Equity-Based Golden Parachutes in Mergers and Acquisitions[1]

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ABSTRACT

The existence and magnitude of golden parachutes have been a long-standing controversy amongst researchers and practitioners. We hand-collect data on the composition of golden parachutes to examine whether equity-based golden parachutes are used to protect managers and benefit shareholders. The results show that target CEO equity-based golden parachutes reduce the likelihood of M&A completion, and enhance target shareholder return in completed M&A deals. Overall, this paper sheds new light on equity-based incentives and determinants of M&A patterns.

Keywords:
Equity-based incentives; golden parachutes; mergers and acquisitions; corporate governance

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1. Introduction

Golden parachutes (GPs hereafter) are benefits the CEO receives if she is terminated as a result of a merger or takeover. In light of the concern that GPs might lure CEOs to accept bad offers, Jensen (1988) was the first to suggest that GPs should be tied to the returns earned by target shareholders. Following the SEC requirement to quantitative and qualitative disclosure regarding GP arrangements, adopted on April 25, 2011, we hand-collect the *composition* of target CEO GP payment. We conjecture that target CEOs who are more aligned with shareholders will exert more effort in due diligence (rejecting bad deals) and negotiation (maximizing premium). Specifically, we investigate whether, conditional on receiving a bid, target CEOs with equity-based GPs are negatively related to M&A completion likelihood. We further investigate whether, conditional on deal completion, target CEOs with equity-based GPs are positively related with the acquisition premium. To the best of our knowledge, this paper is the first to empirically investigate the role of equity-based GPs and its impact on M&A activities.

The purpose of equity-based executive compensation arrangement is to motivate managers to act in the best interest of shareholders and to maximize firm value (Jensen & Meckling, 1976; Jensen & Murphy, 2010; Mehran, 1995). GPs, part of the executive compensation package, are severance pay arrangements that are activated when a change in control of the firm takes place, aiming to protect the executives against the threat of a dismissal and to resolve the conflict of interest between executives and shareholders in the event of a Merger and Acquisition (M&A) (Lambert & Larcker, 1985).[2, 3, 4]

[2] The focus of this paper is on golden parachutes offered to CEOs. Golden parachutes are different from regular severance payments and golden handshakes. The definitions of regular severance payments and golden handshakes are included for completeness. Firstly, regular severance payments refer to the benefits provided to executives in event the executives are terminated either voluntarily or involuntarily (E.g., Rusticus, 2006). Golden parachute is a special type of severance agreements; as golden parachutes are associated with a change

GPs have attracted substantial attention from scholars and practitioners, due to the prevalence use of GPs by firms and significant amount involved in GP payouts. An example is the recent Bloomberg reporting on the possible $12.4 million GP to Yahoo CEO Marissa Mayer if she were terminated because of the acquisition by Verizon (Melin, 2016). The GP usually consists of cash, accelerated vesting of equity awards, pension benefit and medical insurance (Davidson, Pilger, & Szakmary, 1998; Machlin, Choe, & Miles, 1993). The composition of the GP varies across companies. For example, some firms offer either mainly cash-based GP (e.g., cash and bonus) or equity-based GP (e.g., accelerated vesting of equity awards), whereas other firms provide a variety of different mixture of cash- and equity-based GPs (Meisler & Zhao, 2016). Recent media reporting also highlights the significance of the composition of GPs. For instance, as a result of the declining Yahoo share price, Yahoo CEO Marissa Mayer's GP has reduced in value significantly over time (Melin, 2016). Noting these trends, this paper aims to investigate whether the use equity-based GP can better align incentives of target managers and target shareholders in M&As. Specifically, we examine the impact of equity-based GPs offered to target firm CEOs on M&A completion likelihood and target shareholder return.

GP is a controversial tool of corporate governance (Cochran, Wood, & Jones, 1985). There is a long-standing controversy on the adoption and magnitude of GPs amongst scholars (Bebchuk, Cohen, & Wang, 2014). Researchers argue whether managers should be

in control of the company. Secondly, golden handshake is the colloquial term that refers to the benefits awarded to executives in events of retirement or termination, but not in event of change in control (E.g., Yermack, 2006).

[3] There are two types of golden parachute arrangements, namely single-trigger golden parachute and double-trigger golden parachute. Single-trigger golden parachutes award executives when there is a change in control of the firm. Double-trigger golden parachutes award executives when there is a change in control of the firm and the executives are terminated as a result of the takeover. This paper considers only double-trigger golden parachutes as most firms require double triggers to provide the benefit to executives, which is a signal of good corporate governance.

[4] This paper uses Mergers and Acquisitions (M&A) and takeovers interchangeably.

compensated for a change in control of the firm following the takeover, whether the provision of GPs mitigates agency problem or creates additional agency cost, and report mixed findings in regards to the effectiveness of GPs (Evans, Noe, & Thornton, 1997; Fich, Tran, & Walkling, 2013; Singh & Harianto, 1989).

On the one hand, the optimal contracting theory (OCT) suggests that the adoption of GPs allows managers to objectively evaluate a M&A bid on behalf of the shareholders, as managers are protected in case they are terminated subsequent to a takeover (Berkovitch & Khanna, 1991; E. G. Harris, 1990; Lambert & Larcker, 1985). In addition, the existence of GPs benefits shareholders by attracting and retaining talented managers by compensating managers for potential dismissal as a result of the M&A (Davidson et al., 1998). Hence, GPs mitigate the interest misalignment between managers and shareholders (Jensen & Ruback, 1983; Machlin et al., 1993). Therefore, advocates of GPs argue that the adoption of GP is an effective solution to mitigate agency problems in takeovers (Jensen, 1988).

On the other hand, managerial power theory (MPT) argues that the adoption of GPs indicates the existence of managerial influence over the board of directors (Bebchuk & Fried, 2004). Prior literature shows that the arrangement of GPs reflects poor corporate governance structure and discourage managers to improve firm performance (Bebchuk et al., 2014; Cochran & Wartick, 1984; Cochran et al., 1985; Evans et al., 1997; Singh & Harianto, 1989; Wade, O'Reilly, & Chandratat, 1990). Additionally, managers may not resist value-destroying takeovers, as they are induced to collect the GPs and gain personal benefits (Davidson et al., 1998; Machlin et al., 1993).

Existing literature expresses the concern that GP creates additional agency cost in M&As, as the adoption of GPs may induce managers to collect the GP at the expense of shareholders, such as pursuing value-destroying M&As. Therefore, it is argued that GPs cannot sufficiently motivate managers to act in the best interest of shareholders in M&As (e.g., Bebchuk et al., 2014; Cochran & Wartick, 1984; Wade et al., 1990). Prior literature suggests that equity-based incentives are useful in aligning the interests of managers with those of shareholders and motivating managers to maximize shareholder wealth (Jensen & Meckling, 1976). For instance, Mehran (1995) finds that firm performance is positively related to the share of manager compensation that is equity-based. Core and Larcker (2002) report that equity-based incentives are associated with better operating performance. Also, Balsam, Jiang, and Lu (2014) document that equity-based incentives motivate managers to strengthen the firm's internal control, which translates into higher firm valuation. Therefore, we conjecture that equity-based GPs can be used to mitigate the conflict of interest between managers and shareholders, and motivate managers to make sound corporate decisions that increase shareholder value in M&As.

