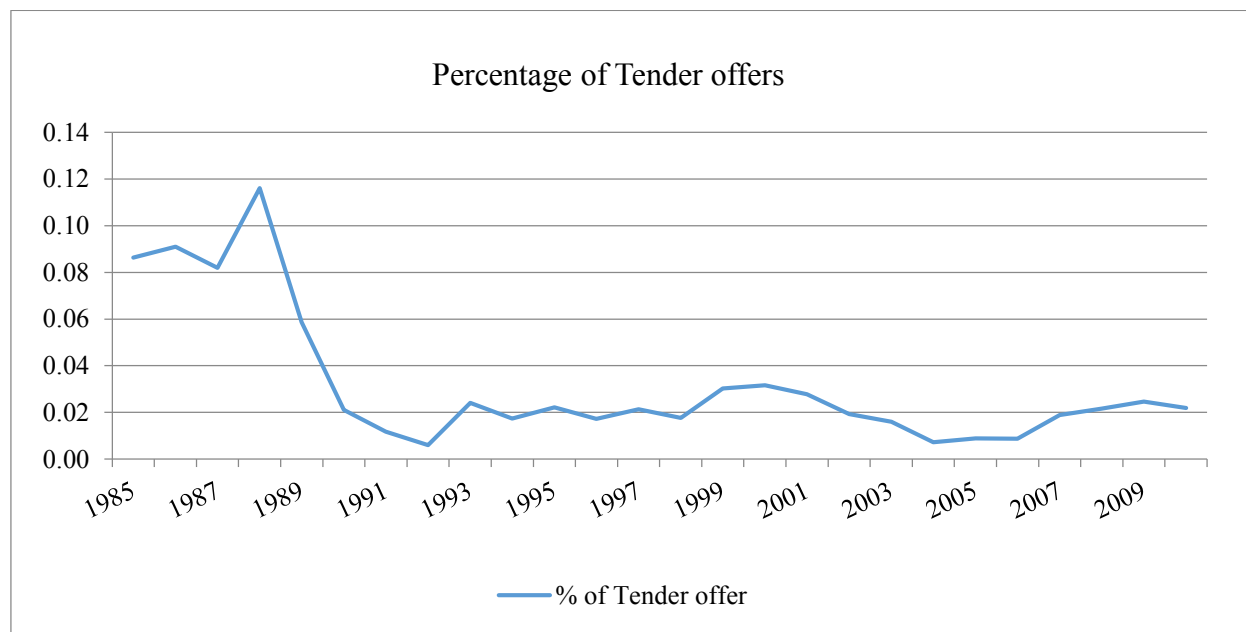


Figure 2. Percentage of tender offers out of all M&A in 1985-2010

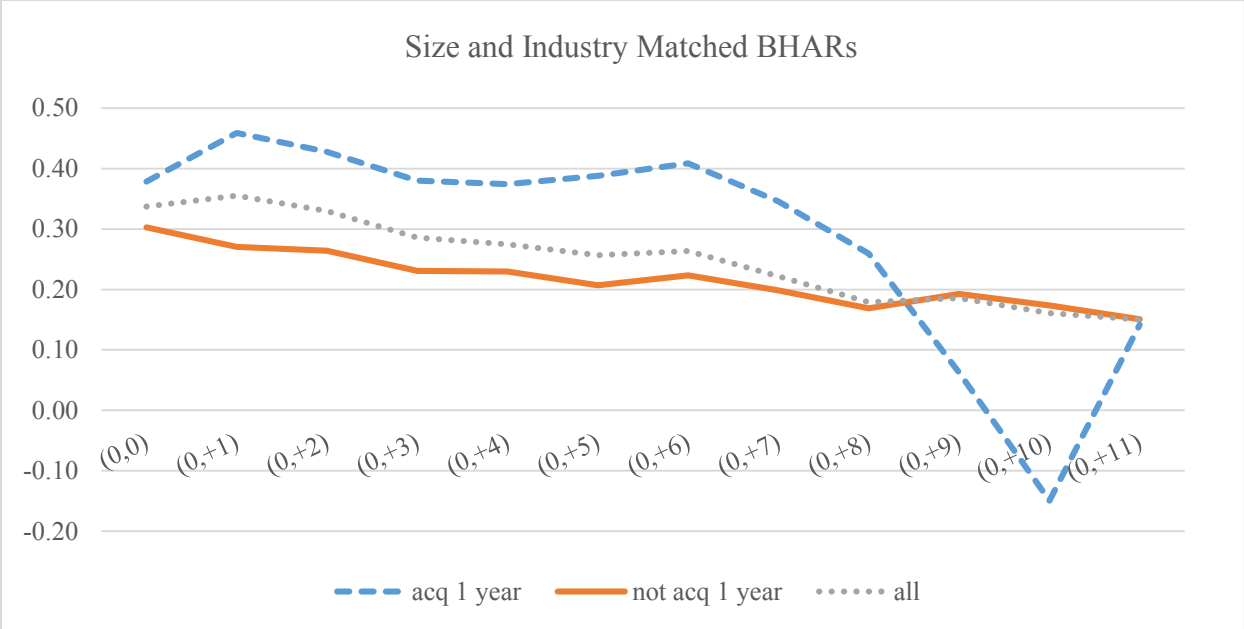


Figure 3. Buy-and-hold abnormal returns (matching by industry & size) to the unsuccessful targets – total sample and “subsequently taken over within 1 year” and “not taken over within 1 year” in the period 1985-2010.

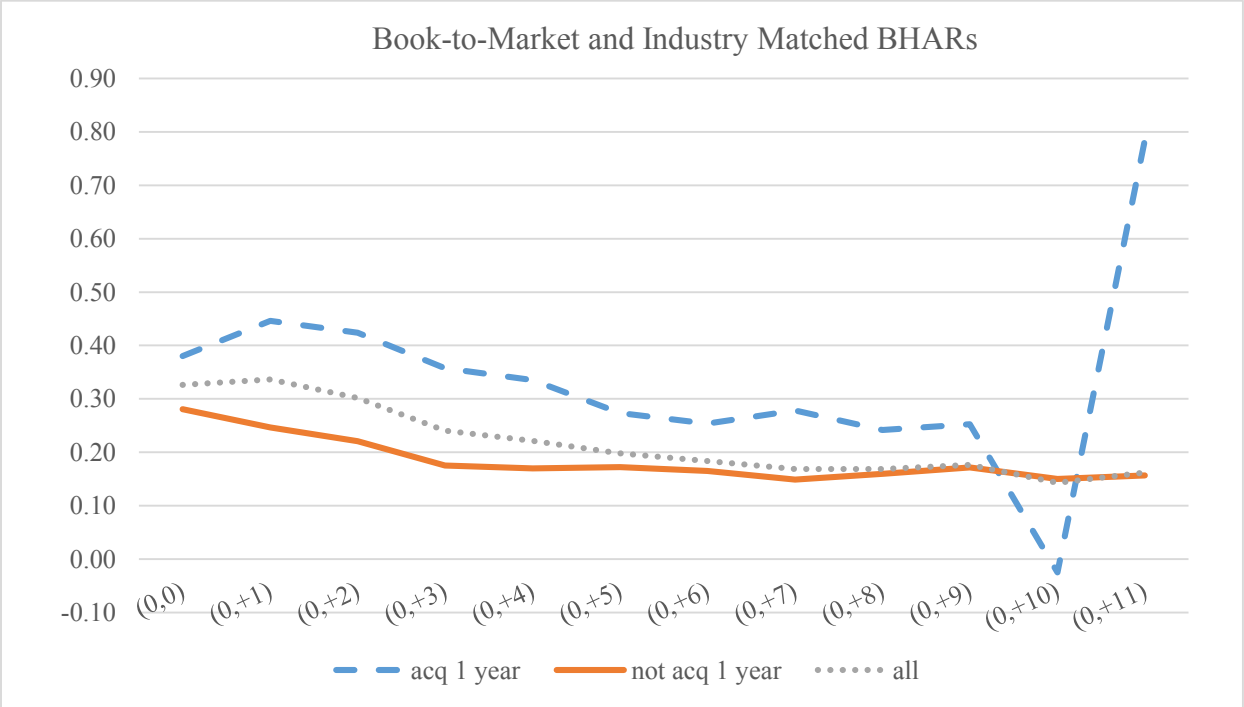


Figure 4. Buy-and-hold abnormal returns (matching by industry & book-to-market value) to the unsuccessful targets – total sample and “subsequently taken over within 1 year” and “not taken over within 1 year” in the period 1985-2010.

