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Golden Parachutes and the Wealth of Shareholders

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Abstract

Golden parachutes have attracted much debate and substantial attention from investors and public officials for more than two decades, and the Dodd-Frank Act recently mandated a shareholder vote on any future adoption of a golden parachute by public firms. We use IRRC data for the period 1990-2006 to provide a comprehensive analysis of the relationship that golden parachutes have both with the evolution of firm value over time and with shareholder opportunities to obtain acquisition premiums. We find that golden parachutes are associated with increased likelihood of either receiving an acquisition offer or being acquired, a lower premium in the event of an acquisition, and higher (unconditional) expected acquisition premiums. Tracking the evolution of firm value over time in firms adopting GPs, we find that firms adopting a GP have a lower industry-adjusted Tobin's Q already in the IRRC volume preceding the adoption, but that their value continues to decline during the inter-volume period of adoption and continues to erode subsequently. A similar pattern is displayed by an analysis of abnormal stock returns prior to the adoption of GPs, during the inter-volume period of adoption, and subsequently.

Keywords: Golden parachute, executive compensation, corporate governance, acquisitions, takeovers, acquisition likelihood, acquisition premiums, agency costs, Tobin's Q, Dodd-Frank.

JEL Classification: D23, G32, G38, J33, J44, K22, M14.

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1. Introduction

Golden parachutes (GPs) have attracted much debate and substantial attention from investors and public officials ever since their use became common in the midst of unprecedented takeover activities in the late '70s and early '80s.[1] In 1984, Congress enacted sections 280G and 4999 of the Internal Revenue Code, which seek to discourage GPs with large monetary value by imposing substantial tax penalties on their use.[2] Over the last fifteen years, precatory resolutions opposing GPs have been brought in significant numbers and have commonly passed.[3] More recently, President Obama and Treasury Secretary Geithner voiced strong criticisms of GPs,[4] the TARP legislation and the regulations implementing it precluded financial firms receiving government funding from making golden parachute payments to top executives, and the 2010 Dodd-Frank Act mandated advisory shareholder votes on all future adoptions of a GP by public firms.[5]

We aim in this paper to inform the ongoing evaluation of and debate on GPs. In particular, we seek to contribute to an understanding of the relationship that GPs have both with ongoing firm value and with shareholder opportunities to obtain acquisition premiums. To the best of our knowledge, our paper is the first study focusing on GPs that takes advantage of the IRRC dataset, which enables us to track the GP status and other governance provisions of all public firms of significance in the US stock market for a long period of time. Using this dataset, we obtain and analyze three sets of findings concerning the relationship that GPs have with (i) acquisition incidence, (ii) acquisition premiums, and (iii) the evolution of firm value over time.

We begin by analyzing the relationship of GPs and acquisition likelihood. We find that, controlling for publicly known financial characteristics that are known to be associated with higher *ex ante* likelihood of acquisition offers and acquisitions, GPs are associated with both a

[1] For a review of the active debate on the subject already taking place in the 1980s, see Bress (1987).
[2] For recent comments on the legislative history, see Hankinson (2005) and Mullane (2009).
[3] See the annual proxy season reviews issued by Georgeson Shareholder.
[4] See the February 4, 2009 speech by President Obama (pledging to take the "the air out of golden parachutes") and the June 11, 2009 statement on executive compensation by Treasury Secretary Geithner (stating that golden parachutes "expanded beyond [their original purpose] to provide severance packages that do not enhance the long-term value of the firm.").
[5] See Dodd–Frank Wall Street Reform and Consumer Protection Act, Section 951.

higher likelihood of receiving an acquisition bid and a higher likelihood of a completed acquisition. The association is economically meaningful; the presence of GPs is associated with a 25.4% proportional increase in the likelihood of takeover bids and a 28.4% proportional increase in the likelihood of acquisition. The association is present among both firms incorporated in and outside of Delaware, both high-value and low-value firms in an industry (as measured by positive and negative industry median adjusted log Tobin's Q), both large and small firms in an industry (as categorized by whether a firm is above or below the industry median market capitalization), and firms in both the most and least competitive industries (as indicated by whether a firm belongs to the highest or the lowest quartile of the Herfindahl Index).

We also explore the possibility that the identified association between GPs and acquisitions is driven solely by a "private information" explanation (Lambert and Larcker (1985)) under which GPs are adopted when managers have private information indicating that, controlling for the firm's publicly known characteristics, the company is relatively more likely to become an acquisition target. If the association between GPs and acquisition likelihood is due to such a signaling explanation, then this statistical result should be driven by "fresh" GPs – that is, GPs that were recently adopted. We find, however, that both old and fresh GPs have a positive association with takeovers, with magnitudes that are statistically no different.

Our findings are also consistent with the possibility that the positive association between GPs and acquisition likelihood is at least partially explained by the effect of GPs on managers' incentives. It has been long argued that GPs may bring about a higher acquisition likelihood by making an acquisition more attractive to managers (e.g. Lambert and Larcker (1985), Jensen (1988), Kahan and Rock (2002)). On the other hand, our findings are not consistent with the hypothesis that, by "taxing" acquisitions in the form of required payments to target executives, and thus reducing the surplus captured by target and acquirer shareholders in the event of an acquisition, GPs reduce the incidence of acquisitions.

We next investigate the relation between GPs and the premiums earned by the acquired firms' shareholders when acquisitions are completed. Our results show that, controlling for a firm's governance structure, financial fundamentals and the deal's characteristics, the presence of GPs is negatively associated with the acquisition premiums earned by acquired firm shareholders. This statistical relation is economically meaningful: for the average firm in our data, the presence of GPs is associated with an average decrease in 1-week acquisition premiums

of 3.57 percentage points (which translates to a 12.8% proportional decrease). As was the case for our findings concerning the positive association between GPs and bid and acquisition likelihoods, our findings concerning the negative association between GPs and acquisition premiums are consistent with the possibility that GPs affect executives' incentives by lowering the threshold above which accepting an acquisition premium would serve executives' private interests. GPs both weaken executives' bargaining position in acquisitions that would take place regardless of the presence of a GP, and add lower-surplus acquisitions that are in executives' interests only due to the presence of a GP.

Having considered the relationship between GPs and conditional acquisition premiums, which is conditional on a takeover, as well as the relationship between GPs and takeover likelihood, we turn to study the association between GPs and the unconditional acquisition premiums, which combines the two effects. Following the methodology of Comment and Schwert (1995), we find that, controlling for firm characteristics, the presence of GPs is associated with an average increase in unconditional expected 1-week premiums of 36 basis points (which translates to a 3.4% proportional increase).

After completing the analysis of acquisition likelihood and premiums, we proceed to examine the relationship between GPs and the evolution of firm value over time. Prior work has shown GPs to be negatively correlated with industry-adjusted Tobin's Q (Bebchuk, Cohen, and Ferrell (2009)). But when does this association arise? Might it be that firms which adopt GPs tend to already have lower value prior to the adoption of a GP? Or might it be that firms adopting GPs experience decline in firm value after the adoption? We seek to contribute to answering these questions.

We show that firms adopting a GP tend to have a lower industry-adjusted Tobin's Q already in the IRRC volume prior to the adoption. Such firms also experience negative abnormal stock returns during the inter-volume period ending with the IRRC volume preceding the adoption of a GP. These findings indicate that the negative association between GPs and firm value documented by prior work is not fully driven by value erosion that follows (and might be brought about by) the GP adoption. At least part of the association is driven by a selection effect, namely the higher inclination of low-value firms to adopt a GP.

Even though the negative association between GPs and firm value is not fully driven by value erosion that follows GP adoption, however, we show that it is partly and significantly

driven by such value erosion. In particular, we show that the industry-adjusted Tobin's Q levels of firms adopting a GP (i) further erode during the inter-volume period surrounding the GP adoption, and (ii) subsequently continue to erode over the next several years. Consistent with our findings concerning the erosion in industry-adjusted Q, we also find that (i) among firms that do not have a GP, those who adopt a GP by the next IRRC volume experience lower abnormal stock returns, compared with firms that do not do so, during the inter-volume period of adoption, and (ii) firms that adopt a GP and do not subsequently drop it experience lower abnormal stock returns during the two inter-volume periods following the adoption than firms that do not have a GP and do not adopt one subsequently.

Our findings concerning the erosion of firm value after the adoption of a GP are consistent with the view that, by making managers less fearful of an acquisition, GPs weaken the discipline of the market for corporate control and thereby lead to increased managerial slack (Shleifer and Vishny (1989), Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen, and Ferrell (2009)). In contrast, we do not find evidence for the view that, by weakening the pressures of the market for corporate control, GPs bring about an increased firm value by inducing more focus on the long-term (see, e.g., Stein (1988)) or by encouraging executives to invest in firm-specific human capital (see, e.g., Jensen (1988), Shleifer and Vishny (1989)).

Our work seeks to contribute to the existing body of empirical work on GPs. Much of this prior work has focused on the stock market returns associated with the announcement of GPs (see Lambert and Larcker (1985), Mogavero and Toyne (1995), Hall and Anderson (1997), and Born and Trahan (1993)). The results on the returns accompanying GP announcements have been mixed.[6] By contrast to this work, we examine the returns (and changes in Tobin's Q) in a much longer window – the two-three years between two IRRC volumes – around a GP adoption. Furthermore, we also study the evolution of firm value for firms adopting a GP both before this long window and following it. In this way we add novel findings to the literature, showing that the documented negative association between GPs and firm value is driven in part by the lower firm value of firms adopting a GP prior to the adoption and partly by the erosion of firm value after such adoption.

[6] Lambert and Larcker (1985) found a positive announcement period return around GP adoption announcements. Mogavero and Toyne (1995) and Hall and Anderson (1997) document the announcement of GP adoption to be associated with a negative net effect on shareholder wealth. Born and Trahan (1993) find no abnormal returns around the adoption of GPs.

There has also been some prior work on how GPs are associated with acquisition likelihood and acquisition premiums. Examination of the relationship with acquisition likelihood was done with mixed results in early work largely using 1980s data; Machlin, Choe, and Miles (1993) and Born and Trahan (1994) find a positive association between GPs and acquisition likelihood, but Cotter and Zenner (1994) and Hall and Anderson (1997) do not. Machlin, Cohe, and Miles (1993) report a positive correlation between GPs and acquisition premiums. Current work by Fich, Tran, and Walkling (2009) reports a negative association between GPs and acquisition premiums, but, unlike our work, does not examine or explain this effect in the context of GPs' effect on acquisition likelihood.[7] Furthermore, our work is the first to integrate the effect of GPs on acquisition likelihood with their effect on premiums in the event of an acquisition and estimate the effect of GPs on unconditional expected acquisition premiums.

Finally, our results complement the literature on how governance indices and the provisions included therein are related to firm value (see, e.g., Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen, and Ferrell (2009)). By focusing on one significant provision that changes over time with some frequency, we are able to track the evolution of firm value before and after the adoption of this provision. Our work thus contributes to understanding the origins of the association between this provision, and the governance indices including it, and firm value.

Our results complement the significant literature that shows how acquisition decisions are influenced by managers' private interests and, more generally, by insiders' agency problems (see, e.g., Brickley, Coles, and Terry (1994), Cotter and Zenner (1994), Cotter, Shivdasani, and Zenner (1997), Grinstein and Hribar (2004), and Wulf (2004)). Our findings are generally consistent with and reinforce the lessons from that literature.

The remainder of the paper will proceed as follows. Section 2 describes our data sources and provides some summary statistics. We then proceed to analyze the relationship that GPs have with bid and acquisition likelihood (Section 4), acquisition premiums (Section 4) and the evolution of firm value over time (Section 5). Section 6 concludes.