Previous studies have examined the role of equity-based incentives in executive regular compensation (see Core, Guay, & Larcker, 2003; Frydman & Jenter, 2010 for reviews). We argue that in the event of a M&A, offering equity-based incentives in the regular executive compensation is insufficient to solve the interest misalignment between managers and shareholders in takeovers. It is also important to implement equity-based GPs in the executive compensation package. The difference between cash-based and equity-based GPs is whether the GP payout depends on share price of the firm. Specifically, cash-based GPs imply that regardless the performance of the firm, target CEO will receive a fixed amount of GP upon employment termination in a takeover. On the other hand, equity-based GPs link the

share price of the firm to the payoff of GPs. Therefore, if target firm CEOs want to maximize the value of the equity-based GP upon termination, then they are motivated to improve firm performance and enhance shareholder wealth. Therefore, we conjecture that offering equity-based GPs can mitigate the interest misalignment between managers and shareholders in M&As. As a result, equity-based GPs can be seen as effective monitoring and incentive alignment mechanisms.

Previous literature documents that takeover is a mechanism to replace inefficient managers with more efficient managers (Palepu, 1986). Specifically, management teams who engage in inefficient managerial behavior and fail to maximize firm value will be taken over by a more efficient team (Grossman & Hart, 1980; Morck, Shleifer, & Vishny, 1989; Powell, 1997). Hence, companies with poor stock market performance are more likely to be taken over (Palepu, 1986; Powell, 1997). Therefore, we hypothesize that equity-based GPs are negatively related to the likelihood of the firm being taken over. Furthermore, equity-based incentive aligns the interests of managers and shareholders, thus in the population of completed M&A deals, we hypothesize that equity-based GPs are positively associated with target shareholder return in the takeover.

The impact of GPs on shareholder value remains an unresolved question in the existing literature. It is an empirical question to examine whether GPs increase or decrease shareholder wealth. Recent work also calls for more research to gain a better understanding of the effectiveness of GP. For instance, Bebchuk et al. (2014) call for additional research on GPs to identify the types of GPs that drive the conflicting evidence documented in prior literature. The current paper answers the call by examining the role of equity-based GP. By hand-collecting GP data from proxy statements filed by U.S. publicly-traded target

companies with the Securities and Exchange Commission (SEC), we are able to identify the composition of GP. Prior literation has documented mixed evidence on the effectiveness of GPs by analyzing the adoption (e.g., Bebchuk et al., 2014; Lambert & Larcker, 1985), existence (e.g., Buchholtz & Ribbens, 1994; Subramaniam & Daley, 2000), and magnitude (e.g., Buchholtz & Ribbens, 1994; Fich et al., 2013) of GP. This study contributes to the ongoing debate by firstly examining the effectiveness of equity-based GP on shareholder wealth. Given the prevalence and importance of GPs, this is an understudied area in the executive compensation literature (Bebchuk et al., 2014).

Using a unique and manually compiled dataset on U.S. publicly-traded target CEO GP for the period from April 2011 to December 2015, we find evidence to support our expectations. Regression results show a negative association between target CEO equity-based GP and the likelihood of deal completion. Furthermore, the results indicate that target CEO equity-based GP is positively associated with target shareholder return. Overall, the findings suggest that target CEOs with equity-based GPs have a lower probability of being taken over. Target CEOs with equity-based GPs are also more likely to act in the best interest of shareholders by realizing higher target shareholder return.

This study contributes to several streams of existing research literature. Firstly, it contributes to empirical research on GPs and sheds new light on the ongoing debate on the effectiveness of GPs. Prior literature documents mixed evidence in regards to the existence of GPs (Buchholtz & Ribbens, 1994; Subramaniam & Daley, 2000), adoption of GPs (Bebchuk et al., 2014; Davidson et al., 1998; Evans et al., 1997; Knoeber, 1986; Lambert & Larcker, 1985; Machlin et al., 1993; Singh & Harianto, 1989) and magnitude of GP (Buchholtz & Ribbens,

1994; Fich et al., 2013). To extend these findings, this study differentiates GP by their structures. The findings demonstrate that equity-based GPs better align interests of managers and shareholders. Thus, having a properly-designed GP will benefit both managers and shareholders. Secondly, this paper contributes to the literature on executive equity-based incentives. The setting used in this paper differs from those used in other accounting research in this area. Prior research has examined the impact of using equity-based incentives in executive regular pay (Core et al., 2003). Previous work shows that equity-based incentives are associated with firm performance (Mehran, 1995), firm valuation (Core & Guay, 1999; Himmelberg, Hubbard, & Palia, 1999) and strength of internal control (Balsam et al., 2014). We extend the existing work by studying the equity-based GPs offered to CEOs in a M&A context. The findings indicate that equity-based GPs are related to M&A completion likelihoods and target shareholder returns. Thirdly, this paper contributes to the literature on M&A consequences. For instance, existing literature shows that efficiency of management team (Palepu, 1986), CEO age (Jenter & Lewellen, 2015), capital structure (M. Harris & Raviv, 1988; Stulz, 1988) in target firm are associated with M&A activities. The results in this paper show that equity-based GPs offered to target CEOs have a significant impact on M&A activities.

Moreover, this paper has important practical implications. The findings indicate that a well-designed GP is the key to achieve the desired purpose of the GP, i.e. aligning incentives between managers and shareholders and motivating managers to act in the best interest of shareholders in takeovers. Hence, having the proper mixture of cash and equity in GP can protect both managers and shareholders simultaneously. This highlights to the compensation committee that not only the magnitude of GP influences managers' behavior, but also the

composition of the GP can play an important role in shaping managerial behavior and decisions.

The remainder of this paper is organized as follows. Section 2 reviews prior literature and develops the hypotheses. Section 3 describes the sample selection process, presents the research methodology and defines the variables. Sections 4 presents descriptive statistics and reports results of the empirical analyses. Section 5 provides a summary of the findings and concludes the paper.

2. Literature Review and Hypotheses Development

2.1 CEO Golden Parachutes

Agency problems arise when there is interest misalignment between agents (managers) and principles (shareholders). In other words, the objectives of managers may differ from those of shareholders. Hence, manager may not act in the best interest of shareholders in making corporate decisions (Eisenhardt, 1989; Jensen & Meckling, 1976). The separation of ownership and control between managers and shareholders motivates the development of corporate governance mechanisms to relieve the tension in the firm (Fama & Jensen, 1983).

A well-designed executive compensation arrangement is a key corporate governance mechanism to align managerial incentives with those of shareholders (Faulkender, Kadyrzhanova, Prabhala, & Senbet, 2010; Jensen & Meckling, 1976). Using a well-designed executive compensation package to reduce agency costs is especially important in the context of M&As. Jensen (1986) argues that the conflict of interest between managers and shareholders, which stems from the agency relationship and information asymmetry, is evidenced in M&A deals. Hence, the agency cost and misalignment of interests may result in

managers not acting in the best interests of shareholders, instead managers may engage in takeovers for personal interests and benefits at the expense of shareholder wealth (Davidson et al., 1998; Fich et al., 2013).

Specifically, when the company becomes a potential target in the M&A, the managers are afraid of losing their jobs if the company is taken over by the acquiring firm. Therefore, target firm managers have an incentive to resist to the bid and take actions to make the firm to become an unattractive target (Lambert & Larcker, 1985). More importantly, due to the future career and reputation concerns, it is possible that target managers are motivated to resist to takeovers that are value-maximizing and in the best interest of the target shareholders (Buchholtz & Ribbens, 1994; E. G. Harris, 1990). Therefore, the agency problem between target managers and target shareholders can become costly, as target managers can realize personal benefits at the expense of target shareholder wealth (Fich et al., 2013; Heitzman, 2011).

