

CEO Turnover After Acquisitions: Do Bad Bidders Get Fired?*

Kenneth Lehn and Mengxin Zhao

Joseph M. Katz Graduate School of Business, University of Pittsburgh, Pittsburgh, PA 15260

McCallum Graduate School of Business, Bentley College, Waltham, MA 02452

April, 2004

Abstract

This paper examines the relation between bidder returns and the subsequent turnover of acquiring firms' CEOs for a sample of 390 firms that completed acquisitions during 1990 through 1998. We find a strong inverse relation between returns to acquiring firms and the likelihood that their CEOs are subsequently fired. The probability that "bad bidders" are fired is not significantly related to the size or structure of boards, whether the CEO also serves as chairman of the board, and the method of payment used in the acquisition. The results support the hypotheses that internal governance mechanisms discipline managers who stray from value-maximization. The results also suggest, contrary to Shleifer and Vishny's (2003) theory of "stock market driven" acquisitions, that negative bidder returns reflect value destruction and not inefficiently priced equity of acquiring firms.

Classification code: G34.

Key words: CEO, Turnover, Acquisition, Governance, and Control.

Corresponding author: Kenneth Lehn
Katz School of Business
University of Pittsburgh
Pittsburgh, PA 15260
Phone: 412-648-2034
Fax: 412-624-2875
E-mail: lehn@katz.pitt.edu

*The authors thank Shane Johnson, Steven Kaplan, Gershon Mandelker, Annette Poulsen, Shawn Thomas, Karen Wruck, and participants at the 2004 American Finance Association Meeting for helpful comments. We thank Sabri Guray Uner for excellent research assistance.

1. Introduction

It is widely recognized that the separation of ownership and control in large public corporations may cause managers to pursue goals other than maximization of shareholder value (Berle and Means (1933), Jensen and Meckling (1976)). The potential conflict between managers and shareholders is especially great when a firm is considering a merger or acquisition. Mergers and acquisitions often involve large uses of capital and have the potential to create or destroy large amounts of shareholder value. The fact that a large proportion of corporate acquisitions are associated with negative acquiring firm returns is often interpreted as evidence of widespread agency problems in large U.S. corporations.¹

This paper examines whether internal governance mechanisms serve to discipline managers who destroy value in mergers and acquisitions. Mitchell and Lehn (1990) find that the market for corporate control, generally thought of as an external control mechanism, disciplines managers who make value-reducing acquisitions. Specifically, they find that, compared with firms that make value-enhancing acquisitions, firms are significantly more likely to be acquired themselves if they make value-reducing acquisitions. Following Mitchell and Lehn (1990), this study examines whether internal control mechanisms also discipline managers who make value-destroying acquisitions.

The extent to which internal control mechanisms discipline managers is important in its own right, but especially so in light of the decline in disciplinary takeovers in recent years (Holmstrom and Kaplan (2001) and Andrade et al. (2001)). Are there control mechanisms, other than hostile takeovers, that discipline managers who make value-reducing acquisitions?

¹ Asquith et al. (1987), Banerjee and Owers (1992), Bradley et al. (1988), Byrd and Hickman (1993), Jennings and Mazzeo (1991), Servaes (1991), Varaiya and Ferris (1987), Gilson and Black (1995), Rau and Vermaelen (1998), Duggal and Millar (1999), Becher (2000), Ghosh (2001).

How well do internal governance mechanisms work in providing this discipline? Are managers who make value-reducing acquisitions more likely to be fired than managers who make value-enhancing acquisitions? Is the size and structure of boards related to the likelihood that chief executive officers (“CEOs”) who are “bad bidders” are fired? Are bad bidders less likely to be fired if they serve as both CEO and chairman of the board? What is the role of ownership structure? These questions are addressed in this paper.

Anecdotal evidence suggests a link between “bad” acquisitions and subsequent management turnover. A good example is Quaker Oats’ acquisition of Snapple Beverages in 1994. This acquisition was made at a time when Quaker itself was considered to be a takeover target. On the day it was announced that Quaker was acquiring Snapple, Quaker’s stock price had an abnormal decline of 10.48%, resulting in a one-day loss of \$493 million for Quaker’s shareholders.² Quaker proceeded with the acquisition and, less than three years later its CEO, William Smithburg, was pressured by Quaker’s stockholders to resign. It was widely recognized that Smithburg’s departure was directly related to the value destroyed by the acquisition of Snapple Beverages. The recent departure of Stephen Case as chairman and CEO of AOL Time-Warner is another high profile example of a CEO who was effectively fired for making an acquisition that destroyed considerable stockholder value.

To test whether the Quaker and AOL Time Warner cases generalize to a larger sample, we examine the relation between the stock price reactions to acquisition announcements and subsequent management turnover for 390 firms that completed acquisitions during the period from 1990 through 1998. One hundred and eighty of the 390 CEOs who made the acquisitions,

² Over a narrow event window surrounding the announcement (five trading days before the announcement through one trading day after the announcement), Quaker’s stock price declined 10.14% resulting in a \$412 million loss of shareholder value. Over a longer window surrounding this announcement (five trading days before the announcement through twenty trading days after the announcement), Quaker’s stock price declined 18.96%, resulting in a \$958 million loss of shareholder value.

or 46% of the sample, were replaced after the acquisitions in what we classify as disciplinary departures or “firings.” The incidence of CEO turnover is significantly lower for a sample of 136 firms that announced and then cancelled the acquisitions. Only thirty-five of these firms, or 26% of the sample, replaced their CEOs after the acquisition withdrawals.

We find that the acquisition announcement returns for the 180 firms that subsequently replace their CEOs are highly negative and significantly lower than the corresponding returns for the 210 firms that do not subsequently replace their CEOs. Logit estimates reinforce this result, showing that it holds after controlling for other variables expected to be associated with CEO firings. The logit results also show that CEOs who cancel value-reducing acquisitions are significantly less likely to be fired than CEOs who proceed with value-reducing acquisitions. We find no significant relation between several corporate governance variables and the likelihood that “bad bidders” are fired. Specifically, board size, board independence, ownership concentration, CEO or insider stock ownership, and whether the CEO also serves as chairman are not related to the probability that CEOs who make value-reducing acquisitions are fired.

We draw three major inferences from the results. First, the results indicate that internal control mechanisms discipline managers who stray from value maximization, at least in the context of mergers and acquisitions. Second, the fact that the corporate governance variables are not significantly related to the probability that bad bidders are fired is consistent with the view that these governance mechanisms are chosen optimally, such that no empirical relation exists between these variables and the probability of CEO firings. Third, the results indicate that negative bidder returns, on average, reflect value-destroying acquisitions, as revealed by the high incidence of CEO firings following these acquisitions. This result contrasts with arguments

made in Shleifer and Vishny (2003) that negative returns associated with acquisitions are often the result of mispriced securities, and not indicative of value-destruction.

Section II reviews relevant literature and describes the hypotheses that are tested. Section III describes the sample and data used in the tests. Section IV explains the empirical design and methods. Section V discusses the empirical results and Section VI concludes the paper.

2. Prediction about the relation between bidder returns and CEO turnover

A large amount of research has focused on the relation between firm performance and the probability of CEO turnover. Several studies document a negative relation between the likelihood of non-routine CEO turnover and firm performance (Coughlan and Schmidt (1985), Warner et al. (1988), Weisbach (1988), Gibbons and Murphy (1990), Murphy and Zimmerman (1993), Blackwell et al. (1994), and Kang and Shivdasani (1995)). In addition, several studies document that the market for corporate control plays an important disciplinary role, as managerial turnover is high in firms that are targets of acquisitions, especially if their pre-acquisition performance is poor (Martin and McConnell (1991), Kini et al. (1995), Hadlock et al. (1999), and Harford (2000)). The evidence suggests that internal and external control mechanisms serve to discipline poorly performing managers.

The stock market's assessment of a firm's mergers and acquisitions provides a good venue for examining the effectiveness of internal control mechanisms in closer detail. Although mergers and acquisitions are approved by the entire board of directors, they are usually initiated by the CEO and considered to one of his or her major responsibilities. Furthermore, there is considerable variation in both the short-run and long-run returns to acquiring firms. The fact that

CEOs usually are responsible for mergers and acquisitions and that there is large variation in the outcomes of M&A decisions makes this an ideal topic for studying the effectiveness of internal control mechanisms.

This study focuses on the relation between bidder returns and the likelihood that CEOs of acquiring firms are replaced. If a CEO creates shareholder value by making an acquisition, he/she should be rewarded by both the firm and the market. On the contrary, if his/her behavior is value-decreasing, then the CEO should be disciplined by the external control market and/or the firm's board of directors. If the firm's past value-reducing acquisitions enlarge the firm to the extent that it becomes insulated from hostile takeovers, then other monitoring mechanisms should respond to mitigate the loss of shareholder value. Stronger monitoring from the board of directors and shareholder activism are expected to take place to complement the absence of discipline from the takeover market. Thus, we expect that CEO turnover is significantly higher after value-reducing acquisitions than it is after value-enhancing acquisitions.

In an efficient capital market, the change in an acquiring firm's stock price around an acquisition announcement provides an unbiased estimate of the value changes associated with the acquisition. Thus, the returns to acquiring firms around the announcement of mergers and acquisitions should be significantly lower for "bad" acquirers than for "good" acquirers. Firms with significant negative abnormal stock returns around acquisition announcement are more likely to experience forced CEO departure. Therefore, stock market value changes due to acquisition announcements are expected to be negatively related to the probability of subsequent management turnover, assuming all else equal.

If a firm withdraws an acquisition after observing a negative stock price reaction to an acquisition announcement, then the probability that the firm's CEO is fired should be lower than

the corresponding probability for CEOs of firms that proceed with value-destroying acquisitions. Therefore, we also test whether cancellation of value-reducing acquisitions reduces the likelihood of disciplinary CEO turnover.

3. Sample and data

The sample was extracted from the Mergers and Acquisitions database of Securities Data Company (SDC). The criteria for mergers and acquisitions to be selected from SDC are: (1) that the merger or acquisition was announced between January 1, 1990 and December 31, 1998; (2) both the acquiring and target firms are publicly traded; (3) the forms of the deals are mergers and acquisitions; (4) the status of the deal is “completed”. These criteria resulted in an initial sample of 2699 mergers and acquisitions. We also required that all firms in the sample be listed on the Center for Research in Securities Prices (CRSP) database and Standard and Poor’s COMPUSTAT Research Tape (COMPUSTAT). For each acquisition, if the target firm or acquiring firm is missing from either CRSP or COMPUSTAT, we excluded that transaction, leaving 2055 mergers and acquisitions. We imposed an additional criterion for inclusion in the sample: the relative size of the target firm to acquiring firm is at least 10%. The rationale of imposing this criterion for the sample selection is that small transactions are less likely to cause a major impact on the firm’s value and control changes. Size of the firm is measured as the sum of market value of equity, book value of preferred stock, and book value of debt at the year-end prior to acquisition announcement. This additional filter reduced the sample to 926 acquisitions.

Financial statement data is obtained from COMPUSTAT, and stock performance data is extracted from CRSP. Dow Jones News Retrieval and firm proxy statements are used to identify CEO, CEO turnover, and to record other CEO related data. Proxy statements are available

through LexisNexis. We had to exclude 280 additional acquiring firms because of missing proxy statements and other related data. The final sample contains 646 acquisitions made by 551 firms. Among the 551 acquiring firms, 161 firms did not experience any internal control discipline, but they were either subsequently acquired by other firms (125 firms) or filed for bankruptcy (36 firms). Excluding these firms left 390 acquiring firms.

In addition to the primary sample of 390 acquiring firms, a control sample of cancelled acquisitions was constructed. Again, the withdrawn deals were initially identified through SDC's Mergers and Acquisitions database. A sample of 438 withdrawn deals was identified, based on the same criteria that were used to identify the primary sample with the exception that we required the status of the deal to be "withdrawn". Only 206 of the 438 cancelled acquisitions met the requirements that the acquirers be listed on both CRSP and COMPUSTAT, that the relative size of the target to the acquirer be at least 10%, and that proxy statements and other CEO or deal related data are complete. Among the 206 firms, 12 firms filed for bankruptcy, and 58 firms were acquired by other firms within 2-5 years after the cancelled acquisitions. This results in 136 acquiring firms with cancelled mergers. We searched news stories relating to the cancellation of the sample mergers. Several reasons are frequently given for canceling mergers, including competing offers from other bidders; both firms mutually agreeing to terminate the deal; both parties are unable to agree on terms of the merger; and regulatory reasons.

4. Empirical method

4.1. Definition of CEO turnover

Two definitions of CEO turnover exist in the literature. The first does not attempt to classify management turnover into categories such as normal, forced, expected, and unexpected.

CEO turnover is simply defined as a change in the identity of the individual who holds the office of CEO, even if the new CEO was formerly president or chairman of the board. Mikkelson and Parch (1997), DeFond and Park (1999), and Perry (1999) employ this definition of CEO turnover. Since the replacement of a CEO who is close to retirement age likely reflects turnover that is not disciplinary, CEO age is included as a control variable in those analyses.

The second definition of CEO turnover follows Parrino (1997) and Huson, et al. (2001). CEO turnover is classified as disciplinary if it is reported that the CEO is fired, forced to step down, or departs due to unspecified policy differences. For other cases, if the departing CEO is under the age of 65, and the news announcement reports that the CEO is retiring, but does not announce the retirement at least six months before the effective date, or if the announcement does not report the reason for the departure as involving death, poor health, or the acceptance of another position, then CEO turnover is also classified as a disciplinary turnover. Information about the circumstances surrounding the turnovers is obtained from Dow Jones News Retrieval services and the proxy statements.

The empirical analysis in this paper is based primarily on the second definition of CEO turnover, since the main motivation of this study is to document whether “bad” acquisition decisions lead to the disciplinary departure of CEO.