[7] Hartzell, Ofek, and Yermack (2004) find that CEOs negotiating an acquisition who are also receiving special acquisition benefits, with the explicit or implicit consent of the acquirer, sell their firms for lower acquisition premiums. However, as will be discussed in section 4 below in detail, such *ex post* payments can be expected to affect premiums in a different way than the GPs adopted *ex ante* that are the subject of our paper.

2. Data and Summary Statistics

2.1. The Data

Our data sample consists of all the companies included in the eight volumes published by the Investor Responsibility Research Center (IRRC), with the volumes published on the following dates: September 1990; July 1993; July 1995; February 1998; November 1999; February 2002; January 2004; and January 2006. Each IRRC volume tracks corporate governance provisions for about 1,400 to 2,000 firms. In addition to all the firms belonging to the S&P500, each IRRC volume also covers other firms considered important by the IRRC. The chief governance variable of interest from this dataset is "Golden Parachute," a binary variable indicating whether, at the current dates listed above corresponding to each volume, a firm has a GP, where a 1 indicates that a firm has a GP in place.

We construct two primary datasets for empirical analyses in this paper. First, we construct for each firm an annual time series of IRRC governance measures following the forward-fill method of Gompers, Ishii, and Metrick (2003): for a firm that is present in two consecutive IRRC volumes, we assume that the governance provisions remain the same from the publication date of the first volume until the publication date of the next volume[8]. Second, we construct a dataset consisting of volume-by-volume governance data. Following Gompers, Ishii, Metrick (2003) and the subsequent literature on governance provisions, our analyses exclude dual class firms as well as real investment trusts (REITs), due to the unique governance structures and regulations in those industries.

The IRRC dataset offers several advantages for the study of GPs. First, IRRC's coverage of firms is comprehensive: any given volume covers over 90% of the combined market capitalization of the AMEX, NYSE, and NASDAQ exchanges. Second, this dataset allows us to construct a long time series spanning almost 20 years. Finally, because IRRC contains information on a host of governance provisions, we can control for the structure and strength of corporate governance when identifying the effect of GPs on takeover likelihood, acquisition premium, and shareholder value.

[8] We also attempted different filling methods (such as backward filling and random filling) and found our results to be robust to the choice of filling.

We merge the IRRC data with annual financial data from the CRSP-Compustat merged sample (CCM) by fiscal year and permno. The volume-to-volume data, on the other hand, is merged with CCM such that the financial data reported is taken from the fiscal year ending closest and prior to the current date of each IRRC volume. For each of the datasets, we also merge in, by fiscal year, a firm's CEO and insider characteristics such as CEO age, tenure and top-five insider ownership from ExecuComp. Throughout our analyses we use Tobin's Q as a primary measure of firm valuation, following its extensive use in the governance literature.[9] Following recent work in this literature, we use the Kaplan and Zingales (1997) definition of Tobin's Q, defined to be the market value of assets divided by the book value of assets[10]. All financial measures we use, including Tobin's Q and other standard firm controls such as size, assets, and leverage, are industry-median adjusted, where industries are group by SIC2 codes.

For our analysis of takeover likelihood and takeover premiums, we code as acquisitions all deals of the type "Mergers," "Acquisitions," and "Acquisitions of Majority Interest" from SDC Platinum. Spinoffs in which the acquirers are the shareholders of the firm are excluded from our sample. CRSP identifiers (Permno) for target firms are obtained by matching target firms' CUSIPs. For target firms with no CUSIP matches in CRSP, we obtain Permnos by matching variations of target names and tickers to those in CRSP. This results in a final sample of 10,856 announced takeover bids from 1990 to 2007, covering 9,277 target firms. Using this data, we follow the procedure described in Bates and Lemmon (2003) to assign auction sequences and identify initial bids in an auction: a bid is coded as an "initial bid" if there is no announced takeover bid 365 calendar days prior to the announcement date; when another takeover attempt is announced within 365 calendar days prior to a bid, then such a bid is coded as a "follow-on bid" as a part of an auction sequence.

Finally, this data is merged with our annual and volume-by-volume IRRC data by CRSP identifier, yielding 1,418 initial bids and 1,081 completed acquisitions in our sample. For the annual merged sample, we define two primary variables of interest: an indicator that a firm

[9] See, for example, Demsetz and Lehn (1985), Morck Shleifer and Vishny (1988), McConnell and Servaes (1990), Lang and Stulz (1994), Yermack (1996), Daines (2001), LaPorta et al (2002), and Gompers, Ishii, and Metrick (2003), and Bebchuk, Cohen, and Ferrell (2009).

[10] In Kaplan & Zingales' definition, the market value of assets is computed as the book value of assets plus the market value of common stock less the sum of book value of common stock and balance sheet deferred taxes.

receives an initial bid in the calendar year following the current year of the IRRC volume (Bid_{t+1}), and an indicator that a firm is acquired in the calendar year following the current year of the IRRC volume ($Acquired_{t+1}$).[11] Similarly, for the volume-by-volume merged sample, we define the following: an indicator that a firm receives an initial bid by the current date of the following IRRC volume (Bid_{t+1}), and an indicator that a firm is acquired by the current date of the following IRRC volume ($Acquired_{t+1}$).[12]

2.2. Summary Statistics

Table I reports summary statistics on the stock and adoption of GPs in each of the eight IRRC volumes. Panel A shows that the use of GPs has become increasingly prevalent: 50.44% of firms in the 1990 volume have GPs compared to 77.65% in the 2006 volume. Panel B summarizes the incidence of GP adoptions during each "inter-volume" period, i.e. the period of time between two consecutive IRRC volumes. We consider a firm a GP adopter if in the first of two consecutive IRRC volumes the firm does not have a GP, but has a GP in the subsequent volume[13]. We find the percentage of eligible adopters that put in GPs in the inter-volume period steadily rose from 1990 to 2002, from 15.81% to 30.02%, and declined thereafter to 21.98% in the 2006 volume. On average (weighted), 22.29% of eligible adopters put in a GP in the inter-volume period. Disadoptions also occur, but they are uncommon; in any IRRC volume less than 5% of firms with GPs dropped them by the following volume.

Table II compares the characteristics of firms with and without a GP. For each group we report univariate summary statistics on the means and standard deviations, as well as significance levels from an unpaired two-sided t-test. Firms with GPs differ from those without in terms of financial and industry characteristics, governance structure, and acquisition likelihood. GP firms have lower industry-adjusted market capitalization, lower industry-adjusted Tobin's Q, and

[11] For example, a firm that receives a bid and is acquired in the year 2002 receives bid = 1 and acquired = 1 in the data matched to the 2001 IRRC volume.

[12] Here t indexes volume.

[13] Clearly, this requires the firm to be covered in two consecutive volumes. All such firms are considered "eligible adopters."

higher industry-adjusted debt-to-asset ratio[14]. Furthermore, GP firms are less likely to be Delaware incorporated, and come from industries with greater product market competition, as measured by the Herfindahl Index[15]. These univariate statistics suggest that firms with GPs face a greater threat of takeover; moreover, these firms are also associated with greater protection from takeovers – that is, they are more likely to have a classified board, a poison pill, and, more generally, tend to have more provisions other than a GP from either the E-Index or the G-index.[16]

Finally, Table III provides summary statistics about the relationship between GPs and acquisitions. During the period 1990-2006, the percentage of firms with GPs that receive an acquisition bid or are acquired in the following calendar year is consistently greater than the percentage of firms without GPs that receive an acquisition bid or are acquired in the following calendar year. On average, 6.68% of firms with GPs receive an acquisition bid in the next year compared to 4.67% of firms without GPs that receive bids, a 43% higher likelihood; the average time-series difference of 2.01% is statistically significant at the 1% level based on a standard two-tailed t-test.

Moreover, on average 5.18% of firms with GPs are successfully acquired in the next year compared to 3.41% of firms without GPs that are acquired, a 52% higher likelihood; the average time-series difference of 1.76% is statistically significant at the 1% level based on a standard two-tailed t-test. In Section 3 below we extend this univariate analysis and examine the roles played by incentive and private information effects in the relationship between a GP and higher likelihood of bids.

[14] Relative market capitalization of a firm is defined to be a firm's market capitalization divided by the median market capitalization of all firms covered in CRSP in that year. Tobin's q is the ratio of the market value of assets to the book value of assets, where the market value of assets is computed as book value of assets plus the market value of common stock less the sum of book value of common stock and balance sheet deferred taxes. Industry-adjusted Tobin's q is equal to Tobin's q minus the median Tobin's q in the industry. Industry relative debt to asset ratio is defined to be the debt-to-asset ratio minus the industry median debt-to-asset ratio. All industry relative measures above use SIC 2 digit definitions.

[15] Following Giroud and Mueller (2008), we defined the Herfindahl index based on SIC 3 digit industry definitions.

[16] Gindex, also known as the GIM index, follows Gompers, Metrick, Ishii (2003). Eindex, or the Entrenchment Index, is a subset of the Gindex proposed by Bebchuk, Cohen, and Ferrell (2008).

3. GPs and Acquisition Likelihood

3.1. Theoretical Discussion

The summary statistics above indicate that GPs are correlated with increased likelihood of receiving an offer and of being acquired. However, such a correlation might be due to GPs being associated with publicly observed variables that are known to be correlated with the likelihood of receiving a bid or of being acquired. Such an association can arise if executives of firms with such variables rationally exert greater effort to obtain a GP. Indeed, the summary statistics above indicate that GPs are associated with publicly observable variables known to be correlated with bids and acquisition such as lower firm size or lower industry-adjusted Q. However, the question remains how GPs can be expected to be correlated with bids and acquisitions controlling for such variables. Here, there are several possible hypotheses:

First, the incentive hypothesis: Under this hypothesis, GP are expected to be positively correlated with bids and acquisitions (controlling for variables known to be correlated with bids and acquisitions). By providing executives with an additional monetary benefit in the event of an acquisition, GPs operate to lower the premium threshold above which an acquisition would be in the executives' private interest notwithstanding their loss of some private benefits of control (Lambert and Larcker (1985), Jensen (1988)).

Second, the private information hypothesis: Even when one controls for publicly observable variables that are associated with an increased likelihood of a bid and an acquisition, executives may have private information suggesting that their company is more likely to receive a bid or be acquired than is suggested by the publicly observable variables. When executives have such private information, they will place a greater weight on having a GP (Lambert and Larcker (1985)). Thus, this hypothesis also predicts a positive association between GPs and the likelihood of receiving a bid or being acquired.

Third, the surplus-diversion hypothesis: When a GP is in place, some of the surplus created by an acquisition would go to the executives, thus imposing a "tax" on the transaction (Choi (2004)). Having some surplus diverted to executives *ex post* might be optimal for shareholders *ex ante* to the extent that it leaves the acquirer with less surplus and enables the shareholders to pay the managers less *ex ante*. Whether such an *ex ante* adjustment takes place or not, the "tax" imposed on a transactions by the presence of a GP reduces the number of transactions that would

produce a net surplus for the acquirer's and target's shareholders. Accordingly, under this hypothesis, GPs should be expected to be associated with a lower incidence of offers and acquisitions.