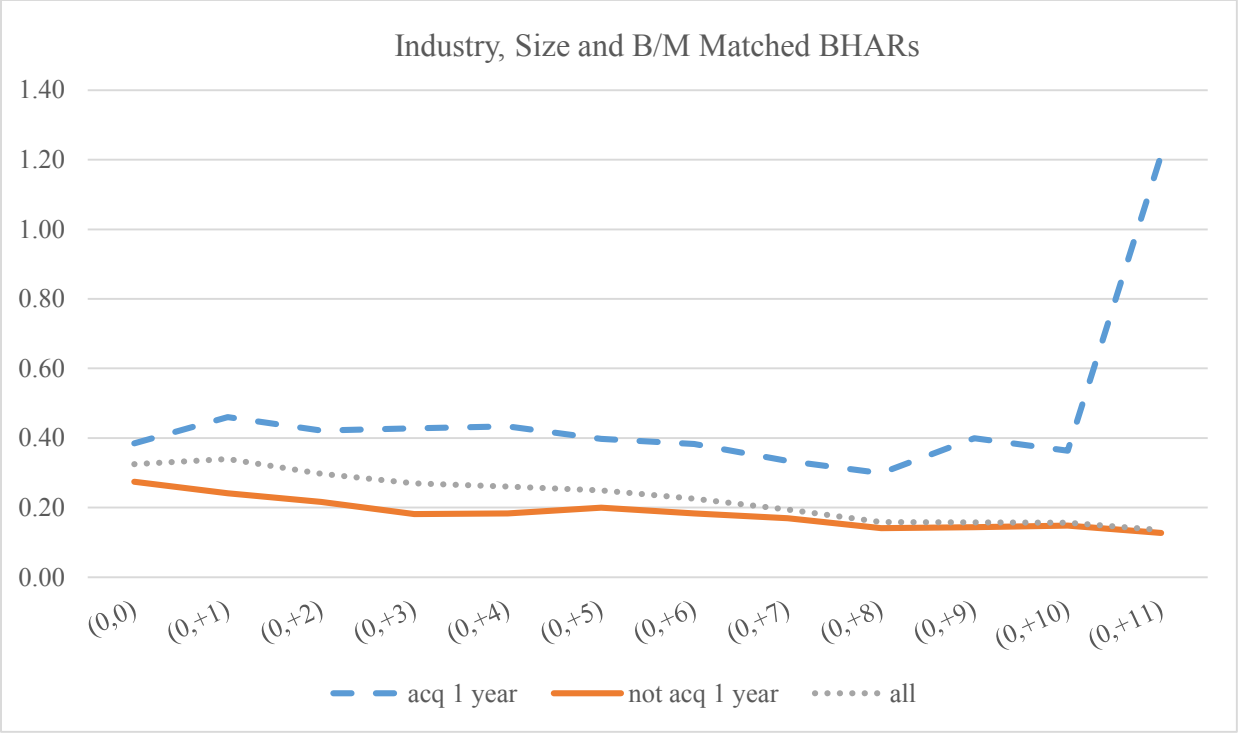


Figure 5. Buy-and-hold abnormal returns (matching by size & industry & book-to-market value) to the unsuccessful targets – total sample and “subsequently taken over within 1 year” and “not taken over within 1 year” in the period 1985-2010.

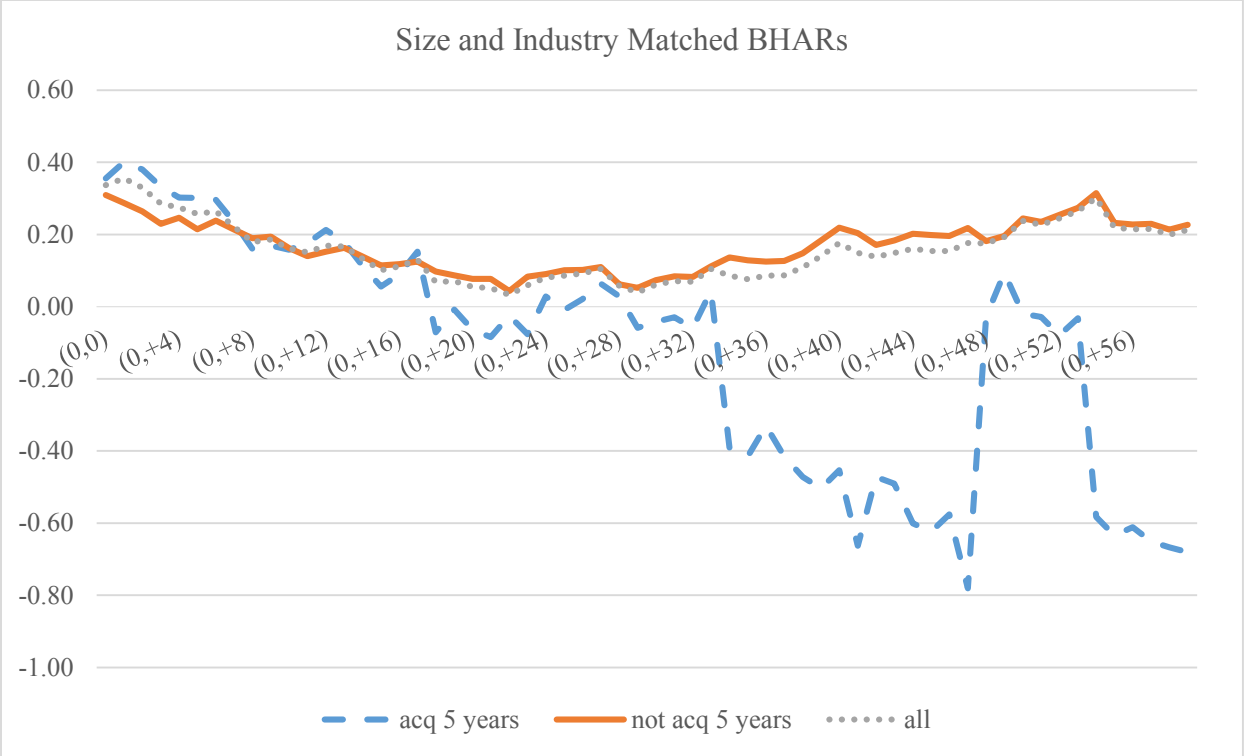


Figure 6. Buy-and-hold abnormal returns (matching by industry & size) to the unsuccessful targets – total sample and “subsequently taken over within 5 years” and “not taken over within 5 years” in the period 1985-2010. (The detailed data are shown in Table 14)

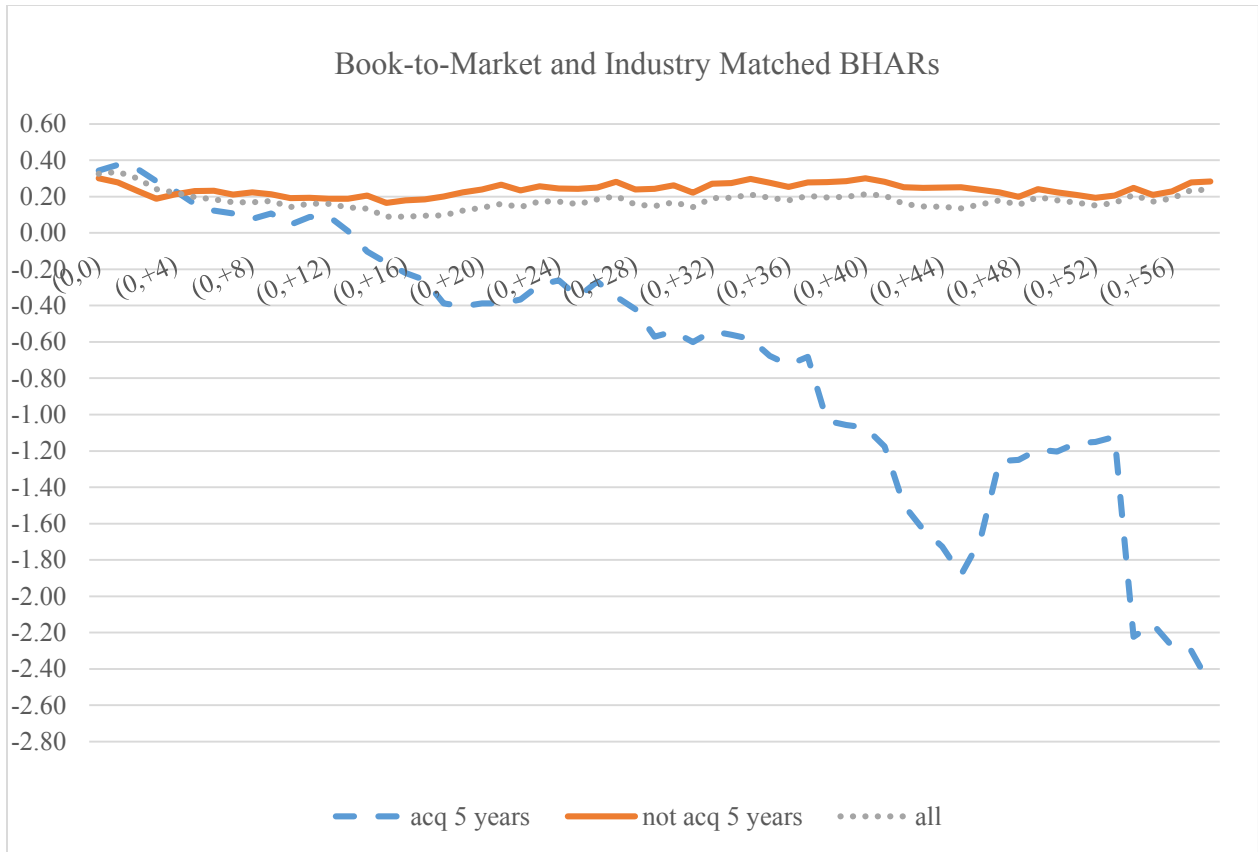


Figure 7. Buy-and-hold abnormal returns (matching by industry & book-to-market value) to the unsuccessful targets – total sample and “subsequently taken over within 5 years” and “not taken over within 5 years” in the period 1985-2010. (The detailed data are shown in Table 15)