In theory, an effective corporate governance mechanism to mitigate the agency problem in the context of M&As is to provide golden parachutes to the target managers, compensating them in the event of termination as a result of the takeover (E. G. Harris, 1990; Lambert & Larcker, 1985). Therefore, agency theory suggests that golden parachutes can be used to align interests and resolve the conflict of interest between managers and shareholders (Singh & Harianto, 1989).

In practice, golden parachutes have been a long-standing controversy amongst researchers and previous literature on golden parachutes has found mixed evidence. Jensen (1988) argues that both managers and shareholders benefit from golden parachutes as managers who have

golden parachutes are more likely to objectively respond to a takeover attempt. Managers understand that the existence of a golden parachute partially compensates them for the loss of their job and future income. As a consequence, managers are more likely to be motivated to act in the best interest of shareholders. For example, Lambert and Larcker (1985) examine the effects of the adoption of golden parachute on managerial decision making and shareholder wealth. They document a statistically significant positive association between the adoption of golden parachute and security market reaction. The result implies that golden parachutes have a favorable effect on the reaction of managers to M&A bids. In addition, E. G. Harris (1990) shows that target shareholders are better off by the adoption of golden parachutes, as golden parachutes enhance target managers' bargaining power during the takeover negotiation.

On the other hand, Mogavero and Toyne (1995) find that the positive market reaction to the adoption of golden parachutes does not exist during their sample period. Shareholders perceive the adoption as an unfavorable signal, thus resulting in negative stock returns. Moreover, Evans et al. (1997) report similar findings in the banking industry. They find that the adoption of a golden parachute is associated with poor performance both ex ante and ex post. Hence, they show that golden parachutes do not align the interests of managers with those of shareholders. The findings in Subramaniam (2001) show that mangers adopt golden parachutes to entrench themselves, making them more costly to be replaced. More recently, Bebchuk et al. (2014) document a negative relationship between the adoption of golden parachutes and firm abnormal stock returns both during and subsequent to the adoption. Bebchuk et al. (2014) show that on average, golden parachutes have an overall negative effect on shareholder wealth.

Overall, previous literature provides mixed evidence on the effectiveness and efficiency of golden parachutes. This paper contributes to the ongoing debate by examining golden parachutes from a new and different perspective. We argue that besides the adoption and magnitude of golden parachutes, it is also important to have well-designed golden parachutes to mitigate the agency problem between managers and shareholders in takeovers. Specifically, we argue that the use of equity-based golden parachutes enhances firm value and reduces interest misalignment between managers and shareholders.

2.2 Executive Equity-Based Incentives

Mehran (1995) argues that the form rather than the level of compensation arrangement is more important in motivating managers to act in the best interests of shareholders and maximizing firm value. Specifically, prior literature suggests that linking executive compensation to stock price performance mitigates agency problems by better aligning interests of managers and shareholders (Core et al., 2003; Jensen & Meckling, 1976; Jensen & Murphy, 2010). For instance, Mehran (1995) shows that firm performance is positively associated with the percentage of equity held by managers and positively related to the percentage of managers' compensation that is equity-based. Core and Larcker (2002) document that equity-based incentives are used by the board of directors to align incentives and improve governance. They also show that the use of equity incentives is associated with better operating performance. More recently, Balsam et al. (2014) find that equity-based incentives induce managers to strengthen firm's internal controls and maintain effective internal controls. As disclosure of internal control weaknesses will negatively affect share price, thus reducing the value of managers' equity holdings (Balsam et al., 2014). Overall, existing research highlight the importance of using equity-based compensation in aligning interests and increasing shareholder wealth.

In the context of M&As, Jensen (1988) emphasizes that golden parachutes need to be correctly implemented to be beneficial to both managers and shareholders. Jensen (1988) argues that a well-implemented golden parachute can effectively reduce the conflict of interest at times of M&As, thus the gains stemming from the takeover are more likely to be realized. In particular, golden parachutes should be tied to the returns earned by target shareholders (Jensen, 1988). Additionally, E. G. Harris (1990) highlights that equity-based golden parachutes need to be adopted to compensate managers for disutility suffered during the takeover and motivate managers to maximize the synergy gain from the takeover. Hence, prior research suggests that equity-based golden parachutes would better align interests of managers and shareholders and thus mitigating agency problem in M&As (E. G. Harris, 1990; Jensen, 1988). But there is none empirical evidence on whether firms whose managers have equity-based golden parachutes are more likely to act in the best interests of shareholders in takeovers and to make sound corporate decisions that enhance shareholder wealth.

We conjecture that equity-based golden parachutes will motivate managers to improve firm performance and maximize shareholder value. Specifically, we argue that when managers understand that the golden parachute payout is contingent on share price of the company to certain extent, then the managers are expected to exert more effort to maintain and increase the firm share price. Because if the firm gets taken over by the acquirer, then the final golden parachute payout depends on the share price of the firm. In other words, the higher the share price of the firm, the more golden parachute will be collected by the manager. For managers offered cash-based golden parachutes, on the other hand, the payoff does not mainly depend on the firm performance. Therefore, it is more likely that those managers with cash-based golden parachute will behave opportunistically. For example, managers with cash-based

golden parachute may cooperate to value-destroying takeover bids, which are not in the best interest of shareholders, in order to collect the golden parachute for personal benefit. Hence, equity-based golden parachutes are more likely to mitigate the agency problem between managers and shareholders in the context of M&As.

In addition, we argue that in the event of a M&A, offering equity-based incentives in the regular executive compensation is insufficient to solve the interest misalignment between managers and shareholders. It is also important to implement equity-based golden parachutes in the executive compensation package. As equity-based golden parachutes can be used to reduce agency costs in takeovers. The difference between cash-based and equity-based golden parachutes is whether the golden parachute payout depends on share price of the firm. Specifically, cash-based golden parachutes imply that regardless of firm performance, target CEO will receive a fixed amount of golden parachute upon employment termination and takeover. However, equity-based golden parachutes link the share price of the firm to the payoff of golden parachutes. Therefore, in event that target CEOs are terminated due to change in control of the firm and want to maximize the value of the equity-based golden parachute, then target CEOs are motivated to improve firm performance and enhance shareholder wealth. Therefore, we conjecture that offering equity-based golden parachutes can mitigate the interest misalignment between managers and shareholders in M&As. As a result, equity-based golden parachutes can be seen as effective monitoring and incentive alignment mechanisms.

Prior literature has shown that the importance of golden parachutes is positively associated with takeover completion likelihood (Fich et al., 2013), the level of golden parachutes is negatively associated with takeover resistance likelihood (Machlin et al., 1993), and

existence of golden parachute is not associated with takeover resistance likelihood (Buchholtz & Ribbens, 1994). We contribute to the existing literature by examining the relationship between equity-based golden parachutes and takeover completion likelihood.

We hypothesize a negative association between equity-based golden parachutes and the likelihood of the firm being successfully taken over by the acquirer. Target CEOs who are more aligned with shareholders will exert more effort in due diligence and are more likely to identify and reject bad offers. Therefore, conditional on receiving a bid, potential target firms are less likely to be taken over by bidding firms when target CEOs have equity-based golden parachutes in the executive compensation package. Stated formally:

H1: Target CEO equity-based golden parachute is negatively associated with the likelihood of M&A deal completion.