3.2 Golden Parachutes and Acquisition Likelihood

We first turn to the analysis of the relationship between GPs and acquisition likelihood in a multivariate setting. We estimate the following pooled probit model using the annual IRRC dataset,

$$P\{Y_{t+1}=1\mid X\}=\Phi\left\{\begin{array}{l}\alpha+\beta_1\cdot GP_t+\beta_2\cdot(\text{EIndex}-\text{GP})_t+\beta_3\cdot(\text{GIndex}-\text{EIndex})_t\\+\beta_4\cdot(\text{LogRelQ})_t+\beta_5\cdot(\text{Ind - Rel Mcap})_t+\beta_6\cdot(\text{Ind - Rel Debt/Asset})_t\\+\beta_7\cdot(\text{Delaware Inc})_t+\beta_8\cdot(\text{Log CEO Age})_t+\beta_9\cdot(\text{Log CEO Tenure})_t\\+(\text{Ind}\ \&\ \text{Year Controls})\end{array}\right\}, \quad (1)$$

using two dependent variables $Y_{t+1} = Bid_{t+1}$, an indicator of whether a firm receives an initial bid in the next calendar year, and $Y_{t+1} = Acq_{t+1}$, an indicator of whether a firm is acquired in the next calendar year. Control variables reflect values in the current fiscal year. LogRelQ refers to the log of a firm's Tobin's Q divided by the industry median Q; Ind-Rel Mcap is the market capitalization of the firm minus the median industry market capitalization; and Ind-Rel Debt/Asset is the debt-to-asset ratio of the firm minus the industry median debt-to-asset ratio. We control for industry effect by either the Herfindahl-Hirschman Index (HHI), representing the level of product market competition in the industry, or by 2-digit SIC (SIC2) industry fixed effects. The use of HHI follows recent literature by Giroud and Mueller (2008), who document that corporate governance may matter only for industries with low product market competition.

Pooled probit estimation results reported in Table IV Panel A find a consistent positive association between GPs and the likelihood of an acquisition bid as well as the likelihood of a completed acquisition across our specifications, controlling for firm characteristics and strength of takeover protection. The fact that results for takeover likelihood are consistent with bid likelihood is not surprising since 70% of the auction sequences identified in our sample result in

completed acquisitions in our sample, with an average length to completion (from initial bid) of 167 days.

From columns (1) and (3), which use the HHI as the control for industry (instead of using industry fixed effects), we find the marginal effect of GPs on bid likelihood and takeover likelihood for an average firm (i.e. one that takes on the mean values in the control variables) to be 1.48% and 1.28%, respectively, both statistically significant at the 1% level. Though a 1~2% increase in the bid and takeover likelihood may not seem large, considering the mean percentage of firms that receive acquisition bids (5.67%) and that are acquired in a year (3.98%), the presence of GPs is associated with a 26.1% proportional increase in the likelihood of takeover bids and a 32.2% proportional increase in the likelihood of acquisitions. Thus, the association between GPs and higher likelihood of a bid as well as a completed acquisition are both statistically and economically meaningful.

In addition to GPs, other variables of interest are associated with higher acquisition likelihood in ways that are consistent with the literature. In particular, lower-Q firms and smaller firms are associated with a higher likelihood of a bid and completed acquisition. Consistent with Daines (2001), Delaware firms are more likely to receive bids and to be acquired. Controlling for these known associations, however, GP and acquisition likelihood are correlated in a significant and economically meaningful way. These findings are consistent with the incentives hypothesis and the private information hypothesis and are inconsistent with the surplus-diversion hypothesis.

3.3 The Generality of the Association between GPs and Acquisition Likelihood

It is possible that the association between GPs and acquisition likelihood is concentrated in certain types of firms. For example, it may be that this association is concentrated in firms that are incorporated in Delaware, whose state laws are more tolerant and therefore facilitate the adoption of anti-takeover measures. Another possibility might be that the association is solely driven by firms in highly competitive industries, where the market for takeovers is much more active and takeover defenses play a more important role. In Panel B of Table IV, we explore the generality of the positive association between GPs and acquisition likelihood by dividing firms into two groups across four different categories.

First, we compare firms incorporated in Delaware to those incorporated in other states; second, we compare firms with Tobin's Q greater than the industry median to those with Q lower than the industry median; third, we compare firms with market capitalization greater than the industry median to those with market capitalization lower than the industry median; and finally, we compare firms from the most competitive industries (i.e. industries that lie in the top quartile of HHI in a given year) to firms in the least competitive industries (i.e. industries that lie in the lowest quartile of HHI in a given year).

For each comparison, we interact the group indicator with the GP indicator in the pooled probit estimation of equation (1). Estimation results are reported in Panel B of Table IV, in which we use two types of industry controls: 1) using HHI and 2) using SIC2 industry fixed effects. We find the positive association between GPs and acquisition likelihood to be robust in each group of the four categories we examine; our results show a similar association between GPs and acquisition likelihood between Delaware and non-Delaware incorporated firms, between high Q and low Q firms, and high HHI and low HHI firms.

Focusing on the estimation results using HHI as industry controls, for an average firm that is incorporated in Delaware, the presence of a GP is associated with a 1.17% increase in the likelihood of takeovers compared to 0.98% for an average firm incorporated outside of Delaware. For an average firm with greater-than-industry-median Q, the presence of a GP is associated with a 1.38% increase in the likelihood of takeovers compared to 1.67% for a firm with below-industry-median Q. For an average firm with above-industry-median market capitalization, the association between GPs and takeover likelihood is 1.25%, compared to 1.28% for a firm with below-industry-median market capitalization.

Finally, for an average firm from the most competitive industries, the presence of a GP is associated with a 1.25% increase in the likelihood of takeovers compared to 1.25% for firms from the least competitive industries. In all four groupings and across the two methods of industry controls, we do not find the differences in the association between GP and acquisition likelihood to be statistically significant at the 10% level. Our evidence suggests that, at least among the sub-groupings examined here, the positive association between GPs and acquisition likelihood is a pervasive and general phenomenon.

3.4 Is the Identified Association Fully Driven by Private Information?

We have thus far found that, controlling for publicly known firm characteristics, including those known to be associated with likelihood of an acquisition, GPs are correlated with a higher incidence of bids and acquisitions and this association is present across many different types of firms. As noted, such an association is consistent both with the incentives hypothesis and the private information hypothesis. We now turn to consider whether this association may be fully driven by the private information hypothesis – that is, by a tendency of executives to obtain a GP when they have private information indicating that the likelihood of a bid or an acquisition in the near or medium-run is higher than suggested by the firm's publicly known characteristics.

We investigate this issue by utilizing the timing of GP adoption. If the adoption of a GP reflects private information regarding impending takeovers, then the association between GPs and takeover likelihood should be stronger for "newer" GPs. To test this hypothesis, we categorize all GPs into "Fresh" and "Old" using IRRC volume-by-volume data. We define a firm's GP to be "Fresh" if it is recently adopted: i.e. if the firm does not have a GP in the previous IRRC volume but has a GP in the current volume, thus making the GP less than 2~3 years old; a GP is defined to be "Old" if it was adopted more than 1 volume ago, i.e. more than 2~3 years old. We estimate the same model as (1) using the volume-by-volume data, and split the GP variable into "fresh" and "old":

$$P\{Acq_{t+1}=1\mid X\}=\Phi\left\{\begin{array}{l}\alpha+\beta_{1F}\cdot(\text{Fresh GP})_t+\beta_{1O}\cdot(\text{Old GP})_t+\beta_2\cdot(\text{EIndex}-\text{GP})_t\\+\beta_3\cdot(\text{GIndex}-\text{EIndex})_t+\beta_4\cdot(\text{LogRelQ})_t+\beta_5\cdot(\text{Ind-Rel Mcap})_t\\+\beta_6\cdot(\text{Ind-Rel Debt/Asset})_t+\beta_7\cdot(\text{Delaware Inc})_t+\beta_8\cdot(\text{Log CEO Age})_t\\+\beta_9\cdot(\text{Log CEO Tenure})_t+(\text{Ind \& Year Controls})\end{array}\right\}. \quad (2)$$

When using volume-by-volume instead of annual data, the financial variables from Compustat are taken from the fiscal year ending closest and prior to the current date of each IRRC volume. Using this data, we first estimate specification (1) in Columns (1) and (2) of Table V, in which we find an association between GP and acquisition likelihood (3.37% and 3.53%, respectively) which is more than double that in columns (3) and (4) of Table IV(A) (1.28% and 1.36%, respectively), which uses the annual dataset. This is not surprising since in the volume-by-volume dataset our dependent variable is an indicator for being acquired over the next 2~3

calendar years, whereas in Table IV(A) columns (3) and (4) the dependent variable is an indicator for being acquired in the next calendar year. [17]

Columns (3) and (4) of Table V reports estimation results from a pooled probit estimation of (2),the coefficients reported are marginal effects for the average firm, using HHI and SIC2 fixed effects, respectively, as industry controls. Controlling for strength of takeover protection and firm characteristics, we find the positive association between GPs and takeover likelihood to be present for both fresh and old GPs; while the marginal effect is larger for fresh GPs, we find no statistical difference between the magnitude of marginal effects between fresh and old GPs (p-value = 0.324). By utilizing the timing of GP adoption, the results presented here cast doubt that the private information effect alone drives the identified positive association of GPs with acquisitions, controlling for publicly known firm characteristics. This evidence is consistent with the possibility that the association between GPs and acquisitions is at least partly driven by the effect of GPs on executives' incentives.

Two caveats should be noted. First, the above test is based only on firms for which we have data in two consecutive IRRC volumes, a sample of firms that tend to be larger and excludes firms that have been acquired between volumes or otherwise ceased to exist. Accordingly, our conclusion that the positive association between GPs and acquisition likelihood is not fully driven by signaling is based on a subset of companies. However, to the extent that GPs affect the incentives of executives in these companies, it is plausible that they may also have such an effect in other companies. Second, and more importantly, our analysis does not rule out the possibility that the identified association between GPs and acquisitions is produced by some firm characteristics that are publicly known and affect acquisition likelihood but are not included in our regressions. Ruling out the possible influence of such omitted variables is a notoriously difficult issue in corporate finance, and addressing it in our context may be an interesting area of investigation for future research.

[17] Column (1) of Table V reports the pooled probit estimation of (1) using volume-by-volume data. The coefficients reported are marginal effects for the average firm. The marginal effect of GP on acquisition likelihood by the next IRRC volume associated with column (1) is an increase of 3.37% and with column (2) and increase of 3.53% for the average firm. Relative to the average likelihood of acquisition between any two IRRC volumes (i.e. 9.6%), this is an increase of 35.1% (36.7%) relative to the baseline risk. These results are comparable to those reported in columns (3) and (4) of Table VI Panel A. The marginal effects here appear to be larger here, but this is expected since the inter-volume period is typically 2 or 3 years.

4. Golden Parachutes and Acquisition Premiums

4.1. Theoretical Discussion

How can GPs be expected to be associated with premiums controlling for the various parameters that are known to affect acquisition premiums (including pre-acquisition value)? GPs can be expected to reduce premiums through several channels.

First, the incentive effect: GPs can be expected to affect premiums by lowering the premium threshold above which an acquisition would be in executives' private interests. This can affect premiums in two ways, both operating in the direction of lowering premiums. By reducing this premium threshold, GPs weaken executives bargaining position in those transactions that would be in the interest of the executives and (the buyer's executives) regardless of whether there is a GP. In addition, some lower-premium transactions that would not be in the interest of executives in the absence of a GP might become worthwhile for the executives once a GP is introduced.

Second, the surplus-diversion effect: As discussed earlier, a GP diverts some of the surplus created by the transaction to executives. Because it reduces the value of the assets of the target, it reduces the buyer's reservation price – that is, the maximum price the buyer would be willing to pay for the target. This effect, again, operates to create a negative correlation between GPs and premiums. Note, however, that the surplus-diversion effect differs from the incentive effect in terms of their predictions concerning the association between GPs and acquisition likelihood: the former predicts a negative association while the latter predicts a positive association.

