Acquisition Decisions and CEO Turnover: Do Bad Bidders Get Fired?

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Abstract

This paper investigates whether corporate control mechanisms discipline management who has made value-reducing acquisitions. The link between acquisition decisions and subsequent turnover of chief executive officer (CEO) is empirically examined. Results from event studies show significant differences in the stock market reaction surrounding the acquisition announcement between the sample of acquirers with post-acquisition CEO turnover and those without subsequent CEO turnover. The average cumulative abnormal returns around the acquisition announcement day are significantly negative for those firms that replaced their CEO after an acquisition occurred. Logit regression analyses provide strong evidence of a negative association between the acquiring firm's abnormal stock market performance due to the acquisition announcement and the probability of disciplinary CEO departure. Those CEOs who have deviated from shareholders' value maximization are more likely to be disciplined through internal corporate governance mechanisms. However, CEOs of firms that cancel an acquisition after observing a negative market reaction are less likely to be replaced subsequently.

Key Word: CEO, Turnover, Acquisition, and Control.

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I. Introduction

It has been widely recognized that a potential divergence of interests exists between managers and stockholders in modern corporations due to the separation of ownership and control (Berle and Means (1933), Jensen and Meckling (1976)). When a firm makes an investment decision, managers not only take into consideration the potential impact on shareholder wealth, but also are concerned with their personal benefits. Some investments are especially attractive from the perspective of managers: they contribute to the long-term growth of the firm, enable the managers to diversify the risk on their human capital, or improve their job security (Shleifer and Vishny (1990)). It is argued that when an investment provides managers with large personal benefits, they might be willing to pursue it regardless of the potential loss of shareholder value.

Corporate mergers and acquisitions are major, externally observable, and discretionary investments. Prior literature cites two competing arguments to explain the rationale of firms engaging in acquisition activities. On one hand, when the interests of corporate managers and shareholders are well aligned, managers undertake the acquisitions to increase shareholders' wealth. On the other hand, corporate managers may acquire another firm to pursue their own interests in the form of greater power, prestige, and enhanced remuneration associated with managing a larger firm (e.g. Jensen (1986), Roll (1986), Morck et al. (1990)). Existing evidence suggests that a majority of the corporate acquisitions undertaken in the past two decades have not resulted in shareholder wealth gains [1].

Several forces such as competitive labor and product markets, managerial compensation plans, the structure of equity ownership, effective monitoring of the corporate board, and the threat of external corporate control market have evolved to mitigate the manager-stockholder conflicts. These are the internal and external monitoring mechanisms on which shareholders rely to resolve agency problems. When the stock price of a firm deviates from profit maximization, the difference between actual and potential stock price signals the internal governance systems and external control market that

[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).

management is not maximizing shareholder value. In an efficient capital market, the stock prices around a merger or an acquisition announcement should incorporate all expected value changes with this managerial decision. The market should be able to discriminate between "bad" acquirers and "good" acquirers. Corporate decision makers who destroy shareholder wealth by acquiring or merging with another firm ought to be disciplined either by the external corporate control market or through internal control mechanisms.

The seminal paper by Mitchell and Lehn (1990) provides evidence that firms engaging in acquisitions that significantly reduce their equity value tend to become takeover targets subsequently, and firms making value-increasing acquisitions are less likely to become takeover targets. Their empirical results suggest that value-destroying firms tend to be penalized by the external control market. Prior research has argued that internal and external control systems are substitutes for each other (the "substitute hypothesis" by Fama and Jensen (1983) and Williamson (1983)). The disciplinary influence exerted by takeovers on top management, characterizes the takeover market as the "court of last resort" to replace ineffective management (Jensen (1986)). However, as documented in Comment and Schwert (1995) and Schwert (2001), disciplinary takeover activities declined after the 1980s, especially, since most of the acquisitions in the 1990s were "friendly" in nature (Schwert (2001)). A natural question is: In the absence of an active external control market, are there other control mechanisms in existence to discipline the management who does not maximize shareholder value? In other words, when "bad" acquirers are not easily acquired by another bidder subsequent to their value-reducing investment, will internal control mechanisms discipline the decision makers' behavior? This question is especially relevant when the size of the firm keeps increasing through mergers and acquisitions, and the merger integration is very costly and time-consuming, thus, in the future there will be fewer potential buyers for a larger firm and greater difficulty to finance large acquisitions (Comment and Schwert (1995)).

Following Mitchell and Lehn (1990), this study tries to answer the following research questions: In addition to the external control market, are there any internal control mechanisms existing to discipline

or reverse the past errors that corporate executives have made? Do we observe management turnovers after they engage in acquisitions that have destroyed shareholder wealth?

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 the time when Quaker Oats itself was a speculated takeover target. A stated motive for Quaker Oats to acquire Snapple Beverages is "You either swallow or you get swallowed"[2]. On the day of the acquisition announcement, Quaker's stock price suffered an abnormal declined of 10.48%, resulting in a loss of $493 million for Ouaker's shareholders during one day.[3] This negative market reaction to the acquisition announcement did not stop the transaction from completion. However, less than 3 years later, the chief executive officer (CEO) of Quaker Oats, William Smithburg, was pressured by the angry shareholders to step down. The public attributed this forced CEO departure to the disastrous acquisition of Snapple Beverages. If the market reaction around the acquisition announcement had already incorporated the shareholders' valuation of this acquisition, should Quaker's management have cancelled this value-destroying transaction? A similar example is Qwest Communications' acquisition of U.S. West in 1999. The stock price of Qwest suffered an abnormal decline of 23.52% net of market. Qwest's CEO, Joseph Nacchio, was forced to depart in June 2002.

To determine whether Quaker Oats and Qwest cases generalize to a large sample of acquisitions, I examine the stock price reactions to acquisition announcements and subsequent management turnover based on two samples of firms: the primary sample consists of 159 firms that completed acquisitions during the period from 1990 through 1997 and are still stand-alone firms at the end of year 2001; and the control sample consists of 60 firms that cancelled their acquisitions after the public announcement during the same period of time. Proxy statements and Dow Jones News Retrieval are used to track the career changes of the acquiring firm's CEO following the acquisition. Sixty-one out of 159 CEOs were replaced

[2] By David Craig, November 3rd. 1994, USA Today.
[3] Over a narrow event window surrounding the announcement (5 trading days before the announcement through 1 trading day after the announcement), Quaker's stock price declined 10.14% with $412 million shareholders' loss. Over a longer window surrounding this announcement (5 trading days before the announcement through 20 trading days after the announcement), Quaker's stock price declined 18.96% with shareholders' loss in the amount of $958 million.

following the acquisitions. These CEO replacements are not due to the normal retirement or succession plan, but they are disciplinary departures[4]. Twenty-six of the remaining 98 CEOs left their firms due to normal retirement[5], and the other 72 still hold the position as CEO. The incidence of subsequent CEO turnovers is much lower for the control sample – only 8 firms replaced their CEO following the acquisition withdrawal.

One important result in this paper is that the sample of 61 firms with non-routine CEO turnover following the completed acquisition have more significant negative cumulative abnormal stock returns over various event windows around the acquisition announcement than those 98 firms which do not experience disciplinary CEO departures. However, this is not the case for the control sample. Logit estimates of the effect of value-decreasing acquisitions on the probability of subsequent CEO turnover show a strong significant negative association between the stock market reaction to the acquisition announcement and the likelihood of CEO turnover. These results still hold after controlling for the CEO's age, tenure, control power (CEO and Chairman of the board being held by one or more individuals), and relative size of the target firm to the acquiring firm. The decision to withdraw a value-reducing acquisition decreases the likelihood of forced CEO departure. This seems to suggest that the executives' quick reversal of a decision error tends to reduce the probability of disciplinary replacements.

This paper focuses on the CEO turnover instead of the management team turnover for the following three reasons: 1) the CEO is the primary decision maker when the firm initiates any major corporate transaction; 2) the decision to replace an "unqualified" CEO is among the most important decisions made by the board of directors; 3) a less important but quite practical reason to focus on CEO turnover only is the relative ease of data and information collection for the CEO than for the whole management team.

This study complements the existing literature on the effectiveness of corporate governance in disciplining value-destroying managerial behavior. The implications drawn from the empirical results of

[4] Disciplinary departure is defined in Section IV.A.
[5] Normal retirement is defined in Section IV.A.

this study serve as guidance to managerial decision-making – the management whose behavior deviates from shareholder value maximization is likely to be disciplined through internal control mechanisms. It also provides further evidence suggesting that capital market is efficient in that the stock prices incorporate the information and valuation of the management decisions associated with the acquisitions. Furthermore, this research provides findings suggesting that management who would reverse their decision error in a timely manner faces lower probability of being disciplined.

Section II covers literature review and the testing hypotheses; Section III describes the sample selection and data collection; Section IV explains the empirical design and methods; Section V discusses the empirical results; Section VI draws the conclusions of the paper.

II. Literature Review and Testing Hypotheses

II.A. CEO Turnover and Firm Performance

Both academia and the business press have focused considerable attention on corporate management succession. One potential reason for this focus is that changes in management signal changes in future corporate decisions, perhaps involving reversals of past errors, or the establishment of new policies that reflect the differing viewpoints and abilities of management. A great deal of research focuses on examining the relation between firm performance and the probability of CEO turnover. A negative relation between the likelihood of nonroutine CEO turnover and firm performance is documented in the 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). These observed negative associations between firm performance and the probability of management turnover and significant improvements in operating performance subsequent to the forced turnover suggest that the board of directors is effective monitors of management.

II.B. CEO Turnover and Corporate Transaction

Empirical research documents that management turnover is abnormally high around unusual financial events, such as bankruptcy or proxy fight (Gilson (1989)(1990), DeAngelo and DeAngelo (1989)). A positive relation between management turnover and divesture of recently acquired divisions is supported in Weisbach (1995).

Many studies examine the target's executive turnovers due to mergers and acquisitions. Martin and McConnell (1991) document a strong link between top executive turnover and the pre-takeover performance of the target firm. Kini et al. (1995) also report evidence suggesting that the likelihood of the target firm CEO turnover subsequent to corporate takeovers is negatively related to the pre-takeover firm's market-related performance. The sample in Kini et al. (1995) concentrates on those targets with insider-dominated boards of directors and they imply that takeovers serve as a substitute for effective board monitoring. Hadlock et al. (1999) document high rates of management turnover following bank acquisitions. Harford (2000) studies the career changes of target firms' directors due to takeovers. His paper suggests that external control markets penalize directors by way of financial loss, loss of current board seats and fewer future directorships when they fail as monitors for shareholders.