4.2. Stock market analysis of acquisitions

This paper employs event-study methodology to measure the stock price effects associated with the announcements of acquisitions. Stock returns are provided by CRSP. The announcement date for each acquisition is the first date reported from the SDC Mergers and Acquisitions database, cross-checked with Dow Jones News Retrieval service. Market model

parameters are estimated over period of 220 through 21 trading days preceding the announcement date for the acquisition. We use the returns to the CRSP value-weighted index of the market portfolio as the measure of market returns.

4.3. Empirical design

To examine the effect that value-reducing acquisitions have on the probability of CEO turnover, we follow Jensen and Murphy (1990) to estimate the following logit model:

$$\ln\left[\frac{\text{prob}(\text{CEOSubsequentTurnover})}{1 - \text{prob}(\text{CEOSubsequentTurnover})}\right] = \beta_0 + \beta_1 \text{CAR} + \beta_2 \text{MATechnique} + \beta_3 \text{LeadershipStructure} \\ + \beta_4 \text{BoardSize} + \beta_5 \text{BoardIndependence} \\ + \beta_6 \text{OwnershipConcentration} + \beta_7 \text{CEOOwnership} \\ + \beta_8 \text{InsiderOwnership} + \beta_9 \text{CEOage} + \beta_{10} \text{Tenure} \\ + \beta_{11} \text{Premergerperformance} + \beta_{12} \text{Postmergerperformance} + \beta_{13}$$

CAR is the cumulative abnormal returns to acquiring firms around the announcements of their acquisitions, measured over several event windows, including the abnormal return on the announcement date [0]; the CAR measured over the window of one trading day before through one trading day after the announcement date [-1,1]; the CAR measured five trading days before through one trading day after the announcement date [-1,5]; the CAR measured five trading days before through forty trading days after the announcement date [-5,5]; and the CAR measured twenty trading days before through forty trading days after the announcement date [-5,20]. We expect the coefficient on CAR to be negative.

4.3.1. Corporate governance variables

In addition to CAR, we include several governance variables as independent variables to test whether the governance structures of firms is associated with the likelihood that CEOs who are bad bidders are replaced. Each of these is discussed in turn.

Leadership structure. The function of the chairman is to run board meetings and oversee the process of hiring, firing, evaluating, and compensating the CEO. It is very unlikely that the CEO can perform this function apart from his or her personal interest. Jensen (1993) states that “for the board to be effective, it is important to separate the CEO and chairman positions”. Similarly, Fama and Jensen (1983) argue that the concentration of decision management and decision control in one individual reduces a board’s effectiveness in monitoring top management. Recently, Goyal and Park (2002) document a negative relation between the sensitivity of CEO turnover to firm performance and the combination of CEO and chairman duties. To control for leadership structure, we include a dummy variable that equals 1 if the CEO is also Chairman, and zero otherwise, and interact this variable with the bidder return variable.

Board size. An emerging literature on board size argues that large boards are ineffective monitors of managerial performance. For example, Jensen (1993) states that “keeping boards small can help improve their performance.” Yermack (1996) finds a significant inverse relation between board size and corporate values, but is unable to establish a causal relation between these two variables. To test whether companies with small boards are more likely to fire CEOs who are bad bidders, we include board size as an independent variable, and interact this variable with the bidder return variable.

Board independence. Many studies argue that independent directors serve an important disciplinary role and find evidence suggesting a relation between the independence of boards and

their effectiveness as monitors of managerial performance. For example, Weisbach (1988) finds that CEO turnover is more sensitive to firm performance when outsiders form a majority of the board. Hermalin and Weisbach (1989) find that boards are more likely to add outside directors after poor firm performance, suggesting that outside directors serve a useful monitoring function. Therefore, we include the proportion of the firm's board consisting of independent directors as an independent variable, and interact it with the bidder return variable. We define independent directors as directors who are not employees, former employees, related to employees, or employees with firms that have contractual relations with the acquiring firm, as described in the firm's proxy filing that is closest to the merger announcement.

Stock ownership. Denis et al. (1997) document a negative association between the probability of top executive turnover and the ownership stake of officers and directors. To test whether ownership structure is related to the likelihood that bad bidders are fired, we include the percentage of stock held by principal shareholders (shareholders who beneficially owned more than 5% of the firm's equity), the CEO and executives and officers as independent variables, and interact them with the bidder return variable.

4.3.2. Method of Payment

We include a dummy variable that takes the value of 1 if the deal is stock-based or a combination of stock and cash, and 0 otherwise. We include this variable for two reasons.

First, it is well-documented that returns to acquiring firms are significantly lower when acquiring firms use stock rather than cash as the method of payment in the acquisition (Asquith, Bruner, and Mullins (1990), Andrade, Mitchell, and Stafford (2001)). The result is usually explained by reference to the signal conveyed by stock acquisitions, namely, that the acquiring

firms' managers believe their companies' stocks are overvalued. If so, then one should find less of an association between acquiring firms' returns and the probability of CEO turnover in stock versus cash acquisitions.

The second reason for including a dummy variable for method of payment relates to a recent paper by Shleifer and Vishny (2003). Shleifer and Vishny argue that acquisitions are often driven by an overvaluation of the acquiring firms' stock prices. Under their hypothesis, managers of acquiring firms, such as Stephen Case of AOL, take advantage of the overvalued stock and use it as a currency to acquire companies with valuable assets, an action that is in the interest of the acquiring firms' stockholders. Shleifer and Vishny (2003) argue that "long-run returns to bidders are likely to be negative in stock acquisitions, and positive in cash acquisitions," and "despite negative long-run returns, acquisitions for stock serve the interest of long-term shareholders of the bidder (p. 297)." If so, then the relation between acquiring firms' long-run returns and the probability of CEO turnover should be less pronounced in stock acquisitions than in cash transactions.

4.3.3. Other control variables

CEO age and tenure. Weisbach (1988), Murphy and Zimmerman (1993), and Goyal and Park (2002) find a significant positive relation between CEO turnover and CEO age. On the other hand, CEO age is also associated with longer tenure and perhaps more control of the firm. Older CEOs might have stronger influence on the board, thus reducing the likelihood of CEO turnover after the acquisitions. Therefore, CEO age and tenure in the year of the acquisition are included as a control variable.

Prior acquisition performance. A negative relation between the likelihood of non-routine top executive turnover and firm performance has been documented in the literature³. The departures of managers after acquisitions might be due to the firms' poor performance before the corresponding acquisitions. To control for this, a measure of the firm's performance before the acquisition is included as an independent variable. Market adjusted buy-and-hold returns and cumulative abnormal returns measured over the three years before the acquisition announcement, return on assets (ROA), return on equity (ROE), operating margin (OM) and net profit margin (NM) serve as the measures of firm performance. We expect these variables to be inversely related to CEO turnovers.

Post-acquisition performance. We also include proxies for post-acquisition performance as an independent variable. The departures of managers after acquisitions might be due to the firms' poor performance after the corresponding acquisitions. To control for this, a measure of the firm's performance after the acquisition is included as an independent variable. Market adjusted buy-and-hold returns and cumulative abnormal returns measured over the three years after the acquisition completion, return on assets (ROA), return on equity (ROE), operating margin (OM) and net profit margin (NM) serve as the measures of firm performance. We expect these variables to be inversely related to the likelihood of CEO turnover.

The measures of post-acquisition performance also allow for a test of the Shleifer-Vishny (2003) hypothesis, as discussed above. In particular, the Shleifer-Vishny hypothesis predicts that the relation between post-acquisition performance and the likelihood of CEO turnover should be less pronounced in stock versus cash transactions.

³ Studies by Coughlan and Schmidt (1985), Warner et al. (1988), Weisbach (1988), Gibbons and Murphy (1990), Murphy and Zimmerman (1993), Blackwell et al. (1994), and Kang and Shivdasani (1995) document this relation.

CEO age, tenure, and the various governance variables are measured as close in time to the date on which the firms announce the acquisitions.

5. Empirical results

5.1. Sample descriptive statistics

Tables 1 and 2 report descriptive statistics for the sample. Table 1A shows the acquisition characteristics for the completed merger sample (390 firms), the sample without subsequent CEO turnover (210 firms), and the sample with subsequent CEO turnover (180 firms). For each sample, the means, medians, standard deviation (Stddev), maximum (Max), minimum (Min) of the acquiring firm's value, the target firm's value, the relative size of the target firm to the acquiring firm, the value of the acquisitions, acquisition techniques dummy (dummy=1 if the deal is equity based, =0 if the deal is cash based) and diversifying merger dummy (dummy=1 if the 4-digit SIC code for the target is the same as that for the acquirer, =0 otherwise) are calculated. On average, the value of target firms is approximately 60% of the value of acquiring firms. The mean and median values of the transactions are \$1,681 million and \$406 million respectively. The relative size of the target to the acquirer has a slightly higher mean and median value for the firms in the non-turnover sample than those for the firms in the turnover sample. The non-turnover sample has a larger mean and median transaction value, although this difference is not significant. The same is true for the mean and median of acquiring firm values and target firm values. About 81% of the acquisitions are stock-based or a combination stock and cash and about half the sample firms' acquisitions are nondiversifying mergers based on 4-digit SIC code.⁴

⁴ Both T-statistics and Z-statistics of Wilcoxon rank sum test show that the differences in mean and median values of the variables in table 1 are not significantly different from zero.

Table 1B reports the acquisition characteristics for the cancelled merger sample, the sub-sample without subsequent CEO turnover, and the sub-sample with subsequent CEO turnover. Overall, compared with the completed mergers, the acquiring firms involved in the cancelled mergers are bigger, acquired relatively larger firms and the cancelled mergers have higher initial transaction values. On average, the value of target firms is approximately 80% of the value of acquiring firms. The mean and median values of the transactions are \$2,652 million and \$779 million respectively. Similar to the sample of completed mergers, the relative size of the target to the acquirer has a higher mean and median value for the firms in the non-turnover sample than those for the firms in the turnover sample. The non-turnover sample has a larger mean and median transaction value, and again this difference is not significant. About 76% of the acquisitions are stock-based or a combination stock and cash and about a little bit more than half the sample firms' acquisitions are non-diversifying mergers based on 4-digit SIC code.⁴

Table 2 provides summary statistics on CEO characteristics for the total sample, the sample of acquiring firms with post-acquisition CEO turnover, and the sample of acquiring firms with no post-acquisition CEO turnover. Overall, the mean and median age of CEOs in the completed merger sample is 54. On average, about 70% of the CEOs in the sample also hold the position of chairman of the board. Their average tenure as CEO is close to eight years immediately before the acquisition announcements. CEOs who were replaced after acquisitions are younger, and have significantly shorter tenure than CEOs who retained their positions after acquisitions. There are as many CEOs who are also chairman of the board in the turnover sample as in the non-turnover sample. As to the cancelled merger sample, the CEOs who were not replaced after their firms' acquisitions are significantly younger, have significantly longer tenure and are more frequently chairman of the board. Results from table 2 show that there are

certain significant differences in the age and tenure of CEOs who were and were not replaced after their firms' acquisitions. Summary statistics for the corporate governance variables are reported below for the sample of firms that made acquisitions.

Panel A of table 3 reports firm performance prior to the acquisition announcement. Among the firms with completed mergers, mean and median comparisons for both stock returns and accounting returns show that no significant difference in firm performance between firms with and without post-acquisition turnover of CEOs. However, firms that replaced CEOs after their acquisitions have significantly lower operating margin (measured as operating income divided by sales) than other firms. In regards to cancelled mergers, firms in the non-turnover sample have better stock performance than firms in the turnover sample, though there is no significant difference in terms of accounting performance between these two sub-samples.

Panel B in table 3 reports the post-acquisition long-run stock performance for the total sample, as well as for the subsamples of stock acquisitions and cash acquisitions. Overall, bidders experience negative mean (and median) market adjusted buy-and-hold returns and negative mean (median) cumulative abnormal returns in the three years after acquisitions. Interestingly, long-run post-acquisition returns are negative for both stock and cash acquisitions, a result that is inconsistent with Shleifer and Vishny's (2003) prediction that long-run returns should be positive in cash acquisitions. Furthermore, univariate analysis reveals no significant difference in the mean or median long-run post-acquisition returns for stock versus cash acquisitions. The univariate analysis suggests that the method of payment in acquisitions is not predictive of long-run bidder returns.

5.2. Stock price performance of acquiring firms

Table 4 reports the mean announcement day abnormal return (*AR*) and the corresponding mean cumulative abnormal returns (*CARs*) for different event windows around the announcement of acquisition for each of the samples. *Z*-statistics are included in parentheses and the percentages of positive *ARs* (*CARs*) are listed below the *Z*-statistics. The mean announcement day *AR* corresponding to the acquisitions made by the total sample is -1.13% and it is statistically significant at the 0.01 level. The *CARs* corresponding to the other four event windows range from -2.42% (the $[-5, 20]$ window) to -1.79% (the $[-1, 1]$ window), and they are all statistically significantly negative at the 0.01 level.

Table 4 also reveals that the stock price reaction associated with the announcement of the acquisitions made by firms in the CEO turnover sample differs significantly from the stock price reaction associated with the announcement of acquisitions made by firms in the non-CEO turnover sample. The *AR* on the announcement day of the CEO turnover sample is -2.19% , which is significantly different from zero. Furthermore, the *CARs* of the CEO turnover sample are all significantly negative for the other four event windows. This indicates that the market reacted negatively to the initial announcement of these acquisitions and that as more information about these acquisitions is released during the following weeks, the market continues to devalue the acquiring firms in this sub-sample. For the sample that did not experience subsequent CEO turnover, the *AR* on the announcement day is -0.23% , and it is statistically insignificant. All of the *CARs* are negative but not significantly different from zero under the other event windows. Table 4 also reports the percentage of the positive *ARs* and *CARs* for each sample under different event windows. These percentages also reveal that the sample with CEO turnover has a much

smaller percentage of firms that experienced a positive stock price reaction to their acquisition announcements, compared with the non-CEO turnover sample and the total sample.