It is worth noting that there is another reason that can be provided for an association between low premiums and special payments to executives in connection with an acquisition – but one that does not seem to apply for most of the GPs in our dataset. Hartzell, Ofek, and Yermack (2004) study situations in which CEOs negotiating an acquisition also obtain, with the explicit or implicit approval of the buyer, some extra payments in the form of a special bonus or increased GPs. The study finds that CEOs obtaining such acquisition benefits tend to accept lower premiums for their shareholders. The authors reasonably interpret this pattern as reflecting a willingness of CEOs to accept a reduction in the acquisition premiums in return for the buyer's willingness to let them get some *ex post* acquisition benefits which have not been set for them *ex*

ante.[18] Unlike the acquisition benefits studied in their paper, which executives negotiating an acquisition need to bargain for, the benefits provided to executives under the GPs in our dataset are not ones for which executives need to bargain at the time they negotiate an acquisition. These GPs were adopted *ex ante*, are already set and binding, and the executives do not need to take any step or make any concession in terms of the premium or otherwise in order to be in a position to benefit from them.

4.2 Premiums Conditional on an Acquisition

We now turn to the analysis on the association between GPs and acquisition premiums. For this analysis, we obtain from SDC the set of completed takeovers from 1990 to 2007, and merge in the most recent governance data from IRRC and financial data from Compustat prior to acquisition completion. Of the set of 1007 completed transactions with non-missing IRRC data, we exclude those transactions in which the bidder and the target companies share the same parent company (120 transactions). In our analysis we consider as dependent variables the 1-week and the 4-week acquisition premiums, as reported in SDC, and focus our analysis on those transactions with non-negative acquisition premiums (840 non-missing for the 1-week premium and 839 for the 4-week)[19]. We view negative premium takeovers to reflect abnormal takeover circumstances and therefore exclude them from our analysis; including such transactions does not change our results qualitatively, but generally weakens the statistical significance. Using this data we estimate the following regression model of the determinants of acquisition premium.

$$\begin{aligned}\text{AcqPrem}_{it} = {} & \alpha + \beta_1 \cdot \text{GP}_{it} + \beta_2 \cdot (\text{EIndex} - \text{GP})_{it} + \beta_3 \cdot (\text{GIndex} - \text{EIndex})_{it} + \beta_4 \cdot (\text{DE Inc})_i \\ & + \beta_5 \cdot (\text{LogRelQ})_{it} + \beta_6 \cdot (\text{Inside Ownership})_{it} + \beta_7 \cdot \log(\text{Assets})_{it} \\ & + \beta_6 \cdot (\text{Debt/Asset})_{it} + (\text{Deal Characteristics}) + \beta_8 \cdot \log(\text{CEO Age})_i \\ & + \beta_9 \cdot \log(\text{CEO Tenure})_i + (\text{Ind \& Year Controls}) + \varepsilon_{it}\end{aligned} \tag{3}$$

We control for a firm's governance structure, financial fundamentals, and standard deal characteristics, such as the acquiring firm's toehold in the acquired firm's shares prior to the

[18] Relatedly, Wulf (2004) reports that, in mergers of equals, CEOs seem to be willing to accept a lower premium for their shareholders when they are awarded a position in the post-merger combined firm.

[19] The 840 transactions with non-missing 1-week premiums is not a superset of the 839 transactions with non-missing 4-week premiums. 15 observations in the former are not included in the latter, while 18 observations in the latter are not included in the former.

takeover announcement, whether a termination fee is in place[20], whether the acquisition attempt is hostile, whether the deal is a tender offer, and whether the deal involves a stock swap. We also proxy for the strength of negotiating effort by including the time to completion (in days) and controls for the target firms' CEO characteristics by including log of the CEO's age and tenure. Because acquisition premium is positively-skewed, in addition to the standard fixed effects OLS in columns (1) and (3) of Table VI, we also estimate (3) using the log of acquisition premium as the dependent variable.

Results reported in Table VI show a consistent and negative association between GPs and acquisition premium that is statistically significant. Estimation results using the 1-week and 4-week premiums reported in columns (1) and (3), respectively, show that the presence of GPs is associated with an average reduction in acquisition premiums of 3.57 and 4.33 percentage points, respectively. Translating these numbers into percentages, the log specifications reported in columns (2) and (4) of Table VI show that the presence of GP reduces 1-week premiums by 12.8% and 4-week premiums by 19.2%, an economically significant discount.

The negative association between GPs and acquisition premiums we find in our dataset can be explained, as noted earlier, either by the executive incentives effect or by the surplus-diversion effect. But our earlier finding concerning the positive association between GPs and acquisition and bid likelihood is consistent only with the former but not the latter. Thus, when we put together our results concerning acquisition likelihood and acquisition premiums, our evidence is consistent with the executive incentives hypothesis but not with the surplus-diversion effect.

4.3 Unconditional Premiums

We have above identified two counteracting effects of GPs on the *ex ante* unconditional expected premiums from acquisitions: while the presence of GPs is associated with an increased likelihood of acquisition and thus the likelihood of realizing acquisition premiums, the presence

[20] Typically, after target and acquiring boards reach a preliminary agreement, the impending deal is announced publicly and both sides await target shareholder approval. These preliminary agreements may include a termination clause requiring the target firm to pay a fee to the acquirer in the event that the target cancels the agreement to accept a competing bid.

of GPs is also associated with a decrease in the size of premiums in the event of an acquisition. In this section we turn to integrating these two effects and examining the association between GPs and the unconditional expected acquisition premium. Under the incentive hypothesis, which is supported by our empirical results above, the association between GPs and expected premiums is ambiguous. The incentives hypothesis predicts a positive association between GPs and acquisition likelihood and a negative association between GPs and (conditional) acquisition premiums, but it does not have a clear prediction on the product of these two effects. The relationship between GPs and the unconditional acquisition premium is therefore an empirical question.

Using the full sample of firms in our annual IRRC dataset, we follow the methodology of Comment and Shwert (1995) and set the acquisition premiums to zero for all non-takeover firm-year observations. Table VII reports the pooled estimation results of (3) using the full sample; unlike Table VI, we now interpret the coefficients of this model as marginal effects on the *ex ante* unconditional expected acquisition premiums, which combines GPs' effects on the acquisition likelihood and the conditional acquisition premium. As before, we consider 1-week and 4-week premiums in Columns (1) and (3), and the log of the respective premiums in Columns (2) and (4)[21].

Results reported in Table VII show a consistent and positive association between GPs and unconditional expected acquisition premiums. Estimation results using the 1-week and 4-week premiums reported in columns (1) and (3), respectively, show that the presence of GPs is associated with an average increase in unconditional acquisition premiums of 36 and 36 basis points, respectively.

Translating these numbers into percentages, the log specifications reported in columns (2) and (4) of Table VI show that the presence of GP increases 1-week unconditional premiums by 3.40% and 4-week premiums by 3.67%. These results are not surprising when considering our earlier findings that the presence of GPs increases the likelihood of acquisitions proportionally (relative to the mean) by 26~34%, while decreasing conditional premiums proportionally by approximately 13~19%. In aggregate, we find a small but positive association between GPs and unconditional premiums.

[21] For the log versions of the variable, we fill in zero for log returns for all non-takeover firm-year observations.

5. GPs and the Evolution of Firm Value

5. 1 Theoretical Discussion

Finally, we consider the question of how GPs are associated with the evolution of firm value over time. Prior work has shown that GPs have a negative, statistically significant, and economically meaningful correlation with industry-adjusted Tobin's Q (Bebchuk, Cohen, and Ferrell (2009)), but has not spoken to the question of when this association arises and thus whether it might be fully driven by a selection effect. In this section we examine this issue, presenting both an analysis based on changes in industry-adjusted Tobin's Q over time and on the performance of buy-and-hold portfolios. Our buy and hold portfolios do not present implementable trading strategies as they use some future information; rather, these portfolio return results represent a methodology for examining or tracking the stock performance of firms that pursue different paths over time with respect to having a GP.

The first question that we examine concerns firms' relative Q and stock return performance in the years prior to GP adoption. Our hypothesis is that the association between GP and lower value is at least partly driven by a selection effect, because managers of underperforming firms are more likely to get a GP. Thus, we hypothesize that firms adopting GPs tend to have a lower Q already at the time of the IRRC volume preceding GP adoption and also tend to experience negative stock returns during those preceding years.

We also examine changes in Q and stock performance during the inter-volume period surrounding GP adoption. Here we compare the performance of firms that adopted a GP between volumes i and i+1 with those of firms that did not have a GP at i and still did not have a GP at i+1. When a firm adopts a GP at time t between volumes i and i+1, a decline in the firm's value during this inter-volume period might be least partly driven by a selection effect – the executives' decision to adopt a GP at time t might be in response to a decrease in the firm's value between the time of volume i and time t and/or the executives' anticipation that the firm's value will decline subsequent to time t. Of course, the inter-volume change in the firm's value might also be partly due to whatever effect the GP adopted at time t has on executives' incentives subsequent to the adoption.

We then turn to examine how Q and stock returns continue to evolve in the years following GP adoption. During this period, the presence of GP can affect shareholder interests by affecting

bid likelihood and bid premiums, but can also have an important effect by shaping the incentives executives face in managing the firm as a stand-alone entity, and therefore impacts shareholder value in the absence of an acquisition.

There are competing views in the literature regarding the incentive effects of GP on the stand-alone value of a firm. On a priori theoretical grounds, GPs could be argued to have both positive and negative effects on the management of a firm. On the positive side, it may be argued that, by making managers less fearful of an acquisition attempt, a GP may (i) reduce short-termism distortions and facilitate a long-term focus (Stein (1988)), as well as (ii) encourage managers to make investments in firm-specific human capital (Jensen (1988), Shleifer and Vishny (1989)). On the negative side, it may be argued that GPs may reduce value by (i) making managers less fearful of an acquisition attempt, and thereby weakening the disciplinary force of the market for corporate control and increasing managerial "slack" (Shleifer and Vishny (1989), Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen, and Ferrell (2009)), Given the lack of an unambiguously clear theoretical prediction, empirical evidence on the subject would be useful.

5. 2. GPs and the Evolution of Tobin's Q

We begin by documenting the level of Q for those firms that adopt a GP in the future relative to non-adopters. In each IRRC volume, we focus on all the firms that do not have a GP and appear in the next IRRC volume. We define a firm to be a "Future GP Adopter" if the firm does not have a GP in the current IRRC volume but has GP in the next IRRC volume. The comparison group of non-adopters (i.e. firms for which the variable "Future GP Adopter" takes on a value of 0) consists of firms do remain without a GP in the next IRRC volume. Using our volume-by-volume IRRC data and focusing on the subsample of future adopters and non-adopters, Panel A of Table VIII reports OLS estimation of the following Q regression:

$$\begin{aligned}\log(\text{Ind Rel Q})_{it} = \alpha &+ \beta_1 \cdot (\text{Future GP Adopter})_{it} + \beta_2 \cdot (\text{Other Provisions in E})_{it} \\ &+ \beta_2 \cdot (\text{Other Provisions in G})_{it} + \beta_3 \cdot ROA_{it} + \beta_4 \cdot \log(\text{Assets})_{it} \\ &+ \beta_5 \cdot (\text{Capex/Assets})_{it} + \beta_6 \cdot \log(\text{Age})_{it} + \beta_7 \cdot (\text{Ind Rel Debt/Assets})_{it} \\ &+ \beta_8 \cdot \Delta \log(RD/Sales)_{it} + (\text{Industry and Year Controls}) + \varepsilon_{it}\end{aligned} \quad . \quad (4a)$$

We report three specifications, differing based on industry and year controls. In all three specifications reported, we find that firm valuation is low prior to GP adoption. On average, Tobin's Q for future GP adopters are 4.75%~5.54% lower than that of non-adopters, controlling for other governance and firm characteristics. Coefficients from all three specifications are significant at the 10% level, with two significant at the 5% level.