Jensen (1988) argues that properly structured golden parachutes should reward managers for negotiating large acquisition premiums (i.e. target shareholder return). Prior literature has examined the impact of executive incentives on target shareholder returns and reported mixed findings. For instance, Machlin et al. (1993) find a positive association between the size of golden parachutes and acquisition premiums. Lefanowicz, Robinson, and Smith (2000) find a positive relation between managerial incentives and target acquisition returns, but no statistically significant relationship between the level of golden parachutes and target gains. Choi (2004) examines the relation between the use of golden parachutes and target shareholder returns. He finds that target shareholders use golden parachutes to extract rent from potential acquirers. Sokolyk (2011) finds no statistically significant relationship between golden parachutes and acquisition premiums. Fich et al. (2013) show that the importance of golden parachute is negatively associated with target shareholder return, as

acquiring firms extract rent from target shareholders. And Bebchuk et al. (2014) find that golden parachutes are associated with higher expected acquisition premiums but have an overall negative effect on shareholder wealth. Therefore, we contribute to the existing literature by examining the relation between equity-based golden parachutes and target shareholder returns.

We hypothesize a positive relationship between equity-based golden parachutes and target shareholder return. As aforesaid, equity-based incentives are useful in aligning the interests of managers with those of shareholders and motivating managers to maximize shareholder wealth (Jensen & Meckling, 1976; Mehran, 1995). Hence, we argue that equity-based golden parachutes motivate managers to objectively evaluate the takeover bid, thus they are more likely to accept takeover bids that maximize shareholder value. Therefore, target CEOs with equity-based golden parachutes are more likely to act in the best interest of shareholders and achieve higher target shareholder return. Furthermore, prior literature shows that managerial ownership is positively related to target shareholder return, as the managerial ownership encourages target managers to bargain more effectively during takeover negotiations (Song & Walkling, 1993). We argue that it is important to offer equity-based golden parachutes to motivate managers to negotiate higher acquisition premiums. Therefore, in the population of completed M&A deals, we hypothesize that equity-based golden parachutes are positively associated with target shareholder return in the takeover. Stated formally:

H2: Target CEO equity-based golden parachute is positively associated with the target shareholder return in M&A deal.

3. Research Design

3.1 Data

The initial sample includes the M&A deals during the 4-year period between April 25, 2011 and December 31, 2015, which are extracted from Thomson Reuters One Banker Securities Data Corporation's (SDC) U.S. Mergers and Acquisitions database. Specifically, we use those dates as the announcement date of the deal.[5] We begin the sample in 2011 because from April 25, 2011, the SEC adopted rules for say-on-golden parachute, requiring additional quantitative and qualitative disclosure regarding golden parachute arrangements, and a separate shareholder advisory vote to approve the golden parachutes when shareholders vote on the M&A transactions (Securities and Exchange Commission, 2011). Therefore, in order to obtain more detailed disclosure on the composition of golden parachutes offered to target CEOs from the proxy statements and to ensure the sample of deals are more representative, we start the sample from April 25, 2011. Also, we focus the analyses on CEOs as they are most likely to be offered golden parachutes in the employment contracts and their compensation arrangements are likely to be most visible.

For the purpose of this paper, we only consider completed and withdrawn M&A deals. We require the percentage of shares acquired and/or percentage owned after the transaction to be 100 percent. Moreover, we exclude acquirers and target firms that are in the financial services sector.[6] In addition, we only consider publicly-traded acquiring and target firms due to data availability reason. Finally, we extract relevant deal characteristics data from SDC database to complete the analyses, such as deal number, date announced, date completed,

[5] SDC definition of Date Announced: "The date one or more parties involved in the related M&A transaction makes the first public disclosure of common or unilateral intent to pursue the transaction (no formal agreement is required). Among other things, Date Announced is determined by the disclosure of discussions between parties, disclosure of a unilateral approach made by a potential bidder, and the disclosure of a signed Memorandum of Understanding (MOU) or other agreement."

[6] We exclude financial services acquirers and targets using SIC codes of 6000-6799 (i.e. Finance, Insurance and Real Estate) and 9900-9999 (i.e. Nonclassifiable) because of their industry-specific regulatory status and financial reporting issues.

date withdrawn, status, form, consideration structure, whether the deal began as a rumor, deal attitude, number of bidders and acquisition premium.

We collect CEO personal characteristics data from Standard & Poor's ExecuComp database, such as age, gender, and year became CEO. In addition, we collect financial data from COMPUSTAT to construct control variables in the model, such as total assets, total liabilities, cash and short-term investments, income before extraordinary items, common shares outstanding, and fiscal year closing price.

In order to measure the equity-based golden parachutes offered to target firm CEOs, we hand-collect the data on the composition of the golden parachute from DEF14A proxy statements from SEC website. Specifically, using hand-collected data, we are able to identify the proportion of cash-based golden parachutes and proportion of equity-based golden parachutes in the total golden parachute payments. Companies are required to disclose M&A-related compensation arrangements with executives in the proxy statements. The M&A-related compensation arrangements are usually referred to as golden parachutes or change-in-control payment in the proxy statements. The data on golden parachute compositions is not readily available in executive compensation databases, such as Execucomp.[7] Thus, using a hand-collected dataset, this paper contributes to the existing literature by empirically examining the impact of equity-based golden parachute on M&A deals.

The sample is reduced due to use of data from SDC, Compustat and proxy statements for the analyses, such as the construction of control variables and main variables of interest. Hence,

[7] Execucomp database only provides data on the total estimated payments in event of change in control of executives, which is a total estimation of the change-in-control payment. Specifically, Execucomp database does not provide the individual components of the change-in-control payments, thus it is unable to analyze the composition of change-in-control payments based on the data in Execucomp database.

the final sample for H1 consists of 342 announced M&A deals during 2011 to 2015. And the final sample for H2 consists of 192 completed M&A deals. Details of sample selection are provided in Panel A of Table 1.

The sample compositions for announced M&A deals and completed M&A deals by year and industry are summarized in Panel B of Table 1.[8] The number of announced M&A deals is the highest in 2014 (31.29 percent). Hence, it is reasonable that most of completed M&A deals happened in 2015 (33.85 percent). The sample covers a wide range of industries. The business equipment (22.22 percent in announced deals and 22.92 percent in completed deals) and Healthcare-Medical Equipment-Drugs (18.42 percent in announced deals and 25.52 percent in completed deals) sectors were the most heavily represented industries in the sample. Overall, the sample distributions show that it is important to include both year and industry fixed effects to control for time and industry trends in the regression models.

[Table 1 about here.]

3.2 Regression Models

3.2.1 Equity-Based Golden Parachute and M&A Completion Likelihood

The following logistic regression models are employed to test if the target CEOs equity-based golden parachutes are negatively associated with the likelihood of completing a M&A deal:

Equation (1a):

[8] Industry fixed effects are based on Fama-French 12 industry classifications. See Ken French's website http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

$$Completion = \beta_0 + \beta_1 GP\_Median + \beta_2 Age + \beta_3 Bidder + \beta_4 Rumor + \beta_5 DealAttitude + \beta_6 ROA + \beta_7 Leverage + \beta_8 Size + \beta_9 MVA + \beta_{10} Time + \beta_{11} Industry + \beta_{12} Year + \varepsilon$$

Equation (1b):

$$Completion = \beta_0 + \beta_1 GP\_Percent + \beta_2 Age + \beta_3 Bidder + \beta_4 Rumor + \beta_5 DealAttitude + \beta_6 ROA + \beta_7 Leverage + \beta_8 Size + \beta_9 MVA + \beta_{10} Time + \beta_{11} Industry + \beta_{12} Year + \varepsilon$$