The results contained in table 4 show that the stock market negatively values acquisitions by firms that replace their CEO following the transactions, and it positively values acquisitions by firms that did not replace their CEOs after their acquisitions. Figure 1 graphically depicts the difference in the serial patterns of *CARs* for the total sample, the sample with CEO turnover, and the sample without CEO turnover for the event window of $[-5, 40]$. CEOs who withdraw acquisitions after observing adverse stock price reactions to the acquisition announcements are significantly less likely to be replaced than CEOs who proceed with value reducing acquisitions. A control sample of cancelled acquisitions was constructed to examine this issue. Panel A and B in table 5 report the stock market performance around the acquisition announcement date and the acquisition withdrawal date respectively for the firms in the control sample. Firms experience significantly negative abnormal returns around the acquisition announcement and significantly positive or non-significant negative abnormal returns around the announcement of the acquisition withdrawal.

Of the 136 firms in the control sample that are still independent firms, only 35 replaced their CEOs after the acquisitions were cancelled. The event study results do not show any association between CEO replacement and market reaction to the acquisition announcement. However, on average, the stock market did react positively to the announcement of the cancellation of the acquisitions. Figure 2 shows the differences in *CARs* over the event window $[-5, 40]$ for the control sample. The stock performance around the acquisition announcement of the sample of the cancelled acquisitions is more negative than that of the sample of the

completed acquisitions. The market reaction to the announcement of the withdrawal of the acquisition is less negative compared with the acquisition announcement.

5.3. Corporate governance

Table 6 reports summary statistics on the corporate governance variables for the total sample and various sub-samples. Panel A.1 of table 6 reports summary statistics for these variables for the entire sample of 526 merger announcements and the sub-samples of 390 completed mergers and 136 cancelled mergers. The panel shows that there is no significant difference in the mean and median values of the governance variables between the sub-samples of completed and cancelled mergers except for board size. The median value of the dummy variable for whether the CEO serves as chairman of the board is 1 for both sub-samples, indicating that the central tendency is that CEOs serve as chairman of the board for both sub-samples. Median board size is 10 for total sample. The mean and median board size in the completed merger sample is significantly smaller than those in the cancelled merger sample. Independent directors account for 57% of the board seats for the median firm in both the sub-sample of firms that completed mergers and the sub-sample of firms that withdrew mergers. The median percentage of equity held by CEOs was lower for firms that completed mergers (1.39%) than for firms that withdrew mergers (0.96%), but this difference is not significant. The same pattern for insider shareholdings and the total percentage of equity owned by principal owners (ownership concentration). The median percentages of both insider ownership and ownership concentration were lower for firms in the completed merger sample (6.51%; 18.55%) than for firms in the cancelled merger sample (6.9%; 21.3%), again, the differences are not significantly.

Panel A.2 of table 6 reports summary statistics for the sample of 390 firms that completed mergers and two sub-samples: firms that did and did not replace their CEOs after completing mergers. The panel documents that the frequency with which CEOs served as chairman is lower for firms with CEO turnover than for firms without CEO turnover, however, this difference is not significant. As to ownership structure, firms that replaced their CEOs subsequently have significantly lower degree of ownership concentration, CEO equity holdings and insider ownership than firms that did not replace their CEOs after completing mergers.

Panel A.3 of table 6 reports summary statistics for the sample of 136 firms that cancelled mergers and the two sub-samples of firms that did and did not replace their CEOs after canceling the mergers. Thirty-five of the 136 firms replaced their CEOs. The frequency with which CEOs served as chairman is significantly lower for firms with CEO turnover than for firms without CEO turnover after canceling mergers. No significant difference exists in the mean and median values of the other governance variables except CEO ownership across the two sub-samples. The mean CEO ownership is significantly lower at 0.10 level for firms with CEO turnover (2.75%) than for firms without CEO turnover (6.74%). However, the median CEO ownership is not significantly different across the two sub-samples.

Panels B.1, B.2, and B.3 report similar data as panels A.1, A.2, and A.3, but stratifies the sample by the CARs associated with the bidder's acquisition announcements. As Panel B.1 shows for the entire of 526 firms that announced mergers, among those in the bottom third of the CARs, i.e., the ones most likely to fire the CEOs, there is no significant difference in the mean and median value of the governance variables for firms with and without CEO turnover. Panels B.2 and B.3 find similar results for the firms that completed and cancelled mergers, respectively. The results in panels B.1, B.2, and B.3 suggest that firms select governance structures optimally,

such that no empirical difference exists in the governance structure of firms that do and do not fire CEOs after value-destroying acquisitions.

5.4. Do value-reducing acquisitions increase the likelihood of subsequent CEO turnover?

To examine whether CEOs who make “bad” acquisitions are more likely to be fired than other CEOs, we estimate the logit equation in which the dependent variable is the logistic transformation of the odds that the CEO is replaced. The results are reported in table 7.

The sample for the logit equations reported in table 7 consists only of firms that completed mergers. The cumulative abnormal stock returns (CAR) for the event window of $[-1,1]$ is included as an independent variable to test whether the market reaction to the acquisition announcement is associated with the likelihood of the CEO being replaced. We replicated the test by substituting mean abnormal return on the announcement day ($AR(0)$) and cumulative abnormal returns associated with the acquisition announcements, measured over various event windows, for $CAR(-1,1)$. Because the results are robust with respect to reasonable event windows, we report only the results that use the day $[-1,1]$ event window as an independent variable in table 7. Other independent variables include the dummy variable for method of payment, the interaction of CAR and the method of payment variable, the dummy variable for whether the CEO serves as chairman and the interaction of this variable with CAR, board size and the interaction of board size with CAR, the percentage of the board consisting of independent directors and the interaction of this variable with CAR, the percentage of equity held by the firm’s principal shareholders (ownership concentration), CEO and insiders, and the interactions of these variables with CAR, the CEO’s tenure, age, the relative size of the target to the acquiring firm, the firm’s buy-and-hold return during the three years after the merger, the

interaction of this buy-and-hold return with the method of payment variable, and the firm's buy-and-hold return during the three years before the merger announcements.⁵

The results reveal that the likelihood of the CEO being replaced after making an acquisition is significantly and inversely related to the abnormal stock performance around the announcement date. The estimated coefficients in all the equations in table 7 are negative and significant at the 0.01 level. This is consistent with the hypothesis that CEOs who make "bad" acquisitions are more likely to be replaced than CEOs who make "good" acquisitions.

The coefficients on the governance variables show no association between governance structure and CEO firings due to bad acquisitions. The coefficients of the dummy variable for whether the CEO serves as chairman of the board, board size, board independence, and ownership concentration are not significant in all equations whether they enter the regression separately or together with CAR. CEO ownership and insider shareholdings enter the equations with significant negative coefficients. However, the interactions of these variables with the bidder return are not significant, suggesting that larger stock ownership does not protect CEOs from being fired when the firm makes value-destroying acquisitions. The lack of significance between the governance variables and the likelihood of CEO turnover might be interpreted to mean that governance "doesn't matter." Alternatively, we interpret the data to mean that firms effectively "choose" governance mechanisms optimally, such that no detectable empirical relation exists between these variables and CEO turnover.

The method of payment in the acquisition is not significantly related to the likelihood of CEO turnover. Interestingly, the coefficient on the interaction of method of payment and CAR is not significant. This result suggests that despite the signal associated with the use of stock as the

⁵ We also replicate our analyses by substituting accounting performance (ROA, ROE, OM) pre- and post merger for stock performance. We find that neither pre-merger nor post-merger accounting performance is significantly related to the likelihood of CEO being replaced after completing the mergers. Results are not reported.

method of payment in acquisitions, CEOs of acquiring firms are not more likely to retain their positions if they use stock versus cash in acquisitions associated with negative bidder returns. This result suggests that negative bidder returns in stock transactions reveal more about the quality of the acquisition and less about any overvaluation of the acquiring firms' stock prices.

The firm's buy-and-hold return after the acquisition announcement is significantly and inversely related to CEO turnover, indicating that post-merger firm performance is a significant determinant of CEO turnover. Interestingly, the interaction of this return and the method of payment variable is not significantly related to the likelihood of CEO turnover. This result is inconsistent with Shleifer and Vishny (2003), who argue that stock acquisitions serve the interests of the stockholders of acquiring firms even in the presence of long-run negative bidder returns. Since CEOs are equally likely to be replaced when long-run returns are poor, regardless of whether the method of payment is stock or cash, the evidence contradicts the predictions of Shleifer and Vishny.

CEO tenure enters each equation with a significant negative coefficient, indicating that CEOs with longer tenure are less likely to be involuntarily replaced. CEO age⁶, however, is not significantly related to the likelihood of CEO turnover. The relative size of the target to the acquiring firm is not significantly related to the probability that CEOs are fired. The firm's buy-and-hold return before the acquisition announcement is generally not significantly related to CEO turnover.

Table 8 provides similar logit results for the combined sample of completed and cancelled acquisitions. The dummy variable "Withdraw" is created to indicate whether the acquisition is cancelled. The interaction between the abnormal stock return around the

⁶ We employed three measures for CEO age – CEO age, age dummy=1 if CEO's age ≥ 65 , 0 otherwise; age dummy variables for CEO's age < 60 , between 62-66, and > 66 . The results are all insignificant and similar. Table 7 reports the results as CEO Age dummy=1 if CEO's age ≥ 65 , 0 otherwise.

acquisition announcement and “Withdraw” also is included as an independent variable to test whether CEOs who cancel value-destroying acquisitions are more likely to retain their positions than CEOs who proceed with value-destroying acquisitions. Otherwise, the same independent variables included in the regressions reported in table 7 are included in the regressions reported in table 8.

The abnormal return associated with the acquisition announcement remains significantly and negatively related to the likelihood of CEO turnover in each equation. The coefficient on the “Withdraw” dummy is negative and significant in all equations, indicating that CEOs who withdraw acquisitions are significantly less likely to be fired than CEOs who proceed with acquisitions. The coefficient on the interaction of CAR and the “Withdraw” dummy is positive and significant, indicating that CEOs who withdraw acquisitions associated with negative abnormal returns are even less likely to be replaced, whereas CEOs who withdraw acquisitions associated with positive abnormal returns are more likely to be replaced. These results also are generally insensitive to the event windows over which the acquiring firm’s returns are measured.

We obtain similar results for the other governance variables as the ones reported in table 7. None of the variables that interact governance with bidder returns is significant, whether they enter the regression separately or together. Percentages of CEO shareholdings and insider shareholdings enter with significant negative coefficients. However, the interactions of these variables with CAR do not enter with significant coefficients. Board size, board independence, and ownership concentration do not enter with significant coefficients when not interacted with bidder returns. The general lack of significance between the governance variables and the likelihood of CEO turnover again suggests to us that firms select governance mechanisms optimally, at least in this particular context.

Similar to table 7, CEO age and relative size of the target to the acquiring firm are not significant. CEO tenure and bidders' post acquisition performance are significantly and negatively related to the probability of CEO turnover. However, the firm's buy-and-hold return before the acquisition announcement enters the equations with positive and significant coefficients.

6. Discussion and conclusion

Academic research as well as the business press has paid a great deal of attention to whether corporate managers create value for shareholders when they make acquisitions. Previous work has documented that the external control market disciplines managers who destroy shareholder value by making value-decreasing acquisitions (Mitchell and Lehn (1990)). Related to the previous research, this study empirically examines whether internal control mechanisms operate to discipline managers who make value-reducing acquisitions.

Based on a sample of 390 firms that completed acquisitions during 1990 through 1998, we document that managers who make value-reducing acquisitions face a significantly higher probability of being fired than do managers who make value-enhancing acquisitions. This suggests that internal control mechanisms serve to discipline managers who stray from value maximization. CEOs who withdraw acquisitions after observing a diminution in their companies' stock price face significantly lower risk of replacement than their counterparts who proceed with value-reducing acquisitions, suggesting that the market is forgiving of CEOs who learn from stock price signals, at least in the context of acquisitions. Finally, we find no association between a firm's governance characteristics and the probability that CEOs who make

value-reducing acquisitions are replaced. This suggests to us that firms generally select the “right” governance structures, at least in the context studied in this paper.

We also find evidence that is inconsistent with a recent provocative paper by Shleifer and Vishny (2003), which argues that acquisitions are often driven by the purportedly overvalued stock of acquiring firms. We find that the probability of CEO turnover is not significantly related to the use of stock or cash in acquisitions, nor to the interaction of long-run bidder returns and a dummy variable for the method of payment in acquisitions. These results strongly suggest that negative bidder returns are indicative of value-destroying acquisitions and not indicative of mispriced securities.

References

- Agrawal, Anup and Knoeber, Charles R., 1996. “Firm performance and mechanisms to control agency problems between managers and shareholders” *The Journal of Financial and Quantitative Analysis* 31, 377-397.
- Amihud, Yakov and Lev, Baruch, 1981. “Risk reduction as a managerial motive for conglomerate mergers” *The Bell Journal of Economics* 12, 605-617.
- Andrade, George, Mitchell, Mark, and Stafford, Erik, 2001. “New evidence and perspectives on mergers” *Harvard Business School Working Paper*.
- Asquith, Paul, Bruner, Robert F. and Mullins, David W., 1987. “Merger returns and the form of financing” *Proceedings of the Seminar on the Analysis of Security Prices* 34, 115-146.
- Banerjee, A. and Owers, J. E., 1992. "Wealth reduction in white knight bids" *Financial Management*, Autumn, 48-57.
- Becher, David A., 2000. “The valuation effect of bank mergers” *Journal of Corporate finance* 6, 189-214.
- Berle, Adolf A., and Means, Gardiner C., 1933. “The modern corporation and private property” New York: Macmillan, 1933.

Blackwell, David W., Brickley, James A. and Weisbach, Michael S., 1994. "accounting information and internal evaluation: Evidence from Texan banks," *Journal of Accounting and Economics* 17, 331-359.