We continue the analysis and examine the changes in Q for future adopters versus non-adopters around the IRRC period of adoption, that is the period during which adopters obtain GPs. OLS estimation results of the following changes regression (where changes in variables are denoted by Δ), using the same sample as above,[22] are reported in Panel B of Table VIII.

$$\begin{aligned}\Delta\log(\text{Ind Rel Q})_{it} = \alpha &+ \beta_1 \cdot (\text{Future GP Adopter})_{it} + \beta_2 \cdot \Delta(\text{Other Provisions in E})_{it} \\ &+ \beta_2 \cdot \Delta(\text{Other Provisions in G})_{it} + \beta_3 \cdot \Delta ROA_{it} + \beta_4 \cdot \Delta\log(\text{Assets})_{it} \\ &+ \beta_5 \cdot \Delta(\text{Capex/Assets})_{it} + \beta_6 \cdot \Delta\log(\text{Age})_{it} + \beta_7 \cdot \Delta(\text{Ind Rel Debt/Assets})_{it} \\ &+ \beta_8 \cdot \Delta\log(RD/Sales)_{it} + (\text{Industry and Year Controls}) + \varepsilon_{it}\end{aligned} \quad (4b)$$

On average, we find that future GP adopters experience a change in Q, from one volume to the next, of 4.75%~5.82% lower than that of non-adopters, controlling for governance and firm characteristics. All three models produce a β_1 coefficient that is statistically significant at the 5% level.

To see the evolution of firm value after the adoption of GP, we follow a similar approach as (4b) but limit our analysis to the set of firms that are long-term GP adopters or long-term GP non-adopters. In the following specification (4c), the LT GP Adopter indicator equals one if a firm has a GP in the previous, current, and next IRRC volumes, and equals zero if a firm does not have a GP in the previous, current, and next IRRC volumes.

$$\begin{aligned}\Delta\log(\text{Ind Rel Q})_{it} = \alpha &+ \beta_1 \cdot (\text{LT GP Adopter})_{it} + \beta_2 \cdot \Delta(\text{Other Provisions in E})_{it} \\ &+ \beta_2 \cdot \Delta(\text{Other Provisions in G})_{it} + \beta_3 \cdot \Delta ROA_{it} + \beta_4 \cdot \Delta\log(\text{Assets})_{it} \\ &+ \beta_5 \cdot \Delta(\text{Capex/Assets})_{it} + \beta_6 \cdot \Delta\log(\text{Age})_{it} + \beta_7 \cdot \Delta(\text{Ind Rel Debt/Assets})_{it} \\ &+ \beta_8 \cdot \Delta\log(RD/Sales)_{it} + (\text{Industry and Year Controls}) + \varepsilon_{it}\end{aligned} \quad (4c)$$

[22] However, we lose some observations from Panel A to Panel B as a result of missing observations for control variables.

Across the three specifications in Panel C of Table VIII, we find consistent results showing that, compared to long-term non-adopters of GP, long-term adopters experience an average volume-to-volume change in Q that are 4.84%~6.19% lower. While these are economically large effects, statistical significance here is weaker than the previous: all β_1 coefficients are statistically significant at the 12% level, while two of the three specifications produced significance at the 10% level.

We emphasize here that our results here do not imply that Q is declining for GP adopters. Rather, relative to non-GP firms the firm valuation of future GP adopters are lower prior to adoption, and the changes in adopters' firm valuation in the 2~3 year period around GP adoption are also smaller. Finally, the average volume-to-volume changes in the firm valuation of long-term adopters are also lower than that of long-term non-adopters of GP.

As a robustness check, we include all firms and take into account all changes, adoptions and dis-adoptions in GP and study their overall association on firm valuation from one IRRC volume to the next. We estimate the following changes regression:

$$\begin{aligned}\Delta\log(\text{Ind Rel Q})_{it} = \alpha &+ \beta_1\cdot\Delta\text{GP}_{it} + \beta_2\cdot\Delta(\text{Other Provisions in E})_{it} \\ &+ \beta_2\cdot\Delta(\text{Other Provisions in G})_{it} + \beta_3\cdot\Delta ROA_{it} + \beta_4\cdot\Delta\log(\text{Assets})_{it} \\ &+ \beta_5\cdot\Delta(\text{Capex/Assets})_{it} + \beta_6\cdot\Delta\log(\text{Age})_{it} + \beta_7\cdot\Delta(\text{Ind Rel Debt/Assets})_{it} \\ &+ \beta_8\cdot\Delta\log(RD/Sales)_{it} + (\text{Industry and Year Controls}) + \varepsilon_{it}\end{aligned} \quad (4d)$$

Across all three specifications in Panel D of Table VIII, we find that controlling for the changes in the strength of anti-takeover defenses and firm characteristics, the adoption of GP is associated with a decrease in Q of 4.35%~4.60%, all statistically significant at the 5% level. This result also implies an increase in Q of the same magnitude associated with the disadoption of GP (a change of -1).

Together, we find that on average GP adopters have low Q *prior* to the adoption of GP**,** and that Q continues to decrease *around and after* adoption. Our results in this section indicate that firms adopting GPs are ones whose performance is in a declining trend. These firms on average had a low Tobin's Q to begin with – at the time of the preceding IRRC volume – and they experience negative abnormal return and a declining industry-adjusted Tobin's Q during the inter-volume period in which they adopt the GP. Our results are broadly consistent with the findings of Mogavero and Toyne (1995) and Hall and Anderson (1997), which find negative

equity responses around the announcements of GPs. Both of these event studies focus on a short event window around the announcement date of GP adoption; in particular, Mogavero and Toyne focused on 5 trading days prior and after the announcement date, while Hall and Anderson considered a variety of event windows, with the largest extending from 20 trading days prior until 20 trading days after the announcement date. In contrast to these earlier studies, we take a long horizon approach by considering a 2 to 3 year window around the adoption of GPs.[23]

5.3. GPs and Stock Returns over time

We complement the above analysis on the evolution of Q around GP adoption by studying the evolution of stock returns. We study the long-term returns on certain long-short strategies. It should be emphasized at the outset that the strategies we examine are not implementable in that portfolios are constructed at points in time based on information that will become publicly revealed only down the road.

We begin by studying stock returns of firms prior to GP adoption by considering the long-term returns on the following portfolios. We long a portfolio of stocks that adopt golden parachute two volumes from the current one (i.e. does not have GP in the current and next IRRC volumes but has GP in the following one) while, simultaneously, shorting another portfolio of stocks that do not have golden parachute in the current and the succeeding two IRRC volumes. We consider an equal-weighted portfolio and a value-weighted portfolio, weighting each stock by its common stock market capitalization. The portfolio is rebalanced monthly, and in addition updated whenever information on firms' corporate governance provisions became available: in July 1993; July 1995; February 1998; February 2000; February 2002; January 2004; and January 2006.[24] After calculating monthly returns on this portfolio, we estimate its risk-adjusted excess returns by estimating the intercept term from a standard four-factor asset-pricing model, using the Fama-French three factors and the Carhart (1997) momentum factor:

[23] Early event studies regarding GP adoption suffer from the uncertainty around what is the appropriate date in which the adoption of GP becomes public. Furthermore, adoptions of GPs may be correlated with other changes in the firm that may be value-relevant, for example, changes in other aspects of the governance structure. Coates (2000) presents a summary critique of governance-related event studies. We resolve some of these difficulties, as Gompers, Ishii, and Metrick (2003) and Bebchuk, Cohen, and Ferrell (2008), by taking a longer-term horizon approach.

[24] These are the earliest dates in which the information in the 1990, 1993, 1995, 1998, 2000, 2002, 2004, and 2006 IRRC volumes, respectively, became publicly known.

$$\left(\text{Portfolio Return}\right)_t = \alpha + \beta_1 \cdot \left(\text{MKTRF}\right)_t + \beta_2 \cdot \left(\text{HML}\right)_t + \beta_3 \cdot \left(\text{SMB}\right)_t + \beta_4 \cdot \left(\text{Momentum}\right)_t + \varepsilon_t \quad (4)$$

where $MKTRF_t$ is the month t value-weighted market return minus the risk-free rate, SMB_t and HML_t are the Fama-French zero-investment benchmark factor mimicking portfolios reflecting, respectively, size and book-to-market stock return effects for time t (Fama and French (1993)), and $Momentum_t$ reflects stock return momentum effects for time t (Carhart (1997)).

Panel A of Table IX reports that the value- (equal-) weighted portfolio generates an average monthly abnormal return of -59 (-35) basis points from September 1990 to December 2003, and are statistically significant at the 1% level. On a compounded annualized basis, these translate to abnormal returns of -6.85% (-4.12%). Like our findings with Q, firms that adopt GPs two IRRC volumes into the future experience an economically significant decline in stock returns relative to firms that do not have GPs over the same period of time, consistent with the hypothesis that the adoption of GPs is driven at least partially by selection.

Next, we analyze the stock performance during the IRRC period of adoption, that is the inter-volume period in which GP adoption takes place, by considering the following portfolio strategy: go long a portfolio of adopters' stocks while simultaneously shorting a portfolio of non-adopters' stocks. A firm is considered an adopter if it does not have a GP in one volume and does have a GP in the succeeding volume, while a firm is considered a non-adopter if it does not have a GP in both successive volumes. As before, we consider both value- and equal- weighted portfolios, rebalanced monthly, and update portfolios whenever new governance information becomes publicly available.

Panel B of Table IX reports that, for both the equal- and value-weighted portfolios, we find negative and significant average abnormal monthly returns around the adoption period from September of 1990 to December of 2005. While the equal-weighted portfolio generates average monthly abnormal return of –20 basis points, significant at the 10% level, the value-weighted portfolio produces average monthly abnormal returns of -37 basis points, significant at the 5% level. On a compounded annualized basis, these translate to an abnormal return of -2.36% for the equal-weighted portfolio and -4.36% for the value-weighted portfolio. Consistent with our results using Q, GP adopters tend to experience a decline in stock performance relative to non-adopters over the IRRC adoption period.

Since we do not have the exact GP adoption dates, the negative abnormal returns above may arise either from the period prior to adoption, reflecting a selection effect, or in the period after GP adoption, reflecting an incentive effect, or both. To explore the latter further, we analyze the stock performance in the aftermath of GP adoption by considering the following long short exercise: long a portfolio of long-term GP adopters, that is stocks that have GPs in the previous, current, and next IRRC volumes, while simultaneously shorting another portfolio of long-term non-adopters, stocks that do not have GPs in the previous, current, and the next IRRC volumes. As before, we consider value- and equal- weighted portfolios that are rebalanced monthly and updated whenever new governance information becomes publically available. Columns (1) and (2) in Table IX Panel C report that, from July 1993 to December 2005, the value- and equal-weighted portfolios produce average monthly abnormal returns of -37 basis points and -28 basis points, respectively, both statistically significant at the 5% level, translating to -4.35% and -3.31% on a compounded annualized basis.