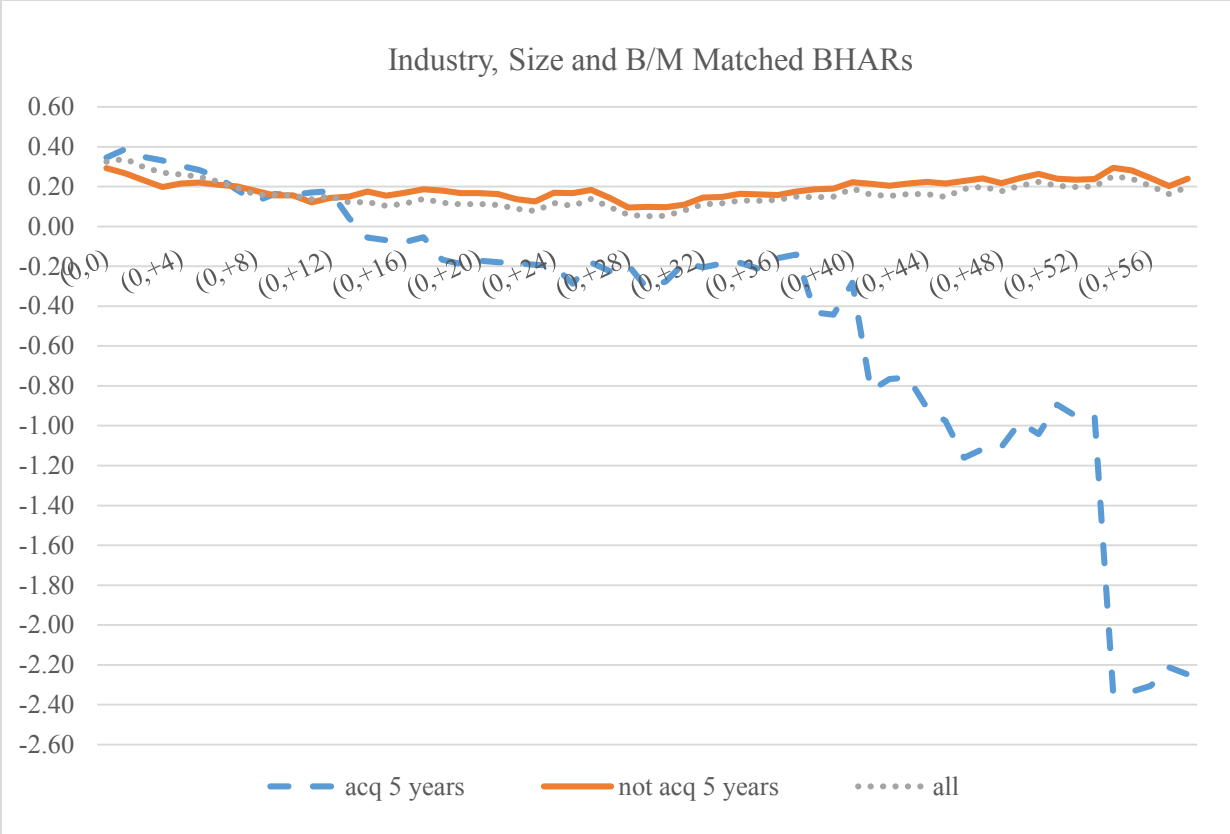


Figure 8. Buy-and-hold abnormal returns (matching by size & industry & book-to-market value) to the unsuccessful targets – total sample and “subsequently taken over within 5 years” and “not taken over within 5 years” in the period 1985-2010. (The detailed data are shown in Table 16)

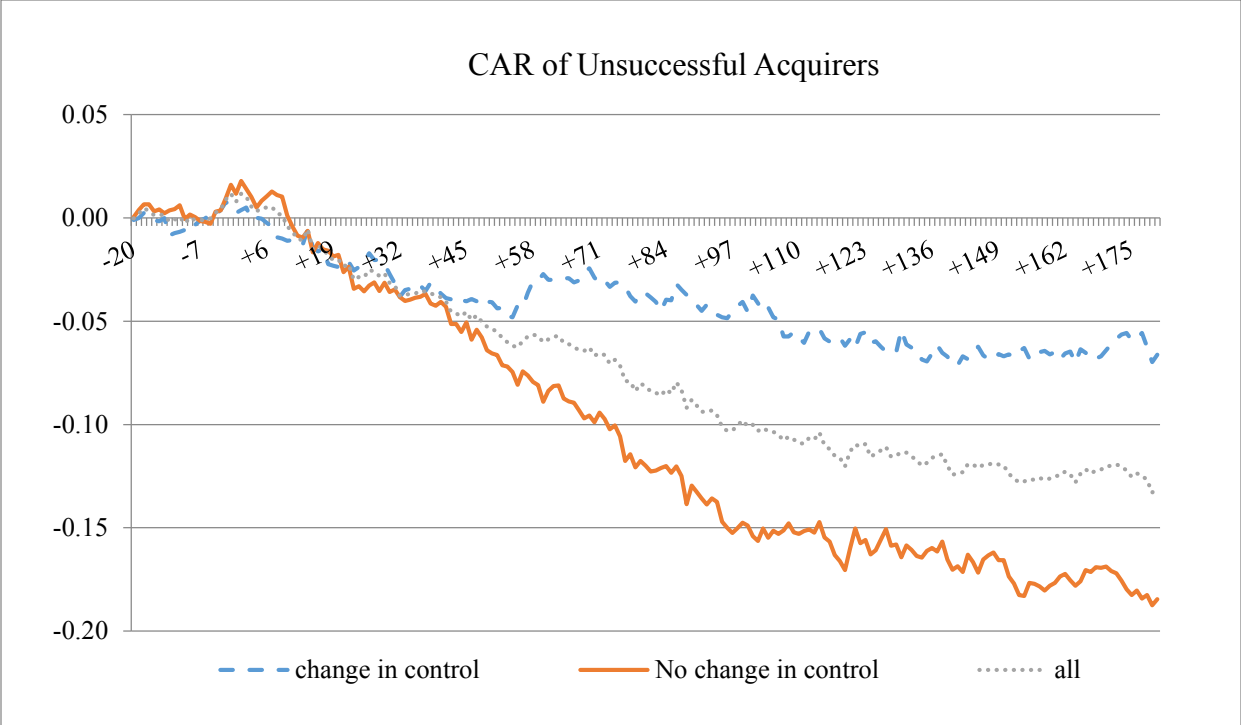


Figure 9. Cumulative abnormal returns to unsuccessful acquirers – total sample, and “change in control” and “not change in control” subsamples in the period 1985-2010.

Table 1: Number of unsuccessful targets “acquired within 1 year” and “not acquired within 1 year” in each month after announcement of tender offers

Table 1 reports the number of unsuccessful targets in total sample, “subsequently acquired within 1 year” and “not acquired within 1 year” subsamples in each month after announcement of unsuccessful tender offers. The total sample includes 240 unsuccessful target firms which lost the control-oriented tender offers between 1985 and 2010. The total sample are categorized into “subsequently acquired within 1 year” and “not acquired within 1 year” subsamples. In “subsequently acquired within 1 year” subsample, the unsuccessful target firms were acquired in another acquisition after the initial unsuccessful tender offers within 1 year; in “not acquired within 1 year” subsample, the unsuccessful target firms were not acquired successfully after the unsuccessful tender offers within 1 year. Event month 0 denotes announcement month. N denotes the number of firms in each sample in each event month. The number of firms decreases with time because the targets which were acquired are absorbed after the second successful acquisition since we concentrate on the 100% acquisitions for the subsequently successful deals.

Event month	Total sample	Subsequently acquired within 1 year	Not acquired within 1 year
	N	N	N
0	240	109	131
+1	236	106	130
+2	216	87	129
+3	202	74	128
+4	184	57	127
+5	174	48	126
+6	160	35	125
+7	147	23	124
+8	138	15	123
+9	129	7	122
+10	126	5	121
+11	121	1	120

Table 2: Percentage buy-and-hold abnormal returns to the unsuccessful targets “acquired within 1 year” and “not acquired within 1 year” in time windows

Table 2 represents the percentage buy-and-hold abnormal returns (BHAR) to the unsuccessful targets in time windows in total sample, “subsequently acquired within 1 year” and “not acquired within 1 year” subsamples. $BHAR_i(t,T) = \prod_{t=1}^T (1 + R_{i,t}) - \prod_{t=1}^T (1 + R_{benchmark,t})$ is used to calculate BHAR. The firm, which is not only in the same industry with the unsuccessful target but also has closest market value to the unsuccessful target’s 3 months before announcement of the tender offers, is selected as the benchmark for each unsuccessful target. Only 11 months following the announcement date are presented in this table because the unsuccessful targets which were acquired within 1 year are total absorbed up to 12 months after announcement. Column 5 is the comparison of the BHAR to the unsuccessful targets in both subsamples. T-statistics is shown in parentheses.