Borokhovich, Kenneth A, Parrino, Robert, and Trapani, Teresa, 1996. "Outside directors and CEO selection" *Journal of Financial and Quantitative Analysis* 31, 337-355.

Bradley, M., Desai, A.S. and Kim, E.H., 1988. "Synergistic gains from corporate acquisitions and their division between the stockholders of target and acquiring firms" *Journal of Financial Economics* 21, 3-40.

Brickley, J. A., Coles, J. L. and Jarrel, G., 1997. "Leadership structure: Separating the CEO and chairman of the board" *Journal of Corporate Finance* 7, 43-66.

Byrd, John, and Hickman, Kent, 1993. "Do outside directors monitor managers: Evidence from tender offers" *Journal of Financial Economics* 32, 195-221.

Coughlan, Anne T. and Schmidt, Ronald M., 1985. "Executive compensation, management turnover, and firm performance: An empirical investigation" *Journal of Accounting and Economics* 7, 43-66.

DeAngelo, Harry and DeAngelo, Linder, 1989. "Proxy contests and the governance of publicly held corporations" *Journal of Financial Economics*, June, 29-59.

DeFond, Mark L. and Park, Chul W., 1999. "The effect of competition on CEO turnover" *Journal of Accounting and Economics* 27, 35-56.

Demsetz, Harold and Lehn, Kenneth, 1985. "The structure of corporate ownership: Causes and consequences" *Journal of Political Economy* 93, 1155-1177.

Denis, D. J., Denis, D. K. and Sarin, A., 1997. "Ownership structure and top executive turnover" *Journal of Financial Economics* 45, 193-221.

Denis, David J. and Timothy A. Kruse, 2000. "Managerial discipline and corporate restructuring following performance declines" *Journal Financial Economics* 55, 391-424.

Donaldson, Gordon and Lorsch, Jay, 1983. "Decision making at the top: The shape of strategic direction" *Basic Books*.

Duggal, Rakesh and Millar, James A, 2000. "Institutional ownership and firm performance: The case of bidder returns" *Journal of Corporate Finance* 5, 103-107.

Fama, E., and M. Jensen, 1983. "Separation of ownership and control" *Journal of Law and Economics* 26, 301-325.

- Ghosh, Alok, 2001. "Does operating performance really improve following corporate acquisitions?" *Journal of Corporate Finance* 7, 151-178.
- Gibbons, Robert S. and Murphy, Kevin J., 1990. "Relative performance evaluation for chief executive officers" *Industrial and Labor Relations Review* 43, 30S-51S.
- Gilson, Stuart C., 1989. "Management turnover and financial distress" *Journal of Financial Economics* 25, 241-263.
- Gilson, Stuart C., 1990. "Bankruptcy, boards, banks, and blockholders: Evidence on changes in corporate ownership and control when firms default" *Journal of Financial Economics* 27, 355-388.
- Gilson, Stuart C. and Vetsuypens, Michael, 1993. "CEO compensation in financially distressed firms: An empirical analysis" *Journal of Finance* 43, 425-458.
- Gilson, R. J. and Black, B., 1999 "Supplement to the law and finance of corporate acquisitions". *University Casebook Series*.
- Gorton, Gary, Kahl, Matthias and Rosen, Richard, 2000. "Eat or be eaten: A theory of mergers and merger waves" *Working Paper*, Northwestern University.
- Goyal, Vidhan K. and Park, Chul W., 2002. "Board leadership structure and CEO turnover" *Journal of Corporate Finance* 8, 49-66.
- Harford, Jarrad, 2000. "Takeover bids and target directors' incentives: Retention, experience and settling-up" *Journal of Financial Economics Forthcoming*.
- Hadlock, Charles, Houston, Joel, and Ryngaert, Michael, 1999. "The role of managerial incentives in bank acquisitions" *Journal of Banking & Finance*, 23, 221-249.
- Hadlock, Charles J. and Lumer, Gerald B., 1997. "Compensation, turnover and top management incentives: Historical evidence" *Journal of Business* 70, 153-187.
- Holmstrom, Bengt, and Kaplan, Steven N., 2001. "Corporate governance and merger activity in the U.S.: making sense of the 1980s and 1990s" *NEBR working paper*.
- Huson, Mark R., Parrino, Robert, and Starks, Laura T., 2001. "Internal monitoring mechanisms and CEO turnover: A long-term perspective" *Journal of Finance* 56, 2265-2297.
- Jennings, R.H. and Mazzeo, M.A., 1991. "Stock price movements around acquisition announcements and management's response" *Journal of Business* 64, 139-163.
- Jensen, Michael C., 1986. "Agency costs of free cash flow, corporate finance, and takeovers" *American Economic Review* 76, 323-329.

- Jensen, Michael C., 1993. "The modern industry revolution, exit, and the failure of internal control systems" *Journal of Finance* 48, 831-880.
- Jensen, Michael C. and Meckling, William H., 1976. "Theory of the firm: managerial behavior, agency costs and ownership structure" *Journal of Financial Economics* 3, 305-360.
- Jensen, Michael C. and Murphy, Kevin J. 1990. "Performance pay and top management incentives" *Journal of Political Economy* 98, 225-264.
- Kang, Jun-Koo and Shivdasani, 1995. "Firm performance, corporate governance, and top executive turnover in Japan" *Journal of Financial Economics* 38, 29-58.
- Kaplan, Steven N. and Weisbach, Michael S., 1992. "The success of acquisitions: Evidence from divestitures" *Journal of Finance* 47, 107-138.
- Khorana, Ajay, and Zenner, Marc, 1998. "Executive compensation of large acquirors in the 1980s" *Journal of Corporate Finance* 4, 209-240.
- Kini, O., Kracaw, W. and Mian, S., 1995. "Corporate takeovers, firm performance and board composition" *Journal of Corporate Finance* 1, 383-412.
- Martin, Kenneth J., 1996. "The method of payment in corporate acquisitions, investment opportunities, and management ownership" *Journal of Finance*, 1227-1246.
- Mikkelson, Wayne H., and Partch, Megan M., 1997. "The decline of takeovers and disciplinary managerial turnover" *Journal of Financial Economics* 44, 205-228.
- Mitchell, Mark L. and Lehn, Kenneth, 1990. "Do bad bidders become good targets?" *Journal of Political Economy* 98, 372-398.
- Morck, Randall, Shleifer, Andrei and Vishny, Robert, 1990. "Do managerial motives drive bad acquisitions?" *Journal of Finance* 45, 31-38.
- Murphy, Kevin J. and Zimmerman, Jerold L., 1993. "Financial performance surrounding CEO turnover" *Journal of Accounting and Economics* 16, 273-315.
- Parrino, Robert, 1997. "CEO turnover and outside succession A cross-sectional analysis" *Journal of Financial Economics* 46, 165-197.
- Perry, Tod, 1998. "Incentive compensation for outside directors and CEO turnover" *Working Paper*, Arizona State University.
- Pound, John, 1993. "The rise of the political model of corporate governance and corporate control" *New York University Law Review* 68.

Rau, P. Raghavendra and Vermaelen, Theo, 1998. "Glamour, value and the post-acquisition performance of acquiring firms" *Journal of Financial Economics* 49, 223-253.

Roll, Richard, 1986. "The hubris hypothesis of corporate takeovers" *Journal of Business* 59, 197-216.

Shleifer, Andrei and Vishny, Robert W., 1988. "Value maximization and the acquisition process" *Journal of Economic Perspectives* 2, 7-20.

Shleifer, Andrei and Vishny, Robert W., 1990. "Equilibrium short horizons of investors and firms" *American Economic Review*, 148-53.

Shleifer, Andrei and Vishny, Robert W. 2003, "Stock market driven acquisitions" *Journal of Financial Economics* 70, 295-311.

Serrvaes, Henri, 1991. "Tobin's Q and the gains from takeovers" *Journal of Finance* 46, 409-419.

Varaiya, N. and Ferris, K., 1987. "Overpaying in corporate takeovers: the winner's curse" *Financial Analyst Journal* 43, 64-70.

Warner, Jerold B., Watts, Ross L. and Wruck, Karen H., 1988. "Stock prices and top management changes" *Journal of Financial Economics* 20, 461-492.

Weisbach, Michael S., 1995. "CEO turnover and the firm's investment decisions" *Journal of Financial Economics* 37, 159-188.

Weisbach, Michael S., 1988. "Outside directors and CEO turnover" *Journal of Financial Economics* 20, 431-460.

Williamson, Oliver E., 1983. "Organization form, residual claimants, and corporate control" *Journal of Law and Economics* 26, 351-366.

Figure 1: Stock Price Reaction to Acquisition Announcements - Completed Merger

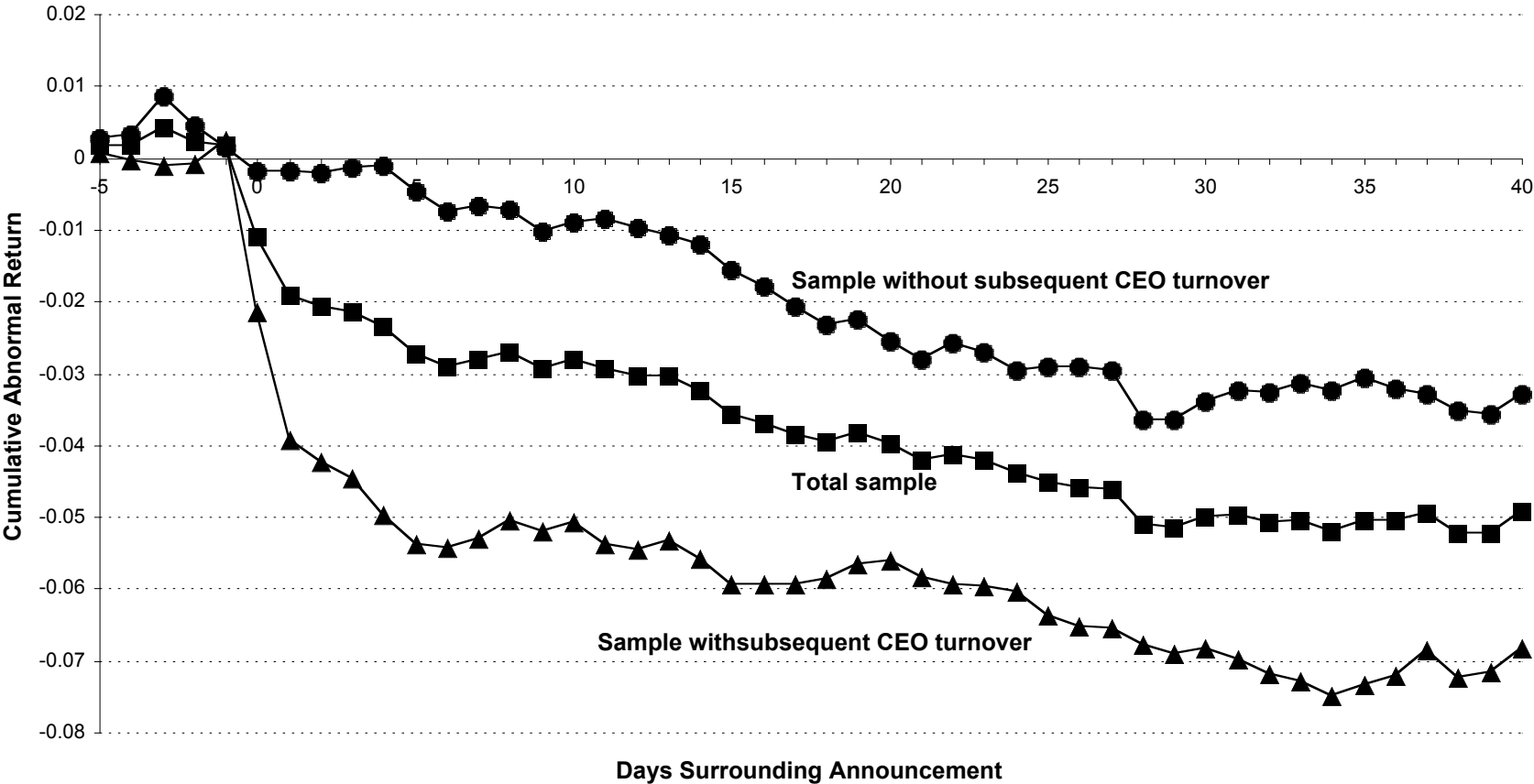


Figure 2: Stock Price Reaction to Acquisition Announcement - Cancelled Merger:

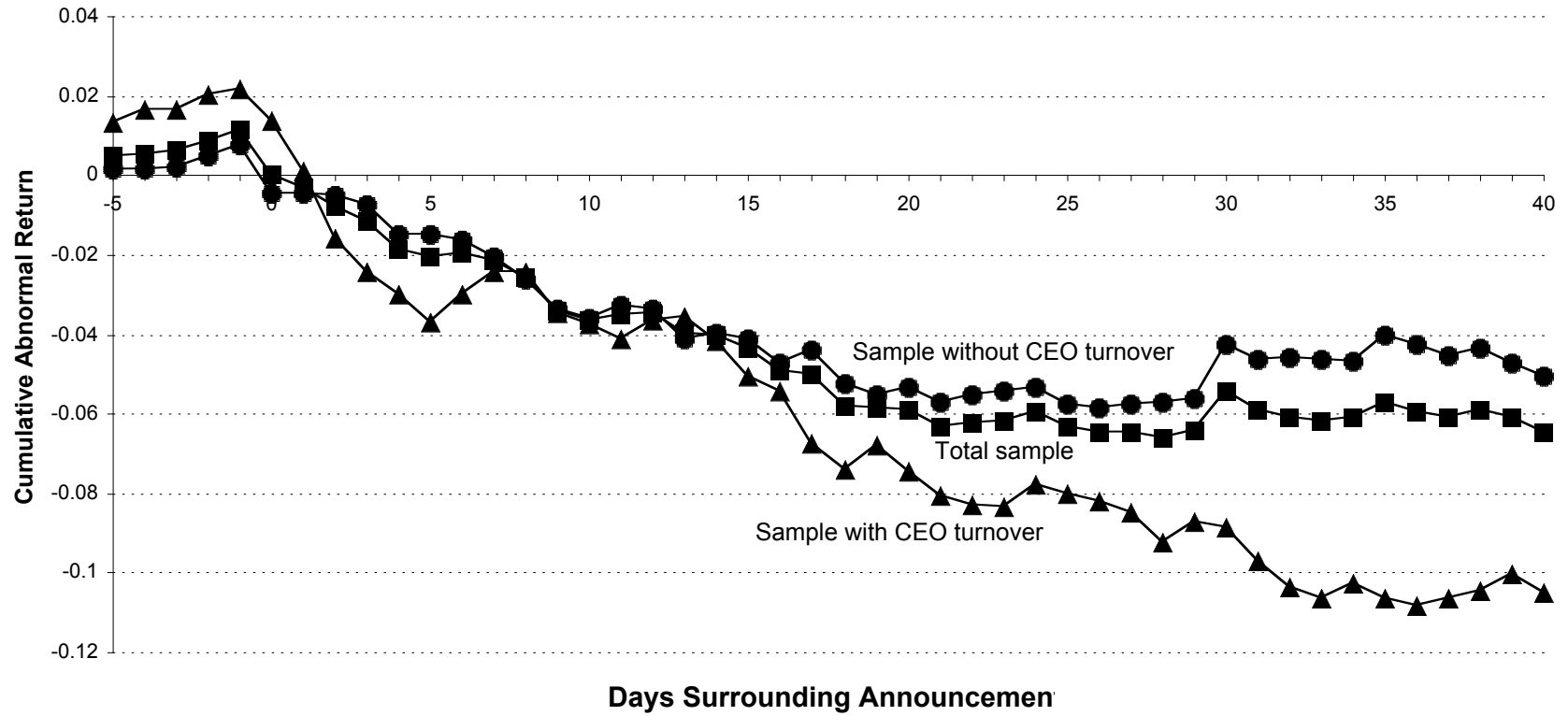


Table 1 Sample characteristics

Firm value is measured as the market value of equity plus the book value of preferred stock and the book value of debt at the year-end prior to the acquisition announcement. Transaction values are obtained from the SDC database. The CEO turnover sample consists of firms that experienced disciplinary CEO turnover following the mergers (or cancelled mergers). All other firms are included in the non-turnover sample. CEO turnover is defined as situations in which a CEO is fired, forced to step down, departs due to unspecified policy differences, or departs before reaching age 65 for reasons other than death, poor health, or the acceptance of a position elsewhere.

Table 1A Completed merger sample

Completed merger sample	Mean (\$mil)	Median (\$mil)	Stddev (\$mil)	Max (\$mil)	Min (\$mil)	N
Total sample						
Acquiring firm value	4640.72	1079.30	12673.49	160478.46	4.70	390
Target firm value	1609.92	353.57	4519.77	63877.70	7.68	
Target value/Acquirer value	0.60	0.30	1.77	29.09	0.10	
Transaction value*	1680.78	406.10	5472.13	78945.79	1.80	
Acquisition Technique	0.81	1.00	0.39	1.00	0.00	
Diversifying vs. nondiversifying	0.53	1.00	0.50	1.00	0.00	
Sample with no CEO turnover						
Acquiring firm value	4996.38	1101.46	13659.15	160478.46	10.32	210
Target firm value	1901.24	363.58	5483.68	63877.70	10.66	
Target value/Acquirer value	0.60	0.32	1.35	16.74	0.10	
Transaction value*	1802.99	379.67	6151.46	78945.79	6.24	
Acquisition Technique	0.79	1.00	0.41	1.00	0.00	
Diversifying vs. nondiversifying	0.54	1.00	0.50	1.00	0.00	
Sample with CEO turnover						
Acquiring firm value	4225.78	1001.09	11440.63	110407.81	4.70	180
Target firm value	1270.04	350.90	3011.36	30426.93	7.68	
Target value/Acquirer value	0.59	0.29	2.17	29.09	0.10	
Transaction value*	1537.39	437.68	4561.01	53592.49	1.80	
Acquisition Technique	0.83	1.00	0.37	1.00	0.00	
Diversifying vs. nondiversifying	0.51	1.00	0.50	1.00	0.00	

Note: The mean and median differences of the above variables across the two subsamples are not significantly different from zero.

* Transaction value, which is collected from the SDC database, is computed as the total value of consideration paid by the acquirer, excluding fees and expenses. The dollar value includes the amount paid for all common stock, common stock equivalents, preferred stock, debt, options, assets, warrants and stake purchases made within six months of the announcement date of the transaction. Liabilities assumed are included in the value if they are publicly disclosed. If a portion of the consideration paid by the acquirer is common stock, the stock is valued using the closing price on the last full trading day prior to the announcement of the terms of the stock swap. If the exchange ratio changes, the stock is valued based on its closing price on the last full trading date prior to the date of the change in the exchange ratio.

Table 1B Cancelled merger sample

Cancelled merger sample	Mean (\$mil)	Median (\$mil)	Stddev (\$mil)	Max (\$mil)	Min (\$mil)	N
Total Sample						
Acquiring firm value	6338.38	1350.41	13837.74	106034.10	13.41	136
Target firm value	2827.30	617.63	5324.62	31784.90	23.53	
Target value/Acquirer value	0.81	0.45	1.75	19.50	0.10	
Transaction value*	2651.68	779.22	5419.16	35563.72	6.47	
Acquisition Technique	0.76	1.00	0.43	1.00	0.00	
Diversifying vs. nondiversifying	0.55	1.00	0.50	1.00	0.00	
Sample with no CEO turnover						
Acquiring firm value	7200.18	1501.63	15535.86	106034.10	13.41	101
Target firm value	3250.28	638.97	6023.38	31784.90	23.53	
Target value/Acquirer value	0.85	0.43	2.01	19.50	0.10	
Transaction value*	2972.69	814.00	6076.64	35563.72	6.47	
Acquisition Technique	0.72	1.00	0.45	1.00	0.00	
Diversifying vs. nondiversifying	0.55	1.00	0.50	1.00	0.00	
Sample with CEO turnover						
Acquiring firm value	3851.48	925.14	6468.14	30538.76	50.52	35
Target firm value	1606.69	571.16	1948.84	7318.81	51.32	
Target value/Acquirer value	0.68	0.59	0.47	2.24	0.11	
Transaction value*	1651.61	590.23	2231.92	8863.26	88.45	
Acquisition Technique	0.89	1.00	0.32	1.00	0.00	
Diversifying vs. nondiversifying	0.54	1.00	0.51	1.00	0.00	

Note: The mean and median differences of the above variables across the two subsamples are not significantly different from zero.

* Transaction value, which is collected from the SDC database, is computed as the total value of consideration paid by the acquirer, excluding fees and expenses. The dollar value includes the amount paid for all common stock, common stock equivalents, preferred stock, debt, options, assets, warrants and stake purchases made within six months of the announcement date of the transaction. Liabilities assumed are included in the value if they are publicly disclosed. If a portion of the consideration paid by the acquirer is common stock, the stock is valued using the closing price on the last full trading day prior to the announcement of the terms of the stock swap. If the exchange ratio changes, the stock is valued based on its closing price on the last full trading date prior to the date of the change in the exchange ratio.

Table 2 Descriptive statistics of sample CEOs

This table provides descriptive statistics of the acquiring firms' CEOs in both completed mergers and cancelled mergers. CEO age is measured as the age of the CEO at the time of the acquisition announcements. CEO tenure is the length of time that the CEO held the position of CEO at the time of the acquisition announcement. We also check whether the firm's CEO also serves as chairman of the board at the time of the acquisition announcement. All data are taken from proxy statements. T-statistics to test for differences in means and Z-statistics to test for differences in medians are displayed in parentheses.

	Total sample		Sample with no CEO turnover		Sample with CEO turnover		Differences between two subsamples	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Completed mergers								
CEO age	53.5	54	53.8	54	53.2	53	0.52 (0.64)	1 (0.25)
CEO Tenure	7.7	6	8.7	7	6.6	5	2.09*** (2.89)	2*** (2.85)
CEO is also chairman	0.7	1	0.7	1	0.7	1	0.02 (0.34)	0 (0.34)
Cancelled mergers								
CEO age	54.5	55	56.1	56	50.0	50	6.11*** (3.52)	6*** (3.64)
CEO Tenure	8.9	6.5	10.2	7	5.1	4	5.02*** (2.96)	3*** (2.75)
CEO is also chairman	0.8	1	0.8	1	0.6	1	0.27*** (3.40)	0*** (3.27)

*** Significant at 1% level;

** Significant at 5% level;

* Significant at 10% level.

Table 3 Acquiring firm performance**Panel A**

Panel A in this table reports various measures of the acquiring firm's performance before its acquisition for both the completed merger sample and the cancelled merger sample. PreBHR(-3) (PreBHR(-1)) is the acquiring firm's market adjusted buy and hold return during the three (one) years prior to 20 days before the acquisition announcement. PreCAR (-3mon) is the acquiring firm's cumulative abnormal return three months prior to 20 days before the acquisition announcement. Return on Equity (ROE), Return on Assets (ROA), Operating Margin (OM) and Net income Margin (NM) are measured as the average of the three years prior to 20 days before the acquisition announcement. Mean and median differences in performance between acquiring firms with and without subsequent CEO turnover are provided in the table. T-statistics to test for differences in means and Z-statistics to test for differences in medians are displayed in parentheses.

	Total sample		Sample with no CEO turnover		Sample with CEO turnover		Differences between two subsamples	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Completed mergers								
PerBHR(-3)	0.519	0.107	0.408	0.098	0.649	0.107	-0.241 (-1.140)	-0.009 (-0.243)
PreBHR(-1)	0.124	0.023	0.066	0.010	0.191	0.082	-0.125* (-1.920)	-0.072 (-1.560)
PreCAR (-3 mon)	0.002	-0.014	0.012	0.003	-0.010	-0.038	0.022 (0.950)	0.041* (-1.709)
PreROE	0.095	0.132	0.116	0.130	0.071	0.133	0.045 (1.030)	-0.003 (-0.201)
PreROA	0.022	0.039	0.027	0.038	0.016	0.040	0.011 (0.770)	-0.002 (-0.715)
PreOM	0.124	0.159	0.134	0.168	0.112	0.148	0.022 (0.410)	0.020*** (2.478)
PreNM	0.012	0.054	0.034	0.066	-0.013	0.049	0.047 (0.670)	0.016 (2.496)
Cancelled mergers								
PreBHR(-3)	0.581	0.225	0.440	0.205	0.988	0.267	-0.548 (-1.170)	-0.062 (-0.772)
PreBHR(-1)	0.136	0.008	0.036	-0.006	0.424	0.009	-0.388*** (-2.090)	-0.015 (-1.364)
PreCAR (-3 mon)	-0.020	-0.014	0.003	0.012	-0.086	-0.079	0.089* (1.730)	0.090*** (2.253)
PreROE	0.103	0.129	0.043	0.127	0.278	0.142	-0.234 (-1.310)	-0.015 (-0.921)
PreROA	0.026	0.035	0.020	0.031	0.042	0.041	-0.022 (-1.230)	-0.010 (-1.434)
PreOM	0.178	0.158	0.180	0.167	0.174	0.111	0.005 (0.180)	0.056 (1.232)
PreNM	0.052	0.063	0.052	0.066	0.051	0.044	0.001 (0.050)	0.022 (0.976)

*** Significant at 1% level;

** Significant at 5% level;

* Significant at 10% level.

Table 3 (Continued)**Panel B**

Panel B documents the univariate comparison of long-run stock performance between the stock-based acquisitions and cash-based acquisitions. Buy-hold return is measured as the three year (one year) market adjusted buy-and-hold return of the acquiring firms' shareholders after the acquisitions. CAR is the cumulative abnormal return three years (one year) after the acquisition is completed. -statistics to test for differences in means and Z-statistics to test for differences in medians are displayed in parentheses.

	Stock Acquisitions (N=316)		Cash Acquisitions (N=74)		Differences		Total (N=390)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Buy-hold return (3 years post acquisitions)	-0.111	-0.387	-0.176	-0.413	0.065 (0.27)	0.026 (0.54)	-0.124	-0.391
Buy-hold return (1 years post acquisitions)	-0.037	-0.125	-0.086	-0.143	0.049 (0.49)	0.017 (0.283)	-0.046	-0.125
CAR (3 years post acquisitions)	-0.210	-0.571	-0.161	-0.400	-0.049 (-0.56)	-0.171 (-0.855)	-0.614	-0.548
CAR (1 years post acquisitions)	-0.641	-0.208	-0.497	-0.191	-0.144 (-0.65)	-0.017 (-0.959)	-0.201	-0.202

Table 4 Abnormal stock market performance of acquiring firms associated with acquisition announcements – Completed mergers

This table reports the stock price reaction to acquisition announcements for the total sample of acquiring firms, the sample of acquiring firms with CEO turnover after their acquisitions, and the sample of acquiring firms without CEO turnover after their acquisitions. CEO turnover is defined to mean the replacement of a CEO outside the normal retirement process. Cumulative Abnormal Returns (CARs) are calculated based on different event windows listed below. Z-statistics⁽¹⁾ are in parentheses and percentage of abnormal returns that are positive listed below Z-statistics.