II.C. CEO Turnover with Internal and External Control Mechanisms

Previous literature suggests that the decline in takeover activities decreases the disciplinary pressure on managers and this in turn leads to a decrease in management turnover. On the other hand, some studies argue that alternative mechanisms that control agency problems substitute for takeover activity, so that there should be no decrease in the amount of disciplinary pressure on managers. Hadlock and Lumer (1997), Mikkelson and Partch (1997), and Denis and Kruse (2000) examine the frequency of top executive turnover for evidence on whether internal and external monitoring mechanisms are complements or substitutes. Mikkelson and Partch (1997) and Hadlock and Lumer (1997) report evidence that the relation between firm performance and top executive turnover is weaker during the

period when the threat of takeover is low. This evidence suggests that top managers face reduced disciplinary pressure in periods when there is less takeover activity. Denis and Kruse (2000), however, find no decline in the frequency of internally precipitated forced turnovers and that the level of restructuring activity was unchanged at firms that experienced sharp declines in operating performance after the level of takeover activity declined in the late 1980s. It is difficult to draw a strong conclusion from the evidence reported in these studies. The result reported by Hadlock and Lumer is for the period (1933 to 1941) in which internal corporate governance structures were considerably different from those that we observe today. The Mikkelson and Partch and Denis and Kruse studies examine relatively short periods of time (1984 to 1993 and 1985 to 1992, respectively).

More recently, Huson et al. (2001) study the evolution and interrelation of internal and external monitoring mechanisms during the period from the 1970s to the mid-1990s. They document an increased frequency of forced CEO turnovers and outside succession, as well as a stable sensitivity of forced turnover to firm performance, in spite of the changing internal and external control environment.

Several papers examine the relation between different governance structures and the sensitivity of executive turnovers to firm performance. Weisbach (1988) maintains that insider directors are more likely to be less effective monitors than outside directors because it can be costly for them to challenge the CEO to whom their careers are tied. Borokhovich et al. (1996) find that outside directors are also more likely to replace a fired CEO with an executive from outside the firm. Perry (1999) reports that the likelihood of CEO turnover following poor stock return performance is significantly greater when the directors of independent boards receive incentive compensation than when they do not. Goyal and Park (2002) provide empirical evidence showing that the sensitivity of CEO turnover to firm performance is significantly lower when the CEO and Chairman duties are vested in the same individual. Their results are consistent with the view that the lack of independent leadership in firms that combine the CEO and Chairman positions makes it difficult for the board to remove poorly performing managers. Kang and Shivdasani (1995), based on a sample of Japanese firms, document that the sensitivity of nonroutine

turnover to earnings performance is higher for firms with ties to a main bank than for firms without such ties.

In addition to the threat of takeovers and internal control mechanisms, Jensen (1993) and Agrawal and Knoeber (1996) point out that managers face external pressure from contractual commitments to debt holders, monitoring by active investors, product market competition, and initiatives in the legal and political sectors. As shown by Gilson and Vetsuypens (1993) in their study of financially distressed firms, high levels of financial leverage can lead to increased managerial discipline. Pound (1992) argues that as conditions change in the market for corporate control, entrepreneurs develop new approaches to corporate governance. Recently, these innovations have taken the form of activist institutional investors who develop an ongoing dialogue with managers and apply pressure on directors to discipline poorly performing managers. These alternative forces potentially compensate for reduced disciplinary pressure from takeover activities.

Parrino (1997) also studies the relation between industry structure and the likelihood of CEO turnover. He finds that forced turnover and intra-industry appointment increases with industry homogeneity due to less costly replacement. DeFond and Park (1999) find that the frequency of CEO turnover is greater in highly competitive industries than in less competitive ones.

II.D. Managerial Incentives and Acquisition Performance

There is considerable evidence suggesting that making acquisitions is a mixed blessing for the shareholders of acquiring companies. Average returns to bidding shareholders from making acquisitions are at best slightly positive, and significantly negative in some studies (Bradley et al. (1988), Roll (1986)). The potential motives of acquiring firm managers to engage in a non-value maximizing merger or acquisition could be: when the managers were not properly diversified, they would diversify the holdings of the firm to reduce the risk to their human capital even when diversification offers few if any benefits to the shareholders (Amihud and Lev (1981)); managers would also try to enter new lines of

business to assure the survival and continuity of the firm even when shareholder wealth maximization dictates shrinkage or liquidation (Donaldson and Lorsch (1983)); managers honestly overestimate their abilities to manage certain kinds of businesses, so they end up overinvesting in these types of businesses (Roll (1986)); when poor performance of the firm threatens managers' jobs, they have an incentive to enter new businesses at which they might be better (Shleifer and Vishny (1990)); if managers have a strong aversion to being acquired, they engage in unprofitable defensive acquisitions (Gorton et al. (2000)); finally, bad managers might make bad acquisitions simply because they are bad managers.

Jensen (1986) emphasizes that managers' compensation is often a function of the size of the firm, so that in the absence of external monitoring, managers may undertake projects that increase firm size but not profitability. Khorana and Zenner (1998) examine the role of executive compensation in corporate acquisition decisions. They find that if good acquisitions can be separated from bad acquisitions, good acquisitions increase compensation, whereas bad acquisitions do not have a positive effect on compensation. Datta et al. (2001) document a positive relation between the acquiring managers' equity-based compensation and stock price performance around and following an acquisition announcement.

II.E. Testing Hypotheses

Related to but different from current research, this study focuses on the changes in the acquiring firm's management after they engage in a major acquisition. If management creates shareholder value by making an acquisition, they should be rewarded by both the firm and the market. On the contrary, if their behavior is value-decreasing, the management should be disciplined by the external control market and internal governance systems. If the firm's past value-reducing acquisitions enlarge the scope of the firm to the extent that it becomes very difficult to be taken over in the external control market, other monitoring mechanisms should respond to increase the shareholder value by improving the managerial decision-making process. Stronger monitoring from the board of directors and shareholder activism are

expected to take place to complement the absence of the discipline from corporate takeovers. Replacing inefficient management is one of the solutions to prevent the firm from repeating the same decision errors. **Thus, I expect to observe a higher frequency of management turnover following value-reducing acquisitions than value-enhancing acquisitions.**

In an efficient capital market, the adjusted stock price around an acquisition announcement should incorporate any expected value changes associated with this managerial decision. The market should be able to discriminate between "bad" acquirers and "good" acquirers. Thus, the stock performance around the announcement of a merger or an acquisition should be more negative for the "bad" acquirers than for the "good" acquirers. Firms with more negative abnormal stock returns around the 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.**

When management withdraws an acquisition after observing a negative market reaction to the acquisition announcement, this reversal of a decision error should not lead to their replacement, all else equal. Therefore, the above proposed hypothesis should not hold for the sample of cancelled acquisitions. **Cancellation of a value-reducing acquisition is expected to reduce the likelihood of a disciplinary CEO turnover.**

III. Sample and Data

The initial 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) Announcement dates are between 1/1/1990 and 1/1/ 1998; (2) Both acquiring and target firms are publicly traded; (3) Deal value will be equal to or higher than 1 million U.S. dollars; (4) Forms of the deals are mergers and acquisitions; (5) The status of the deal is "Complete". In total, these criteria produce 2088 transactions. I also require that all the 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, I exclude that transaction, leaving 803 acquisitions.

The focus of this study is to document CEO turnover after the corporate event of a merger or an acquisition. Among the 803 acquiring firms, 253 firms were subsequently acquired by other firms (Mitchell and Lehn (1990) document that acquirers who made value-reducing acquisitions are subsequently acquired by other firms), and 82 firms filed for bankruptcy. Excluding these firms left 468 existing acquiring firms. Furthermore, I impose two other criteria: (1) transaction value is larger than $100 million; (2) the relative size of the target firm to acquiring firm is at least 10%. The rationale of imposing these two criteria 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 gives us 186 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. I had to exclude 27 additional acquiring firms that have missing proxy statements. The final sample contains 159 acquisitions.

In addition to the above primary sample, a control sample of cancelled acquisitions was constructed. Again, the withdrawn deals are initially identified though SDC's Mergers and Acquisitions database. 570 withdrawn deals are extracted based on the following criteria which parallel the criteria for the primary sample: (1) Announcement dates are between 1/1/1990 and 1/1/ 1998; (2) Both acquiring firms and target firms are publicly traded; (3) Deal value will be equal to or higher than 1 million U.S. dollars; (4) Forms of the deals are mergers and acquisitions; (5) The status of the deal is "Withdrawn". Only 147 cancelled acquisitions meet the following requirements: the acquirers be listed in both CRSP and COMPUSTAT; the relative size of the target to the acquirer is at least 10%; the acquisition

transaction value is equal to or above $100 million. Among the 147 firms, 24 firms filed for bankruptcy, and 63 firms were acquired by other firms within 2-5 years after the cancelled acquisitions. The remaining 60 firms are still stand-alone entities at the end of year 2001.

Appendix A and Appendix B provide a summary of the sample and data information for the sample of completed acquisitions and the sample of cancelled acquisitions respectively.

IV. Empirical Method

IV.A. Definition of CEO Turnover

Some researchers (Weisbach (1988), Mikkelson and Parch (1997), Denis et al. (1997)) argue that there is no reliable way to classify the motive for managerial turnover, i.e. it is difficult to distinguish between disciplinary turnover events and normal retirements. There are two definitions of CEO turnover in the literature. The first definition of CEO turnover does not attempt to classify management turnover into categories such as normal and forced or 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. As usually the replacement of a CEO who is close to retirement more likely reflects turnover that is not disciplinary, CEO age is included as a control variable in those analysis.

The second definition of CEO turnover follows Parrino (1997) and Huson et al. (2001). If the news reports that the CEO is fired, forced to step down, or departs due to unspecified policy differences, this turnover is classified as disciplinary. 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 elsewhere, the CEO turnover is still

classified as a disciplinary turnover. These circumstances surrounding the turnovers are ascertained from Dow Jones News Retrieval services and the proxy statements.

The empirical analysis is mainly based 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 turnover. On average, the disciplinary CEO departure as defined above took place during two to three years after the acquisition or after the withdrawal of the acquisition.

IV.B. Stock Market Analysis of Acquisitions

This paper employs the event-study methodology to measure the stock price effects associated with the announcement of an acquisition. Stock returns are provided by CRSP. The abnormal return for each acquiring firm is estimated as:

$$AR_{it} = R_{it} - \alpha_t - \beta_t R_{mt}$$

Where R_{it} is the return to firm *i* at time *t*, R_{mt} is the return to the CRSP value-weighted index of the market portfolio, and α_t and β_t are market model parameter estimates from 220 through 21 trading days preceding the announcement date for the acquisition.