Event time period (in months)	Total sample	Subsequently acquired within 1 year (1)	Not acquired within 1 year (2)	(1) - (2)
0 to 0	33.72%*** (15.15)	37.86%*** (11.68)	30.27%*** (9.96)	7.59%* (1.70)
0 to +1	35.53%*** (14.73)	45.92%*** (12.39)	27.06%*** (9.08)	18.86%*** (4.01)
0 to +2	33.00%*** (13.32)	42.79%*** (10.83)	26.40%*** (8.64)	16.39%*** (3.32)
0 to +3	28.57%*** (10.93)	38.03%*** (9.74)	23.10%*** (6.85)	14.93%*** (2.80)
0 to +4	27.46%*** (9.34)	37.45%*** (7.40)	22.98%*** (6.48)	14.47%** (2.30)
0 to +5	25.67%*** (7.77)	38.78%*** (7.47)	20.67%*** (5.12)	18.11%*** (2.49)
0 to +6	26.38%*** (6.91)	40.89%*** (5.14)	22.31%*** (5.19)	18.58%** (2.03)
0 to +7	22.17%*** (5.45)	34.58%*** (3.30)	19.87%*** (4.51)	14.71% (1.32)
0 to +8	17.87%*** (4.03)	25.94%* (1.74)	16.89%*** (3.64)	9.05% (0.63)
0 to +9	18.57%*** (3.72)	6.31%** (0.19)	19.28%*** (3.87)	-12.97% (-0.59)
0 to +10	16.07%*** (3.35)	-14.92% (-0.59)	17.36%*** (3.56)	-32.28% (-1.32)
0 to +11	15.05%*** (2.98)	14.17% (0.19)	15.06%*** (2.95)	-0.89% (-0.02%)

***, ** and * stand for statistical significance based on two-sided tests at the 1%, 5%, 10%-level, respectively.

Table 3: Number of unsuccessful targets “acquired within 5 years” and “not acquired within 5 years” in each month after announcement of tender offers

Table 3 reports the number of unsuccessful targets in total sample, “subsequently acquired within 5 years” and “not acquired within 5 years” subsamples in each month after announcement of unsuccessful tender offers. The total sample includes 240 unsuccessful target firms which lost the tender offers between 1985 and 2010. The total sample are categorized into “subsequently acquired within 5 years” and “not acquired within 5 years” subsamples. In “subsequently acquired within 5 years” subsample, the unsuccessful target firms were acquired in another acquisition after the initial unsuccessful tender offers within 5 years; in “not acquired within 5 years” subsample, the unsuccessful target firms were not acquired successfully after the unsuccessful tender offers within 5 years. Event month 0 denotes announcement month. N denotes the number of firms in each sample in each event month. The number of firms decreases with time because the targets which were acquired are absorbed after the second successful acquisition since we concentrate on the 100% acquisitions for the subsequently successful deals.

Event month	Total sample	Subsequently acquired within 5 years	Not acquired within 5 years
	N	N	N
0	240	145	95
+1	236	142	94
+2	216	123	93
+3	202	110	92
+6	160	71	89
+12	119	34	85
+24	94	14	80
+48	68	2	66
+60	59		59

Table 4: Percentage buy-and-hold abnormal returns to the unsuccessful targets “acquired within 5 years” and “not acquired within 5 years” in time windows

Table 4 represents the percentage buy-and-hold abnormal returns (BHAR) to the unsuccessful targets in time windows in total sample, “subsequently acquired within 5 years” and “not acquired within 5 years” subsamples. $BHAR_i(t,T) = \prod_{t=1}^T (1 + R_{i,t}) - \prod_{t=1}^T (1 + R_{benchmark,t})$ is used to calculate BHAR. The firm, which is not only in the same industry with the unsuccessful target but also has closest market value to the unsuccessful target’s 3 months before announcement of the tender offers, is selected as the benchmark for each unsuccessful target. Column 5 is the comparison of the BHAR to the unsuccessful targets in both subsamples. T-statistics is shown in parentheses.

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to 0	33.72%*** (15.15)	35.57%*** (12.61)	30.89%*** (8.54)	4.7% (1.03)
0 to +1	35.53%*** (14.73)	40.07%*** (12.32)	28.67%*** (8.34)	11.40%** (2.34)
0 to +2	33.00%*** (13.32)	37.99%*** (11.41)	26.39%*** (7.31)	11.60%** (2.34)
0 to +3	28.57%*** (10.93)	33.25%*** (9.94)	22.97%*** (5.65)	10.28%** (1.97)
0 to +6	26.39%*** (6.91)	29.61%*** (5.67)	23.80%*** (4.35)	5.8% (0.75)
0 to +12	16.95%*** (3.07)	21.29%* (2.33)	15.22%* (2.22)	6.07% (0.49)
0 to +24	8.09% (0.81)	2.82% (0.12)	9.01% (0.83)	-6.19% (-0.22)
0 to +36	8.61% (0.72)	-33.04% (-1.16)	12.50% (0.98)	-45.54 (-1.07)
0 to +48	17.49% (1.12)	-2.81% (-0.04)	18.11% (1.22)	20.92% (-0.24)
0 to +60	15.17% (0.99)		15.17% (0.99)	

***, ** and * stand for statistical significance based on two-sided tests at the 1%, 5%, 10%-level, respectively.

Table 5: Percentage buy-and-hold abnormal returns to the unsuccessful targets “acquired within 1 year”, “acquired within 5 years but after 1 year” and “not acquired within 5 years”

Table 5 represents the percentage buy-and-hold abnormal returns (BHAR) to the unsuccessful targets in time windows in “subsequently acquired within 1 year”, “subsequently acquired within 5 years but after 1 year” and “not acquired within 5 years” subsamples. $BHAR_i(t,T) = \prod_{t=1}^T (1 + R_{i,t}) - \prod_{t=1}^T (1 + R_{benchmark,t})$ is used to calculate BHAR. The firm, which is not only in the same industry with the unsuccessful target but also has closest market value to the unsuccessful target’s 3 months before announcement of the tender offers, is selected as the benchmark for each unsuccessful target. Column 5 is the comparison of the BHAR to the unsuccessful targets in “subsequently acquired within 1 year” and “subsequently acquired within 5 years but after 1 year”. T-statistics is shown in parentheses.

Event time period (in months)	Subsequently acquired within 1 year (1)	Subsequently acquired within 5 years but after 1 year (2)	Not subsequently acquired within 5 years (3)	(1) – (2)
0 to 0	37.86%*** (11.68)	28.63%*** (5.06)	30.89%*** (8.54)	9.23% (1.42)
0 to +1	45.92%*** (12.39)	22.84%*** (3.83)	28.67%*** (8.34)	23.08%*** (3.18)
0 to +2	42.79%*** (10.83)	26.41%*** (4.53)	26.39%*** (7.31)	16.38%** (2.28)
0 to +3	38.03%*** (9.74)	23.44%*** (3.85)	22.97%*** (5.65)	14.59%** (2.08)
0 to +4	37.45%*** (7.40)	18.74%*** (2.71)	23.80%*** (5.96)	18.71%** (2.22)
0 to +5	38.78%*** (7.47)	18.69%** (2.63)	15.22%*** (4.38)	20.09%** (2.34)
0 to +6	40.89%*** (5.14)	18.64%*** (2.92)	9.01%*** (4.35)	22.26%** (2.19)
0 to +7	34.58%*** (3.30)	16.26%** (2.14)	18.11%*** (3.96)	18.31% (1.45)
0 to +8	25.94%* (1.74)	11.89% (1.39)	15.17%*** (3.42)	14.05% (0.86)

***, ** and * stand for statistical significance based on two-sided tests at the 1%, 5%, 10%-level, respectively.

Table 6: ARs and CARs to unsuccessful “no change in control” acquirers and “change in control” acquirers in each day after announcement of tender offers

Table 6 represents the percentage abnormal returns (AR) and cumulative abnormal returns (CAR) to the unsuccessful acquirers each event day in total sample, “no change in control” and “change in control” subsamples. $AR_{it} = Rit - \hat{\alpha}_i - \hat{\beta}_i R_{mit}$ is applied to calculate AR and $CAR = \sum_{t=t_0}^T \frac{1}{N_t} \sum_{i=1}^N AR_{it}$ is adopted to measure CAR. Event day 0 denotes announcement day of tender offers. The total sample includes 139 unsuccessful acquiring firms which lost the tender offers between 1985 and 2010. The total sample are categorized into “no change in control” and “change in control” subsamples. In “no change in control” subsample, the unsuccessful acquirers lost the bid to management of the targets, hence the control of the targets was not changed; in “change in control” subsample, the unsuccessful acquirers lost to rival bidders, thus the control of the targets was transferred to rival bidders. N denotes the number of firms in each sample in each event day.

Event day	Total sample			No change in control			Change in control		
	N	AR	CAR	N	AR	CAR	N	AR	CAR
-20	139	-0.02%	-0.02%	76	0.04%	0.04%	63	-0.10%	-0.10%
-15	139	0.04%	0.17%	76	0.10%	0.42%	63	-0.04%	-0.16%
-10	139	-0.32%	-0.27%	76	-0.67%	-0.05%	63	0.09%	-0.58%
-5	139	0.07%	-0.02%	76	-0.10%	-0.29%	63	0.27%	0.25%
-4	139	0.28%	0.26%	76	0.59%	0.30%	63	-0.09%	0.16%
-3	139	0.15%	0.41%	76	0.07%	0.37%	63	0.23%	0.39%
-2	139	0.49%	0.90%	76	0.58%	0.95%	63	0.38%	0.77%
-1	139	0.27%	1.17%	76	0.66%	1.61%	63	-0.19%	0.58%
0	139	-0.39%**	0.78%	76	-0.43%**	1.18%	63	-0.34%	0.24%
1	139	0.40%	1.18%	76	0.61%*	1.79%	63	0.14%	0.38%
2	139	-0.15%	1.03%	76	-0.38%	1.41%	63	0.12%	0.50%
3	139	-0.48%	0.55%	76	-0.39%	1.02%	63	-0.59%*	-0.09%
4	139	-0.23%	0.32%	76	-0.51%	0.51%	63	0.10%	0.01%
5	139	0.16%	0.48%	76	0.32%	0.83%	63	-0.04%	-0.03%
10	138	-0.54%	-0.40%	75	-0.91%	0.12%	63	-0.11%	-1.11%
15	138	-0.96%*	-1.51%	75	-1.03%	-1.66%	63	-0.87%	-1.42%
20	138	0.01%	-2.02%	75	0.07%	-1.79%	63	-0.05%	-2.37%
30	138	-0.47%	-3.15%	75	-0.46%*	-3.59%	63	-0.48%	-2.72%
40	138	-0.05%	-3.83%***	75	0.18%	-4.07%	63	-0.33%	-3.66%
80	138	-0.14%*	-8.16%***	75	-0.23%	-12.00%***	63	-0.03%	-3.64%
100	138	-0.29%	-10.09%***	75	-0.14%	-14.89%***	63	-0.47%	-4.54%
120	138	0.73%	-11.30%***	75	1.05%**	-15.99%***	63	0.33%	-5.86%
140	138	-0.44%	-12.43%***	75	-0.50%	-17.03%***	63	-0.37%	-7.09%*
160	138	0.13%**	-12.49%**	75	0.13%**	-17.67%***	63	0.12%	-6.49%
180	137	0.32%	-12.97%**	74	0.29%	-18.46%***	63	0.36%	-6.62%