Event window around announcement day	[0]	[-1, 1]	[-1,5]	[-5, 5]	[-5,20]
Total sample (N=390)	-1.13%*** (-7.594)	-1.79*** (-6.942)	-2.40%*** (-6.098)	-1.96*** (-3.978)	-2.42%*** (-3.189)
% of positive	37.14%*** (-3.805)	39.22%** (-2.987)	37.92%*** (-3.498)	40.26%** (-2.579)	45.19% (-0.638)
Sample with CEO turnover (N=180)	-2.19%*** (-9.935)	-3.38%*** (-8.883)	-4.42%*** (-7.586)	-4.21%*** (-5.767)	-3.63%*** (-3.237)
% positive	32.20%*** (-3.893)	31.64%*** (-4.044)	28.81%*** (-4.797)	27.68%*** (-5.099)	41.24% (-1.483)
Sample without CEO turnover (N=210)	-0.23% (-1.243)	-0.42% (-1.340)	-0.68% (-1.399)	-0.05% (-0.075)	-1.38% (-1.479)
% positive	41.35% (-1.585)	45.67% (-0.334)	45.67% (-0.334)	50.86% (1.195)	48.56% (0.500)

*** Significant at 1% level;

** Significant at 5% level;

* Significant at 10% level.

(1) Standardized test statistics are calculated to assess the statistical significance of stock market abnormal performance. Each

abnormal return is divided by the square root of its forecast variance $(\hat{\sigma}_{AR} = \sqrt{\hat{\sigma}^2 + \frac{1}{L} + \frac{(R_{mt} - \bar{R}_m)^2}{CSSR_m}})^{1/2}$, where

$\hat{\sigma}^2$ is the estimated residual variance for the estimation period, L is the number of observations in the estimation period, \bar{R}_m is the mean market return during the estimation period, and CSSR is the corrected sum of squares of the market return during the event window) to form a standardized abnormal return $S(AR_{it}) = AR_{it} / \hat{\sigma}_{AR}$. The test statistic for the AR is

$Z_t = \sqrt{N} \sum_{i=1}^N S(AR_{it})$, and the test statistic for the CAR is $(1/\sqrt{T}) \sum_{t=1}^T Z_t$, where T is the length of the event window.

Table 5 Abnormal stock market performance of cancelled mergers

This table consists of two panels. Panel A reports the stock price reaction to acquisition announcements for the sample of cancelled acquisitions. Panel B provides the stock market performance around the withdrawn date for the same sample. Cumulative Abnormal Returns (CARs) are calculated based on different event windows listed below. Z-statistics⁽¹⁾ are in parentheses and percentage of abnormal returns that are positive listed below Z-statistics.

Panel A					
Event window around announcement date	[0]	[-1, 1]	[-1, 5]	[-5, 5]	[-5, 20]
Total sample (N=136)	-1.20%*** (-5.204)	-1.43%*** (-3.581)	-3.15%*** (-5.180)	-2.46%*** (-3.224)	-6.12%*** (-5.213)
% positive	38.52%* (-1.896)	41.48% (-1.206)	41.48% (-1.206)	42.96% (-0.861)	34.07%** (-2.931)
Sample with CEO turnover (N=35)	-0.82% (-1.603)	-1.88* (-2.131)	-4.61%*** (-3.150)	-3.43%* (-2.025)	-6.26%** (-2.406)
% positive	50% (0.356)	37.14% (-1.019)	35.29% (-1.362)	29.41%* (-2.050)	35.29% (-1.362)
Sample without CEO turnover (N=101)	-1.32%*** (-5.257)	-1.27%** (-2.917)	-2.33%*** (-3.490)	-2.13%** (-2.553)	-6.07%*** (-4.721)
% positive	34.65%** (-2.399)	42.57% (-0.803)	43.56% (-0.603)	47.52% (-0.195)	33.66%** (-2.598)

*** Significant at 1% level;
 ** Significant at 5% level;
 * Significant at 10% level.

Table 5 (Continued)

Panel B

Event window around withdrawn date	[0]	[-1, 1]	[-5, 1]	[-5, 40]	[-20, 40]
Total sample (N=136)	0.01% (0.058)	-1.25%*** (-3.135)	-1.71%** (-2.823)	-1.68%* (-2.205)	-2.77%** (-2.363)
% positive	52.59% (1.374)	49.63% (0.684)	46.67% (-0.006)	47.41% (0.166)	46.67% (-0.006)
Sample with CEO turnover (N=35)	1.08%* (2.007)	0.26% (0.274)	-0.11% (-0.074)	0.85% (0.474)	-0.09% (-0.034)
% positive	58.82% (1.404)	64.71%* (2.091)	52.94% (0.717)	58.82% (1.404)	58.82% (1.404)
Sample without CEO turnover (N=101)	-0.35% (-1.342)	-1.75%*** (-3.917)	-2.26%*** (-3.302)	-2.53%** (-2.953)	-3.66%** (-2.783)
% positive	50.50% (0.774)	44.55% (-0.423)	44.55% (-0.423)	43.56% (-0.623)	42.57% (-0.822)

*** Significant at 1% level;
 ** Significant at 5% level;
 * Significant at 10% level.

(1) Standardized test statistics are constructed to assess the statistical significance of stock market abnormal performance. Each

abnormal return is divided by the square root of its forecast variance ($\sigma_{AR} = \sqrt{\sigma^2 + \frac{1}{L} + \frac{(R_{mt} - \bar{R}_m)^2}{CSSR_m}}$), where

σ^2 is the estimated residual variance for the estimation period, L is the number of observations in the estimation period, \bar{R}_m is the mean market return during the estimation period, and CSSR is the corrected sum of squares of the market return during the event window) to form a standardized abnormal return $S(AR_{it}) = AR_{it} / \sigma_{AR}$. The test statistic for the AR is

$Z_t = \sqrt{N} \sum_{i=1}^N S(AR_{it})$, and the test statistic for the CAR is $(1/\sqrt{T}) \sum_{t=1}^T Z_t$, where T is the length of the event window.

Table 6 Description of corporate governance variables

Panel A.1

Panel A.1 of this table provides the descriptive statistics of corporate governance variables for the total sample of both completed and cancelled mergers and the two the subsamples in which the acquiring firm’s CEO did and did not turn over after their acquisition. The corporate governance variables considered in this paper include the leadership structure of the board of directors, i.e. whether or not the chairman of the board is also the CEO of the company, the size of the board of directors, the proportion of the directors who are classified as independent, ownership concentration which is measured as the total percentage of shares held by beneficial owners (i.e. principal shareholders with more than 5% equity), the percentage of equity held by the CEO, and total insider shareholdings. Independent directors are defined as directors who are not employees or do not have family ties with employees; directors who are not attorneys, accountants or investment bankers; and those directors who are not involved in related transactions with the company as described in the companies’ proxy statements. Univariate comparisons for corporate governance variables between the two subsamples are provided in the last column. T-statistics to test for differences in means and Z-statistics to test for differences in medians are displayed in parentheses.

	Total Sample (N=526)					Sample with completed mergers (N=390)					Sample with cancelled mergers (N=136)					Difference between the two subsamples	
	Mean	Median	Max	Min	S.D.	Mean	Median	Max	Min	S.D.	Mean	Median	Max	Min	S.D.	Mean	Median
Chairman is also CEO	0.74	1.0	1.0	0	0.44	0.72	1	1.00	0	0.45	0.77	1	1	0	0.42	-0.05 (-1.07)	0 (-1.07)
Board Size	10.25	10.0	32.0	3	4.04	10.02	9.50	26.00	3	3.96	10.91	11	32	4	4.21	-0.89*** (-2.15)	-1.5*** (-2.37)
% of independent directors	0.56	0.6	0.9	0	0.18	0.55	0.57	0.94	0	0.20	0.56	0.57	0.94	0.13	0.15	-0.01 (-0.51)	0 (0.205)
Ownership concentration %	23.80	19.4	90.2	0	21.25	23.52	18.55	88.20	0	21.16	24.63	21.3	90.2	0	21.57	-1.11 (-0.52)	-2.75 (-0.60)
CEO ownership (%)	5.04	1.3	80	0	10.20	4.81	1.39	80.00	0	10.07	5.71	0.96	53.39	0.00	10.57	-0.90 (-0.87)	0.43 (1.38)
Insider ownership (%)	11.89	6.6	88.2	0	14.22	11.86	6.51	88.20	0	14.21	11.96	6.9	71.7	0.05	14.30	-0.10 (-0.07)	-0.40 (-0.66)

*** Significant at 1% level;
 ** Significant at 5% level;
 * Significant at 10% level.

Table 6 (Continued)

Panel A.2

Panel A.2 of this table provides the descriptive statistics of corporate governance variables for the total sample of completed mergers and the subsamples of acquisitions in which the acquiring firm's CEO did and did not turn over after their acquisitions. The corporate governance variables considered in this paper include the leadership structure of the board of directors, i.e. if chairman of the board is also the CEO of the company; the size of the board of directors; the proportion of directors who are independent, ownership concentration which is measured as the total percentage of shares held by beneficial owners (i.e. principal shareholders with more than 5% equity), the percentage of equity held by the CEO, and total insider shareholdings. Independent directors are defined as directors who are not employees or do not have family ties with employees; directors who are not attorneys, accountant or investment bankers; and directors who are not involved in related transactions with the company as described in the companies' proxy statements. Univariate comparisons for corporate governance variables between the two subsamples are provided in the last column. T-statistics to test for differences in means and Z-statistics to test for differences in medians are displayed in parentheses.

	Total sample of completed mergers (N=390)					Sample with CEO turnover (N=180)					Sample without CEO turnover (N=210)					Difference between the two subsamples	
	Mean	Median	Max	Min	S.D.	Mean	Median	Max	Min	S.D.	Mean	Median	Max	Min	S.D.	Mean	Median
Chairman is also CEO	0.72	1	1	0	0.45	0.72	1	1	0	0.45	0.73	1	1	0	0.44	-0.02 (-0.34)	0 (0.34)
Board Size	10.02	9.50	26	3	3.96	10.27	10	26	3	4.24	9.81	9	24	3	3.69	0.46 (1.15)	1 (0.87)
% of independent directors	0.55	0.57	0.94	0	0.20	0.57	0.58	0.92	0	0.19	0.54	0.57	0.94	0	0.20	0.03 (1.47)	0.01 (1.54)
Ownership concentration %	23.52	18.55	88.2	0	21.16	21.35	17.18	88.20	0	20.10	25.373	21.35	86.03	0	21.90	-4.02* (-1.89)	-4.17* (-1.79)
CEO ownership %	4.81	1.39	80	0	10.07	3.18	1.17	76	0	7.05	6.21	1.67	80	0	11.92	-3.03*** (-3.10)	-0.50*** (-2.25)
Insider ownership %	11.86	6.51	88.2	0	14.21	10.14	6.00	88.20	0.10	12.88	13.34	7.48	80.1	0	15.14	-3.19*** (-2.25)	-1.48** (-2.02)

*** Significant at 1% level;
 ** Significant at 5% level;
 * Significant at 10% level.

Table 6 (Continued)

Panel A.3

Panel A.3 of this table provides the descriptive statistics of corporate governance variables for the total sample of cancelled mergers and the subsamples in which the acquiring firm’s CEO did and did not turn over after their acquisitions. The corporate governance variables considered in this paper include the leadership structure of the board of directors, i.e. if chairman of the board is also the CEO of the company, size of the board of directors, the proportion of directors who are independent, ownership concentration which is measured as the total percentage of shares held by beneficial owners (i.e. principal shareholders with more than 5% equity), the percentage of equity held by the CEO, and total insider shareholdings. Independent directors are defined as directors who are not employees or do not have family ties with employees; directors who are not attorneys, accountant or investment bankers; and directors who are not involved in related transactions with the company as described in the proxy statements. Univariate comparisons for corporate governance between the two subsamples are provided in the last column. T-statistics to test for differences in means and Z-statistics to test for differences in medians are displayed in parentheses.

	Total sample of cancelled mergers (N=136)					Sample with CEO turnover (N=35)					Sample without CEO turnover (N=101)					Difference between the two subsamples	
	Mean	Median	Max	Min	S.D.	Mean	Median	Max	Min	S.D.	Mean	Median	Max	Min	S.D.	Mean	Median
Chairman is also CEO	0.77	1	1	0	0.42	0.57	1	1	0	0.50	0.84	1	1	0	0.37	-0.27*** (-2.92)	0*** (-3.27)
Board Size	10.91	11	32	4	4.21	10.20	11	17	4	3.19	11.16	11	32	4	4.50	-0.96 (-1.37)	0 (-0.52)
% of independent directors	0.56	0.57	0.94	0.13	0.15	0.55	0.56	0.8	0.13	0.16	0.57	0.57	0.94	0.25	0.14	-0.02 (-0.70)	-0.02 (-0.40)
Ownership concentration %	24.63	21.30	90.20	0	21.57	28.80	28.03	90.2	0	21.79	23.17	17.95	87	0	21.41	5.63 (1.32)	10.08 (1.60)
CEO ownership %	5.71	0.96	53.39	0	10.57	2.75	1.26	20.6	0	4.52	6.74	0.9	53.39	0	11.82	-3.99* (-1.95)	0.36 (1.09)
Insider ownership %	11.96	6.90	71.70	0.05	14.30	11.56	6.9	71.7	0.05	14.16	12.10	6.40	63.90	0.08	14.42	-0.54 (-0.19)	0.50 (0.21)

*** Significant at 1% level;

** Significant at 5% level;

* Significant at 10% level.

Table 6 (Continued)

Panel B.1

Panel B.1 of Table 6 reports descriptive statistics of corporate governance for firms in three groups ranked by CAR [-1, 1] around announcement date. Both completed and cancelled mergers are included in this analysis. The corporate governance variables include the leadership structure of the board of directors, i.e. if chairman of the board is also the CEO of the company; the size of the board of directors; the proportion of directors who are independent; ownership concentration which is measured as the total percentage of shares held by beneficial owners (i.e. principal shareholders with more than 5% equity); the percentage of equity held by the CEO; and total insider shareholdings. Independent directors are defined as directors who are not employees or do not have family ties with employees; directors who are not attorneys, accountant or investment bankers; and directors who are not involved in related transactions with the company as described in the proxy statements. Univariate comparisons for corporate governance variables between the two subsamples are provided in the last column. T-statistics to test for differences in means and Z-statistics to test for differences in medians are displayed in parentheses.