The announcement date for each acquisition is the first date reported from the SDC Mergers and Acquisitions database, crosschecked with Dow Jones News Retrieval service. Daily abnormal returns across firms in each of the sub-samples (e.g. acquirers without subsequent CEO departures and acquirers with CEO departures following the acquisitions) is averaged to obtain the portfolio abnormal return, $AR_t = \sum_{i=1}^{N} AR_t / N$, where *N* is the number of firms in each portfolio of interest. *CAR* is the cumulative abnormal return over different event windows, for portfolio, $CAR = \sum_{t=1}^{T} AR_t$, and for individual firm, $CAR_i = \sum_{t=1}^{T} AR_{it}$, where *T* is the length of the event window. The event windows covered in this study are: (1) the AR for the acquisition event date [0]; (2) 1 day before the event date through 1 day after the

event date, [-1, 1]; (3) 5 days before the event date through 1 day after the event date, [-5,1]; (4) 5 days before the event date through 40 days after the event date, [-5,40]; and (5) 20 days before the event date through 40 days after the event date [-20, 40]. In the absence of abnormal performance, the expected value of the AR and CAR are equal to zero. 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 ($\sigma_{AR} = \left\{\sigma^2\left[1+\frac{1}{L}+\frac{(R_{mt}-\overline{R}_m)^2}{CSSR_m}\right]\right\}^{1/2}$, where σ^2 is the estimated residual variance for the estimation period, L is the number of observations in the estimation period, $\overline{R}_m$ is the estimation period mean of the market return, 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}/σ_{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.

The same event-study methodology is applied to measure the stock performance around the announcement date and withdrawal date for the control sample of cancelled acquisitions.

IV.C. Do Value-reducing Acquisitions Increase the Likelihood of CEO Turnover?

To examine the effect that value-reducing acquisitions have on the probability of CEO turnover, the following logit model is constructed:

$$\ln\left[\frac{prob(CEOSubsequentTurnover)}{1-prob(CEOSubsequentTurnover)}\right] = \alpha + \beta \times X ,$$

X is the vector of the independent variables, which includes the stock market abnormal performance of acquiring firms surrounding the acquisition announcements and other control variables, which are explained in the following paragraphs.

IV.D. Control Variables

Prior Acquisition Performance: A negative relation between the likelihood of nonroutine top executive turnover and firm performance is documented in previous work [6]. Management's departure subsequent to the acquisition might be the direct consequence of the firm's poor performance prior to the acquisition announcement. In order to examine the impact of the acquisition decision on management, the firm's performance prior to acquisition is measured and included in the regression analysis. Buy-and-hold returns 3 years before the acquisition announcement, Return on Assets (ROA) and Operating Margin are calculated to serve as the performance measures.

CEO age: Weisbach (1988), Murphy and Zimmerman (1993), and Goyal and Park (2002) find a strong positive relation between CEO turnover and CEO age. On the other hand, CEO age is also associated with longer tenure and potential greater control power within the firm. Older CEOs might have stronger influence on the board decision, thus reducing the likelihood of CEO turnover than younger CEOs. Since the sample consists of both the firms which replaced their CEO subsequent to the acquisition and the firms whose CEO was not forced to step down, CEO age at the year of the acquisition is included as a control variable.

CEO tenure: Tenure is measured as the number of years the CEO had held the position as of the year of the acquisition. CEO tenure could affect CEO turnover either positively or negatively. Tenure could be an indicator that the CEO is close to retirement; if so, then, CEO tenure and CEO turnover are likely to be positively related. On the other hand, CEOs with longer tenure could have established a power base over time, and this implies that CEO turnover could be negatively related to CEO tenure.

Leadership structure: Jensen (1993) points out that when the CEO also holds the position of the chairman of the board, the internal control system fails, as the board cannot effectively perform its key functions including those of evaluating and replacing the CEO. Similarly, Fama and Jensen (1983) argue that the concentration of decision management and decision control in one individual reduces a board's

[6] 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.

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. It seems that leadership structure matters in disciplining top management. I include a dummy variable which is equal to 1 if the CEO is also the Chairman, and equal to zero otherwise.

Stock Ownership: Denis et al. (1997) argue that a board's ability to monitor the CEO is also affected by the firm's ownership structure. CEO stock holdings, total officers and directors' stock ownership, fraction of shares owned by blockholders owning 5% or more, and institutional ownership are potential ownership structure measures to be included to control for its effect on the likelihood of CEO turnover. In regards to the major interest in this paper as well as the potential endogeniety of ownership structure (Demsetz and Lehn (1985)), ownership structure is not incorporated in the current analysis.

CEO age, tenure, and firm's leadership structure are measured as the value at the time when the firm made the acquisition. Since this paper focuses on CEO turnover after the firm has engaged in a major acquisition, factors affecting the likelihood of CEO turnover, such as industry competition (Defond and Park (1999)), industry homogeneity (Parrino (1997)), and the structure of corporate governance, which has been the subject of numerous studies, are not included in the current empirical testing. I do include the relative size of the acquisition transaction, which is measured as the market value of the target firm divided by the market value of the acquiring firm, to examine whether management of the firm, which acquired a larger target relative to their own firm, is more likely to be replaced subsequently.

V. Empirical Results

V.A. Sample Descriptive Statistics

Table 1 and Table 2 report the sample descriptive statistics. Table 1 shows the acquisition transaction characteristics for the total sample, the sample with subsequent CEO turnover, and the sample without subsequent CEO turnover. For each sample, the means and medians of the acquiring firm value, target firm value, transaction value of the acquisitions, and the relative size of target firm to acquiring

firm are calculated. The average relative size of the target firm to the acquiring firm is about 45%. The value of the transaction has a mean of $1,640 million and a median of $549 million. As mentioned before, the sample only includes large acquisitions with the relative size being greater than 10%. The relative size of the target to the acquirer has a higher mean and median value for the firms in the turnover sample than those for the firms in the non-turnover sample. This seems to imply that there is an association between CEO turnover and the relative size of the target firm to the acquiring firm. In terms of the transaction value, the turnover sample has a larger mean and median. The same is true for the mean and median of acquiring firm values and target firm values. However, these differences in the mean and median between the CEO turnover sample and CEO non-turnover sample are not significantly different from zero[7].

Table 2 provides the statistics of CEO characteristics for the total sample, the sample of acquiring firms that incurred on subsequent CEO turnovers, and the sample of acquiring firms that did not experience subsequent CEO turnover. Overall, CEOs of the total sample have a mean and median age of 54. On average, about 76% of the CEOs in the sample also hold the position of Chairman of the board. Their average tenure is close to 8 years. This is the length of time that the person held the CEO title prior to the acquisition announcement. When we compare the two subsamples, CEOs who were subsequently replaced after engaging in the acquisition are significantly younger, and have significantly shorter tenure. Among the CEOs of the turnover sample, there are significantly fewer CEOs who are also Chairman of the board. 84% of the CEOs in the non-turnover samples are also chairmen of the board. Results from Table 2 show that there exist significant differences in CEO characteristics between those CEOs who were subsequently replaced and those who did not experience forced turnover following the acquisition. These statistics also suggest that CEO's age, tenure and the leadership structure of the acquiring firm are the potential factors that impact the likelihood of management changes after the corporate acquisition.

[7] T-statistics show that the difference in means is not significantly different from zero. Z-statistics of Wilcox rank sum test show that the difference in medians is not significantly different from zero.

Table 3 reports firm performance prior to the acquisition announcement. Both market based and accounting based performance measures are calculated for each firm. Mean and median comparisons for both buy-and-hold returns and returns on assets show that there is no significant difference in firm performance between the firms experiencing disciplinary CEO departure and the firms without forced CEO turnover. However, those firms, which replaced their CEO after the acquisition, have significantly lower operating margin (measured as operating income divided by sales) than other firms. There is no consistent evidence to support the notion that one subsample of firms underperforms the other subsample.

V.B. Stock Price Performance of Acquiring Firms

Table 4 reports the announcement day abnormal return (*AR*) and corresponding cumulative abnormal returns (*CARs*) for different event windows around the announcement of acquisition by each of the samples. Z-statistics are included in parentheses and the percentages of positive *ARs* (*CARs*) are listed below the Z-statistics. The announcement day *AR* corresponding to the acquisitions made by the total sample is –0.69% and is statistically significant at 1% level. The *CARs* corresponding to the other four event windows range from –2.53% [-5, 40] to -0.73% [-5, 1]. *CAR* for [-1, 1] is still significant at 1% level, and *CARs* for [-5, 1] and [-5, 40] are only marginally significant. *CAR* for [-20, 40] is not significant.

Table 4 also reveals that the stock price reaction associated with the announcement of the acquisition made by firms in the CEO turnover sample differ significantly from the stock price reaction associated with the announcement of acquisition made by firms in the non-CEO turnover sample. The *AR* on the announcement day of the CEO turnover sample is –2.51%, which is statistically and 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. For the sample which did not experience subsequent CEO turnovers, the *AR* on the announcement day is 0.45%, and is

statistically insignificant. The *CARs* are all positive and insignificantly 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 which experienced a positive stock price reaction to the acquisition announcement, compared with the non-CEO turnover sample and the total sample.

The empirical results from Table 4 show that the stock market negatively values acquisitions by firms that replace their CEO following the transaction, while positively valuing acquisitions by firms that did not experience CEO turnover due to their investment in the acquisition. 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]. The graph provides a meaningful piece of evidence that the stock market is able to tell "bad" acquisitions from "good" acquisitions. The stock prices reacted more positively to acquisition announcements by the sample without CEO turnover than to the acquisition announcements by the sample with CEO turnover.

A negative market reaction to an acquisition announcement should be interpreted as a strong signal by the firm's management – have they made the right decision? Those decision makers who are able to identify and reverse the error by stopping a non-value increasing transaction appear to enhance their creditability and rescue their career. The control sample of cancelled acquisitions was constructed to examine this question. 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 abnormal returns around the announcement of the acquisition withdrawal. There are 60 firms in the control sample that are still independent firms, with only 8 CEOs being replaced 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, the stock market did react to the announcement of the acquisition cancellation by adjusting the firm value upwards. Figure 2 shows the differences in *CARs* over the event window [-5, 40] for the primary sample and 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 acquisition withdrawal announcement is less negative compared with the acquisition announcement.

