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Golden Parachutes and the Wealth of Shareholders

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Abstract

Golden parachutes have attracted substantial attention from investors and public officials for more than two decades. We find that golden parachutes are associated with higher expected acquisition premiums, and that this association is at least partly due to the effect of golden parachutes on executive incentives. However, we find that firms that adopt a golden parachute experience a reduction in their industry-adjusted Tobin's Q, as well as negative abnormal stock returns both during and subsequent to the inter-volume period of adoption. This finding raises the possibility that, despite their facilitating some value-increasing acquisitions, golden parachutes have, on average, an overall negative effect on shareholder wealth; this effect could be due to GPs weakening the force of the market for control and thereby increasing managerial slack and/or providing executives with incentives to go along also with some value-decreasing acquisitions that do not serve shareholders' long-term interests. Our findings have significant implications for ongoing debates on golden parachutes and suggest the need for additional work identifying the type of GPs that drive the correlation between GPs and reduced shareholder value.

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

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

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1. Introduction

Golden parachutes (GPs) became common in the late 1970s and early 1980s in the midst of unprecedented takeover activity, and they have attracted much debate and substantial attention from investors and public officials ever since.¹ In 1984, Congress enacted sections 280G and 4999 of the Internal Revenue Code, which seek to discourage GPs with high monetary value by imposing substantial tax penalties on their use.² Over the past 15 years, precatory resolutions opposing GPs have been brought in significant numbers and have commonly passed.³ The 2010 Dodd-Frank Act mandated advisory shareholder votes on all future adoptions of a GP by public firms.⁴

In this paper, we contribute to the ongoing debate about GPs by using a long panel dataset from 1990-2007 to assess empirically the effects GPs. We show that, even though GPs are associated with higher expected acquisition premia, they could well be overall value-reducing for shareholders.

The first part of our paper focuses on the effect of GPs on unconditional expected acquisition premiums (i.e., expected premiums), which is a product of the likelihood of an acquisition and the premium conditional on an acquisition. There is a substantial empirical literature examining how GPs are associated with acquisition likelihood and with premiums in the event of an acquisition (see, most recently, Sokolyk (2011) and Fich et al. (2013)).⁵ Our work, however, is the first to provide an integrated analysis combining the effects of GPs on both acquisition likelihood and premiums. We find that GPs are associated with higher expected acquisition premiums; even though GPs are associated with a lower

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 Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 951.

⁵ Earlier studies examining the relationship of GPs with acquisition likelihood include Harris, (1990), Machlin, Choe, and Miles (1993), Cotter and Zenner (1994), Born and Trahan (1994), Hall and Anderson (1997), Agrawal and Knoeber (1998), Lefanowicz et al. (2000), and Bates et al. (2008). Most (but not all) of these studies find a positive association between GPs and acquisition likelihood.

As to the relationship of GPs with premiums in the event of an acquisition, Machlin, Cohe, and Miles (1993) report a positive correlation between the size of GPs and acquisition premiums. Fich, Tran, and Walkling (2009) find a negative association between GPs and premiums in the event of an acquisition. Sokolyk (2011) finds no statistically significant relationship between GPs and acquisition premiums. Hartzell, Ofek, and Yermack (2004) present related findings, which we discuss in Section 4 below.

premium in the event of an acquisition, their association with a higher acquisition likelihood turns out to dominate the lower premium effect.⁶

Furthermore, we add to the literature by showing that the positive associations between GPs with higher acquisition likelihood and higher expected premiums are not wholly due to the “private information” or signaling explanation (Lambert and Larcker, 1985) that argues GPs are adopted when managers have private information indicating a high likelihood of acquisition. Instead, our findings show that these positive associations are at least partly driven by the effect of GPs on executives’ incentives, under which acquisitions become more attractive to managers (Lambert and Larcker, 1985; Jensen, 1988; Kahan and Rock, 2002).⁷ If these associations were solely driven by the signaling explanation, we would expect the associations to be driven by “fresh” GPs (i.e., GPs that were recently adopted). We find, however, that both “fresh” and “older” GPs are positively and significantly associated (with similar magnitudes) with acquisition likelihood as well as unconditional expected premiums. These findings are thus consistent with the possibility that the positive associations between GPs with both acquisition likelihood and expected premiums are at least partially due to the effect on executives’ incentives.