Firms ranked by CAR [-1, 1]	Chairman is also CEO		Board Size		% of independent directors		Ownership Concentration %		CEO Ownership %		Insider Ownership %	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Lowest one-third (N=175)	0.75	1	9.98	9	0.55	0.56	23.26	18.20	4.53	1.43	10.52	6.03
With turnover (94)	0.74	1	9.71	9	0.56	0.57	23.06	18.25	3.55	1.42	9.10	5.56
Without turnover (81)	0.75	1	10.30	9	0.54	0.55	23.49	18.10	5.66	1.50	12.17	6.90
Differences	-0.01 (-0.08)	0 (-0.08)	-0.58 (-0.88)	0 (-0.8)	0.01 (0.39)	0.03 (0.63)	-0.43 (-0.14)	0.15 (0.23)	-2.11* (-1.68)	-0.09 (-0.10)	-3.07 (-1.55)	-1.34 (-0.93)
Second one-third (N=175)	0.71	1	11.06	11	0.58	0.62	20.32	15.90	4.18	0.75	10.62	6.10
With turnover (59)	0.66	1	11.63	11	0.59	0.64	18.13	8.41	1.89	0.71	9.86	6.10
Without turnover (116)	0.74	1	10.78	10	0.58	0.60	21.44	17.52	5.34	0.86	11.00	5.87
Differences	-0.08 (-1.08)	0 (-1.11)	0.85 (1.32)	1 (1.56)	0.01 (0.49)	0.04 (0.65)	-3.31 (-0.99)	-9.11 (-1.46)	-3.45*** (-3.10)	-0.16 (-1.34)	-1.14 (-0.59)	0.23 (0.50)
Highest one-third (N=176)	0.75	1	9.72	9	0.54	0.56	27.80	23.00	6.42	1.95	14.52	8.45
With turnover (62)	0.65	1	9.79	10	0.56	0.57	26.02	24.20	3.60	1.39	12.80	7.21
Without turnover (114)	0.81	1	9.68	9	0.53	0.56	28.77	22.35	7.95	2.69	15.45	8.91
Differences	-0.16*** (-2.26)	0*** (-2.36)	0.11 (0.20)	1 (0.38)	0.03 (1.20)	0.02 (1.30)	-2.75 (-0.78)	1.85 (0.42)	-4.35 (-2.22)	-1.30*** (-2.61)	-2.65 (-1.03)	-1.70 (-1.08)

*** Significant at 1% level;
 ** Significant at 5% level;
 * Significant at 10% level.

Table 6 (Continued)

Panel B.2

Panel B.2 of Table 6 reports descriptive statistics of corporate governance variables for firms in three groups ranked by CAR [-1, 1] around announcement date. Only completed mergers are included in this panel. The corporate governance variables include the leadership structure of the board of directors, i.e. if chairman of the board is also the CEO of the company; the size of the board of directors; the proportion of directors who are independent; ownership concentration which is measured as the total percentage of shares held by beneficial owners (i.e. principal shareholders with more than 5% equity); the percentage of equity held by the CEO; and total insider shareholdings. Independent directors are defined as directors who are not employees or do not have family ties with employees; directors who are not attorneys, accountants or investment bankers; and directors who are not involved in related transactions with the company as described in the proxy statements. Univariate comparisons for corporate governance variables between the two subsamples are provided in the last column. T-statistics to test for differences in means and Z-statistics to test for differences in medians are displayed in parentheses.

Firms ranked by CAR [-1, 1]	Chairman is also CEO		Board Size		% of independent directors		Ownership Concentration %		CEO Ownership %		Insider Ownership %	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Lowest one-third (N=130)	0.72	1	9.62	9	0.54	0.56	23.08	18.25	4.55	1.55	10.88	6.02
With turnover (76)	0.72	1	9.82	9	0.55	0.57	22.53	16.71	3.43	1.40	9.35	5.37
Without turnover (54)	0.72	1	9.35	9	0.53	0.54	23.85	21.95	6.12	2.11	13.03	7.10
Differences	0.00	0	0.46	0	0.03	0.03	-1.32	-5.25	-2.69*	-0.71	-3.68	-1.73*
	(0.02)	(0.02)	(0.63)	(0.46)	(0.64)	(0.71)	(-0.38)	(-0.4)	(-1.73)	(-0.97)	(-1.5)	(-1.71)
Second one-third (N=130)	0.74	1	10.78	10	0.58	0.63	20.16	15.10	3.77	1.08	10.40	6.28
With turnover (54)	0.76	1	11.52	11	0.60	0.64	16.57	8.15	2.11	0.76	9.41	6.05
Without turnover (76)	0.72	1	10.25	10	0.57	0.60	22.71	18.96	4.94	1.15	11.11	7.39
Differences	0.04	0	1.27	1*	0.03	0.04	-6.14*	-10.81**	-2.82***	-0.39	-1.70	-1.34
	(0.50)	(0.4)	(1.85)	(1.73)	(0.97)	(0.82)	(-1.77)	(-2.02)	(-2.25)	(-1.14)	(-0.85)	(-1.18)
Highest one-third (N=130)	0.72	1	9.67	9	0.54	0.56	27.30	22.48	6.12	1.72	14.31	7.50
With turnover (50)	0.66	1	9.62	10	0.56	0.58	24.70	22.67	3.94	1.29	12.15	7.21
Without turnover (80)	0.75	1	9.70	9	0.52	0.55	28.93	21.70	7.47	2.50	15.67	8.45
Differences	-0.09	0	-0.08	1	0.04	0.03	-4.23	0.97	-3.53	-1.21*	-3.52	-1.24
	(-1.08)	(-1.10)	(-0.12)	(0.03)	(1.26)	(1.27)	(-1.00)	(0.72)	(-1.59)	(-1.92)	(-1.20)	(-0.65)

*** Significant at 1% level;
 ** Significant at 5% level;
 * Significant at 10% level.

Table 6 (Continued)

Panel B.3

Panel B.3 of Table 6 reports descriptive statistics of corporate governance variables for firms in three groups ranked by CAR [-1, 1] around announcement date. Only cancelled mergers are included in this panel. The corporate governance variables include the leadership structure of the board of directors, i.e. if chairman of the board is also the CEO of the company; the size of the board of directors; the proportion of directors who are independent; ownership concentration which is measured as the total percentage of shares held by beneficial owners (i.e. principal shareholders with more than 5% equity); the percentage of equity held by the CEO; and total insider shareholdings. Independent directors are defined as those who are not employees or do not have family ties with employees; directors who are not attorneys, accountants or investment bankers; and directors who are not involved in related transactions with the company as described in the proxy statements. Univariate comparisons for corporate governance variables between the two subsamples are provided in the last column. T-statistics to test for differences in means and Z-statistics to test for differences in medians are displayed in parentheses.

Firms ranked by CAR [-1, 1]	Chairman is also CEO		Board Size		% of independent directors		Ownership Concentration %		CEO Ownership %		Insider Ownership %	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Lowest one-third (N=45)	0.76	1	11.09	11	0.56	0.55	25.91	19.75	4.18	0.72	10.34	6.90
With turnover (17)	0.71	1	10	9	0.56	0.56	26.83	25.40	3.18	1.26	8.36	6.90
Without turnover (28)	0.79	1	11.75	12	0.55	0.55	25.34	14.49	4.79	0.60	11.53	5.75
Differences	-0.08	0	-1.75	-3	0.01	0.01	1.49	10.91	-1.61	0.66	-3.17	1.16
	(-0.58)	(-0.58)	(-1.45)	(-1.01)	(0.22)	(0.48)	(0.21)	(0.51)	(-0.74)	(0.37)	(-0.96)	(0.22)
Second one-third (N=45)	0.73	1	11.60	11	0.59	0.60	19.76	17.51	5.70	0.61	10.78	2.40
With turnover (7)	0.14	0	10.57	11	0.50	0.46	28.82	19.90	2.54	0.15	14.67	7.10
Without turnover (38)	0.84	1	11.79	11	0.60	0.63	18.09	16.71	6.29	0.71	10.06	2.27
Differences	-0.70***	-1***	-1.22	0	-0.10	-0.17	10.73	3.20	-3.75	-0.56	4.60	4.83
	(-4.59)	(-3.78)	(-0.90)	(-0.13)	(-1.12)	(-1.11)	(0.94)	(0.84)	(-1.32)	(-0.85)	(0.79)	(0.80)
Highest one-third (N=46)	0.83	1	10.07	10	0.54	0.57	28.16	27.10	7.22	2.47	14.71	10.98
With turnover (11)	0.64	1	10.27	11	0.55	0.57	31.83	31.90	2.22	1.40	14.52	3.55
Without turnover (35)	0.89	1	10.00	9	0.54	0.56	27.01	22.20	8.80	3.50	14.77	11.60
Differences	-0.25	0*	0.27	2	0.01	0.02	4.82	9.70	-6.58***	-2.10	-0.25	-8.05
	(-1.54)	(-1.86)	(0.24)	(0.57)	(0.20)	(0.54)	(0.75)	(0.97)	(-2.92)	(-1.61)	(-0.04)	(-0.98)

*** Significant at 1% level;
 ** Significant at 5% level;
 * Significant at 10% level.

Table 7 Logit regression modeling the probability that the acquiring firm’s CEO is replaced after the acquisition

This table provides the results of logit estimation based on the 390 acquiring firms. The dependent variable is the transformed probability that the acquiring firm’s CEO was replaced after the acquisition. The independent variables include the abnormal stock return around acquisition announcement date (CAR [-1,1])#, a dummy variable equal to 1 if the acquisition is stock-based (MA Technique), the product of MA Technique and CAR, a dummy variable that takes the value of 1 if the CEO also is chairman of the board and zero otherwise (“Chairman”), the product of CAR and Chairman, the size of the acquiring firms’ boards of directors (“Board size”), the product of CAR and Board size, the percentage of the acquiring firms’ directors who are classified as “independent” (% Independent directors), the product of CAR and % independent, total shareholding by beneficial shareholders (Ownership Concentration), the product of CAR and Ownership Concentration, the percentage of equity held by the acquiring firm’s CEO (“CEO ownership”), the product of CAR and CEO ownership, insider shareholding, the product of CAR and Insider Shareholding, CEO tenure and the age of the acquiring firm’s CEO at the time of the acquisition (Tenure and CEOAGE[®]), the ratio of the target firm’s size to the acquiring firm’s size, the acquiring firm’s buy-and-hold stock returns during the three years after the acquisition (“Buy-Hold Return (post)”), and the acquiring firm’s buy-and-hold stock returns during the three years before the acquisition (“Buy-Hold Return (pre)”). T-statistics are shown in parentheses.

Panel A

Dependent variable is transformed probability that acquiring firm CEO was replaced after the acquisition						
Intercept	-0.098 (-0.329)	-0.082 (-0.273)	-0.203 (-0.861)	-0.196 (-0.817)	-0.397 (-0.230)	-0.289 (-0.912)
CAR [-1,1]	-6.025*** (-3.863)	-8.059** (-2.001)	-6.010*** (-3.906)	-5.723*** (-2.254)	-4.871*** (-3.737)	-1.186 (-0.354)
MA Technique	-0.032 (-0.111)	-0.036 (-0.123)				
MA Technique*CAR		2.424 (0.557)				
Chairman			0.130 (0.520)	0.120 (0.460)		
Chairman*CAR				-0.443 (-0.141)		
Board size					0.018 (0.743)	0.005 (0.203)
Board size*CAR						-0.420 (-1.172)
CEO Tenure	-0.042*** (-2.571)	-0.042*** (-2.573)	-0.044*** (-2.639)	-0.044*** (-2.639)	-0.050*** (-3.493)	-0.051*** (-3.507)
CEOAGE	0.115 (0.250)	0.124 (0.267)	0.165 (0.348)	0.168 (0.354)	-0.443 (-1.095)	-0.437 (-1.081)
Target size to Acquirer size	0.002 (0.035)	0.006 (0.097)	0.007 (0.117)	0.006 (0.102)	-0.033 (-0.558)	-0.034 (-0.575)
Buy-hold return (post-merger)	-0.478*** (-3.768)	-0.473*** (-3.769)	-0.474*** (-3.749)	-0.473*** (-3.733)	-0.480*** (-4.181)	-0.485*** (-4.217)
Buy-hold return (pre-merger)	0.168 (0.829)	0.167 (0.828)	0.165 (0.821)	0.168 (0.832)	0.318* (1.897)	0.336** (1.989)
Percent concordant (%)	71.3	71.2	71.3	71.4	71.6	71.8
-2LogL	491.06	490.74	489.80	489.78	645.20	643.80
Pseudo R-square (%)	15.25	15.35	15.3	15.3	15.99	16.30
# of observations	390	390	390	390	390	390