Equation (1c):

$$Completion = \beta_0 + \beta_1 GP\_Equity + \beta_2 Age + \beta_3 Bidder + \beta_4 Rumor + \beta_5 DealAttitude + \beta_6 ROA + \beta_7 Leverage + \beta_8 Size + \beta_9 MVA + \beta_{10} Time + \beta_{11} Industry + \beta_{12} Year + \varepsilon$$

The dependent variable $Completion$ in the regression models is a dummy variable, that is equal to 1 if the M&A deal is completed (i.e. not withdrawn) and 0 otherwise.[9]

The main variable of interest is GP, which measures the target CEO equity-based golden parachute. We use three different ways to measure equity-based golden parachutes. Firstly, in equation 1a, GP_Median is a dummy variable, which equals 1 if the proportion of CEO's equity-based golden parachute (i.e. equity-based golden parachute divided by total golden parachute) is greater than the median in the sample, and equal to 0 otherwise. Secondly, in equation 1b, $GP\_Percent$ measures the proportion of equity-based golden parachute in total golden parachute offered to the CEO (i.e. equity-based golden parachute divided by total

[9] SDC definition of Withdrawn: "the target or acquirer in the transaction has terminated its agreement, letter of intent, or plans for the acquisition or merger."

golden parachute). This is used to investigate how does the proportion of equity-based golden parachute, measured in levels, impact on M&As. Finally, in equation 1c, GP_Equity is a dummy variable, which equals 1 if the golden parachute offered to the CEO includes an equity-based component, and equal to 0 otherwise (i.e. entire golden parachute is cash-based). This is used to examine whether the presence of equity-based golden parachute impacts on M&As.

For hypothesis 1, the coefficient for GP (β_1) is examined. Based on the argument that equity-based golden parachutes motivate managers to act in the best interest of shareholders and maximize firm value, and therefore those firms are less likely to be successfully taken over by acquiring firms. Therefore, the estimation coefficient of GP is expected to be negative.

Additionally, a group of CEO-related and takeover-related control variables that may have an impact on the completion likelihood of M&A bids are included in equations 1a, 1b and 1c with reference to prior literature. Age is a binary variable, which equals 1 if the target firm CEO is older than 65, and equal to 0 otherwise. Jenter and Lewellen (2015) suggest that the probability of a takeover increases when the target firm CEO reaches age 65, as acquirers are more likely to target firms with retirement-age CEOs and retirement-age CEOs are more willing to accept takeover offers. Thus, Age is used to control for the retirement-age effect of target firm CEOs on M&A completion likelihood. $Bidder$ is a dummy variable which takes the value of 1 if multiple acquiring firms are competing to take over a target firm, and takes the value of 0 otherwise. Walkling (1985) argues that the existence of competition between multiple acquirers is negatively related to the likelihood of deal completion. Thus, $Bidder$ controls for the number of bidders in an M&A deal. $Rumor$ is a dummy variable which equals 1 if the deal began as a rumor as recorded in the SDC database, and equal to 0

otherwise. Prior literature documents that whether the deal started as a rumor has an significant impact in the M&A deal process and outcome (Fich et al., 2013). $DealAttitude$ is a dummy variable which equals 1 if the deal is hostile in nature, and equal to 0 otherwise. Hsieh and Walkling (2005) document that when acquiring and target firms are involved in friendly negotiation and discussion environment, then bids are more likely to be successfully completed. In accordance with prior literature (Bebchuk et al., 2014; Fich et al., 2013), $Time$ is used to measure the annualized time spent from deal announcement to deal completion/withdrawal. ROA is measured as the income before extraordinary items-to-assets ratio, which is used to control for the return on assets of the firm in the model. Prior research documents mixed evidence on the association between ROA and takeover completion likelihood (Cremers, Nair, & John, 2009; Ivashina, Nair, Saunders, Massoud, & Stover, 2009). $Leverage$ is measured as the ratio of book debt to total assets at year end prior to the acquisition, which controls for capital structure of the firm, since past literature suggests that a negative relationship exists between leverage and acquisition likelihood (M. Harris & Raviv, 1988; Stulz, 1988). In order to control for firm size, $Size$ is measured as the natural logarithm of the market value of the firm's equity prior to the acquisition. Existing M&A literature suggests that the likelihood of deal completion is inversed associated with the size of the firm (Ambrose & Megginson, 1992; Hasbrouck, 1985; Palepu, 1986). MVA is measured as the ratio of market-to-book value of assets. Palepu (1986) suggests that firms whose market values are low compared to the book values are more likely to be acquired. Finally, we control for year- and industry-fixed effects using year dummies and industry dummies based on the Fama-French 12-industry classifications.

3.2.2 Equity-Based Golden Parachute and Target Shareholder Return

The following Ordinary Least Squares regression models are employed to test if target firm CEOs with equity-based golden parachutes are positively associated with target shareholder returns:

Equation 2(a):

$$Premium = \alpha_0 + \alpha_1 GP\_Median + \alpha_2 Rumor + \alpha_3 Time + \alpha_4 ROA + \alpha_5 Size + \alpha_6 MVA + \alpha_7 Stock + \alpha_8 Leverage + \alpha_9 Bidder + \alpha_{10} Industry + \alpha_{11} Year + \varepsilon$$

Equation 2(b):

$$Premium = \alpha_0 + \alpha_1 GP\_Percent + \alpha_2 Rumor + \alpha_3 Time + \alpha_4 ROA + \alpha_5 Size + \alpha_6 MVA + \alpha_7 Stock + \alpha_8 Leverage + \alpha_9 Bidder + \alpha_{10} Industry + \alpha_{11} Year + \varepsilon$$

Equation 2(c):

$$Premium = \alpha_0 + \alpha_1 GP\_Equity + \alpha_2 Rumor + \alpha_3 Time + \alpha_4 ROA + \alpha_5 Size + \alpha_6 MVA + \alpha_7 Stock + \alpha_8 Leverage + \alpha_9 Bidder + \alpha_{10} Industry + \alpha_{11} Year + \varepsilon$$

Following previous literature (Bebchuk et al., 2014; Fich et al., 2013), target shareholder return in M&As is measured using the acquisition premium. The dependent variable in equations 2a, 2b and 2c, $Premium$ is the four-week acquisition premiums, as reported by the SDC database, which are calculated as the offer price paid by the acquirer divided by the target share price four weeks before the M&A announcement date. For hypothesis 2, the coefficient for GP (α_1) is examined. Based on the argument that equity-based golden parachutes motivate managers to act in the best interest of shareholders and make corporate decision that enhance shareholder wealth. Hence, the estimation coefficient of GP is expected to be positive.

The independent variables include the main variable of interest, GP, together with relevant control variables. Variables GP_Median, $GP\_Percent$, GP_Equity, $Bidder$, $Rumor$, $Time$, ROA, $Size$, MVA, $Leverage$, $Industry$ and $Year$ follow the same definitions as above.[10] Consistent with prior research (e.g., Shleifer & Vishny, 2003; Skaife & Wangerin, 2013), the additional control variable introduced in the regression models for hypothesis 2 is $Stock$, which is a dummy variable that equals 1 if the only deal consideration used by acquirer is stock, and equal to 0 otherwise. Thus, $Stock$ controls for the method of payments used in the deal. All variables are defined in the Appendix.

4. Results

4.1 Descriptive Statistics

Table 2 presents the summary statistics of all variables used in the regression models, including dependent, independent and control variables. $GP\_Percent$ is measured as each target CEO's equity-based golden parachute divided by total golden parachute. Therefore, $GP\_Percent$ shows the proportion of equity-based golden parachute offered to each target CEO. $GP\_Percent$ has a mean of 0.516 and median of 0.553, suggesting that on average, 52 percent of golden parachutes offered to target CEOs are equity-based. The variation in target shareholder return ($Premium$) is high, ranging from -91 percent to 400 percent. In addition, the annualized measure of the time spent from deal announcement to termination is, on average, 0.6 years (i.e. 225 days). Descriptive statistics of other controls are consistent with prior literature.