***, ** and * stand for statistical significance based on two-sided tests at the 1%, 5%, 10%-level, respectively.

Table 7: CARs to “no change in control” acquirers and “change in control” acquirers in time windows

Table 7 represents the cumulative abnormal returns (CAR) to the unsuccessful acquirers each event day in total sample, “no change in control” and “change in control” subsamples. $AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mit}$ is used to calculate AR and $CAR = \sum_{t=t_0}^T \frac{1}{N_t} \sum_{i=1}^N AR_{it}$ is adopted to measure CAR. Event day 0 denotes announcement day of tender offers. Event time period is measured from 20 days before the announcement of the tender offers to 180 days after the tender offers. The total sample are categorized into “no change in control” and “change in control” subsamples. In “no change in control” subsample, the unsuccessful acquirers lost the bid to management of the targets, hence the control of the targets was not changed; in “change in control” subsample, the unsuccessful acquirers lost to rival bidders, thus the control of the targets was transferred to rival bidders. T-statistics is shown in parentheses.

Event time period (in days)	Total sample	No change in control	Change in control
-20 to +1	1.18% (1.06)	1.79% (1.10)	0.38% (0.30)
+2 to +20	-3.20%** (-2.33)	-3.58%** (-2.02)	-2.75%* (-1.79)
-20 to +20	-2.02% (-1.07)	-1.79% (-0.71)	-2.37% (-1.17)
-20 to +140	-12.43%*** (-3.49)	-17.03%*** (-3.07)	-7.09%* (-1.68)
-20 to +160	-12.49%*** (-3.43)	-17.67%*** (-3.02)	-6.49% (-1.48)
-20 to + 180	-12.97%*** (-3.40)	-18.46%*** (-3.08)	-6.62% (-1.42)

***, ** and * stand for statistical significance based on two-sided tests at the 1%, 5%, 10%-level, respectively.

Table 8: Analysis about motives of tender offers

Table 8 reports the results of analysis about motives of tender offers. Panel A represents the result of regression about the relationship between target gain and total gain; panel B represents the result of regression about the relationship between target gain and acquirer gain. The total sample includes 123 unsuccessful tender offers, in which both the targets and acquirers are public firms, having available data in SDC between 1985 and 2010. The total sample are categorized into “negative total gains” and “positive total gains” subsamples. Target gain is calculated by multiplying the target’s CAR (-5,5) by the market value of the target firm’s equity 6 days prior to the announcement of the tender offer, minus the value of the target share held by the acquirer; Acquirer gain is calculated by multiplying the acquirer’s CAR (-5,5) by the market value of the acquirer firm’s equity 6 days prior to the announcement of the tender offer; total gain is the sum of target gain and acquirer gain.

Sample	Size	Intercept	Coefficient	P-value	Adjusted R ²
<i>Panel A. Target gain = $\alpha + \beta(\text{Total gain})$</i>					
Total sample	123	31.56	0.46***	<.0001	0.36
Negative total gain	65	-86.37	0.37***	<.0001	0.21
Positive total gain	58	33.99	0.71***	<.0001	0.70
<i>Panel B. Target gain = $\alpha + \beta(\text{Acquirer gain})$</i>					
Total sample	123	-85.67	-0.16**	0.05	0.02
Negative total gain	65	-398.75	-0.27***	0.01	0.09
Positive total gain	58	221.91	-0.005	0.98	-0.02

***, ** and * stand for statistical significance based on two-sided tests at the 1%, 5%, 10%-level, respectively.

Table 9: Robustness test about the motives of tender offers

Table 9 reports the results of robustness test about motives of tender offers. Panel A represents the result of regression among successful rival bidders about the relationship between target gain and total gain; panel B represents the result of regression about the relationship between target gain and acquirer gain. The total sample includes 33 successful acquisitions, which are made by the rival bidders. Target gain is calculated by multiplying the target's CAR (-5,5) by the market value of the target firm's equity 6 days prior to the announcement of the tender offer, minus the value of the target share held by the acquirer; Acquirer gain is calculated by multiplying the acquirer's CAR (-5,5) by the market value of the acquirer firm's equity 6 days prior to the announcement of the tender offer; total gain is the sum of target gain and acquirer gain.

Sample	Size	Intercept	Coefficient	P-value	Adjusted R ²
<i>Panel A. Target gain = $\alpha + \beta(\text{Total gain})$</i>					
	33	1.78	0.01*	0.08	0.07
<i>Panel B. Target gain = $\alpha + \beta(\text{Acquirer gain})$</i>					
	33	1.68	0.01	0.13	0.04

***, ** and * stand for statistical significance based on two-sided tests at the 1%, 5%, 10%-level, respectively.

Table 10: Summary Statistics

Table 10 reports the summary statistics of variables about the targets in unsuccessful tender offers between 1985 and 2010. Staggered board equals to 1 when the board of target firm is classified, 0 otherwise. Poison pill equals to 1 when the firm has poison pill as antitakeover provision, 0 otherwise. Market value of asset (\$mil) is measured by book value of assets minus book value of common equity plus market value of common equity. Tobin's q is calculated by market value of assets divided by book value of assets. Free cash flow is measured as: (Operating income before depreciation – interest expenses-income taxes-capital expenditures) / book value of total assets. Leverage is calculated by book value of (long term debts + short term debts) divided by market value of total assets; Stock price runup is defined as the target's buy-and-hold abnormal return during the period (-210,-11). Industry M&A is defined as the deal value of all M&A deals in the initial unsuccessful target's industry and year scaled by total book value of assets of all COMPUSTAT firms in the same industry in the same year.

	Mean	Median	St Dev
Staggered board	0.32	0	0.47
Poison pill	0.35	0	0.48
Total assets(\$mil)	1294.05	265.63	3263.48
Market value of equity(\$mil)	681.37	170.43	1264.07
Tobin's q	1.37	1.24	1.04
Free cash flow	0.01	0.03	0.13
Leverage	0.20	0.17	0.23
Stock price runup	-0.08	-0.07	0.62
Industry M&A	0.07	0.06	0.05

Table 11: Pearson Correlation Matrix

Table 11 reports the result of Pearson correlation matrix about the variables of the targets in unsuccessful tender offers between 1985 and 2010. SB denotes staggered board, which equals to 1 when the board of target firm is classified, 0 otherwise. Pp denotes poison pill, which equals to 1 when the firm has poison pill as antitakeover provision, 0 otherwise. Size is calculated by log of book value of target's total assets (\$mil). LEVR denotes leverage which is calculated by book value of (long term debts + short term debts) divided by market value of total assets. Market value of total asset is measured by book value of assets minus book value of common equity plus market value of common equity. Q denotes Tobin's q which is calculated by market value of assets divided by book value of assets. FCF denotes free cash flow which is measured as: (Operating income before depreciation – interest expenses-income taxes-capital expenditures) / book value of total assets. IND denotes industry M&A which is defined as the deal value of all M&A deals in the initial unsuccessful target's industry and year scaled by total book value of assets of all COMPUSTAT firms in the same industry in the same year. PUP denotes stock price runup which is defined as the target's buy-and-hold abnormal return during the period (-210,-11). Market value of asset (\$mil) is measured by book value of assets minus book value of common equity plus market value of common equity.