V.C. Stock Market Reaction to Subsequent CEO Turnover Announcement

I also carried out event study to examine the stock price performance of the acquiring firm around the CEO turnover announcement. Figure 3 graphically depict the stock price reaction to CEO turnover announcement for the sample of acquiring firms that experience CEO disciplinary departures. The average cumulative abnormal returns of the 61 firms exhibit slight upward trend around the announcement date; however, they are not significantly different from zero. After day 15, there is consistent upward trend in the average accumulative abnormal returns. The average cumulative abnormal returns are significantly positive twenty-five days after the CEO turnover announcement. The market react positively to the news of CEO departure, however, there is always uncertainty in terms of the future of the firms. If this CEO did not do his job in the past, should the investors have the faith in the board to select another CEO who will do the right thing? When there is more information is released to the market, the investors start to adjust their valuation of the firm. This is when we observe the positive trend in the stock price performance fifteen days after the CEO departure announcement. I have also calculated the correlation coefficients between the cumulative abnormal returns (CAR) of the acquiring firms around acquisition announcements and the cumulative abnormal return (CAR) of the acquiring firms around the announcements of CEO turnovers over various event windows. Results are shown in Table 6. The coefficients are negative for CAR (0, 0), CAR (-1, +1) and CAR (-5, +1). The more negative of the stock market reactions to the acquisition announcement, and more positive of the stock market reactions are to the CEO departure. Overall, there is evidence suggesting that CEO turnover has a positive impact on the stock price performance.

V.D. Do Value-reducing Acquisitions Increase the Likelihood of CEO Subsequent Turnover?

Have the managers who made "bad" acquisitions been disciplined? Mitchell and Lehn (1990) document that value-reducing acquisitions increase the probability of firms becoming a takeover target. This study is trying to document the effect of "bad" acquisitions on the probability of CEO's subsequent turnover. Table 7 reports the results of logit estimation based on the equation of $\ln[\frac{prob(CEOSubsequentTurnover)}{1-prob(CEOSubsequentTurnover)}] = \alpha + \beta \times X$. The firms included in these regressions are those in the primary sample with completed acquisitions. The dependent variable is the transformed probability that the acquiring firm CEO was replaced subsequent to the acquisition. Abnormal stock returns around the acquisition announcement for the different event windows ([0] in Panel A, [-1, 1] in Panel B, [-5, 1] in Panel C, [-5, 40] in Panel D, and [-20, 40] in Panel E) are included in the logit model to examine whether the market reaction to the acquisition announcement impacts the likelihood of the CEO being replaced. Other control variables are also included in the logit regressions, such as CEO age, CEO tenure, the leadership structure (whether the CEO also holds the title of Chairman of the board), the firm performance prior to the acquisition, and relative size of the acquisition.

Panel A in Table 7 reports the estimation results of logit regression when the abnormal stock return is measured on the date of the announcement. These results reveal that the likelihood of the CEO being replaced after making an acquisition is significantly and inversely related to the abnormal stock performance on the announcement date. The estimated coefficients in all the equations in Panel A are negative and significant at 1% level. The abnormal stock return itself explains 10.34% of the variation in the dependent variable. This is consistent with the hypotheses that CEOs who have made "bad" acquisitions are more likely to be replaced subsequently. Market is able to distinguish "good" acquisitions from "bad" ones. The dummy variable for leadership structure shows a significant negative coefficient in all the equations. This implies that when the CEO is also the Chairman of the board, he is less likely to be replaced. This is consistent with the findings of the recent paper by Goyal and Park

(2002). Concentration of decision management and decision control in one individual reduces a board's effectiveness in monitoring top management. CEO age is also negatively related to the probability of being replaced. The coefficient is significantly different from zero. Age here is measured as the CEO's age when the acquisition was made. In my definition of CEO turnover, I already control for CEO age by defining a voluntary departure if the CEO is close to or above age 65. The result here indicates, controlling for the possibility of voluntary departure, that CEOs who made acquisitions at an older age seem to face less of a probability of being replaced. Coefficient of CEO tenure in all regressions turns out to be negative, but not significant when tenure is entered into the equation with age. This is due to the potential correlation between age and tenure. The relative size of the target firm to the acquiring firm of the acquisition is not significant. The firm's performance prior to the acquisition as measured by both stock returns and accounting returns is not significantly related to the likelihood of CEO turnover. This adds support to the hypothesis that the value-reducing acquisition is a major determinant of CEO's subsequent turnover. The relative size of the transaction does not impact the career path of the CEO in terms of management discipline. It is how much value management creates or destroys for the shareholders that matters. Panel A also shows that the predicted probability ranges from 62% to 73%, with Pseudo R-square from 10% to as high as 27%.

Panel B in Table 7 displays the logit estimate results when the abnormal stock return is calculated as the cumulative abnormal return with the event window [-1, 1], and day 0 is the announcement date. Similar results are revealed in this panel as in Panel A. The cumulative abnormal return from one day before the acquisition announcement to one day after the acquisition announcement is negatively associated with the likelihood of subsequent CEO turnover, and the coefficient is significant in all the equations. As the event window is expanded, the same results are obtained in terms of the relation between the stock market reaction to the acquisition announcement, i.e. the relation between the shareholders' valuation of the acquisition transactions and the likelihood of later CEO turnover. Similar conclusions can be reached on the significance of these control variables. Panel C provides the results of logit estimates when the event window is [-5, 1], and Panel D and Panel E report the logit regression

results based on the cumulative abnormal return under the event windows of [-5, 20] and [-20, 40] respectively. Again, the cumulative abnormal returns over the different event windows are all significantly related to the probability of CEO turnover. The coefficients are negative and robust to the change in the length of the event windows. The dummy variable indicating if the CEO is also the chairman of the board continues to be negative and significant. CEOs who are also Chairman of the board are less likely to be replaced, controlling for the abnormal stock price performance. This is again consistent with the view that the CEO's control power within the organization plays an important role in his career continuance. CEO age and tenure at the time of the acquisition are still negatively related to the probability of the CEO's subsequent turnover. The likelihood of a forced CEO departure is not impacted by the firm's pre-acquisition performance as well as the relative size of target firm to the acquiring firm.

Table 8 reports the results of logit estimates of CEO turnover based on the control sample of cancelled acquisitions. In Panel A, the abnormal stock return is measured around the acquisition announcement. No significant negative relation between the stock market reaction and the following CEO departure is supported for the sample of cancelled acquisitions. All of the control variables are insignificant. The negative market reaction around the acquisition announcement results in the withdrawal of the transaction, but not the later management changes. Panel B examines whether the stock performance around the withdrawal date is able to predict the future CEO departure. There are no significant results revealed in this set of regressions. The stock market reaction to the announcement of the acquisition withdrawal has no effect on the CEO's retention versus departure.

In order to explore whether the action of reversing a decision error by withdrawing a value-decreasing acquisition reduces the probability of a disciplinary CEO departure, Table 9 provides the logit regressions based on the combined sample of completed and cancelled acquisitions. The dummy variable "Withdraw Dummy" is created to indicate whether the acquisition is cancelled. The interaction between the abnormal stock return around the acquisition announcement "CAR" and the "Withdraw Dummy" is included in the regressions to study the impact of the acquisition cancellation. The stock market reaction to the acquisition announcement is still significantly and negatively related to the likelihood of CEO

turnover after controlling for the effect of the acquisition cancellation. The coefficient of Withdraw Dummy is negative and significant in all the equations. These are true when the stock market reaction is measured within different event windows. Acquisition cancellation thus reduces the negative association between the abnormal stock returns and the likelihood of a forced CEO departure.

In sum, the empirical results of this study show strong support for the hypothesis that CEOs who operate their firms in ways that do not maximize shareholders' value are to be disciplined. CEOs who have made value-decreasing acquisitions are less likely to escape the disciplinary actions of the external and internal control mechanisms. The stock market reaction to the acquisition announcement is more negative for the sample of acquiring firms whose CEOs are replaced due to the "bad" acquisitions than for the sample of acquiring firms whose CEOs continue to manage the firm. Changes in shareholders' value due to the acquisition announcement do a very good job in predicting later turnovers of the acquiring firm's management. These results still hold after controlling for the CEO's age, tenure, control and decision powers, firm's pre-acquisition performance, the possibility of acquisition cancellation, and the size of the transaction.

VI. Conclusions and Discussions

Academic research as well as the public press has paid a great deal of attention to whether the management of public corporations creates value for shareholders when they engage in acquisitions. Previous work has explored the consequences of management engaging in value-decreasing transactions. Mitchell and Lehn (1990) document that firms engaging in acquisitions, which significantly reduce their equity value, tend to become takeover targets subsequently. The external control market disciplines management who has destroyed the shareholder wealth through value-decreasing acquisition. Related to the previous research, this study empirically examines whether management who makes value-reducing acquisitions are subsequently replaced by the board of directors.

Based on a sample of 159 firms which have engaged in completed acquisitions during the period from 1990 through 1997, I document that 61 acquiring firm CEOs left their firms between one to five years after the acquisition without good reasons[8], 26 departed because of normal retirements or with seemingly good reasons[8], and the remaining 76 CEOs are still managing their firms as CEO. The results from the event studies show that the average cumulative abnormal stock returns around the acquisition announcement day for the 61 firms with forced CEO departures are significantly negative and underperformed the total sample of acquisitions. On the other hand, the average cumulative abnormal stock returns around the acquisition announcement day for those firms without CEO departures (CEOs remained as CEOs or CEOs left with good reasons) are positive and overperformed the total sample.

The logit estimates of the acquisition announcement effects on the probability of subsequent CEO turnover provide strong evidence of the significant negative association between shareholder value changes at the time of the acquisition announcement and the likelihood of CEO post acquisition turnover. These results are consistent with the hypothesis that management engaging in value-reducing acquisitions tends to be disciplined through the internal corporate control system, if not the external takeover market. On the other hand, when the management cancelled an acquisition with a negative market reaction, the likelihood that this CEO is replaced is reduced, all else equal.

This study makes contributions to the current research on internal control mechanisms and management turnover. It provides systematic evidence suggesting that management is less likely to continue playing a key role in the corporation when their behavior deviates from the shareholders' best interests. This paper complements the study by Mitchell and Lehn (1990) in that with a more current sample and data, empirical results reveal that management of the acquiring firms are more likely to be replaced for making the value-reducing acquisitions through internal control mechanisms. It also provides further evidence suggesting that capital market is efficient in that the stock prices incorporate the information and valuation of the management decisions associated with the acquisitions. Furthermore,

[8] Good reason is defined in Section IV.A. as reasons involving death, poor health, acceptance of another position elsewhere, and normal retirement with the announcement taking place at least six months in advance.

this research provides findings suggesting that management who would reverse their decision error in a timely manner faces lower probability of being disciplined.