[Table 2 about here.]

[10] Control variable, *DealAttitude*, is not included in regression models for H2. As the sample of completed M&A deals used for H2 does not include hostile deals.

Table 3 reports the Pearson correlations among the variables, and indicates that target CEO golden parachutes favoring equity are correlated with the likelihood of deal completion. The correlation matrix also shows that the correlation between the equity-based golden parachute measures and some of the control variables are significant at the conventional levels.

[Table 3 about here.]

4.2 Main Analyses

Hypothesis 1: Equity-Based Golden Parachute and M&A Completion Likelihood

H1 focuses on the association between the target CEO equity-based golden parachute and likelihood of completing the deal. The results for H1 are provided in Table 4. The dependent variable $Completion$ in the regression model is a dummy variable, that is equal to 1 if the M&A deal is completed (i.e. not withdrawn) and 0 otherwise.

Panel A presents the results for the univariate analyses. The coefficients for GP_Median and $GP\_Percent$ are negative and statistically significant at 5 percent level of significance, suggesting that target CEOs with more equity-based golden parachutes are associated with less likelihood of being taken over. Panel B presents the results for the multivariate analyses. In particular, in model 4, the coefficient on variable GP_Median is negative and significant at the 10 percent level of significance, suggesting that the probability of completing the deal is negatively associated with target CEO equity-based golden parachutes. The coefficient estimate on GP_Median is -0.639, suggesting that, holding other factors constant, the odds of a target CEO with above median equity-based golden parachutes being taken over is 0.53 times the odds of a target CEO with below median equity-based golden parachutes doing so. In model 5 (6), the proxy for target CEO equity-based golden parachute, $GP\_Percent$ (GP_Equity), is not statistically significant at the conventional level. In other words, the

proportion of target CEO golden parachutes measured in levels is not statistically associated with completion likelihood. The existence of target CEO equity-based golden parachute alone is not statistically associated with completion likelihood. Instead, the proportion of equity-based golden parachute needs to be greater than median level offered to peer CEOs to have a significant impact on the completion likelihood. Therefore, this suggests that firms need to offer sufficient level of equity-based golden parachutes to motivate managers to improve firm performance and act in the best interest of shareholders. Hence, the more efficient managers are less likely to be taken over. Furthermore, consistent with prior literature, the results of control variables demonstrate that the likelihood of deal completion is negatively related to the multiple bidder offers (Walkling, 1985), positively related to whether the deal began as a rumor (Fich et al., 2013), negatively related to the size of target firm (Ambrose & Megginson, 1992; Hasbrouck, 1985; Palepu, 1986) and negatively related to the time spent from announcement to completion/termination (Bebchuk et al., 2014; Fich et al., 2013). The findings also show that M&A deal completion likelihood is positively related to the target firms' market-to-book value of assets. This is inconsistent with prior literature (Palepu, 1986), which documents that firms whose market values are low compared to the book values are more likely to be acquired. In summary, H1 is supported as target CEO equity-based golden parachute is negatively related to likelihood of M&A deal completion, indicating that offering equity-based golden parachute motivates CEOs to improve firm performance and enhance managerial efficiency, thus they are less likely to be taken over in M&As.

[Table 4 about here.]

Hypothesis 2: Equity-Based Golden Parachute and Target Shareholder Return

H2 focuses on the association between target CEO equity-based golden parachute and target shareholder return. The results for H2 are provided in Table 5. The dependent variable, $Premium$, is the four-week acquisition premium, which is calculated as the offer price paid by the acquirer divided by the target share price four weeks before the M&A announcement date.

Panel A presents the results for the univariate analyses. The coefficients for GP_Median, $GP\_Percent$ and GP_Equity are statistically insignificant at conventional levels of significance. Panel B presents the results for the multivariate analyses. In particular, in model 4, the coefficient on variable GP_Median is positive and statistically significant at the 5 percent level of significance, suggesting that the target shareholder return is positively associated with target CEO equity-based golden parachutes. The coefficient estimate on GP_Median is 16.645, suggesting that, holding other factors constant, target CEOs with above median equity-based golden parachutes achieve approximately 17% more acquisition premium than target CEOs with below median equity-based golden parachutes. In model 5 (6), the proxy for target CEO equity-based golden parachute, $GP\_Percent$ (GP_Equity), is not statistically significant from zero. In other words, the proportion of target CEO golden parachutes measured in levels is not statistically associated with target shareholder return. And the existence of target CEO equity-based golden parachute is not statistically associated with target shareholder return. Instead, the proportion of equity-based golden parachute needs to be greater than median level offered to peer CEOs to have a significant impact on the target shareholder return. Therefore, this suggests that firms need to offer sufficient level of equity-based golden parachutes to align interest of managers and shareholders, which in turn achieving higher acquisition premium. Furthermore, consistent with prior literature, the results of control variables demonstrate that the target shareholder return is negatively related

to the size of the target firm (Fich et al., 2013), negatively related to the use of stock-based consideration by acquiring firm (Jensen, 1986; Schwert, 2000; Skaife & Wangerin, 2013) and positively related to the leverage of the target firm (Skaife & Wangerin, 2013). In summary, H2 is supported as target CEO equity-based golden parachute is positively related to target shareholder return.

[Table 5 about here.]

4.3 Sensitivity Analysis

In this section, we test the robustness of the results of hypothesis 2 to changes in the specifications in the dependent variable, $Premium$. In the main analysis, the target shareholder returns (i.e. acquisition premium) were analyzed using the four-week acquisition premiums, which are calculated as the offer price paid by the acquirer divided by the target share price four weeks before the M&A announcement date. Following prior literature (e.g., Bebchuk et al., 2014), we use an alternative time period over which the acquisition premium is calculated, namely $Premium\_One$. The robustness of the results to the one-week acquisition premium is given in Table 6. We verify whether the results are robust by using the one-week acquisition premiums (reported in SDC database), which are calculated as the offer price paid by the acquirer divided by the target share price one week before the M&A announcement date.

The results are similar to the main analysis, with the main variable of interest (i.e. GP_Median) being still positive and statistically significant at the 10 percent level of significance. The coefficient estimate on GP_Median is 14.281, suggesting that, holding other factors constant, target CEOs with above median equity-based golden parachute

achieve approximately 14% more acquisition premium than target CEOs with below median equity-based golden parachute. Therefore, the findings indicate that the interests of target CEOs with more equity-based golden parachutes are more aligned with those of target shareholders, by realizing higher acquisition premiums. The coefficient estimate on GP_Median (i.e. 14.281) using one-week acquisition premium is smaller than the coefficient estimate on GP_Median (i.e. 16.645) using four-week acquisition premium. This result is consistent with findings in previous research (e.g., Bebchuk et al., 2014).

[Table 6 about here.]