The second part of our paper, which provides the paper’s most important contribution, focuses on the evolution of firm value and the pattern of returns prior to, around, and after the adoptions of GPs. Bebchuk, Cohen, and Ferrell (2009) note that GPs are negatively correlated with Tobin’s Q but do not identify the extent to which this association is driven by a selection effect (a tendency of low-Q firms to have GPs) and/or by post-adoption changes. We show that firms adopting a GP tend to have a lower Tobin’s Q already in the Investor Responsibility Research Center (IRRC) volume prior to adoption. Moreover, we show that GP adoption is subsequently followed by significant erosion in value. In particular, we show that the Tobin’s Q of firms adopting a GP (i) erode during the period around GP

⁶ We first carried out an analysis of the relationship of GPs and expected acquisition premia in our working paper (Bebchuk, Cohen, and Wang (2010)). Fich et al. (2013) subsequently followed our approach, adding such an investigation to the analysis of Fich et al. (2010), and obtained consistent results.

⁷ Our results are thus consistent with and complement the significant body of literature showing how acquisition decisions are influenced by managers’ private interests (see, e.g., Brickley, Coles, and Terry (1994), Cotter and Zenner (1994), Cotter, Shivdasani, and Zenner (1997), Grinstein and Hribar (2004), Wulf (2004), and Jenter and Lewellen (2011)).

adoption, between the publications of consecutive IRRC volumes (i.e., the inter-volume period), and (ii) subsequently continue to erode over the next several years.

Consistent with our findings concerning the erosion in Tobin's 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 during the inter-volume period of adoption than firms that do not have GPs and do not adopt them by the next IRRC volume, and (ii) firms that adopt GPs and maintain them experience lower abnormal stock returns during the two inter-volume periods following adoptions than firms that do not have GPs and do not adopt them subsequently.

Our findings concerning the erosion of firm value following GP adoption could be at least partly driven by a "managerial slack" effect: weakening of the discipline of the market for corporate control can lead to increased managerial slack (Shleifer and Vishny, 1989; Gompers, Ishii, and Metrick, 2003), and GPs weaken this market discipline by making managers less fearful of acquisitions (Bebchuk, Cohen, and Ferrell (2009)). In addition, the erosion of value following GP adoption could be partly driven by a "selling out" effect: executives might have some private information about the long-term independent value of their company, and GPs that are large enough might give them incentives to go along with an acquisition even when the executives' private information indicates that doing so would not be in the shareholders' long-term interest. In contrast, our finding about the relationship between GPs and shareholder value provide no support for the view that, by weakening the pressures of the market for corporate control, GPs bring about increased firm value by inducing more focus on the long-term (Stein, 1988) or by encouraging executives to invest in firm-specific human capital (Jensen, 1988; Shleifer and Vishny, 1989).

Because our stock return results include gains from acquisitions, and the market capitalization captured by Tobin's Q reflect expectations about expected acquisition premiums, our findings suggest that, notwithstanding their beneficial impact on acquisition premiums, the net overall effect of GPs is, on average, negative. Thus, our analysis reaches a less favorable conclusion concerning GPs than much of

the literature, which has focused on the effect of GPs on acquisitions and not on their overall effect on shareholder value.

We would like stress the “on average” aspect of our conclusion that GPs are on average associated with reduced value for shareholders. Our findings do not rule out the possibility that some types of GPs, or the use of GPs in some types of circumstances has overall positive effect on shareholder wealth. Whether such types of GPs or such circumstances can be identified is an interesting subject to future empirical work.

The remainder of this paper is organized as follows. Section 2 describes our data sources and provides summary statistics. Section 3 analyzes the relationship between GPs and expected acquisition premiums. Section 4 analyzes the relationship between GPs and evolution of firm value over time. Section 5 concludes.

2. Data and Summary Statistics

2.1 The Data

Our data on golden parachutes comes from the eight volumes published by the Investor Responsibility Research Center (IRRC) 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 a wide range of corporate governance provisions, including the variable of interest “*Golden Parachute*,” a binary variable indicating whether a firm has a GP at each of the above publication dates, for 1,400 to 2,000 firms that comprise the S&P500 and other firms considered to be important by the IRRC.

The IRRC dataset offers at least three distinct advantages for the study of GPs. First, IRRC has comprehensive coverage of firms: any given IRRC volume covers over 90% of the combined market capitalization of the AMEX, NYSE, and NASDAQ exchanges. Second, this dataset data set allows us to construct a long time series spanning almost 20 years. Third, IRRC tracks a host of other corporate governance provisions for a given firm, allowing researchers to control for the structure and strength of

corporate governance when identifying the effect of GPs on takeover likelihood, acquisition premium, and shareholder value.

We construct two panel datasets based on the IRRC data, merged with the CRSP-Compustat merged sample (CCM), to conduct our analyses: a dataset that is updated annually and a dataset that is updated on each IRRC publication date. The annual dataset is constructed as follows. Since governance data are updated every 2-3 years, we impute the inter-volume values of the governance provisions using the forward-fill method of Gompers et al (2003) (“GIM”).⁸ The forward-fill results in an annual dataset of governance provisions that we merge with annual financial data from CCM according to fiscal year and permno (the CRSP firm identifier). The volume-by-volume dataset is constructed by merging the eight volumes of IRRC governance data with CCM according to the fiscal year ending closest and prior to the current date of each IRRC volume.