There are certain limitations in this study. I focus on the link between the stock market reaction to the acquisition announcement and the acquiring firm's subsequent CEO turnover. Some other firm specific events or changes in the industry structure might occur during the same period of time that this paper studies, and these factors might also impact the likelihood of management turnover. Additionally, the stock market valuation considered in this paper is the firm's (cumulative) abnormal returns around announcement date. Success of a corporate transaction might take effect over a longer term, especially if there is not enough information released to the marketplace when the firm makes the acquisition announcement, and the acquiring firm might implement value-enhancing integration during the post acquisition period. The firm's long-run post acquisition performance might also add to our understanding of the destiny that management faces after some major corporate event such as the acquisition.

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Appendix A

Sample and Data – Completed Acquisitions

Initial Sample Selection from Securities Data Company (SDC):

(1) Announcement dates are between 1/1/1990 and 1/1/1998;
(2) Both acquiring firms and target firms are publicly traded;
(3) Deal value will be equal or higher than 1 million U.S. dollars;
(4) Forms of the deals are mergers, acquisitions or acquisitions of assets;
(5) The status of the deals is "Complete".

Number of Acquisitions: 2088

CRSP and COMPUSTAT

Number of Acquirers: 803
Acquired by other firms: **253**
Filed bankruptcy: **82**
Existing Stand-Alone Acquirers **468**

Relative Size of Target to Acquirer >10%
& Acquisition Transaction Value > $100mil

Number of Acquirers: 186

Incomplete Proxy Statements and CEO Turnover Information **27**

Final Sample **Number of Acquirers: 159**

Sources of Data:

Securities Data Company (SDC)
CRSP
COMPUSTAT
Dow Jones News Retrieval
Proxy Statements (LexisNexis, SEC website, freeedgar.com, 10kwizard.com, corporateinformation.com, etc.)

Appendix B

Sample and Data – Cancelled Acquisitions

Initial Sample Selection from Securities Data Company (SDC):

(1) Announcement dates are between 1/1/1990 and 1/1/1998;
(2) Both acquiring firms and target firms are publicly traded;
(3) Deal value will be equal or higher than 1 million U.S. dollars;
(4) Forms of the deals are mergers, acquisitions or acquisitions of assets;
(5) Status of the deals is "Withdrawn".

Number of Withdrawn Acquisitions: 570

CRSP and COMPUSTAT
Relative Size of Target to Acquirer
prior to Acquisition Announcement >10%
& Acquisition Transaction Value when announced > $100mil

Number of Acquirers:	**147**
Delist due to Bankruptcy:	**24**
Delist due to M&A:	**63**
Surviving Acquirers:	**60**

Figure 1 - Stock Price Reaction to Acquisition Announcements

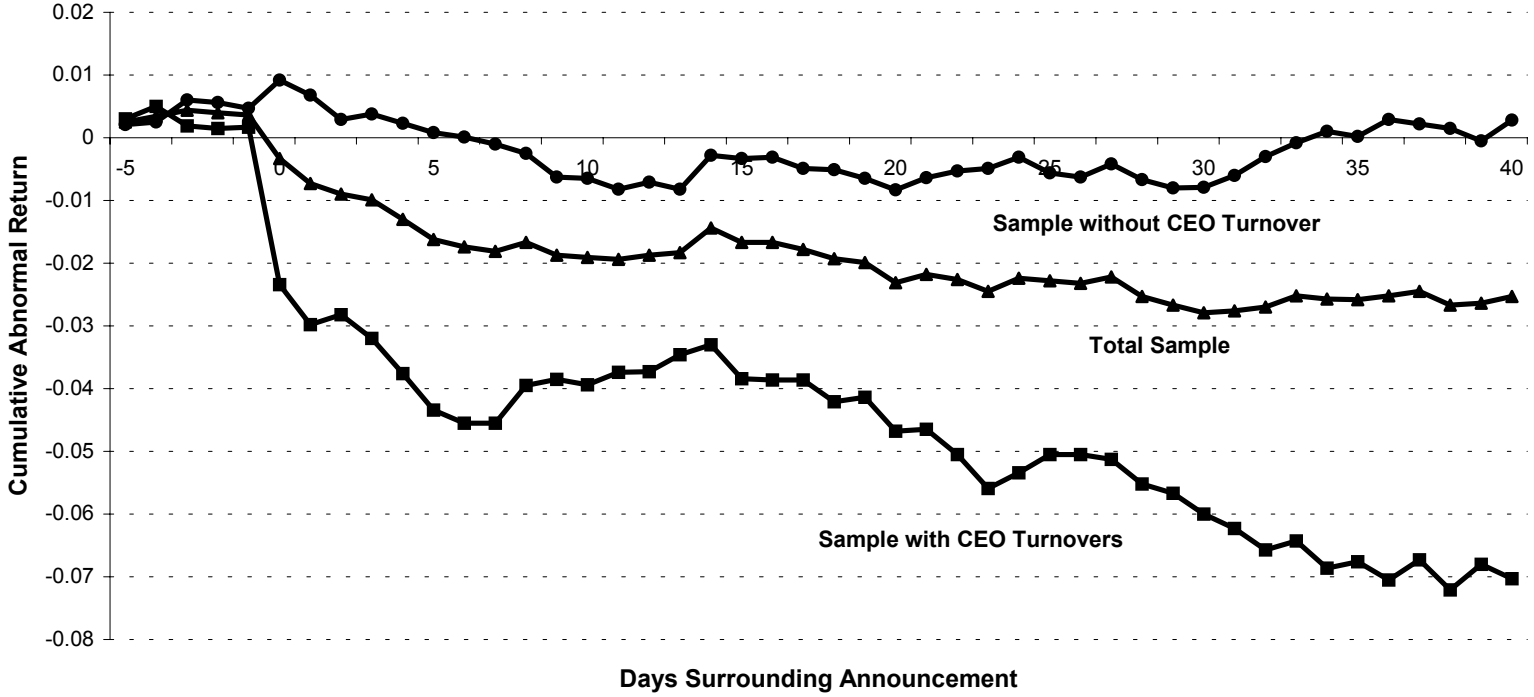
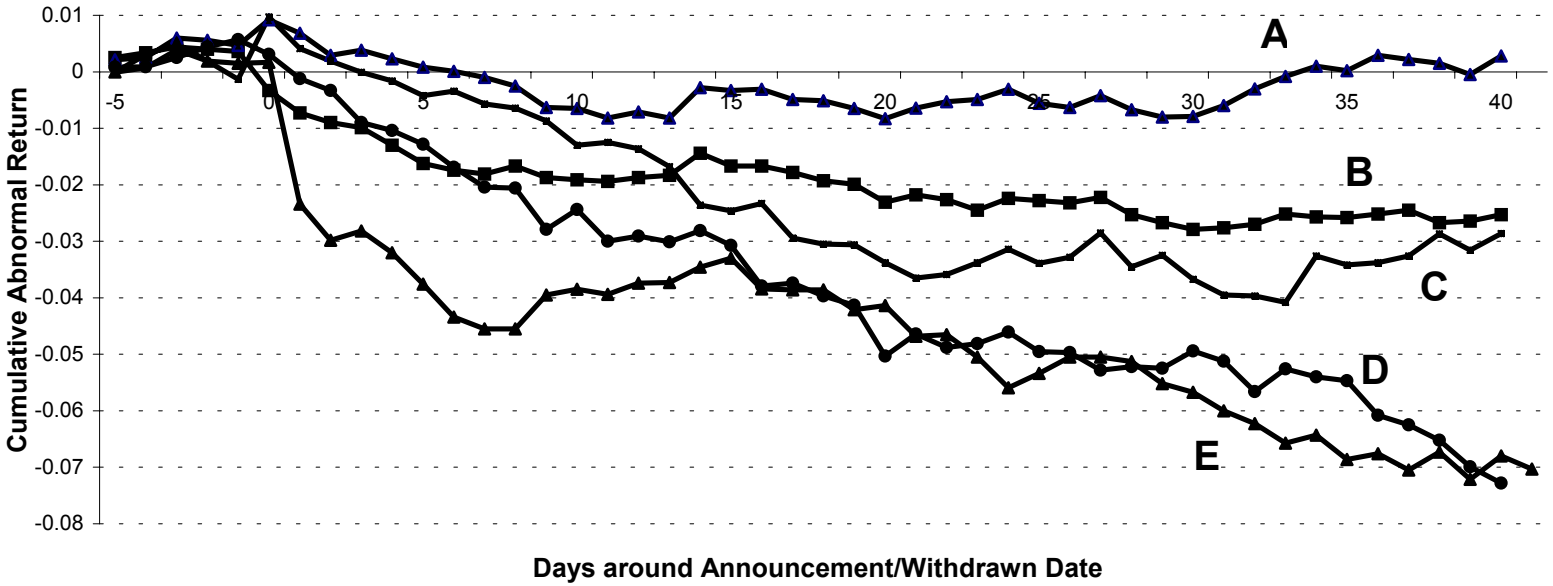


Figure 2 - Stock Price Reaction to Acquisition Announcement and Acqusition Cancellation



A: Market reaction to the acquisition announcements of the sample of completed acquisitions without subsequent CEO turnovers;
B: Market reaction to the acquisition announcements of the total sample of completed acquisitions;
C: Market reaction to the acquisition cancellation announcements of the sample of cancelled acquisitions;
D: Market reaction to the acquisition announcements of the sample of cancelled acquisitions;
E: Market reaction to the acquisition announcements of the sample of completed acquisitions with subsequent CEO turnovers;

Figure 3 Stock Price Reaction to Turnover Announcements

Table 1 Acquisition Sample Characteristics

Firm Value is measured as the market value of equity, plus the book value of preferred stocks and book value of debt at the year-end prior to the acquisition announcement. Transaction values are obtained from SDC database. CEO turnover sample consists of firms that experienced disciplinary CEO turnover. All the other firms are constructed to be the non-turnover sample. CEO turnover is defined as the situations in which CEO is fired, forced to step down, departs due to unspecified policy differences, or 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 elsewhere, the CEO turnover is still classified as disciplinary turnover.