	SB	Pp	Size	LEVR	Q	FCF	IND	PUP
SB	1							
Pp	-0.11 (0.11)	1						
Size	0.18 (0.01)	0.18 (0.00)	1					
LEVR	-0.06 (0.41)	-0.06 (0.30)	0.06 (0.35)	1				
Q	0.09 (0.22)	-0.00 (0.95)	-0.09 (0.14)	-0.08 (0.18)	1			
FCF	0.07 (0.38)	0.12 (0.06)	0.23 (0.00)	0.07 (0.30)	-0.06 (0.33)	1		
IND	-0.08 (0.27)	0.03 (0.59)	-0.15 (0.01)	-0.10 (0.09)	0.15 (0.01)	0.07 (0.27)	1	
PUP	0.00 (0.99)	0.00 (0.96)	0.15 (0.01)	0.05 (0.43)	0.04 (0.50)	0.00 (0.96)	0.04 (0.45)	1

Table 12: Estimated coefficients of variables for unsuccessful targets

Table 12 reports the coefficient of the variables of the targets in unsuccessful tender offers between 1985 and 2010. Staggered board, Poison pill, Size, Tobin's q, Leverage, Free cash flow, Industry M&A, Stock price runup are defined in Table 11. The number of observations included in the cross section regression analysis is 143 since information of staggered board is limited on either SDC or CRSP. The independent variable equals to 1 when the target was 100% acquired within 1 year or 5 years, separately, after the announcement of the initial unsuccessful bid; 0 otherwise. P-values are shown in parentheses

	Acquired within 1 Year	Acquired within 5 Years
Staggered Board	-0.52 (0.19)	-0.54 (0.18)
Poison pill	-0.14 (0.71)	-0.71* (0.07)
Size	0.17 (0.49)	0.51* (0.06)
Tobin's q	-0.23 (0.34)	-0.41 (0.16)
Leverage	0.64 (0.42)	0.91 (0.33)
Free cash flow	0.30 (0.86)	0.64 (0.72)
Industry M&A	7.23** (0.05)	10.79*** (0.01)
Stock price runup	0.60* (0.07)	0.29 (0.39)
Intercept	-0.73 (0.35)	-0.71 (0.39)
Number of obs.	143	143
Wald	10.18	14.30

***, ** and * stand for statistical significance based on two-sided tests at the 1%, 5%, 10%-level, respectively.

Table 13: Comparison of characteristics between failed bidders and rival bidders

Table 13 reports the comparison of the means of variables between the unsuccessful bidders and the successful rival bidders between 1985 and 2010. Staggered board, Size, Tobin's q, Leverage, Free cash flow, Industry M&A and Stock price runup are defined in Table 11. Diversification equals to 1 if the bidder and the target do not share a Fama-French 12 industry and 0 otherwise. Relative size is defined as deal value over bidder market value of equity. Management quality is measured by the operating income growth rate, which is defined as $(EBITDA_{t-1} - EBITDA_{t-4})/EBITDA_{t-4}$, adjusted for the industry median. The number of observation is 63 for failed bidders and 39 for rival bidders, which is because 24 rival bidders are private firms, lacking data on CRSP and SDC.

	Failed bidders(N=63)	Rival bidders(N=39)	T Stat	P(T<=t) Two tail
Staggered Board	0.44 (0.25)	0.55 (0.26)	-0.94	0.35
Size	2.96 (0.52)	3.31 (0.58)	-2.41	0.01***
Tobin's q	1.41 (0.69)	1.92 (2.87)	-2.00	0.05**
Leverage	0.20 (0.02)	0.19 (0.10)	0.21	0.83
Free cash flow	0.04 (0.01)	0.06 (0.00)	-0.81	0.42
Industry M&A	0.18 (0.02)	0.13 (0.01)	2.19	0.03**
Stock price runup	-0.01 (0.31)	-0.05 (0.13)	0.33	0.74
Diversification	0.46 (0.25)	0.67 (0.22)	-2.37	0.02***
Relative size	1.42 (14.54)	0.76 (1.51)	1.03	0.31
Management quality	0.34 (0.65)	0.37 (0.57)	-0.13	0.90

***, ** and * stand for statistical significance based on two-sided tests at the 1%, 5%, 10%-level, respectively.

Table 14: BHAR to unsuccessful targets – Matching firms with SIZE&INDUSTRY

Table 14 represents the WHOLE table of percentage buy-and-hold abnormal returns (BHAR) to the unsuccessful targets in time windows in total sample, “subsequently acquired within 5 years” and “not acquired within 5 years” subsamples. $BHAR_i(t,T) = \prod_{t=1}^T(1 + R_{i,t}) - \prod_{t=1}^T(1 + R_{benchmark,t})$ is used to calculate BHAR. The firm, which is not only in the same industry with the unsuccessful target but also has closest market value to the unsuccessful target’s 3 months before announcement of the tender offers, is selected as the benchmark for each unsuccessful target. Column 5 is the comparison of the BHAR to the unsuccessful targets in both subsamples. T-statistics is shown in parentheses.

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to 0	33.72%*** (15.15)	35.57%*** (12.61)	30.89%*** (8.54)	4.68% (1.03)
0 to +1	35.53%*** (14.73)	40.07%*** (12.32)	28.67%*** (8.34)	11.4%** (2.34)
0 to +2	33.00%*** (13.32)	37.99%*** (11.41)	26.39%*** (7.31)	11.6%** (2.34)
0 to +3	28.57%*** (10.93)	33.25%*** (9.94)	22.97%*** (5.65)	10.28%** (1.97)
0 to +4	27.46%*** (9.34)	30.21%*** (7.22)	24.66%*** (5.96)	5.55% (0.94)
0 to +5	25.67%*** (7.77)	30.17%*** (6.91)	21.47%*** (4.38)	8.70% (1.32)
0 to +6	26.38%*** (6.91)	29.61%*** (5.67)	23.8%*** (4.35)	5.81% (0.75)
0 to +7	22.17%*** (5.45)	23.40%*** (3.76)	21.34%*** (3.96)	2.06% (0.25)
0 to +8	17.87%*** (4.03)	16.02%** (2.15)	18.96%*** (3.42)	-2.94% (-0.32)
0 to +9	18.57%*** (3.72)	16.91%** (1.89)	19.41%*** (3.21)	-2.50% (-0.24)
0 to +10	16.07%*** (3.35)	15.80%** (1.89)	16.21%*** (2.75)	-0.41% (-0.04)
0 to +11	15.05%*** (2.98)	17.60%** (1.93)	13.97%** (2.29)	3.63% (0.33)
0 to +12	16.95%*** (3.07)	21.29%** (2.33)	15.22%** (2.22)	6.07% (0.49)
0 to +13	16.69%*** (2.73)	17.90% (1.60)	16.26%** (2.22)	1.64% (0.12)
0 to +14	13.29%* (2.10)	11.31% (0.94)	13.88%* (1.86)	-2.57% (-0.17)
0 to +15	10.09% (1.43)	5.52% (0.40)	11.42% (1.40)	-5.90% (-0.35)

Table 14 - Continued

Event period	time	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to +16		11.13% (1.46)	8.90% (0.57)	11.77% (1.34)	-2.87% (-0.16)
0 to +17		13.05% (1.64)	15.23% (0.88)	12.45% (1.38)	2.78% (0.14)
0 to +18		6.79% (0.79)	-7.11% (-0.38)	9.71% (1.00)	-16.82% (-0.74)
0 to +19		7.06% (0.81)	-0.85% (-0.04)	8.64% (0.89)	-9.50% (-0.40)
0 to +20		5.47% (0.62)	-6.44% (-0.32)	7.70% (0.78)	-14.14% (-0.58)
0 to +21		5.15% (0.56)	-8.45% (-0.47)	7.70% (0.74)	-16.15% (-0.64)
0 to +22		3.26% (0.35)	-2.52% (-0.12)	4.35% (0.42)	-6.87% (-0.27)
0 to +23		5.90% (0.61)	-7.66% (-0.33)	8.28% (0.78)	-15.94% (-0.58)
0 to +24		8.09% (0.82)	2.82% (0.12)	9.01% (0.83)	-6.19% (-0.22)
0 to +25		8.53% (0.81)	-0.91% (-0.03)	10.07% (0.88)	-10.97% (-0.36)
0 to +26		9.21% (0.84)	2.12% (0.07)	10.19% (0.87)	-8.07% (-0.24)
0 to +27		10.41% (0.95)	6.37% (0.21)	10.97% (0.92)	-4.60% (-0.14)
0 to +28		5.78% (0.51)	2.82% (0.09)	6.19% (0.50)	-3.36% (-0.10)
0 to +29		3.92% (0.35)	-5.92% (-0.15)	5.18% (0.44)	-11.10% (-0.31)
0 to +30		6.06% (0.53)	-4.15% (-0.11)	7.36% (0.61)	-11.52% (-0.32)
0 to +31		7.09% (0.62)	-2.97% (-0.09)	8.41% (0.69)	-11.38% (-0.32)
0 to +32		6.86% (0.61)	-6.00% (-0.18)	8.22% (0.69)	-14.22% (-0.37)
0 to +33		10.47% (0.91)	4.36% (0.11)	11.13% (0.92)	-6.76% (-0.17)
0 to +34		8.55% (0.77)	-39.02% (-1.44)	13.62% (1.16)	-52.64% (-1.42)
0 to +35		7.59% (0.66)	-41.58% (-1.58)	12.83% (1.04)	-54.41% (-1.40)
0 to +36		8.61% (0.72)	-33.04% (-1.16)	12.50% (0.99)	-45.54% (-1.07)