One possibility driving these negative abnormal returns is a selection effect, that the firms with GPs, which face a higher acquisition likelihood but yet are not acquired for three consecutive IRRC volumes, tend to be extremely poor performing firms. To account for this possibility in studying the stock performance of LT GP adopters, we re-run the above long short strategy but include all firms that are acquired between the current and the next IRRC volumes. *Ex ante*, we should expect the inclusion of these stocks to increase the portfolios' abnormal returns, since firms with GPs are more likely to be acquired and should therefore be more likely to earn positive acquisition premiums.

Columns (3) and (4) in Table IX Panel C report abnormal monthly returns of -32 basis points and -24 points for the value- and equal-weighted portfolios, respectively, both statistically significant at the 5% level. These returns, while slightly smaller in magnitude by about 15%, are statistically no different from those generated by excluding acquired firms. Taken together, the results on the stock returns of long-term adopters versus long-term non-adopters suggest that firm performance tends to deteriorate in the presence of a GP, consistent with the view that GPs provide corporate executives disincentives to manage the firm efficiently.

In summary, we find a similar pattern in the evolution of Q and stock performance before, around, and after GP adoption. Relative to non-adopters, future GP adopters experience a decline in Q and stock returns prior to adoption, consistent with selection; GP adopters continue to

experience a decline in Q and stock returns in the around adoption, consistent with selection and managerial slack; finally, this decline continues for long-term adopters GPs, which is consistent with managerial slack. Overall this pattern we document might contribute to the general association between GPs and lower firm value identified in prior research. This pattern also does not provide support for theoretical predictions that GPs improve performance by encouraging long-term planning and investments in firm-specific human capital; instead, our findings are consistent with the possibility that, by reducing the disciplinary force of the market for corporate control, GPs lead to an increased managerial slack.

6. Conclusion

This paper has taken advantage of the IRRC's long-run dataset to investigate the association between GPs and key aspects of firm performance and outcomes. We find GPs to be associated with an increased likelihood of an acquisition, a reduced premium conditional on an acquisition, and a higher (unconditional) expected premium from acquisitions. We also find GPs to be associated with certain patterns concerning the evolution of firm value over time. Firms adopting a GP have a lower value already in the IRRC volume preceding the adoption, but their value continues to decline during the inter-volume period of adoption as well as during the subsequent inter-volume period. We hope that our findings will contribute to informing the ongoing discussion and evaluation of GPs by investors and policymakers.

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TABLE I: SUMMARY STATISTICS – STOCK AND ADOPTION OF GPs

Panel A: Stock of Golden Parachutes

IRRC Volume	# Firms in IRRC Volume	Firms w/ GP	% of Firms w/ GP
1990	1,467	740	50.44%
1993	1,463	780	53.32%
1995	1,496	802	53.61%
1998	1,913	1060	55.41%
2000	1,886	1223	64.85%
2002	1,894	1282	67.69%
2004	1,982	1455	73.41%
2006	1,897	1473	77.65%

Panel B: Adoption of Golden Parachutes

Years	Total Firms	Firms with no GP beginning of period	Num of Adopters	% of Adopters
1990~1993	1272	639	101	15.81%
1993~1995	1344	641	79	12.32%
1995~1998	1214	594	142	23.91%
1998~2000	1667	768	214	27.86%
2000~2002	1416	533	160	30.02%
2002~2004	1654	529	131	24.76%
2004~2006	1656	455	100	21.98%

TABLE II: SUMMARY STATISTICS – FIRMS WITH AND WITHOUT GPs

	All Firms	GP	No GP	Difference	
Relative Market Cap	4.273	3.374	5.811	-2.4376	***
	(14.650)	(9.112)	(20.878)		
Industry-Relative Q (SIC2)	0.4658	0.3440	0.6624	-0.3184	***
	(1.481)	(1.231)	(1.796)		
Industry-Relative Debt / Asset (SIC2)	0.0575	0.0659	0.0432	0.0227	***
	(0.176)	(0.174)	(0.180)		
Delaware Incorporation	0.5582	0.5487	0.5742	-0.0255	***
	(0.497)	(0.498)	(0.495)		
Herfandal Index	0.1628	0.1601	0.1674	-0.0073	***
	(0.147)	(0.145)	(0.150)		
Classified Board	0.5833	0.6438	0.4804	0.1634	***
	(0.493)	(0.479)	(0.500)		
Poison Pill	0.5339	0.6464	0.3425	0.3039	***
	(0.499)	(0.478)	(0.475)		
# of Provisions in Eindex other than GP	1.6826	1.8936	1.3238	0.5698	***
	(1.143)	(1.102)	(1.120)		
Gindex - Eindex	6.7097	6.9048	6.3778	0.5270	***
	(1.935)	(1.886)	(1.972)		
Receive Bid Next Year (*)	0.0596	0.0671	0.0472	0.0199	***
	(0.237)	(0.250)	(0.212)		
Acquired Next Year (*)	0.0454	0.0521	0.0344	0.0177	
	(0.208)	(0.222)	(0.182)		
Acquired by Next Volume	0.0960	0.1134	0.0664	0.0471	***
	(0.295)	(0.317)	(0.249)		
Number of Firms	13,998	8,815	5,183		

TABLE III: SUMMARY STATISTICS -- INCIDENCE OF ACQUISITION

	% Receiving Initial Bid in the Next Year			% Acquired in the Next Year		
	No GP	**GP**	**Diff**	**No GP**	**GP**	**Diff**
1990	4.6%	4.7%	+	2.5%	2.3%	-
1991	2.7%	3.6%	+	1.9%	2.6%	+
1992	3.0%	3.4%	+	2.8%	3.1%	+
1993	3.2%	4.6%	+	1.9%	2.1%	+
1994	5.8%	8.0%	+	1.9%	5.5%	+
1995	4.0%	7.4%	+	2.6%	4.4%	+
1996	4.8%	9.9%	+	3.9%	8.6%	+
1997	8.4%	9.1%	+	5.0%	7.3%	+
1998	7.8%	12.7%	+	6.3%	10.2%	+
1999	6.2%	9.7%	+	6.5%	9.4%	+
2000	3.7%	5.1%	+	3.7%	5.6%	+
2001	1.9%	2.6%	+	1.1%	2.8%	+
2002	3.5%	3.9%	+	2.3%	2.6%	+
2003	3.2%	4.7%	+	3.0%	4.0%	+
2004	4.3%	6.1%	+	1.8%	4.6%	+
2005	7.0%	8.1%	+	5.4%	4.8%	-
2006	5.3%	9.8%	+	5.6%	8.2%	+
Mean	4.7%	6.7%	2.01% ***	3.4%	5.2%	1.76% ***
SD	(0.03)	(0.02)		(0.02)	(0.03)	

TABLE IV: GOLDEN PARACHUTES AND ACQUISITION LIKELIHOOD

Panel A: Acquisition Likelihood – the Full Sample

This table reports the results for pooled probit regressions. For Columns (1) and (2), the dependent variable is an indicator equaling one if the firm receives a takeover bid in the next calendar year and zero otherwise; for columns (3) and (4) the dependent variable is an indicator equaling one if the firm is acquired in the next calendar year and zero otherwise. Standard controls are used in these specifications. (1) and (2) differ based on how the industry effect is taken into account. All models estimated use robust cluster standard errors and have year fixed effects. Coefficients for industry and year fixed effects, as well as the constant term, are not displayed. We report (*) the marginal effect associated with GP, using average values for all other controls. Significance levels are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Probit Dependent Var	Receive Bid Next Year		Acquired Next Year	
	(1)	(2)	(3)	(4)
Golden Parachute	0.0148 ***	0.0154 ***	0.0128 ***	0.0136 ***
	(0.003)	(0.003)	(0.002)	(0.002)
EIndex-GP	-0.0046 ***	-0.0048 ***	-0.0015	-0.0017
	(0.001)	(0.001)	(0.001)	(0.001)
GIndex - EIndex	0.0003	0.0004	0.0004	0.0004
	(0.001)	(0.001)	(0.001)	(0.001)
Log Rel Q	-0.0196 ***	-0.0174 ***	-0.0074 ***	(0.006) **
	(0.004)	(0.004)	(0.003)	(0.003)
Ind Rel Market Cap	(0.001) ***	-0.0012 ***	-0.0009 ***	-0.0011 ***
	(0.000)	(0.000)	(0.000)	(0.000)
Ind Rel Debt/Asset	0.0143	0.0122	-0.0014	-0.0038
	(0.009)	(0.009)	(0.007)	(0.007)
Delaware Inc	0.0133 ***	0.0109 ***	0.0076 ***	0.0066 ***
	(0.003)	(0.003)	(0.002)	(0.002)
Log(CEO Age)	-0.0060	-0.0015	-0.0050	-0.0002
	(0.015)	(0.014)	(0.012)	(0.012)
Log(CEO Tenure)	-0.0044 ***	-0.0044 ***	-0.0020	-0.0021 *
	(0.001)	(0.001)	(0.001)	(0.001)
Herfindahl Index	-0.0190 *		-0.0152 *	
	(0.011)		(0.009)	
Dependent Var Mean	0.0567	0.0569	0.0398	0.0401
Proportional Marginal Effect	0.2609	0.2706	0.3220	0.3388
Year Controls	Yes	Yes	Yes	Yes
Industry Controls	No	Yes	No	Yes
Cluster SE	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0500	0.0640	0.0700	0.0840
Observations	19,747	19,683	19,747	19,554

Panel B: Acquisition Likelihood in Different Groups of Firms

This table reports results of likelihood of acquisition by next year as in column (3) and (4) of Table VI, where the GP variable is interacted with binary variables indicating whether a firm A) is incorporated in Delaware, B) has Tobin's Q greater than the industry median, C) has market capitalization greater than the market median, and D) belongs to a highly competitive industry (HHI in the top quartile in a given year). We report only the coefficients on the interacted GP variables. For each interaction variable two sets of coefficients are reported which differ based on how we control for industry: (1) uses HHI as industry control, and (2) uses industry fixed effects. Marginal effects are reported in the table, with standard errors reported in parentheses below. All models estimated use robust standard errors clustered by firm and have year fixed effects. Significance levels are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

A) Delaware Incorporated vs. None Delaware Incorporated			
	GPxDEInc	GPxNotDEInc	Diff
(1) Using HHI as Ind Control	0.0117 ***	0.0098 ***	0.0019
	(0.003)	(0.005)	(0.005)
(2) Using FE as Ind Control	0.0133 ***	0.0130 ***	0.0003
	(0.003)	(0.006)	(0.005)
B) Positive Industry Relative Q vs. Negative Industry Relative Q			
	GPx +IndRelQ	GPx -IndRelQ	Diff
(1) Using HHI as Ind Control	0.0138 ***	0.0167 ***	-0.0029
	(0.003)	(0.005)	(0.005)
(2) Using FE as Ind Control	0.0142 ***	0.0160 ***	-0.0018
	(0.003)	(0.005)	(0.005)
C) Positive Industry Relative Mcap vs. Negative Industry Relative Mcap			
	GPx +IndRelSize	GPx -IndRelSize	Diff
(1) Using HHI as Ind Control	0.0125 ***	0.0128 ***	-0.0003
	(0.003)	(0.004)	(0.005)
(2) Using FE as Ind Control	0.0135 ***	0.0139 ***	-0.0004
	(0.003)	(0.004)	(0.005)
D) Top Quartile HHI vs. Low Quartile HHI			
	GPxHiHHI	GPxLowHHI	Diff
(1) Using HHI as Ind Control	0.0125 ***	0.0125 ***	0.0000
	(0.003)	(0.004)	(0.005)
(2) Using FE as Ind Control	0.0127 ***	0.0103 ***	0.0024
	(0.003)	(0.004)	(0.005)