	Sample	Mean ($$mil)	Median ($$mil)	N
Acquirers Firm Value	Total Sample	$4,226.74	$1,566.67	159
Target Firm Value	Total Sample	$1,552.57	$429.31	159
Target Firm Value/ Acquirer Firm Value	Total Sample	0.4502	0.3136	159
Transaction Value	Total Sample	$1,640.26	$549.30	159
Acquirer Firm Value	CEO Turnover	$3,363.85	$1,084.90	61
Target Firm Value	CEO Turnover	$1,453.82	$494.11	61
Target Firm Value/ Acquirer Firm Value	CEO Turnover	0.5632	0.3365	61
Transaction Value	CEO Turnover	$1,396.92	$496.53	61
Acquirer Firm Value	Non-Turnover	$4,803.15	$1,715.80	98
Target Firm Value	Non-Turnover	$1,628.53	$463.16	98
Target Firm Value/ Acquirer Firm Value	Non-Turnover	0.3809	0.2975	98
Transaction Value**	Non-Turnover	$1,806.81	$561.77	98

Note: The mean and median differences of the above characteristics variables cross two sub samples are not significantly different from zero. No statistics are reported here.
**Value of Transaction ($ mil): 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 of shares offered changes, the stock is valued based on its closing price on the last full trading date prior to the date of the exchange ratio change. Source: SDC.

Table 2 Descriptive Statistics of Sample CEOs

This table provides the descriptive statistics of CEO characteristics. CEO age is measured as the age of the CEO prior to acquisition announcement; CEO tenure is the length of time this individual holds the position of CEO until the acquisition announcement; Firm's leadership structure is also recorded as the time before acquisition announcement. All the data are taken from proxy statements.

	Total Sample N=159		Sample with CEO Turnovers N=61		Sample without CEO Turnovers N=98		Differences between two Sub-Samples	
CEO Age	Mean	Median	Mean	Median	Mean	Median	Mean	Median
	54	54	51.1	51	54.7	55	-3.6***	-4***
							(-3.77)	(-3.47)
CEO Tenure	Mean	Median	Mean	Median	Mean	Median	Mean	Median
	7.99	6	6.05	5	9.15	7	-3.10***	-2***
							(-2.78)	(-2.45)
CEO and Chairman are One Individual	Mean	Median	Mean	Median	Mean	Median	Mean	Median
	0.76	1	0.63	1	0.84	1	-0.21***	0***
							(-2.97)	(-2.89)

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

Table 3 Firm Performance Prior to the Acquisition Announcement

This table reports the sample firms' prior to acquisition performance. Both market based and accounting based performance measures are examined. Mean and median differences in performances between the firms with subsequent CEO turnovers and the firms without subsequent CEO turnovers are provided in the table. Buy-Hold Return is the 3 years buy and hold return prior to 20 days before the acquisition announcement. Return on Assets (ROA) and Operating Margin are measured at the year-end prior to acquisition announcement.

	Total Sample		Sample with CEO Turnovers		Sample without CEO Turnovers		Differences between two Sub-Samples	
Buy-Hold Return (-3years)	Mean	Median	Mean	Median	Mean	Median	Mean	Median
	0.467	0.120	0.699	0.205	0.323	0.067	0.376	0.138
							(1.45)	(0.508)
ROA	Mean	Median	Mean	Median	Mean	Median	Mean	Median
	0.044	0.036	0.048	0.032	0.041	0.037	0.007	-0.005
							(0.63)	(-0.000)
Operating Margin	Mean	Median	Mean	Median	Mean	Median	Mean	Median
	0.134	0.115	0.081	0.111	0.166	0.132	-0.085***	-0.022*
							(-2.18)	(-1.686)

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

Table 4 Abnormal Stock Market Performance of Acquiring Firms Associated Acquisition Announcements

This table reports the stock market reaction to acquisition announcements for the total sample of acquiring firms, sample of acquiring firms experiencing subsequent CEO turnovers, and the sample of acquiring firms which do not experience CEO turnovers subsequent to the acquisitions. CEO turnover is identified based on the second definition of CEO turnover, i.e. changing CEO identity excluding the circumstances of normal retirements or successions. The Cumulative Abnormal Returns (CARs) are calculated based on different event windows listed below. Z-statistics(1) are in parentheses and percentage abnormal returns that are positive listed below Z-statistics.

Event Window around Announcement Day	[0]	[-1, 1]	[-5, 1]	[-5, 40]	[-20, 40]
Total Sample (N=159)	-0.0069***	-0.0113***	-0.0073*	-0.0253*	-0.0245
% of Positive Abnormal Return	(-4.975)	(-4.142)	(-1.857)	(-1.658)	(-1.191)
	40.88%	42.77%	42.14%	45.28%	45.28%
Sample with CEO	-0.0251***	-0.0313***	-0.0298***	-0.0703***	-0.0662***
Turnovers (N=61)	(-9.076)	(-6.614)	(-4.019)	(-3.366)	(-2.672)
% of Positive Abnormal Return	36.07%	31.15%	29.51%	39.34%	44.26%
Sample without CEO	0.0045	0.0011	0.0068	0.0028	0.0013
Turnovers (N=98)	(0.824)	(0.058)	(0.805)	(0.544)	(0.591)
% of Positive Abnormal Return	43.88%	50%	50%	48.98%	45.92%

***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 ($\sigma_{AR} = \left\{\sigma^2\left[1+\frac{1}{L}+\frac{(R_{mt}-\overline{R}_m)^2}{CSSR_m}\right]\right\}^{1/2}$, where σ^2 is the estimated residual variance for the estimation period, L is the number of observations in the estimation period, $\overline{R}_m$ is the estimation period mean of the market return, 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 5 Abnormal Stock Market Performance of Cancelled Mergers

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

Panel A

Event Window around Announcement Day	[0]	[-1, 1]	[-5, 1]	[-5, 40]	[-20, 40]
Total Sample	-0.0026***	-0.0056***	-0.0012	-0.0728***	-0.0761***
(N=147)	(-3.986)	(-3.618)	(-1.532)	(-5.016)	(-4.680)
% of Positive Abnormal Return	40.82%	40.82%	43.54%	26.03%	31.97%
Firms Acquired by other Firms	-0.0096***	-0.0110***	-0.0021	-0.0699***	-0.0569***
(N=63)	(-2.315)	(-2.805)	(-0.596)	(-2.898)	(-2.103)
% of Positive Abnormal Return	41.94%	43.55%	41.94%	27.87%	38.71%
Firms going Bankruptcy	0.0281	0.0254	0.0249	-0.0594*	-0.0826**
(N=24)	(0.718)	(0.224)	(0.322)	(-1.761)	(-2.034)
% of Positive Abnormal Return	34.78%	39.13%	34.78%	26.09%	34.78%
Surviving Firms	-0.0080***	-0.0119***	-0.0101*	-0.0807***	-0.0926***
(N=60)	(-3.383)	(-2.633)	(-1.956)	(-3.751)	(-3.859)
% of Positive Abnormal Return	41.94%	61.29%	41.94%	24.19%	24.19%
Surviving Firms with CEO Departure	0.0233*	0.0257	0.0317	-0.1535	-0.2391*
(N=8)	(1.821)	(1.616)	(1.223)	(-1.160)	(-1.787)
% of Positive Abnormal Return	87.5%	62.5%	62.5%	25%	12.5%
Surviving Firms without CEO Departure	-0.0109***	-0.0174***	-0.0156***	-0.0626***	-0.0644***
(N=52)	(-4.183)	(-3.402)	(-2.695)	(-3.270)	(-3.190)
% of Positive Abnormal Return	35.19%	35.19%	38.89%	24.07%	25.93%

***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	0.0110***	0.0023*	0.0041	-0.0286	-0.0454
(N=147)	(5.963)	(1.693)	(0.911)	(-1.074)	(-1.552)
% of Positive Abnormal Return	59.18%	48.30%	48.30%	40.14%	41.50%
Firms Acquired by other Firms	0.0242***	0.0189***	0.0218***	-0.011	-0.0309
(N=63)	(7.02)	(3.010)	(2.364)	(-0.678)	(-1.111)
% of Positive Abnormal Return	61.29%	45.16%	43.48%	35.48%	38.71%
Firms going Bankruptcy	0.0033*	-0.0167	-0.0121	-0.1358*	-0.1823***
(N=24)	(1.695)	(-0.558)	(-0.381)	(-1.887)	(-2.374)
% of Positive Abnormal Return	52.17%	43.48%	51.61%	34.78%	30.43%
Surviving Firms	0.001	-0.0071	-0.0072	-0.0064	-0.0093
(N=60)	(1.155)	(-0.049)	(-0.717)	(-0.171)	(0.166)
% of Positive Abnormal Return	25.17%	22.45%	19.73%	46.77%	20.41%
Surviving Firms with CEO Departure	0.0093	-0.0137	-0.0088	-0.0429	-0.0918
(N=8)	(0.212)	(-0.653)	(-0.538)	(-0.090)	(-0.646)
% of Positive Abnormal Return	75%	50%	37.5%	12.5%	12.5%
Surviving Firms without CEO Departure	-0.0025	-0.0073	-0.0063	0.0125	0.0175
(N=52)	(-0.879)	(-0.043)	(-0.479)	(0.770)	(0.834)
% of Positive Abnormal Return	57.41%	53.7%	46.30%	51.85%	53.70%

***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 ($\sigma_{AR} = \left\{\sigma^2\left[1+\frac{1}{L}+\frac{(R_{mt}-\overline{R}_m)^2}{CSSR_m}\right]\right\}^{1/2}$, where σ^2 is the estimated residual variance for the estimation period, L is the number of observations in the estimation period, $\overline{R}_m$ is the estimation period mean of the market return, 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 Correlation Matrix Between the Stock Market Reaction to the Acquisition Announcements and the Stock Market Reaction to the CEO Turnover Announcements

CARA is the cumulative abnormal return of the sample firm around the acquisition announcements; CART is the cumulative abnormal return of the sample firm around the CEO turnover announcements. Day 0 is the announcement date.