5. Conclusion

In this study, we examine whether equity-based golden parachutes motivate target firm CEOs to act in the best interest of target shareholders and make sound corporate decisions to enhance firm value. Golden parachutes are a controversial tool in corporate governance, as golden parachutes aim to protect target CEOs in the event of termination subsequent to M&As, but the generous payout might also induce managers to accept value-destroying takeovers. We argue that equity-based golden parachutes need to be implemented to motivate CEOs to maximize firm value and to align interests of target CEOs and target shareholders in M&As. Consistent with our expectation, we find that target CEO equity-based golden parachutes are negatively associated with the likelihood of M&A deal completion, and positively associated with target shareholder return in completed M&A deals. This study provides insight into the role of equity-based golden parachutes in mitigating the agency problem between target CEOs and target shareholders in M&As. Therefore, this study contributes to the ongoing debate on the effectiveness of golden parachutes by showing that equity-based golden parachutes can be used to achieve the proposed objective (i.e. protecting

the managers in the event of termination following a change in control) and desired outcome (i.e. motivating managers to maximize shareholder wealth). In addition, this study has practical implications for compensation design, as it shows that the mere offering of a golden parachute is insufficient to achieve good corporate governance; it is also important to have properly-designed golden parachutes to motivate managers to act in the best interest of shareholders.

The interpretation of the findings is subject to several caveats. First, the sample of M&A deals used for the purpose of this paper only includes firms that have received at least one bid from acquiring firms, and so selection bias is of concern. Future research could consider whether firms with CEOs with equity-based golden parachutes are more or less likely to become potential targets. In particular, future researchers could compare the differences between target CEO with equity-based golden parachute and non-target CEO with equity-based golden parachute. Second, this paper does not explicitly control for the equity-based incentive in target CEO regular compensation package. Therefore, we cannot rule out the possibility that the composition of regular pay plays a role in the M&A patterns we explore. Additional research could explore the relation between equity-based incentives in regular executive compensation and equity-based incentives in golden parachutes, and examine if the relation is consistent with optimal contracting or managerial power theory. Furthermore, future research could analyze whether the composition of golden parachutes is implemented to achieve a compensation hedging purpose.

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Table 1: Sample Selection and Sample Distribution
This table reports the sample selection procedure and sample distribution. Panel A reports the sample selection procedure for H1 and H2. Panel B reports the sample distribution by year and industry for announced M&A deals and completed M&A deals.

Panel A: Sample Selection

Procedure	**No. of observations**
M&A deals identified in the SDC dataset	698
Less: target firms that do not provide golden parachutes to CEOs and/or have missing information in proxy statements	(302)
Less: target firms that have missing data for relevant control variables	(54)
Final Sample for H1	**342**
Less: withdrawn deals and target firms that have missing data for relevant analysis	(150)
Final Sample for H2	**192**

Panel B: Sample Distribution

By Year – announced M&A deals:

Year	**N**	**%**
2011	6	1.75
2012	63	18.42
2013	76	22.22
2014	107	31.29
2015	90	26.32
Total	**342**	**100.00**

By Year – completed M&A deals:

Year	**N**	**%**
2011	1	0.52
2012	21	10.94
2013	45	23.44
2014	42	21.88
2015	65	33.85
2016	18	9.38
Total	**192**	**100.00**

Panel B (*contd.*): Sample Distribution

By Industry – announced M&A deals:

Industry	N	%
Consumer Non-Durables	24	7.02
Consumer Durables	5	1.46
Manufacturing	31	9.06
Oil, Gas, and Coal Extraction and Products	14	4.09
Chemicals and Allied Products	13	3.80
Business Equipment	76	22.22
Telephone and Television Transmission	11	3.22
Utilities	9	2.63
Wholesale, Retail, and Some Services	47	13.74
Healthcare, Medical Equipment, and Drugs	63	18.42
Other	49	14.33
Total	**342**	**100.00**

By Industry – completed M&A deals:

Industry	N	%
Consumer Non-Durables	15	7.81
Consumer Durables	4	2.08
Manufacturing	20	10.42
Oil, Gas, and Coal Extraction and Products	9	4.69
Chemicals and Allied Products	6	3.13
Business Equipment	44	22.92
Telephone and Television Transmission	4	2.08
Utilities	5	2.60
Wholesale, Retail, and Some Services	17	8.85
Healthcare, Medical Equipment, and Drugs	49	25.52
Other	19	9.90
Total	**192**	**100.00**

Table 2: Descriptive Statistics
This table reports the descriptive statistics (i.e. number of observations, mean, median, standard deviation, minimum and maximum) for variables used in the regression analyses.

Variable	N	Mean	Median	Std. Dev.	Min	Max
Completion	342	0.620	1.000	0.486	0.000	1.000
Premium	192	44.798	35.730	47.942	-91.180	400.000
GP_Median	342	0.482	0.000	0.500	0.000	1.000
GP_Percent	342	0.516	0.553	0.303	0.000	1.000
GP_Equity	342	0.883	1.000	0.322	0.000	1.000
Age	342	0.108	0.000	0.311	0.000	1.000
Bidder	342	0.067	0.000	0.251	0.000	1.000
Rumor	342	0.143	0.000	0.351	0.000	1.000
DealAttitude	342	0.018	0.000	0.131	0.000	1.000
ROA	342	0.031	0.035	0.418	-6.057	0.397
Leverage	342	0.511	0.491	0.274	0.003	2.245
Size	342	7.136	7.259	1.746	0.691	11.577
MVA	342	2.207	1.642	2.491	0.617	38.227
Time	342	0.616	0.340	0.645	0.000	3.220
Stock	342	0.094	0.000	0.292	0.000	1.000

Variable definitions are given in Appendix

Table 3: Pearson Correlations
This table reports the Pearson correlation matrix.

	Completion	*Premium*	*GP_Median*	*GP_Percent*	*GP_Equity*	*Age*	*Bidder*	*Rumor*	*DealAttitude*	*ROA*	*Leverage*	*Size*	*MVA*	*Time*	*Stock*
Completion	1														
Premium	0.185***	1													
GP_Median	-0.124**	0.090	1												
GP_Percent	-0.121**	0.032	0.825***	1											
GP_Equity	0.015	0.001	0.042	0.030	1										
Age	0.079	-0.071	-0.091*	-0.107**	-0.020	1									
Bidder	-0.126**	0.008	-0.026	-0.066	-0.011	-0.056	1								
Rumor	0.148***	-0.010	0.106**	0.064	-0.007	-0.035	0.057	1							
DealAttitude	-0.171***	-0.009	-0.040	-0.003	0.049	-0.047	0.053	0.009	1						
ROA	-0.113**	-0.234***	0.039	0.083	-0.033	0.025	0.003	0.044	0.031	1					
Leverage	-0.047	0.230***	0.033	0.107**	0.065	-0.043	0.050	0.059	0.096*	-0.212***	1				
Size	-0.256***	-0.250***	0.307***	0.319***	0.011	-0.160***	0.046	0.198***	0.035	0.253***	0.015	1			
MVA	0.062	0.156**	0.151***	0.097*	0.023	-0.034	-0.027	0.077	-0.006	-0.620***	0.115**	0.065	1		
Time	-0.548***	-0.182***	0.104*	0.085	-0.019	-0.128**	-0.096*	-0.135**	-0.063	0.123**	0.008	0.274***	-0.004	1	
Stock	0.086	-0.130**	-0.149***	-0.104*	0.054	-0.080	-0.006	0.0119	0.034	-0.105*	0.089	-0.014	-0.046	-0.046	1

***p < 0.01, **p < 0.05, *p < 0.10
Variable definitions are given in Appendix

Table 4: Equity-Based Golden Parachute and M&A Completion Likelihood
This table reports the results of the empirical tests on the association between target CEO equity-based golden parachute and M&A completion likelihood. Panel A reports the results for the univariate analyses. Panel B reports the results for the multivariate analyses.