We construct these two panel datasets to conduct a comprehensive analysis of the effect of GPs. The strength of the annual dataset is the increased sample and the higher frequency in which we observe relevant firm outcomes (e.g., being taken over) and other financial characteristics (e.g., Tobin’s Q). On the other hand, the strength of the volume-by-volume dataset is the accuracy in the governance data, which is up-to-date as of the publication date of each IRRC volume. Our analyses utilize the strengths of both of these datasets to establish the associations of GPs with acquisition likelihood, acquisition premiums conditional on a bid, and ex-ante premiums. We will also utilize the volume-by-volume dataset to explore the evolution of firm valuation and returns prior to, around, and after GP adoptions.

For both datasets, our analyses exclude dual-class firms and real estate investment trusts, following GIM, due to these firms’ unique governance structures and regulations. We also merge ExecuComp data to incorporate information on firm CEO and insider characteristics, such as CEO age, tenure, and top-five insider ownership.

⁸ We also attempt different filling methods (such as backward filling and random filling) and find our results robust to the choice of filling method.

For our analysis of takeover likelihood and takeover premiums, we code as acquisitions all deals designated as “Mergers,” “Acquisitions,” and “Acquisitions of Majority Interest” from SDC Platinum. Spinoffs in which the acquirers are shareholders of the firm are excluded from our sample. CRSP identifiers (permnos) for target firms are obtained by matching target firm CUSIPs.⁹ This results in a final sample of 10,856 announced takeover bids from 1990 to 2007, covering 9,277 target firms. Using these data, we follow the procedure described in Bates and Lemmon (2003) to assign auction sequences and identify initial bids in an auction: an “initial bid” is if there is no announced takeover bid 365 calendar days prior to the announcement date and a “follow-on bid” is when another takeover attempt is announced within 365 calendar days prior to a bid. Our analysis of takeover premiums focuses on the 1-week and 4-week acquisition premiums, as reported in SDC, which are the price per share paid by the acquirer divided by the target price 1-week and 4-weeks prior to the announcement date. Finally, these data are 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 dataset we define two primary variables of interest for our analyses on takeover likelihood: an indicator that a firm receives an initial bid in the calendar year following the current year of the IRRC volume (*“Received Bid Next Year”*) and an indicator that a firm is acquired in the calendar year following the current year of the IRRC volume (*“Acquired Next Year”*).¹⁰ 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 (*“Received Bid by Next IRRC Vol”*) and an indicator that a firm is acquired by the current date of the following IRRC volume (*“Acquired by Next IRRC Vol”*).

⁹ For target firms with no CUSIP matches in CRSP, we obtain permnos by matching variations of target names and tickers to those in CRSP.

¹⁰ 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.

Our analyses on the evolution of firm value use Tobin's Q as a primary measure of firm valuation in accordance with its extensive use in the governance literature.¹¹ As is now standard, we follow Kaplan and Zingales (1997) by defining Tobin's Q as the market value of assets divided by book value of assets, where the market value of assets is computed as the book value of assets plus the market value of common stock less the sum of the book value of common stock and balance sheet deferred taxes.

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 adoption 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.¹² We find the percentage of eligible adopters that adopt GPs in the inter-volume period steadily rises from 1990 to 2002, from 15.81% to 30.02%, and declines thereafter to 21.98% in the 2006 volume. On average (weighted), 22.29% of eligible adopters adopt a GP in the inter-volume period. GP removals 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 GPs. For each group, we report univariate summary statistics on means and standard deviations, as well as significance levels from an unpaired two-sided t-test. Firms with GPs differ from those without them 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 higher industry-adjusted debt-to-

¹¹ See, e.g., 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).

¹² Clearly, this requires the firm to be covered in two consecutive volumes. All such firms are considered “eligible adopters.”

asset ratio.¹³ Furthermore, GP firms are less likely to be Delaware incorporated and from industries with greater product market competition as measured by the Herfindahl Index.¹⁴ These univariate statistics suggest that firms with GPs face greater threat of takeover; moreover, these firms are also associated with greater protection from takeovers—i.e., they are more likely to have a classified board, a poison pill, and provisions other than a GP from either the EIndex or the GIndex.¹⁵

Finally, Table III provides summary statistics on the relationship between GPs and acquisitions. During the 1990–2006 period, 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 following 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.

¹³ Relative market capitalization of a firm is defined as 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 as the debt-to-asset ratio minus the industry median debt-to-asset ratio. All industry relative measures above use SIC 2-digit definitions.