	CARA (0,0)	CARA (-1, +1)	CARA (-5, +1)	CARA (-5, +40)	CARA (-20, +40)	CART (0, 0)	CART (-1, +1)	CART (-5, +1)	CART (-5, +40)	CART (-20, +40)
CARA (0,0)	1.00									
CARA (-1, +1)	0.78	1.00								
CARA (-5, +1)	0.73	0.91	1.00							
CARA (-5, +40)	0.21	0.49	0.46	1.00						
CARA (-20, +40)	0.09	0.36	0.36	0.90	1.00					
CART (0, 0)	-0.13	-0.20	-0.16	-0.22	-0.21	1.00				
CART (-1, +1)	-0.06	-0.10	-0.06	-0.20	-0.18	0.77	1.00			
CART (-5, +1)	-0.02	-0.04	-0.02	-0.11	-0.11	0.67	0.78	1.00		
CART (-5, +40)	0.13	0.17	0.14	0.06	0.03	0.35	0.37	0.40	1.00	
CART (-20, +40)	0.13	0.15	0.13	0.17	0.15	0.30	0.30	0.39	0.83	1.00

Table 7 Logit Regression Modeling the Probability of Subsequent Acquiring Firms' CEO Turnover

This table provides the results of logit estimation based on the 159 acquiring firms. Dependent variable is transformed probability that acquiring firm CEO was replaced subsequent to the acquisition. T-statistics to test the significance of coefficients are shown in the parentheses. The independent variable of the greatest interests is the abnormal stock return around acquisition announcement date. The abnormal returns are measured under different event windows. Leadership structure is included to control for the factor of CEO control power on the likelihood of being replaced. Chairman is the dummy variable equal to 1 if the CEO was also the Chairman when the acquisition took place. Age and tenure are measured at the year-end before the acquisition announcements. Relative size of the target firm to the acquiring firm is included to control for the size of the transaction and its impact on the CEO turnovers. Pre-acquisition performance is also taken into consideration to examine whether the acquirers are already underperformed before they make the acquisition decisions. BHR is the market-adjusted buy and hold return 3 years prior to acquisition announcement. Return on Assets (ROA) and Operating Margin (Operating Income divided by Sales) are measured at the year-end before the acquisition announcement.

Panel A

Event Window – Day 0 is the Announcement Date							
	[0]	[0]	[0]	[0]	[0]	[0]	[0]
Dependent Variable Is Transformed Probability That Acquiring Firm CEO Was Replaced Subsequent To The Acquisition							
Intercept	-0.599 (-3.417)	4.182 (2.985)	0.593 (1.497)	3.970 (2.716)	4.002 (2.632)	3.617 (2.357)	3.909 (2.481)
Abnormal Stock Return around Acquisition Announcements	-11.735*** (-3.213)	-10.724*** (-2.801)	-10.646*** (-2.901)	-10.156*** (-2.620)	-10.249*** (-2.522)	-12.001*** (-2.771)	-12.401*** (-2.734)
Chairman		-0.985** (-2.290)	-0.992** (-2.357)	-0.753* (-1.663)	-0.752* (-1.662)	-0.839* (-1.731)	-0.851* (-1.745)
CEO Age		-0.075*** (-2.878)		-0.073*** (-2.675)	-0.073*** (-2.616)	-0.068*** (-2.408)	-0.068*** (-2.388)
CEO Tenure			-0.0629** (-2.010)	-0.053 (-1.575)	-0.053 (-1.572)	-0.036 (-1.081)	-0.031 (-0.908)
Target Size to Acquirer Size				-0.621 (1.122)	0.617 (1.115)	0.583 (0.979)	0.569 (0.876)
BHR					-0.011 (-0.078)		
ROA						-0.044 (-0.010)	
Operating Margin							-2.093 (-1.242)
Percent Concordant	61.8%	71.2%	69.5%	73.1%	73.1%	73.0%	73.5%
-2LogL	199.152	174.437	181.301	169.786	169.780	151.099	149.320
Pseudo R-square	10.34%	23.22%	19.30%	26.60%	26.61%	27.25%	28.65
# of observations	159	159	159	159	159	159	159

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

Table 7 (Continued)

Panel B

Event Window – Day 0 is the Announcement Date							
	[-1, 1]	[-1, 1]	[-1, 1]	[-1, 1]	[-1, 1]	[1, 1]	[1, 1]
Dependent Variable Is Transformed Probability That Acquiring Firm CEO Was Replaced Subsequent To The Acquisition							
Intercept	-0.580	4.197	0.569	3.985	3.861	3.674	3.917
	(-3.338)	(3.043)	(1.448)	(2.768)	(2.601)	(2.443)	(2.545)
Abnormal Stock Return around Acquisition Announcements	-5.969***	-4.819**	-5.477***	-4.702*	-4.513*	-5.055*	-4.842*
	(-2.569)	(-2.027)	(-2.227)	(-1.880)	(-1.760)	(-1.911)	(-1.815)
Chairman		-0.897***	-0.889***	-0.662	-0.673	-0.704	-0.698
		(-2.117)	(-2.150)	(-1.492)	(-1.509)	(-1.506)	(-0.262)
CEO Age		-0.077***		-0.073***	-0.071***	-0.070***	-0.069***
		(-2.969)		(-2.713)	(-2.580)	(-2.507)	(-2.475)
CEO Tenure			-0.067***	-0.056*	-0.056*	-0.044	-0.039
			(-2.247)	(-1.765)	(-1.763)	(-1.366)	(-1.215)
Target Size to Acquirer Size				0.561	0.575	0.566	0.530
				(1.105)	(1.111)	(0.988)	(0.859)
BHR					0.0453		
					(0.327)		
ROA						0.533	
						(0.126)	
Operating Margin							-1.712
							(-1.070)
Percent Concordant	62.8%	70.1%	69.2%	72.6%	72.7%	71.6%	72.2%
-2LogL	204.380	179.345	185.551	174.096	173.985	156.664	155.269
Pseudo R-square	6.14%	19.55%	16.04%	23.48%	23.56%	22.75%	23.89%
# of observations	159	159	159	159	159	159	159

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

Table 7 (Continued)

Panel C

Event Window – Day 0 is the Announcement Date							
	[-5, 1]	[-5, 1]	[-5, 1]	[-5, 1]	[-5, 1]	[-5, 1]	[-5, 1]
Dependent Variable Is Transformed Probability That Acquiring Firm CEO Was Replaced Subsequent To The Acquisition							
Intercept	-0.551 (-3.222))	4.043 (2.930)	0.597 (1.531)	3.822 (2.646)	3.684 (2.485)	3.473 (2.301)	3.739 (2.411)
Abnormal Stock Return around Acquisition Announcements	-5.087*** (-2.494)	-3.758* (-1.764)	-4.655** (-2.150)	-3.565* (-1.651)	-3.374 (-1.603)	-4.233* (-1.793)	-4.051* (-1.695)
Chairman		-0.929** (-2.208)	-0.901*** (-2.183)	-0.682* (-1.743)	-0.692 (-1.560)	-0.730 (-1.558)	-0.730 (-1.549)
CEO Age		-0.073*** (-2.829)		-0.069*** (-2.569)	-0.067*** (-2.442)	-0.065*** (-2.325)	-0.066*** (-2.331)
CEO Tenure			-0.066*** (-2.189))	-0.056* (-1.716)	-0.056* (-1.722)	-0.041 (-1.283)	-0.037 (-1.136)
Target Size to Acquirer Size				0.583 (1.162)	0.600 (1.167)	0.577 (1.047)	0.540 (0.875)
BHR					0.053 (0.386)		
ROA						0.075 (0.018)	
Operating Margin							-1.728 (-1.074)
Percent Concordant	62.8%	69%	69.3%	72.4%	72.5%	71.2%	72%
-2LogL	204.786	180.457	185.918	175.078	174.924	157.154	155.744
Pseudo R-square	5.81%	18.70%	15.76%	22.75%	22.87%	22.34%	23.51%
# of observations	159	159	159	159	159	159	159

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

Table 7 (Continued)

Panel D

Event Window – Day 0 is the Announcement Date							
	[-5, 40]	[-5, 40]	[-5, 40]	[-5, 40]	[-5, 40]	[-5, 40]	[-5, 40]
Dependent Variable Is Transformed Probability That Acquiring Firm CEO Was Replaced Subsequent To The Acquisition							
Intercept	-0.615	3.852	0.560	3.731	3.681	3.455	3.730
	(-3.472)	(2.749)	(1.421)	(2.579)	(2.495)	(2.285)	(2.412)
Abnormal Stock Return around Acquisition Announcements	-2.832***	-2.449**	-2.827***	-2.216*	-2.146*	-1.881	-1.788
	(-2.611)	(-2.060)	(-2.437)	(-1.839)	(-1.686)	(-1.501)	(-1.421)
Chairman		-1.029***	-1.022***	-0.766*	-0.770*	-0.782*	-0.752
		(-2.408)	(-2.433)	(-1.707)	(-1.712)	(-1.661)	(-1.586)
CEO Age		-0.069***		-0.068***	-0.067***	-0.065***	-0.065***
		(-2.634)		(-2.491)	(-2.413)	(-2.305)	(-2.309)
CEO Tenure			-0.059*	-0.053	-0.053	-0.040	-0.035
			(-1.919)	(-1.594)	(-1.595)	(-1.233)	(-1.073)
Target Size to Acquirer Size				0.520	0.525	0.513	0.461
				(1.243)	(1.235)	(1.004)	(0.838)
BHR					0.024		
					(0.167)		
ROA						1.199	
						(0.293)	
Operating Margin							-1.746
							(-1.118)
Percent Concordant	60.7%	71.0%	68.9%	73.0%	73.1%	71.8%	72.2
-2LogL	204.458	179.353	184.665	174.403	174.375	158.380	156.793
Pseudo R-square	6.08%	19.54%	16.73%	23.25%	23.27%	21.33%	22.64%
# of observations	159	159	159	159	159	159	159

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

Table 7 (Continued)

Panel E

Event Window – Day 0 is the Announcement Date							
	[-20, 40]	[-20, 40]	[-20, 40]	[-20, 40]	[-20, 40]	[-20, 40]	[-20, 40]
Dependent Variable Is Transformed Probability That Acquiring Firm CEO Was Replaced Subsequent To The Acquisition							
Intercept	-0.573 (-3.309)	4.006 (2.886)	0.600 (1.537)	3.864 (2.692)	3.784 (2.582)	3.618 (2.427)	3.842 (2.503)
Abnormal Stock Return around Acquisition Announcements	-1.932** (-2.092)	-1.705* (-1.670)	-2.025** (-2.069)	-1.544 (-1.500)	-1.445 (-1.315)	-1.201 (-1.145)	-1.267 (-0.826)
Chairman		-1.002*** (-2.395)	-1.006*** (-2.427)	-0.741* (-1.674)	-0.746* (-1.681)	-0.747 (-1.610)	-0.719 (-1.535)
CEO Age		-0.072*** (-2.758)		-0.070*** (-2.581)	-0.068*** (-2.493)	-0.068*** (-2.414)	-0.067*** (-2.377)
CEO Tenure			-0.062** (-2.016)	-0.054* (-1.655)	-0.055* (-1.652)	-0.041 (-1.255)	-0.036 (-1.107)
Target Size to Acquirer Size				0.529 (1.272)	0.537 (1.261)	0.530 (1.092)	0.457 (0.833)
BHR					0.037 (0.259)		
ROA						0.612 (0.153)	
Operating Margin							-1.857 (-1.191)
Percent Concordant	57.9%	69.7%	67.4%	72.6%	72.8%	71.5%	71.9%
-2LogL	207.148	180.916	186.543	175.631	175.562	159.369	157.464
Pseudo R-square	3.86%	18.34%	15.27%	22.34%	22.39%	20.50%	22.14%
# of observations	159	159	159	159	159	159	159

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

Table 8 Logit Estimation of Acquiring Firms' CEO Turnovers for Cancelled Acquisitions

This table reports the results of logit estimation based on the sample consisting of the cancelled acquisitions. Dependent variable is the transformed probability that the CEO was replaced subsequent to the cancelled acquisition. T-statistics to test the significance of coefficients are shown in the parentheses. The independent variable of the greatest interests is the abnormal stock return around the acquisition announcement. Chairman is the dummy variable equal to 1 if the CEO was also the Chairman when the acquisition first took place. Age and tenure are measured at the year-end before the acquisition announcements. Relative size of the target firm to the acquiring firm is included to control for the size of the cancelled acquisition.