TABLE V: ACQUISITION LIKELIHOOD: OLD VS. FREHS GPs

This table reports marginal effects from pooled Probit results. Results from columns (1) and (2) are comparable to those in Table VI, with the difference that the dependent variable is an indicator for whether or not a firm is acquired by the current date of the next IRRC volume. Columns (3) and (4) represent the same models as (1) and (2), respectively, but splits GP into Old and Fresh GP, where Fresh GP equals 1 if a firm does not have GP in the previous IRRC volume and has GP in the current volume, and Old GP equals 1 if a firm has GP in both the previous and current IRRC volume. All models estimated use robust cluster standard errors. Specifications (1) and (3) use the Herfindahl Index as industry control, while (2) and (4) use 2-digit SIC industry fixed effects. Standard errors are reported below marginal effects in parentheses. Marginal effects for industry and year fixed effects, as well as the constant term, are not displayed. Significance levels are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Probit Dependent Var	Acquired by Next IRRC Vol		Acquired by Next IRRC Vol	
	(1)	(2)	(3)	(4)
Golden Parachute	0.0337 ***	0.0353 ***		
	(0.005)	(0.005)		
Old GP			0.0345 ***	0.0377 ***
			(0.006)	(0.006)
Fresh GP			0.0392 ***	0.0406 ***
			(0.013)	(0.013)
Eindex-GP	-0.0012	-0.0016	-0.0002	-0.0006
	(0.002)	(0.002)	(0.002)	(0.002)
Gindex - Eindex	0.0021	0.0021	0.0016	0.0016
	(0.001)	(0.001)	(0.001)	(0.001)
Log Rel Q	-0.0057	-0.0040	-0.0039	-0.0021
	(0.005)	(0.005)	(0.005)	(0.005)
Ind Rel Market Cap	-0.0011 ***	-0.0013 ***	-0.0012 ***	-0.0014 ***
	(0.000)	(0.000)	(0.000)	(0.000)
Ind Rel Debt/Asset	-0.0039	-0.0053	-0.0007	-0.0028
	(0.013)	(0.013)	(0.013)	(0.014)
Delaware Inc	0.0155 ***	0.0133 ***	0.0173 ***	0.0150 ***
	(0.005)	(0.005)	(0.005)	(0.005)
CEO Age	-0.0235	-0.0121	-0.0249	-0.0132
	(0.028)	(0.027)	(0.028)	(0.028)
CEO Tenure	-0.0054 *	-0.0060 **	-0.0055 *	-0.0062 **
	(0.003)	(0.003)	(0.003)	(0.003)
Herfindahl Index	-0.0163		-0.0171	
	(0.018)		(0.018)	
Dependent Var Mean	0.0950	0.0956	0.0950	0.0956
Proportional Marginal Effect	0.3548	0.3694	.4127/.3632	.4249/.3946
Year Controls	Yes	Yes	Yes	Yes
Industry Controls	No	Yes	No	Yes
Cluster SE	Yes	Yes	Yes	Yes
Pseudo R-squared	0.1750	0.1870	0.1730	0.1860
Observations	10,422	10,361	10,422	10,361

TABLE VI: GOLDEN PARACHUTES AND PREMIUMS IN ACQUISITIONS

This table reports pooled regression results of 1-week and 4-week acquisition premiums on target firms' governance characteristics, fundamentals, and deal characteristics. Columns (1) and (2) use 1-week premium and log of 1-week premium as the dependent variable; columns (3) and (4) use 4-week premium and log of 4-week premium as the dependent variable. All models include estimated 2-digit SIC industry and year fixed effects, and all estimations use cluster robust standard errors, clustering by 2-digit SIC industries, and have year and SIC2 industry fixed effects. Coefficients for year and industry fixed effects and the constant term are suppressed. Significance levels are indicated by *, **, and *** for 10%, 5%, and 1% respectively; [a] denotes statistical significance at the 11% level.

Dependent Var	1Wk Prem	ln(1Wk Prem)	4Wk Prem	ln(4Wk Prem)
	(1)	(2)	(3)	(4)
Golden Parachute	-0.0357 **	-0.1280 [a]	-0.0433 **	-0.1921 **
	(0.017)	(0.077)	(0.020)	(0.093)
EIndex-GP	0.0166 **	0.0428	0.0124	0.0311
	(0.007)	(0.026)	(0.009)	(0.029)
GIndex-EIndex	0.0062	0.0194	0.0002	(0.002)
	(0.004)	(0.019)	(0.005)	(0.015)
Delaware Inc	0.0092	-0.0418	0.0140	-0.0193
	(0.015)	(0.059)	(0.017)	(0.070)
Log Rel Q	-0.0303	-0.0242	-0.0368	-0.0142
	(0.028)	(0.075)	(0.035)	(0.077)
Inside Ownership	-0.0014	0.0006	-0.0025	-0.0053
	(0.002)	(0.006)	(0.002)	(0.008)
Log(Assets)	-0.0179 *	-0.0377	-0.0221 **	-0.0625 *
	(0.009)	(0.034)	(0.010)	(0.032)
Debt/Asset	0.0590	0.1813	0.0462	0.2567
	(0.049)	(0.206)	(0.047)	(0.173)
Hostile Bid	0.0930 *	0.2503 *	0.0545	0.2869 ***
	(0.053)	(0.139)	(0.040)	(0.105)
Tender Offer	0.0591 *	0.2175 **	0.1031 ***	0.2771 **
	(0.034)	(0.089)	(0.037)	(0.114)
Toehold	-0.0011	-0.0036	-0.0021	-0.0026
	(0.002)	(0.006)	(0.001)	(0.005)
Termination Fee	-0.0068	-0.0027	0.0005	0.1233
	(0.023)	(0.071)	(0.021)	(0.091)
Stock Swap	-0.0125	-0.1606 *	-0.0183	-0.1640 *
	(0.026)	(0.083)	(0.026)	(0.085)
Log(Time)	0.0180	0.0528	0.0152	0.0443
	(0.021)	(0.065)	(0.023)	(0.067)
Log(CEO Age)	-0.0910	-0.4395	-0.1810	-0.8681 **
	(0.134)	(0.489)	(0.127)	(0.413)
Log(CEO Tenure)	0.0180	0.1000 **	0.0130	0.0636
	(0.019)	(0.046)	(0.021)	(0.049)
Adjusted R-squared	0.1140	0.0780	0.1530	0.0720
Observations	756	756	753	753

TABLE VII: GOLDEN PARACHUTES AND EXPECTED PREMIUMS FROM ACQUISITIONS

This table reports pooled regression results of 1-week and 4-week acquisition premiums on target firms' governance characteristics and fundamentals across all firms in the annual IRRC dataset, where any firm that does not undergo a completed acquisition over the next year have an acquisition premium of 0. Columns (1) and (2) use 1-week premium and log of 1-week premium as the dependent variable; columns (3) and (4) use 4-week premium and log of 4-week premium as the dependent variable. All models include estimated 2-digit SIC industry and year fixed effects, and all estimations use cluster robust standard errors, clustering by 2-digit SIC industries, and have year and SIC2 industry fixed effects. Coefficients for year and industry fixed effects and the constant term are suppressed. Significance levels are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Dependent Var	1Wk Prem	ln(1Wk Prem)	4Wk Prem	ln(4Wk Prem)
	(1)	(2)	(3)	(4)
Golden Parachute	0.0036 ***	0.0344 ***	0.0036 ***	0.0367 ***
	(0.001)	(0.008)	(0.001)	(0.008)
EIndex-GP	-0.0002	-0.0034	0.0000	-0.0032
	(0.000)	(0.003)	(0.000)	(0.003)
GIndex-EIndex	-0.0003	-0.0015	0.0000	-0.0008
	(0.000)	(0.002)	(0.000)	(0.002)
Delaware Inc	0.0022 *	0.0157	0.0019 *	0.0148
	(0.001)	(0.010)	(0.001)	(0.010)
Log Rel Q	-0.0033 **	-0.0173	-0.0031 **	-0.0192 *
	(0.001)	(0.012)	(0.001)	(0.011)
Log Size	0.0000	-0.0004 *	0.0000	-0.0004 *
	(0.000)	(0.000)	(0.000)	(0.000)
Inside Ownership	-0.0002 ***	-0.0013 **	-0.0002 **	-0.0013 **
	(0.000)	(0.001)	(0.000)	(0.001)
Log(Assets)	-0.0027 ***	-0.0196 ***	-0.0023 ***	-0.0184 ***
	(0.000)	(0.003)	(0.000)	(0.003)
Debt/Asset	0.0009	-0.0038	-0.0013	-0.0229
	(0.005)	(0.033)	(0.003)	(0.025)
Log(CEO Age)	-0.0007	0.0142	-0.0010	0.0193
	(0.005)	(0.032)	(0.003)	(0.028)
Log(CEO Tenure)	0.0002	0.0005	0.0003	-0.0001
	(0.000)	(0.004)	(0.000)	(0.004)
Adjusted R-squared	0.0160	0.0180	0.0140	0.0170
Observations	22918	22915	22918	22918

TABLE VIII: GOLDEN PARACHUTES AND THE EVOLUTION OF TOBIN'S Q

Panel A: Tobin's Q Prior to Adoption

This table reports OLS coefficients from a regression of log industry-relative Q on an indicator for future GP adopter (does not have GP in the current IRRC volume and has GP in the following IRRC volume), controlling for EIndex, GIndex, and other firm characteristics. The estimation is performed on a sample of firms that are either future adopters of GP or non-adopters of GP (has no GP in current and next IRRC). All cluster robust standard errors are clustered by 2-digit SIC industries; standard errors are reported in parentheses below the coefficient estimates. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Dependent Var	Log(Industry Relative Q)		
	(1)	(2)	(3)
Future GP Adopter	-0.0494 **	-0.0554 **	-0.0475 *
	(0.024)	(0.024)	(0.025)
Other Provisions in E	-0.0352 ***	-0.0308 **	-0.0350 ***
	(0.009)	(0.013)	(0.013)
Other Provisions in G	0.0172 ***	0.0132 *	0.0171 **
	(0.005)	(0.008)	(0.008)
ROA	0.4928 ***	0.4724 ***	0.4905 ***
	(0.186)	(0.179)	(0.187)
Log(Assets)	0.0058	0.0077	0.0055
	(0.007)	(0.013)	(0.011)
CAPEX / Assets	0.5411 ***	0.9536 ***	0.5525 ***
	(0.154)	(0.243)	(0.198)
Log(Age)	-0.1254 ***	-0.1139 ***	-0.1251 ***
	(0.014)	(0.020)	(0.019)
Rel Debt / Assets	-0.4504 ***	-0.4266 ***	-0.4504 ***
	(0.081)	(0.129)	(0.123)
R&D / Sales	0.0226	0.0261	0.0229
	(0.017)	(0.017)	(0.017)
Herfindahl Index			0.0761
			(0.103)
Industry FE	No	Yes	No
Year FE	No	Yes	Yes
SE	Robust	Cluster	Cluster
Adjusted R-squared	0.2197	0.2682	0.2198
Observations	2,540	2,540	2,540