Table 7 (Continued)**Panel B**

Dependent variable is transformed probability that acquiring firm CEO was replaced after the acquisition						
Intercept	-0.548 (-1.622)	-0.537 (-1.524)	0.032 (0.155)	0.030 (0.142)	-0.025 (0.143)	-0.057 (-0.319)
CAR [-1,1]	-4.901*** (-3.750)	-4.525 (-1.216)	-5.862*** (-3.800)	-5.943*** (-2.267)	-6.038*** (-3.893)	-7.128*** (-3.942)
MA Technique						
MA Technique*CAR						
Chairman						
Chairman*CAR						
Board size						
Board size*CAR						
% independent directors	0.592 (1.143)	0.571 (1.032)				
% independent directors*CAR		0.716 (0.108)				
Ownership Concentration			-0.008 (-1.415)	-0.008 (-1.386)		
Ownership Concentration*CAR				0.003 (0.038)		
CEO ownership					-0.040*** (-2.297)	-0.037*** (-2.483)
CEO ownership*CAR						0.251 (1.214)
CEO Tenure	-0.050*** (-3.451)	-0.050*** (-3.444)	-0.041*** (-2.497)	-0.041*** (-2.482)	-0.034*** (-2.497)	-0.033** (-1.976)
CEOAGE	-0.441 (-1.093)	-0.442 (-1.093)	0.159 (0.342)	0.160 (0.343)	0.215 (0.451)	0.218 (0.459)
Target size to Acquirer size	-0.036 (-0.605)	-0.036 (-0.607)	0.015 (0.249)	0.015 (0.239)	-0.002 (-0.060)	-0.001 (-0.014)
Buy-hold return (post-merger)	-0.477*** (-4.242)	-0.478*** (-4.241)	-0.484*** (-3.783)	-0.484 (-3.781)	-0.507*** (-3.911)	-0.520*** (-3.964)
Buy-hold return (pre-merger)	0.312* (1.852)	0.313* (1.854)	0.153 (0.199)	0.153 (0.767)	0.164 (0.824)	0.192 (0.951)
Percent concordant (%)	71.7	71.7	71.8	71.8	73	72.7
-2LogL	644.44	644.42	489.04	489.03	482.27	480.78
Pseudo R-square (%)	16.16	16.16	15.87	15.87	17.89	18.33
# of observations	390	390	390	390	390	390

Table 7 (Continued)

Panel C

Dependent variable is transformed probability that acquiring firm CEO was replaced after the acquisition						
Intercept	-0.032 (-0.166)	0.004 (0.019)	-0.324 (-0.505)	-0.468 (-1.855)	-0.375 (-1.495)	-0.260 (-0.406)
CAR [-1,1]	-5.897*** (-3.832)	-7.130*** (-3.400)	-5.363 (-0.657)	-6.223*** (-4.081)	-7.589* (-1.952)	-5.288 (-0.655)
MA Technique			-0.241 (-0.788)	0.054 (0.191)	-0.055 (-0.190)	-0.355 (-1.129)
MA Technique*CAR			4.928 (1.001)		1.589 (0.376)	4.572 (0.951)
Chairman			0.152 (0.539)			0.149 (0.527)
Chairman*CAR			-0.020 (-0.006)			0.068 (0.020)
Board size			0.012 (0.343)			0.012 (0.365)
Board size*CAR			-0.849 (-1.610)			-0.880* (-1.868)
% independent directors			0.364 (0.544)			0.379 (0.565)
% independent directors*CAR			3.334 (0.450)			3.947 (0.530)
Ownership Concentration			-0.000 (-0.013)			-0.000 (-0.055)
Ownership Concentration*CAR			-0.054 (-0.588)			-0.055 (-0.592)
CEO ownership			-0.036* (-0.1936)			-0.036* (-1.909)
CEO ownership*CAR			0.189 (0.776)			0.191 (0.784)
Insider Shareholding	-0.016** (-1.976)	-0.015* (-1.841)	0.004 (0.280)			0.004 (0.302)
Insider Shareholding*CAR		0.090 (0.901)	0.071 (0.529)			0.074 (0.545)
CEO Tenure	-0.039*** (2.402)	-0.039*** (-2.366)	-0.039*** (-2.211)			-0.038*** (-2.166)
CEOAGE	0.133 (0.285)	0.147 (0.313)	0.318 (0.630)			0.325 (0.642)
Target size to Acquirer size	0.014 (0.226)	0.009 (0.143)	0.012 (0.191)			0.019 (0.310)
Buy-hold return (post-merger)	-0.500*** (-3.880)	-0.505*** (-3.898)	-0.566*** (-4.102)	-0.498*** (-3.984)	-0.260 (-1.357)	-0.289 (-1.290)
Buy-hold return (post-merger) * MA Technique					-0.310 (-1.305)	-0.354 (-1.307)
Buy-hold return (pre-merger)	0.146 (0.733)	0.158 (0.785)	0.258 (1.251)			0.245 (1.182)
Percent concordant (%)	71.6	72	73.6	68.9	68.8	73.9
-2LogL	486.98	486.18	472.63	498.49	496.86	471.28
Pseudo R-square (%)	16.49	16.72	20.40	12.98	13.48	20.79
# of observations	390	390	390	390	390	390

*** Significant at 1% level;

** Significant at 5% level;

* Significant at 10% level.

Logit estimates are carried out based on CARs around different event windows. The results are not provided in the above table.

@ CEO AGE =1, if CEO's age ≥ 65 , =0, otherwise. In addition to AGE itself, we also use different age dummy variables CEO's age <60, 62-66, and >66. The results are all similar to the above table.

Table 8 Logit regression modeling the probability that the acquiring firm’s CEO is replaced after the acquisition

This table provides the results of a logit model in which the dependent variable is the transformed probability that the acquiring firm’s CEO is replaced after the acquisition. Both completed mergers and cancelled mergers are included in the logit estimates. The dependent variable is the transformed probability that the acquiring firm’s CEO was replaced after the acquisition. The independent variables include the abnormal stock return around acquisition announcement date (CAR [-1,1])#, a dummy variable that takes the value of 1 if the acquisition was withdrawn and zero otherwise (“Withdraw”), the product of CAR and Withdraw, a dummy variable equal to 1 if the acquisition is stock-based (MA Technique), the product of MA Technique and CAR, a dummy variable that takes the value of 1 if the CEO also is chairman of the board and zero otherwise (“Chairman”), the product of CAR and Chairman, the size of the acquiring firms’ boards of directors (“Board size”), the product of CAR and Board size, the percentage of the acquiring firms’ directors who are classified as “independent” (% Independent directors), the product of CAR and % independent, total shareholding by beneficial shareholders (Ownership Concentration), the product of CAR and Ownership Concentration, the percentage of equity held by the acquiring firm’s CEO (“CEO ownership”), the product of CAR and CEO ownership, insider shareholding, the product of CAR and Insider Shareholding, CEO tenure and the age of the acquiring firm’s CEO at the time of the acquisition (Tenure and CEOAGE[®]), the ratio of the target firm’s size to the acquiring firm’s size, the acquiring firm’s buy-and-hold stock returns during the three years after the acquisition (“Buy-Hold Return (post)”), and the acquiring firm’s buy-and-hold stock returns during the three years before the acquisition (“Buy-Hold Return (pre)”). T-statistics to test the significance of coefficients are shown in the parentheses.

Panel A

Dependent variable is transformed probability that acquiring firm CEO was replaced after the acquisition					
Intercept	0.027 (0.168)	-0.015 (-0.094)	-0.138 (-0.516)	0.011 (0.051)	0.037 (0.171)
CAR [-1,1]	-3.967*** (-3.089)	-5.769*** (-3.779)	-7.369*** (-2.141)	-5.788*** (-3.792)	-4.448* (-1.952)
Withdraw	-1.043*** (-4.349)	-0.871*** (-3.567)	-0.844*** (-3.466)	-0.873*** (-3.571)	-0.867*** (-3.54)
Withdraw*CAR		8.548*** (2.568)	8.614*** (2.581)	8.557*** (2.572)	8.462*** (2.504)
MA Technique			0.162 (0.638)		
MA Technique*CAR			1.636 (0.446)		
Chairman				-0.035 (-0.157)	-0.079 (-0.341)
Chairman*CAR					-2.117 (-0.766)
CEO Tenure	-0.053*** (-3.537)	-0.053*** (-3.557)	-0.051*** (-3.403)	-0.053*** (-3.474)	-0.053*** (-3.454)
CEOAGE	-0.327 (-0.793)	-0.349 (-0.847)	-0.358 (-0.865)	-0.297 (-0.710)	-0.289 (-0.691)
Target size to Acquirer size	-0.018 (-0.325)	-0.014 (-0.253)	-0.011 (-0.195)	-0.015 (-0.272)	-0.019 (-0.335)
Buy-hold return (post-merger)	-0.466*** (-4.125)	-0.480*** (-4.181)	-0.493*** (-4.281)	-0.475*** (-4.126)	-0.467*** (-4.058)
Buy-hold return (pre-merger)	0.305* (1.831)	0.299* (1.764)	0.292* (1.723)	0.295* (1.741)	0.303* (1.789)
Percent concordant (%)	73.6	74.5	74.4	74.4	74.6
-2LogL	628.48	621.43	623.80	620.75	620.16
Pseudo R-square (%)	19.23	20.78	20.07	20.73	20.86
# of observations	526	526	526	526	526

Table 8 (Continued)**Panel B**

Dependent variable is transformed probability that acquiring firm CEO was replaced after the acquisition						
Intercept	-0.396 (-1.261)	-0.266 (-0.818)	-0.386 (-1.109)	-0.361 (-1.003)	0.085 (0.446)	-0.061 (-0.312)
CAR	-5.817*** (-3.806)	-0.904 (-0.263)	-5.820*** (-3.808)	-4.859 (-1.256)	-5.649*** (-3.683)	-6.753*** (-2.744)
Withdraw	-0.902*** (-3.672)	-0.902*** (-3.653)	-0.871*** (-3.565)	-0.871*** (-3.566)	-0.861*** (-3.526)	-0.855*** (-3.504)
Withdraw*CAR	8.788*** (2.611)	9.563*** (2.773)	8.620*** (2.580)	8.669*** (2.592)	8.298*** (2.464)	8.149*** (2.397)
Board size	0.035 (1.429)	0.020 (0.758)				
Board size*CAR		-0.575 (-1.549)				
% independent directors			0.636 (1.208)	0.587 (1.054)		
% independent directors*CAR				-1.865 (-0.269)		
Ownership Concentration					-0.005 (-1.030)	-0.004 (-0.916)
Ownership Concentration*CAR						0.038 (0.583)
CEO Tenure	-0.053*** (-3.557)	-0.053*** (-3.533)	-0.053*** (-3.490)	-0.052*** (-3.483)	-0.052*** (-3.503)	-0.052*** (-3.470)
CEOAGE	-0.321 (-0.775)	-0.312 (-0.752)	-0.332 (-0.805)	-0.333 (-0.807)	-0.332 (-0.801)	-0.328 (-0.791)
Target size to Acquirer size	-0.007 (-0.135)	-0.008 (-0.153)	-0.013 (-0.240)	-0.013 (-0.244)	-0.007 (-0.133)	-0.012 (-0.209)
Buy-hold return (post-merger)	-0.517*** (-4.286)	-0.527*** (-4.340)	-0.497*** (-4.249)	-0.499*** (-4.253)	-0.486*** (-4.196)	-0.487*** (-4.193)
Buy-hold return (pre-merger)	0.310* (1.832)	0.334* (1.956)	0.299* (1.751)	0.301* (1.758)	0.304** (2.008)	0.307* (1.812)
Percent concordant (%)	74.7	75	74.5	74.6	74.6	74.7
-2LogL	619.40	616.96	619.97	619.90	620.03	619.69
Pseudo R-square (%)	21.22	21.74	21.09	21.11	20.89	20.96
# of observations	526	526	526	526	526	526

Table 8 (Continued)**Panel C**

Dependent variable is transformed probability that acquiring firm CEO was replaced after the acquisition					
Intercept	0.079 (0.475)	0.063 (0.372)	0.116 (0.650)	0.88 (0.462)	-0.169 (-0.301)
CAR	-5.784*** (-3.737)	-6.507*** (-3.693)	-5.653*** (-3.692)	-7.087*** (-3.489)	-7.228 (-0.987)
Withdraw	-0.850*** (-3.452)	-0.858*** (-3.490)	-0.871*** (-3.562)	-0.868*** (-3.555)	-0.871*** (-3.460)
Withdraw*CAR	8.886*** (2.645)	8.999*** (2.614)	8.547*** (2.541)	8.725*** (2.559)	9.642*** (2.719)
MA Technique					-0.028 (-0.105)
MA Technique*CAR					5.011 (1.211)
Chairman					-0.026 (-0.104)
Chairman*CAR					-1.844 (-0.600)
Board size					0.003 (0.117)
Board size*CAR					-0.531 (-1.293)
% independent directors					0.251 (0.413)
% independent directors*CAR					3.043 (0.428)
Ownership Concentration					0.002 (0.336)
Ownership Concentration*CAR					-0.010 (-0.133)
CEO ownership	-0.043*** (-2.938)	-0.040*** (-2.886)			-0.044*** (-2.494)
CEO ownership*CAR		0.168 (0.882)			0.111 (0.517)
Insider Shareholding			-0.014* (-1.864)	-0.012* (-1.720)	0.004 (0.389)
Insider Shareholding*CAR				0.103 (1.122)	0.081 (0.695)
CEO Tenure	-0.045*** (-2.980)	-0.045*** (-2.967)	-0.052*** (-3.447)	-0.051*** (-3.420)	-0.045*** (-2.817)
CEOAGE	-0.205 (-0.484)	-0.217 (-0.512)	-0.307 (-0.736)	-0.302 (-0.724)	-0.126 (-0.290)
Target size to Acquirer size	-0.009 (-0.160)	-0.008 (-0.141)	-0.004 (-0.070)	-0.008 (-0.138)	-0.009 (-0.163)
Buy-hold return (post-merger)	-0.516*** (-4.365)	-0.525*** (-4.402)	-0.504*** (-4.304)	-0.509** (-4.327)	-0.533*** (-4.331)
Buy-hold return (pre-merger)	0.336* (1.945)	0.349** (2.020)	0.301* (1.767)	0.314* (1.837)	0.397*** (2.241)
Percent concordant (%)	76.1	76.2	74.7	75.1	76.3
-2LogL	609.29	608.51	617.81	616.57	602.37
Pseudo R-square (%)	23.38	23.55	21.56	21.83	24.30
# of observations	526	526	526	526	526

*** Significant at 1% level;
** Significant at 5% level;
* Significant at 10% level.

Logit estimates are carried out based on CARs around different event windows. The results are not provided in the above table.

@ CEO AGE =1, if CEO's age ≥ 65 , =0, otherwise. In addition to AGE itself, we also use different age dummy variables CEO's age <60, 62-66, and >66. The results are all similar to the above table.