Panel A

Event Window – Day 0 is the Announcement Date					
	[0, 0]	[-1, 1]	[-5, 1]	[-5, 40]	[-20, 40]
Dependent Variable Is Transformed Probability That Acquiring Firm CEO Was Replaced Subsequent To The Cancelled Acquisition					
Intercept	0.886	0.072	0.393	0.085	-0.382
	(0.272)	(0.023)	(0.125)	(0.031)	(-0.138)
Abnormal Stock Return around	34.552*	19.917*	11.554*	-2.363	-3.171
Acquisition Announcements	(1.926)	(1.989)	(1.784)	(-0.905)	(-1.408)
Chairman	-0.039	-1.142	-0.781	-0.149	0.256
	(-0.038)	(-1.247)	(-0.816)	(-0.151)	(0.229)
CEO Age	-0.062	-0.028	-0.036	-0.042	-0.042
	(-1.030)	(-0.490)	(-0.618)	(-0.864)	(0.870)
Target Size to Acquirer Size	0.505	0.513	0.273	0.133	0.017
	(0.772)	(0.888)	(0.481)	(0.217)	(0.028)
Percent Concordant	79.1%	76.4%	70.7%	60.8%	64.2%
-2LogL	38.498	40.123	41.174	44.905	43.527
Pseudo R-square	24.61%	20.24%	15.84%	6.67%	10.69%
# of observations	60	60	60	60	60

Panel B

Event Window – Day 0 is the Acquisition Withdrawn Date					
	[0, 0]	[-1, 1]	[-5, 1]	[-5, 40]	[-20, 40]
Dependent Variable Is Transformed Probability That Acquiring Firm CEO Was Replaced Subsequent To The Cancelled Acquisition					
Intercept	0.761	0.679	0.724	-0.082	-0.521
	(0.276)	(0.250)	(0.265)	(-0.030)	(-0.187)
Abnormal Stock Return around	14.533	-0.099	0.440	-2.545	-2.846
Acquisition Announcements	(1.040)	(-0.022)	(0.105)	(-0.987)	(-1.475)
Chairman	-0.430	-0.474	-0.499	-0.373	-0.319
	(-0.458)	(-0.514)	(-0.539)	(-0.406)	(-0.339)
CEO Age	-0.053	-0.045	-0.046	-0.035	-0.030
	(-1.065)	(-0.920)	(-0.927)	(-0.732)	(-0.618)
Target Size to Acquirer Size	0.655	0.298	0.307	0.423	0.515
	(0.885)	(0.503)	(0.517)	(0.704)	(0.857)
Percent Concordant	62.3%	59.6%	59.9%	69.2%	73.3%
-2LogL	44.197	45.705	45.694	44.721	43.437
Pseudo R-square	8.74%	4.29%	4.32%	7.21%	10.95%
# of observations	60	60	60	60	60

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

Table 9 Logit Estimation of Acquiring Firms' CEO Turnover Subsequent to both Completed and Cancelled Acquisitions

This table reports the results of logit estimation based on both the completed and cancelled acquisitions. Dependent variable is the transformed probability that the CEO was replaced subsequent to the acquisition (regardless of whether it was completed or cancelled). T-statistics to test the significance of the coefficients are shown in the parentheses. The independent variables are the abnormal stock return around the acquisition announcement, the dummy variable indicating whether the firm has withdrawn the acquisition (Withdraw Dummy). Chairman is the dummy variable equal to 1 if the CEO was also the Chairman when the acquisition first took place. Age and tenure are measured at the year-end before the acquisition announcements. Relative size of the target firm to the acquiring firm is included to control for the size of the transaction.

Event Window – Day 0 is the Announcement Date									
	[0]	[0]	[0]	[-1, 1]	[-1, 1]	[-1, 1]	[-5, 1]	[-5, 40]	[-20, 40]
Dependent Variable Is Transformed Probability That Acquiring Firm CEO Was Replaced Subsequent To The Acquisition									
Intercept	3.629	3.407	3.790	3.763	3.167	3.604	3.641	3.443	3.568
	(2.922)	(2.781)	(2.883)	(3.040)	(2.629)	(2.816)	(2.818)	(2.725)	(2.846)
Abnormal Stock Return around Acquisition Announcements (CAR)	-5.455*	-11.775***	-10.438***	-2.237	-5.528***	-4.466*	-3.519*	-2.328**	-1.608
	(-1.763)	(-2.973)	(-2.686)	(-1.055)	(-2.206)	(-1.856)	(-1.651)	(-1.983)	(-1.600)
Withdraw Dummy	-1.590***		-1.668***	-1.575***		-1.533***	-1.573***	-1.597***	-1.772***
	(-3.493)		(-3.156)	(-3.501)		(-3.134)	(-3.279)	(-2.877)	(-3.114)
CAR*Withdrawn		34.123***	43.868***		19.567***	22.171***	14.567***	0.963	-0.260
		(3.011)	(2.770)		(2.891)	(2.420)	(2.265)	(0.353)	(-0.122)
Chairman	-0.829***	-0.830***	-0.771*	-0.781**	-0.902***	-0.887***	-0.853***	-0.828***	-0.774**
	(-2.189)	(-2.193)	(-1.954)	(-2.781)	(-2.427)	(-2.259)	(-2.209)	(-2.145)	(-2.009)
CEO Age	-0.070***	-0.071***	-0.076***	-0.073***	-0.065***	-0.070***	-0.069***	-0.068***	-0.070***
	(-3.043)	(-3.104)	(-3.111)	(-3.188)	(-2.893)	(-2.941)	(-2.916)	(-2.885)	(-3.000)
Target Size to Acquirer Size	0.438	0.264	0.594	0.441	0.250	0.522	0.450	0.400	0.386
	(1.229)	(0.882)	(1.393)	(1.257)	(0.857)	(1.337)	(1.247)	(1.241)	(1.247)
Percent Concordant	73.7%	71.8%	76.6%	73.6%	71.1%	75.5%	75.3%	74.7%	74.6%
-2LogL	224.288	225.199	211.720	226.416	230.910	218.391	220.599	223.105	223.840
Pseudo R-square	23.79%	23.28%	30.49%	22.61%	20.09%	26.98%	25.79%	24.43%	24.03%
# of observations	219	219	219	219	219	219	219	219	219

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

Table 10 Logit Estimation of Acquiring Firms' CEO Turnover

This table reports the results of logit estimation based on both the completed acquisitions. Dependent variable is the transformed probability that the CEO was replaced subsequent to the acquisition. T-statistics to test the significance of the coefficients are shown in the parentheses. The independent variables are the abnormal stock return around the acquisition announcement, the dummy variable indicating whether the firm has withdrawn the acquisition (Withdraw Dummy). Chairman is the dummy variable equal to 1 if the CEO was also the Chairman when the acquisition first took place. Age and tenure are measured at the year-end before the acquisition announcements. Relative size of the target firm to the acquiring firm is included to control for the size of the transaction.

	Event Window – Day 0 is the Announcement Date								
			[0]	[-1, 1]	[-5, 1]	[0]	[-1, 1]	[0]	[-1, 1]
	Dependent Variable Is Transformed Probability That Acquiring Firm CEO Was Replaced Subsequent To The Acquisition								
Intercept	-0.739	4.037	3.769	3.853	3.667	3.872	3.660	3.204	3.236
	(-3.445)	(2.818)	(2.556)	(2.647)	(2.647)	(2.595)	(2.553)	(2.638)	(2.737)
CAR			-10.089***	-4.020*	-3.378*	-18.620***	-8.681*	-20.506***	-9.012**
			(-2.663)	(-1.678)	(-1.685)	(-2.206)	(-1.765)	(-2.617)	(-2.026)
BHR	-0.440**	-0.333*	-0.376*	-0.339*	-0.362*	-0.405*	-0.364*		
(+3 Years)	(-2.023)	(-1.665)	(-1.788)	(-1.653)	(-1.748)	(-1.906)	(-1.813)		
Withdraw*CAR								35.728***	24.971***
								(3.244)	(2.476)
Chairman		-0.792*	-0.843*	-0.772*	-0.787*	-0.791*			
		(-1.863)	(-1.920)	(-1.787)	(-1.828)	(-1.727)			
Chairman*CAR						11.565	6.451	11.936	6.918
						(1.219)	(1.137)	(1.383)	(1.339)
CEO Age		-0.080***	-0.076***	-0.077***	-0.074***	-0.078***	-0.085***	-0.079***	-0.079***
		(-3.304)	(-2.822)	(-2.917)	(-2.760)	(-2.875)	(-3.272)	(-3.480)	(-3.577)
T/A		0.262	0.282	0.236	0.279	0.233	0.260	0.244	0.225
		(0.565)	(0.654)	(0.542)	(0.633)	(0.548)	(0.621)	(0.799)	(-0.792)
Percent Concordant	63.3%	72.7%	74.3%	73.2%	72.7%	74.8%	73.2%	71.7%	71%
-2LogL	250.018	179.168	170.984	176.158	176.490	169.316	177.918	227.885	235.108
Pseudo R-square	4.83%	18.95%	25.07%	21.24%	20.99%	26.28%	19.91%	21.79%	17.69%
# of observations	159	159	159	159	159	159	159	219	219

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