Panel B: Changes in Q during the Inter-Volume Period of GP Adoption

This table reports OLS coefficients from a changes regression of volume-to-volume change in log industry-relative Q on an indicator for future GP adopter (does not have GP in the current IRRC volume and has GP in the following IRRC volume), changes in other provisions in EIndex and GIndex, and changes in firm characteristics. The estimation is performed on a sample of firms that are either future adopters of GP or non-adopters of GP (has no GP in current and next IRRC). All cluster robust standard errors are clustered by 2-digit SIC industries; standard errors are reported in parentheses below the coefficient estimates. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Dependent Var	ΔLog(Industry Relative Q)		
	(1)	(2)	(3)
Future GP Adopter	-0.0582 ***	-0.0475 **	-0.0581 ***
	(0.020)	(0.021)	(0.020)
Δ Other Provisions in E	-0.0218	-0.0200	-0.0216
	(0.022)	(0.022)	(0.022)
Δ Other Provisions in G	-0.0031	-0.0050	-0.0032
	(0.011)	(0.011)	(0.011)
Δ ROA	0.2038 **	0.2122 **	0.2038 **
	(0.096)	(0.102)	(0.096)
Δ Log Assets	-0.1055 ***	-0.1061 ***	-0.1053 ***
	(0.030)	(0.031)	(0.030)
Δ CAPEX / Assets	0.3373 *	0.3497	0.3386
	(0.198)	(0.222)	(0.216)
Δ Log Rel Debt / Assets	-0.3212 ***	-0.2803 ***	-0.3201 ***
	(0.060)	(0.061)	(0.059)
Δ Log Age	-0.4800 ***	-0.4867 ***	-0.4803 ***
	(0.090)	(0.094)	(0.093)
Δ R&D / Sales	-0.0001	-0.0003	-0.0001
	(0.009)	(0.008)	(0.008)
Δ Herfindahl Index			0.0612
			(0.115)
Industry FE	No	Yes	No
Year FE	No	Yes	Yes
SE	Robust	Cluster	Cluster
Adjusted R-squared	0.1386	0.1346	0.1383
Observations	2,429	2,429	2,429

Panel C: Evolution of Q After GP Adoption

This table reports OLS coefficients from a changes regression of volume-to-volume change in log industry-relative Q on an indicator for LT GP adopter (having GP in the previous, current, and succeeding IRRC volumes), changes in other provisions in EIndex and GIndex, and changes in firm characteristics. The estimation is performed on a sample of firms that are either LT adopters or LT non-adopters of GP (does not have GP in the previous, current, and next IRRC volumes). All cluster robust standard errors are clustered by 2-digit SIC industries; standard errors are reported in parentheses below the coefficient estimates. Levels of significance are indicated by [a], *, **, and *** for 12%, 10%, 5%, and 1% respectively.

Dependent Var	ΔLog(Industry Relative Q)		
	(1)	(2)	(3)
LT GP Adopter	-0.0484 [a]	-0.0619 *	-0.0531 *
	(0.031)	(0.032)	(0.030)
Δ Other Provisions in E	0.0121	0.0124	0.0106
	(0.024)	(0.026)	(0.025)
Δ Other Provisions in G	-0.0019	-0.0031	-0.0015
	(0.011)	(0.012)	(0.012)
Δ ROA	1.0137 ***	1.0136 ***	1.0123 ***
	(0.147)	(0.158)	(0.155)
Δ Log Assets	-0.1033 **	-0.116 **	-0.1049 **
	(0.044)	(0.045)	(0.043)
Δ CAPEX / Assets	-0.0775	-0.0342	-0.0774
	(0.206)	(0.240)	(0.231)
Δ Log Rel Debt / Assets	-0.4042 ***	-0.3849 ***	-0.4039 ***
	(0.120)	(0.123)	(0.121)
Δ Log Age	-0.2035	-0.2503 *	-0.2075 *
	(0.129)	(0.129)	(0.121)
Δ R&D / Sales	-0.0494 ***	-0.0495 ***	-0.0495 ***
	(0.011)	(0.011)	(0.011)
Δ Herfindahl Index			-0.3045 **
			(0.137)
Industry FE	No	Yes	No
Year FE	No	Yes	Yes
SE	Robust	Cluster	Cluster
Adjusted R-squared	0.1631	0.1567	0.1645
Observations	1,410	1,410	1,410

Panel D: Changes in GP and Changes in Q

This table reports OLS coefficients from a changes regression of volume-to-volume change in log industry-relative Q on changes in GP, as well as changes in other provisions in EIndex and GIndex, and changes in firm characteristics. A change in GP of 1(-1) means an adoption (dis-adoption) of GP from one volume to the next. All cluster robust standard errors are clustered by 2-digit SIC industries; standard errors are reported in parentheses below the coefficient estimates. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Dependent Var	ΔLog(Industry Relative Q)		
	(1)	(2)	(3)
Δ GP	-0.0460 ***	-0.0435 **	-0.0460 ***
	(0.016)	(0.017)	(0.017)
Δ Other Provisions in E	-0.0218 *	-0.0190	-0.0216 *
	(0.012)	(0.012)	(0.012)
Δ Other Provisions in G	0.0001	-0.0003	0.0002
	(0.007)	(0.008)	(0.008)
Δ ROA	0.3285 **	0.3322 **	0.3285 **
	(0.149)	(0.149)	(0.149)
Δ Log Assets	-0.1816 ***	-0.1811 ***	-0.1813 ***
	(0.020)	(0.022)	(0.022)
Δ CAPEX / Assets	0.4300 ***	0.4313 ***	0.4318 ***
	(0.138)	(0.151)	(0.150)
Δ Log Rel Debt / Assets	-0.2681 ***	-0.2656 ***	-0.2685 ***
	(0.061)	(0.067)	(0.067)
Δ Log Age	-0.2155 ***	-0.184 ***	-0.2147 ***
	(0.038)	(0.036)	(0.036)
Δ R&D / Sales	-0.0004	-0.0004	-0.0004
	(0.006)	(0.006)	(0.006)
Δ Herfindahl Index			0.0799
			(0.062)
Industry FE	No	Yes	No
Year FE	No	Yes	Yes
SE	Robust	Cluster	Cluster
Adjusted R-squared	0.1280	0.1288	0.1280
Observations	6,287	6,287	6,287

TABLE IX: STOCK RETURNS AND GOLDEN PARACHUTES

Panel A: Stock Returns Prior to GP Adoption

This table reports the monthly abnormal returns, and their associated robust standard errors in parentheses for the period of September 1990 - December 2003. Abnormal returns were calculated by regressing the return associated with a particular hypothetical portfolio the three Fama-French (Fama & French 1993) factors: the HML factor which captures book-to-market effects, the SMB factor which captures firm size effects, and RMRF factor which captures the value-weighted market return in excess of the risk-free rate for further explanation. Additionally we include a momentum factor which is calculated using the procedures described in Carhart (1997). The examined strategy (which is not implementable in real time as it uses future information) is to long a portfolio of stocks that adopt golden parachute two volumes from the current one (i.e. do not have GP in the current and next IRRC volumes but have GP in the following one) and, simultaneously, tp short another portfolio of stocks that do not have golden parachute in the current and the succeeding two IRRC volume. These long and short portfolios were adjusted when updated information on firms' corporate governance provisions became available: July, 1993; July, 1995; February 1998; February 2000; February 2002; January 2004; January 2006. The long and short portfolios of stocks were constructed using equal weightings of each stock (equal-weight) and by weighting the holding of a stock in the portfolio by its common stock market capitalization (value-weight), and portfolios are rebalanced monthly. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Dependent Var	**Monthly Portfolio Returns**	
	(1)	(2)
	VW	EW
Alpha	-0.0059 ***	-0.0035 ***
	(0.002)	(0.001)
Rm-Rf	0.0034	0.0153
	(0.056)	(0.030)
SMB	0.0834	0.1219 ***
	(0.067)	(0.037)
HML	0.2827 ***	0.1256 ***
	(0.096)	(0.042)
Carhart	-0.0175	-0.0169
	(0.043)	(0.027)
N	160	160
Adj. Rsq	0.0861	0.0852

Panel B: Stock Returns during the Inter-volume Period of GP Adoption

This table reports the monthly abnormal returns, and their associated robust standard errors in parentheses for the period of September 1990 - December 2005. Abnormal returns were calculated by regressing the return associated with a particular trading strategy on the three Fama-French (Fama & French 1993) factors: the HML factor which captures book-to-market effects, the SMB factor which captures firm size effects, and RMRF factor which captures the value-weighted market return in excess of the risk-free rate for further explanation. Additionally we include a momentum factor which is calculated using the procedures described in Carhart (1997). The trading strategy (which is not implementable in real time as it uses future information) is to long a portfolio of stocks that adopt golden parachute in the next IRRC volume, simultaneously, shorting another portfolio of stocks that do not have golden parachute between the current and the succeeding IRRC volume. These long and short portfolios were adjusted when updated information on firms' corporate governance provisions became available: July, 1993; July, 1995; February 1998; February 2000; February 2002; January 2004; January 2006. The long and short portfolios of stocks were constructed using equal weightings of each stock (equal-weight) and by weighting the holding of a stock in the portfolio by its common stock market capitalization (value-weight). Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Dependent Var	**Monthly Portfolio Returns**	
	(1)	(2)
	VW	EW
Alpha	-0.0037 **	-0.0020 *
	(0.002)	(0.001)
Rm-Rf	-0.0320	-0.0195
	(0.040)	(0.027)
SMB	0.2017 ***	0.1310 ***
	(0.050)	(0.037)
HML	0.2120 ***	0.0942 *
	(0.066)	(0.051)
Carhart	-0.0585 **	-0.1262 ***
	(0.025)	(0.024)
N	184	184
Adj. Rsq	0.1185	0.2695

Panel C: Stock Returns of GP Adopters

This table reports the monthly abnormal returns and their associated robust standard errors in parentheses for the period of July 1993 - December 2005. Abnormal returns were calculated by regressing the return associated with a particular trading strategy on the three Fama-French (Fama & French 1993) factors: the HML factor which captures book-to-market effects, the SMB factor which captures firm size effects, and RMRF factor which captures the value-weighted market return in excess of the risk-free rate for further explanation. Additionally we include a momentum factor which is calculated using the procedures described in Carhart (1997). The trading strategy (which is not implementable in real time as it uses future information) is to long a portfolio of stocks that have golden parachutes as of the current date in the previous IRRC volume as well as in the next IRRC volumes, while simultaneously shorting another portfolio of stocks that do not have golden parachutes in the previous, current, and the next IRRC volumes. Columns (3) and (4) differ from (1) and (2) by including all firms that were acquired between the current and the following IRRC volume, and re-investing towards the rest of the respective portfolio on the long and the short side. These long and short portfolios were adjusted when updated information on firms' corporate governance provisions became available: July, 1993; July, 1995; February 1998; February 2000; February 2002; January 2004; January 2006. The long and short portfolios of stocks were constructed using equal weightings of each stock (equal-weight) and by weighting the holding of a stock in the portfolio by its common stock market capitalization (value-weight) in the beginning of each month. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Dependent Var	**Monthly Portfolio Returns**			
	Firms in 3 Consecutive Volumes		Including Acquired Firms	
	(1)	(2)	(3)	(4)
	VW	EW	VW	EW
Alpha	-0.0037 **	-0.0028 ***	-0.0032 **	-0.0024 **
	(0.001)	(0.001)	(0.001)	(0.001)
Rm-Rf	0.0183	0.0127	0.0155	0.013
	(0.039)	(0.021)	(0.040)	(0.023)
SMB	0.1203 ***	0.0242	0.1189 ***	0.0141
	(0.040)	(0.028)	(0.041)	(0.030)
HML	0.5274 ***	0.2904 ***	0.5306 ***	0.2866 ***
	(0.062)	(0.031)	(0.062)	(0.033)
Carhart	0.0285	0.0063	0.0269	0.0133
	(0.028)	(0.013)	(0.028)	(0.013)
N	150	150	150	150
Adj. Rsq	0.5094	0.4876	0.5156	0.4755