Table 14 - Continued

Event period	time	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to +37		8.67% (0.72)	-41.52% (-1.32)	12.69% (1.00)	-54.21% (-1.19)
0 to +38		10.90% (0.88)	-47.23% (-1.27)	14.83% (1.14)	-62.05% (-1.22)
0 to +39		13.97% (1.12)	-50.42% (-1.41)	18.32% (1.41)	-68.75% (-1.35)
0 to +40		17.64% (1.39)	-45.31% (-1.60)	21.90% (1.64)	-67.21% (-1.29)
0 to +41		14.86% (1.13)	-66.29% (-1.67)	20.34% (1.50)	-86.64% (-1.62)
0 to +42		13.80% (1.03)	-47.25% (-0.99)	17.10% (1.24)	-64.35% (-1.06)
0 to +43		14.85% (1.18)	-49.06% (-1.00)	18.35% (1.42)	-67.41% (-1.20)
0 to +44		15.99% (1.22)	-60.06% (-1.10)	20.22% (1.51)	-80.27% (-1.38)
0 to +45		15.41% (1.19)	-62.35% (-1.09)	19.86% (1.51)	-82.20% (-1.45)
0 to +46		15.43% (1.18)	-57.55% (-0.99)	19.61% (1.47)	-77.16% (-1.34)
0 to +47		17.58% (1.26)	-78.03% (-1.02)	21.80% (1.55)	-99.83% (-1.45)
0 to +48		17.49% (1.21)	-2.81% (-0.04)	18.11% (1.22)	-20.92% (-0.24)
0 to +49		19.31% (1.31)	9.39% (0.14)	19.61% (1.30)	-10.22% (-0.12)
0 to +50		23.70% (1.55)	-1.97% (-0.03)	24.49% (1.55)	-26.47% (-0.29)
0 to +51		22.65% (1.50)	-2.83% (-0.05)	23.44% (1.51)	-26.28% (-0.30)
0 to +52		24.44% (1.59)	-7.93% (-0.18)	25.45% (1.61)	-33.38% (-0.37)
0 to +53		26.45% (1.67)	-3.26% (-0.06)	27.38%* (1.68)	-30.64% (-0.33)
0 to +54		30.10% (1.93)	-58.31% (-1.93)	31.48%* (1.99)	-89.78% (-0.70)
0 to +55		21.85% (1.46)	-63.42% (-1.93)	23.20% (1.53)	-86.62% (-0.71)
0 to +56		21.42% (1.36)	-61.17% (-1.93)	22.73% (1.43)	-83.91% (-0.66)
0 to +57		21.55% (1.38)	-65.16% (-1.93)	22.97% (1.45)	-88.12% (-0.71)

Table 14 - Continued

Event period	time	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to +58		19.89% (1.23)	-66.76%	21.31% (1.30)	-88.07% (-0.68)
0 to +59		21.21% (1.34)	-68.06%	22.70% (1.42)	-90.76% (-0.73)
0 to +60		15.17% (0.99)		15.17% (0.99)	

Table 15: BHAR to unsuccessful targets – Matching firms with B/M&INDUSTRY

Table 15 represents the WHOLE table of percentage buy-and-hold abnormal returns (BHAR) to the unsuccessful targets in time windows in total sample, “subsequently acquired within 5 years” and “not acquired within 5 years” subsamples. $BHAR_i(t,T) = \prod_{t=1}^T(1 + R_{i,t}) - \prod_{t=1}^T(1 + R_{benchmark,t})$ is used to calculate BHAR. The firm, which is not only in the same industry with the unsuccessful target but also has closest book-to market value to the unsuccessful target’s 1 year before announcement of the tender offers, is selected as the benchmark for each unsuccessful target. Column 5 is the comparison of the BHAR to the unsuccessful targets in both subsamples. T-statistics is shown in parentheses.

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to 0	32.62%*** (14.78)	34.26%*** (12.22)	30.07%*** (8.41)	4.19% (0.93)
0 to +1	33.65%*** (12.51)	37.49%*** (10.13)	27.76%*** (7.46)	9.74%* (1.78)
0 to +2	30.16%*** (10.86)	35.42%*** (9.17)	23.22%*** (6.05)	12.20%** (2.20)
0 to +3	24.08%*** (8.08)	28.47%*** (6.59)	18.86%*** (4.74)	9.61% (1.61)
0 to +4	22.13%*** (6.80)	22.98%*** (4.43)	21.26%*** (5.45)	1.72% (0.26)
0 to +5	19.78%*** (5.34)	16.02%*** (2.85)	23.11%*** (4.72)	-7.09% (-0.96)
0 to +6	18.40%*** (4.27)	12.31%* (1.77)	23.23%*** (4.31)	-10.92% (-1.26)
0 to +7	16.90%*** (3.44)	10.70% (1.19)	21.08%*** (3.80)	-10.38% (-1.04)
0 to +8	16.89%*** (3.23)	7.80% (0.81)	22.35%*** (3.73)	-14.55% (-1.35)
0 to +9	17.64%*** (3.26)	10.67% (1.04)	21.21%*** (3.39)	-10.53% (-0.92)
0 to +10	14.31%*** (2.72)	4.51% (0.49)	19.15%*** (3.00)	-14.64% (-1.31)
0 to +11	16.20%*** (3.08)	8.74% (0.92)	19.43%*** (3.08)	-10.69% (-0.93)
0 to +12	15.95%** (2.74)	9.10% (0.83)	18.75%*** (2.73)	-9.64% (-0.75)
0 to +13	14.12%** (2.33)	0.94% (0.08)	18.88%*** (2.64)	-17.94% (-1.31)
0 to +14	13.32% (2.02)	-10.18% (-0.75)	20.49%*** (2.76)	-30.67%** (-1.99)
0 to +15	8.88% (1.24)	-16.39% (-1.14)	16.46%** (2.02)	-32.85%* (-1.95)

Table 15 - Continued

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to +16	9.00% (1.19)	-22.01% (-1.41)	18.02%** (2.13)	-40.03%** (-2.25)
0 to +17	9.45% (1.16)	-25.93% (-1.42)	18.41%** (2.08)	-44.33%** (-2.23)
0 to +18	9.70% (1.13)	-38.75%* (-1.79)	20.13%** (2.23)	-58.88%*** (-2.70)
0 to +19	12.29% (1.41)	-40.41%* (-2.06)	22.42%** (2.41)	-62.83%*** (-2.75)
0 to +20	13.81% (1.57)	-38.82%* (-1.87)	23.93%** (2.57)	-62.76%*** (-2.72)
0 to +21	16.03%* (1.81)	-38.79%* (-1.83)	26.57%*** (2.85)	-65.36%*** (-2.82)
0 to +22	14.30% (1.66)	-36.76%* (-1.98)	23.47%** (2.53)	-60.22%** (-2.58)
0 to +23	17.38%* (1.94)	-28.52% (-1.40)	25.62%*** (2.66)	-54.14%** (-2.22)
0 to +24	17.26%* (1.87)	-26.09% (-1.27)	24.48%** (2.45)	-50.56%* (-1.95)
0 to +25	15.82% (1.63)	-35.24% (-1.67)	24.33%** (2.32)	-59.57%** (-2.20)
0 to +26	18.55%* (1.81)	-26.87% (-1.19)	25.03%** (2.25)	-51.91%* (-1.69)
0 to +27	20.19%* (1.89)	-35.16% (-1.63)	28.09%** (2.42)	-63.26%** (-1.99)
0 to +28	15.65% (1.40)	-41.90% (-1.70)	23.87%* (1.98)	-65.78%* (-1.98)
0 to +29	14.81% (1.30)	-57.14% (-1.83)	24.27%** (2.04)	-81.41%** (-2.35)
0 to +30	16.84% (1.49)	-54.35%* (-1.92)	26.21%** (2.20)	-80.55%** (-2.34)
0 to +31	14.31% (1.28)	-60.11%* (-1.99)	22.25%* (1.92)	-82.36%** (-2.23)
0 to +32	19.11%* (1.71)	-54.14%* (-1.99)	27.03%** (2.30)	-81.17%** (-2.20)
0 to +33	19.33%* (1.79)	-56.14% (-1.87)	27.49%** (2.47)	-83.63%** (-2.37)
0 to +34	21.16%* (1.90)	-58.41% (-1.80)	29.76%** (2.60)	-88.17%** (-2.42)
0 to +35	19.40%* (1.73)	-67.75% (-1.85)	27.65%** (2.43)	-95.39%** (-2.46)
0 to +36	17.88% (1.5)	-72.58% (-1.76)	25.32%** (2.09)	-97.89%** (-2.23)

Table 15 - Continued

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to +37	20.44%* (1.79)	-68.26% (-1.63)	27.83%** (2.42)	-96.09%** (-2.31)
0 to +38	19.51%* (1.70)	-103.49%** (-3.12)	28.05%** (2.45)	-131.54%*** (-2.97)
0 to +39	19.85%* (1.77)	-105.73%** (-3.29)	28.57%** (2.57)	-134.30%*** (-3.12)
0 to +40	21.2%* (1.91)	-107.11%** (-3.33)	30.11%*** (2.75)	-137.22%*** (-3.23)
0 to +41	20.51%* (1.79)	-117.52% (-2.30)	28.18%** (2.53)	-145.69%*** (-2.99)
0 to +42	16.00% (1.38)	-149.73%** (-3.61)	25.2%** (2.27)	-174.93%*** (-3.64)
0 to +43	14.62% (1.20)	-163.17%** (-3.30)	24.77%** (2.16)	-187.95%*** (-3.80)
0 to +44	14.38% (1.14)	-172.60%** (-3.24)	25.06%** (2.11)	-197.66%*** (-3.87)
0 to +45	13.51% (1.06)	-188.21%** (-3.34)	25.2%** (2.15)	-213.41%*** (-4.22)
0 to +46	15.64% (1.24)	-168.95% (-2.19)	23.67%* (1.97)	-192.61%*** (-3.24)
0 to +47	17.96% (1.42)	-125.67% (-1.06)	22.38%* (1.81)	-148.06%** (-2.05)
0 to +48	15.49% (1.23)	-124.91% (-1.02)	19.81% (1.62)	-144.71%** (-2.01)
0 to +49	19.72% (1.55)	-119.31% (-1.00)	24.06%* (1.93)	-143.37%* (-1.97)
0 to +50	17.99% (1.37)	-120.28% (-1.04)	22.31%* (1.72)	-142.59%* (-1.89)
0 to +51	16.69% (1.25)	-115.78% (-1.00)	20.90% (1.58)	-136.67%* (-1.79)
0 to +52	15.15% (1.11)	-115.03% (-1.01)	19.28% (1.43)	-134.31%* (-1.73)
0 to +53	16.55% (1.20)	-112.24% (-0.99)	20.64% (1.51)	-132.88%* (-1.69)
0 to +54	20.86% (1.49)	-222.34% (-2.26)	24.72%* (1.81)	-247.06%** (-2.26)
0 to +55	17.15% (1.21)	-215.28% (-2.15)	20.90% (1.51)	-236.18%** (-2.15)
0 to +56	18.98% (1.31)	-227.51% (-2.24)	22.96% (1.63)	-250.46%** (-2.24)
0 to +57	23.64% (1.56)	-229.84% (-2.24)	27.87%* (1.89)	-257.71%** (-2.24)