Dependent Variable = *Completion*						
Variable	**Panel A**			**Panel B**		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	**0.744*****	**0.930*****	0.511	0.533	0.839	0.291
	(0.161)	(0.231)	(0.327)	(1.740)	(1.715)	(1.764)
GP_Median	**-0.513****			**-0.639***		
	(0.225)			(0.354)		
GP_Percent		**-0.839****			-0.865	
		(0.377)			(0.601)	
GP_Equity			-0.025			0.382
			(0.347)			(0.536)
Age				-0.247	-0.247	-0.236
				(0.513)	(0.509)	(0.501)
Bidder				**-2.224*****	**-2.236*****	**-2.093*****
				(0.545)	(0.549)	(0.545)
Rumor				**1.025****	**0.982****	**0.984****
				(0.502)	(0.500)	(0.501)
DealAttitude				-17.807	-17.708	-17.677
				(818.257)	(822.819)	(826.845)
ROA				0.736	0.754	0.728
				(0.692)	(0.701)	(0.700)
Leverage				-0.022	0.017	-0.147
				(0.645)	(0.646)	(0.657)
Size				**-0.250****	**-0.256****	**-0.307****
				(0.124)	(0.124)	(0.122)
MVA				**0.363****	**0.337****	**0.324****
				(0.148)	(0.145)	(0.144)
Time				**-3.182*****	**-3.160*****	**-3.173*****
				(0.462)	(0.460)	(0.461)
Industry dummies				Yes	Yes	Yes
Year dummies				Yes	Yes	Yes
AIC	452.997	453.211	458.254	309.841	311.044	312.634
BIC	460.667	460.881	465.924	405.712	406.914	408.504
Log Likelihood	-224.498	-224.605	-227.127	-129.921	-130.522	-131.317
Deviance	448.997	449.211	454.254	259.841	261.044	262.634
Num. obs.	342	342	342	342	342	342

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$
Variable definitions are given in Appendix

Table 5: Equity-Based Golden Parachute and Target Shareholder Return
This table reports the results of the empirical tests on the association between target CEO equity-based golden parachute and target firm shareholder return. Panel A reports the results for the univariate analyses. Panel B reports the results for the multivariate analyses.

Dependent Variable = *Premium*						
Variable	**Panel A**			**Panel B**		
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Intercept	**41.683*****	**43.015*****	**49.032*****	28.248	30.238	38.171
	(4.528)	(6.468)	(9.806)	(47.350)	(48.032)	(48.635)
GP_Median	7.477			**16.645****		
	(7.016)			(7.131)		
GP_Percent		3.717			14.258	
		(11.376)			(11.815)	
GP_Equity			-4.839			-2.641
			(10.483)			(10.392)
Rumor				-3.657	-2.713	-2.931
				(9.252)	(9.351)	(9.426)
Time				9.243	9.989	9.123
				(16.436)	(16.641)	(16.703)
ROA				-16.182	-16.779	-14.744
				(13.011)	(13.245)	(13.216)
Size				**-5.943****	**-5.233****	**-4.589***
				(2.622)	(2.635)	(2.637)
MVA				-2.007	-1.827	-1.528
				(1.958)	(1.984)	(1.981)
Stock				**-18.194***	**-20.508***	**-21.985****
				(10.588)	(10.648)	(10.741)
Leverage				**45.769*****	**45.718*****	**48.840*****
				(11.857)	(12.128)	(12.241)
Bidder				19.017	18.954	15.868
				(15.993)	(16.259)	(16.516)
Industry dummies				Yes	Yes	Yes
Year dummies				Yes	Yes	Yes
R^2	0.006	0.001	0.001	0.301	0.285	0.279
Adj. R^2	0.001	-0.005	-0.004	0.206	0.187	0.180
Num. obs.	192	192	192	192	192	192
RMSE	47.925	48.055	48.041	42.725	43.225	43.404

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$
Variable definitions are given in Appendix

Table 6: Sensitivity Analysis
This table reports the results of the sensitivity analysis on the association between target CEO equity-based golden parachute and target firm shareholder return. Panel A reports the results for the univariate analyses. Panel B reports the results for the multivariate analyses.

Dependent Variable = *Premium_One*						
Variable	**Panel A**			**Panel B**		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Intercept	**38.400*****	**39.935*****	**44.465*****	7.237	9.784	16.669
	(4.324)	(6.172)	(9.358)	(45.409)	(46.006)	(46.487)
GP_Median	6.183			**14.281****		
	(6.699)			(6.839)		
GP_Percent		2.170			10.207	
		(10.857)			(11.316)	
GP_Equity			-3.987			-3.464
			(10.005)			(9.933)
Rumor				-3.348	-2.539	-2.821
				(8.872)	(8.957)	(9.010)
Time				8.248	8.780	8.098
				(15.763)	(15.939)	(15.965)
ROA				-12.919	-13.161	-11.623
				(12.477)	(12.686)	(12.632)
Size				**-4.538***	-3.851	-3.330
				(2.514)	(2.524)	(2.521)
MVA				-1.787	-1.593	-1.366
				(1.877)	(1.900)	(1.893)
Stock				**-17.293***	**-19.439***	**-20.706****
				(10.154)	(10.199)	(10.267)
Leverage				**47.119*****	**47.431*****	**50.034*****
				(11.371)	(11.616)	(11.700)
Bidder				10.699	10.320	7.635
				(15.337)	(15.573)	(15.787)
Industry dummies				Yes	Yes	Yes
Year dummies				Yes	Yes	Yes
R^2	0.004	0.000	0.001	0.294	0.280	0.277
Adj. R^2	-0.001	-0.005	-0.004	0.198	0.181	0.178
Num. obs.	192	192	192	192	192	192
RMSE	45.763	45.861	45.846	40.973	41.402	41.487

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$
Variable definitions are given in Appendix

Appendix: Variable definitions

Variable	Definition
GP_Median	Dummy variable equal to 1 if the proportion of target CEO's equity-based golden parachute (i.e. equity-based golden parachute divided by total golden parachute) is greater than the median, and 0 otherwise
GP_Percent	Target CEO's equity-based golden parachute divided by total golden parachute
GP_Equity	Dummy variable equal to 1 if the golden parachute offered to the target CEO includes equity-based component, and 0 otherwise (i.e. entire golden parachute is cash-based)
Completion	Dummy variable equal to 1 if the M&A deal is completed, and 0 otherwise
Premium	Four-week acquisition premiums, which are calculated as the offer price paid by the acquirer divided by the target share price four weeks before the M&A announcement date
Premium_One	One-week acquisition premiums, which are calculated as the offer price paid by the acquirer divided by the target share price one week before the M&A announcement date
Age	Dummy variable equal to 1 if the target CEO is older than 65, and 0 otherwise
Bidder	Dummy variable equal to 1 if multiple acquiring firms are competing to take over a particular target, and 0 otherwise
Rumor	Dummy variable equal to 1 if the deal began as a rumor, and 0 otherwise
DealAttitude	Dummy variable equal to 1 if the deal is hostile in nature, and 0 otherwise
ROA	Return on assets of the firm, which is measured as the income before extraordinary items-to-assets ratio
Leverage	Ratio of book debt to total assets at year end prior to the M&A
Size	Natural logarithm of the market value of the target firm's equity prior to the M&A
MVA	Ratio of market-to-book value of assets
Time	Annualized time spent from deal announcement to deal completion/withdrawal
Stock	Dummy variable which equal to 1 if the only deal consideration used by acquiring firm is stock, and 0 otherwise
Industry	Industry dummies identified on the basis of Fama-French 12 industry classification
Year	Year dummies