Table 15 - Continued

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to +58	23.83% (1.57)	-248.96%	28.37%* (1.93)	-277.33%** (-2.42)
0 to +59	31.05%** (2.08)		31.05%* (2.08)	
0 to +60	23.88% (1.63)		23.88% (1.63)	

Table 16: BHAR to unsuccessful targets – Matching firms with MKT&B/M&INDUSTRY

Table 16 represents the WHOLE table of percentage buy-and-hold abnormal returns (BHAR) to the unsuccessful targets in time windows in total sample, “subsequently acquired within 5 years” and “not acquired within 5 years” subsamples. $BHAR_i(t,T) = \prod_{t=1}^T(1 + R_{i,t}) - \prod_{t=1}^T(1 + R_{benchmark,t})$ is used to calculate BHAR. The 10 firms, which are not only in the same industry with the unsuccessful target but also have closest market value to the unsuccessful target’s 1 year before announcement of the tender offers, are chosen first. Then among those 10 firms, the one with closest book/market value 1 year before announcement to the target firm’s is selected as the benchmark for each unsuccessful target. Column 5 is the comparison of the BHAR to the unsuccessful targets in both subsamples. T-statistics is shown in parentheses.

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to 0	32.47%*** (14.19)	34.51%*** (12.06)	29.32%*** (7.74)	5.19% (1.11)
0 to +1	33.94%*** (13.14)	38.74%*** (10.91)	26.65%*** (7.56)	12.1%** (2.31)
0 to +2	29.77%*** (10.67)	34.84%*** (9.03)	23.15%*** (5.92)	11.69%** (2.09)
0 to +3	26.97%*** (9.40)	33.09%*** (8.34)	19.78%*** (4.89)	13.3%** (2.34)
0 to +4	26.03%*** (7.88)	30.35%*** (6.10)	21.61%*** (5.02)	8.74% (1.33)
0 to +5	24.92%*** (6.81)	28.22%*** (5.23)	22.03%*** (4.42)	6.20% (0.84)
0 to +6	22.54%*** (5.69)	24.55%*** (3.94)	20.96%*** (4.08)	3.59% (0.45)
0 to +7	19.44%*** (4.62)	18.40%** (2.51)	20.14%*** (3.97)	-1.74% (-0.20)
0 to +8	15.87%*** (3.5)	12.63% (1.51)	17.79%*** (3.38)	-5.16% (-0.55)
0 to +9	15.78%*** (3.22)	16.21%* (1.69)	15.57%*** (2.78)	0.65% (0.06)
0 to +10	15.66%*** (3.18)	15.89% (1.62)	15.55%*** (2.78)	0.34% (0.03)
0 to +11	13.60%*** (2.65)	17.00% (1.67)	12.14%** (2.05)	4.86% (0.43)
0 to +12	15.3%*** (2.75)	17.68% (1.60)	14.34%** (2.23)	3.34% (0.27)
0 to +13	12.15%** (2.22)	4.23% (0.41)	14.97%** (2.31)	-10.74% (-0.86)
0 to +14	12.21%** (2.13)	-5.58% (-0.56)	17.57%** (2.60)	-23.15% (-1.72)

Table 16 - Continued

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to +15	10.37% (1.60)	-6.85% (-0.58)	15.47%** (2.04)	-22.32% (-1.45)
0 to +16	11.38% (1.61)	-7.77% (-0.63)	16.89%** (2.03)	-24.66% (-1.46)
0 to +17	13.88%* (1.82)	-5.45% (-0.37)	18.72%** (2.14)	-24.16% (-1.27)
0 to +18	11.96% (1.43)	-16.68% (-0.93)	18.04%* (1.94)	-34.72% (-1.59)
0 to +19	11.11% (1.35)	-18.73% (-0.95)	16.78%* (1.87)	-35.51% (-1.59)
0 to +20	11.27% (1.36)	-17.20% (-0.93)	16.68%* (1.83)	-33.88% (-1.51)
0 to +21	10.84% (1.27)	-18.00% (-0.91)	16.32%* (1.75)	-34.32% (-1.49)
0 to +22	8.82% (1.02)	-18.45% (-0.92)	13.66% (1.44)	-32.11% (-1.34)
0 to +23	7.78% (0.88)	-19.32% (-0.91)	12.58% (1.31)	-31.90% (-1.30)
0 to +24	11.76% (1.29)	-19.78% (-0.98)	16.95%* (1.69)	-36.73% (-1.41)
0 to +25	10.26% (1.03)	-28.68% (-1.38)	16.66% (1.53)	-45.34% (-1.61)
0 to +26	13.83% (1.37)	-18.04% (-0.92)	18.32% (1.65)	-36.36% (-1.19)
0 to +27	9.73% (0.95)	-22.50% (-1.03)	14.27% (1.28)	-36.77% (-1.19)
0 to +28	5.86% (0.56)	-19.61% (-0.85)	9.45% (0.83)	-29.06% (-0.92)
0 to +29	5.13% (0.50)	-31.10% (-1.18)	9.84% (0.89)	-40.93% (-1.28)
0 to +30	5.39% (0.50)	-27.61% (-1.11)	9.67% (0.84)	-37.28% (-1.12)
0 to +31	8.13% (0.76)	-18.28% (-0.59)	10.95% (0.96)	-29.23% (-0.8)
0 to +32	11.08% (1.01)	-20.55% (-0.70)	14.50% (1.24)	-35.05% (-0.95)
0 to +33	11.61% (1.07)	-18.63% (-0.60)	14.88% (1.29)	-33.51% (-0.91)
0 to +34	12.96% (1.18)	-18.31% (-0.53)	16.34% (1.40)	-34.65% (-0.93)
0 to +35	12.84% (1.12)	-21.25% (-0.57)	16.06% (1.33)	-37.31% (-0.91)

Table 16 - Continued

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to +36	13.29% (1.14)	-15.89% (-0.32)	15.69% (1.30)	-31.58% (-0.71)
0 to +37	15.03% (1.26)	-14.11% (-0.29)	17.46% (1.41)	-31.57% (-0.70)
0 to +38	14.57% (1.26)	-43.16% (-0.80)	18.58% (1.59)	-61.74% (-1.33)
0 to +39	14.90% (1.39)	-44.30% (-0.87)	19.01%* (1.75)	-63.32% (-1.46)
0 to +40	18.93%* (1.80)	-28.16% (-0.49)	22.2%** (2.10)	-50.36% (-1.18)
0 to +41	15.96% (1.49)	-82.29% (-1.57)	21.42%** (2.01)	-103.71%** (-2.21)
0 to +42	15.30% (1.41)	-76.61% (-1.52)	20.41%* (1.88)	-97.02%** (-2.04)
0 to +43	16.26% (1.51)	-75.70% (-1.38)	21.52%** (2.01)	-97.21%** (-2.09)
0 to +44	16.27% (1.45)	-90.94% (-1.52)	22.39%** (2.03)	-113.33%** (-2.35)
0 to +45	14.85% (1.26)	-97.58% (-1.65)	21.47%* (1.84)	-119.05%** (-2.38)
0 to +46	18.87% (1.54)	-116.13% (-0.84)	22.84%* (1.91)	-138.97%* (-1.92)
0 to +47	19.97% (1.54)	-111.72% (-0.76)	24.08%* (1.91)	-135.80%* (-1.83)
0 to +48	17.67% (1.39)	-110.66% (-0.76)	21.68%* (1.75)	-132.34%* (-1.81)
0 to +49	20.46% (1.63)	-98.32% (-0.70)	24.23%* (1.98)	-122.54%* (-1.72)
0 to +50	22.31% (1.83)	-104.20% (-0.84)	26.32%** (2.21)	-130.53%* (-1.88)
0 to +51	20.36% (1.65)	-89.47% (-0.75)	23.9%* (1.96)	-113.38% (-1.62)
0 to +52	19.77% (1.55)	-95.26% (-0.77)	23.48%* (1.87)	-118.75% (-1.64)
0 to +53	20.10% (1.49)	-95.29% (-0.74)	23.82%* (1.78)	-119.11% (-1.55)
0 to +54	25.28%* (1.70)	-233.93% (-2.33)	29.46%** (2.04)	-263.39%** (-2.29)
0 to +55	23.95% (1.57)	-63.42% (-0.63)	28.17%* (1.89)	-261.54%** (-2.23)
0 to +56	20.24% (1.30)	-61.17% (-0.61)	24.35% (1.60)	-254.89%** (-2.12)

Table 16 - Continued

Event time period (in months)	Total sample	Subsequently acquired within 5 years (1)	Not acquired within 5 years(2)	(1) – (2)
0 to +57	16.30% (1.04)	-65.16%	20.33% (1.33)	-241.60%** (-2.03)
0 to +58	19.82% (1.19)	-66.76%	23.97% (1.46)	-248.76%* (-1.95)
0 to +59	25.11% (1.51)	-68.06%	25.11% (1.51)	
0 to +60	19.25% (1.17)		19.25% (1.17)	