¹⁴ Following Giroud and Mueller (2011), we define the Herfindahl index based on SIC 3-digit industry definitions.

¹⁵ GIndex, also known as the GIM index, follows Gompers, Metrick, Ishii (2003). EIndex, or the Entrenchment Index, is a subset of the GIndex proposed in Bebchuk, Cohen, and Ferrell (2009).

3. GPs and Expected Acquisition Premiums

Our analysis begins by examining the association between GPs and expected acquisition premiums, which are a product of (i) acquisition likelihood, and (ii) premium conditional on an acquisition. Below, we first study the association of GPs with each of these elements separately (Sections 3.1 and 3.2), then proceed to examine the association between GPs with expected premiums (Section 3.3). Finally, we examine in Section 3.4 whether the positive association identified between GPs and expected premiums, as well as the positive association between GPs and acquisition likelihood driving this association, are at least partly due to the effect of GPs on incentives rather than a reflection of the influence of private information.

3.1 GPs and Likelihood of Acquisition

The summary statistics above indicate that GPs are correlated with increased likelihood of receiving an offer and of being acquired. However, such 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 association can arise if executives of firms with such variables rationally exert greater effort to obtain GPs. Indeed, the summary statistics above indicate that GPs are associated with publicly observable variables known to be correlated with bids and acquisitions, such as lower firm size or lower industry-adjusted Q. However, the question remains: can GPs be expected to be correlated with bids and acquisitions after controlling for such variables?

Here are two possible hypotheses. First, the incentive hypothesis posits that GPs 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 lower the premium threshold above which an acquisition would be in the executives' private interests, notwithstanding their loss of some private benefits of control (Lambert and Larcker, 1985; Jensen, 1988). Second, the private information hypothesis predicts that, even when one controls for publicly observable variables that are associated with an increased likelihood of a bid and an acquisition,

an executive may have private information that his 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 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.

Using our annual dataset, we confirm the predictions of these hypotheses empirically by estimating, via a probit model, the likelihood of a firm receiving a bid in the next calendar year (“*Receive Bid Next Year*”) and the likelihood of being acquired in the next calendar year (“*Acquired Next Year*”) as a function of whether the firm has a GP and other controls. Specifically, we control for other corporate governance provisions using three additional variables: “EIndex–GP,” the Entrenchment Index minus GP; “GIndex–EIndex,” the GIM index minus the value of the Entrenchment Index; and “Delaware Inc,” an indicator of whether the firm is incorporated in Delaware. Our other control variables reflect values in the current fiscal year. “Log Rel Q” refers to the log of a firm’s Tobin’s Q divided by the industry-median Q; “Ind Rel Market Cap” 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 (Herfindahl Index), representing the level of product market competition in the industry, or by 2-digit SIC (SIC2) industry fixed effects. Our use of the Herfindahl Index follows the recent work by Giroud and Mueller (2011), which documents the possibility that corporate governance may only matter for industries with low product market competition. We also include year fixed effects.

Pooled probit estimation results, whose marginal effects evaluated at the means are reported in Table IV, 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.

Columns (1) and (3) of Table IV, which use the Herfindahl Index as the control for industry (instead of using industry fixed effects), report the marginal effect of GPs on bid likelihood and takeover likelihood for the average firm (i.e., one that holds the mean values for the control variables) to be 1.48% and 1.28%, with statistically significance at the 1% level for both. Though a 1~2% increase in bid and takeover likelihoods may not seem large, considering the mean percentage of firms that receive acquisition bids (5.67%) and that are acquired within 1 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 acquisition. Therefore, the association between GPs and higher likelihood of a bid, as well as a completed acquisition, are both statistically and economically meaningful. The marginal effects reported in columns (2) and (4), which include SIC2 industry fixed effects, are nearly identical in magnitude and statistical significance to those reported in columns (1) and (3).

These empirical results are consistent with predictions from both the incentive and private information hypotheses. That is, controlling for variables known to correlate with acquisition likelihood, GPs are positively associated with acquisition likelihood in a significant and economically meaningful way.

3.2 GPs and Premiums in the Event of an Acquisition

The effect of GPs on executive incentives can be expected to lower premiums in the event of an acquisition through two channels. First, GPs weaken the executives' incentives to bargain in those bids that would have occurred even in the absence of GPs. In addition, some lower-premium bids, ones that would not have occurred in the absence of a GP, might become worthwhile for those executives once a GP is introduced.

It should be noted that there is an alternative reason 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 GPs in our data set. Hartzell, Ofek, and Yermack (2004) examine situations in which CEOs negotiating an acquisition also obtain, with the explicit or implicit approval of the buyer, extra payments

in the form of a special bonus or increased GPs. These authors find that CEOs who obtain 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 acquisition premiums in return for buyer willingness to let them derive *ex post* acquisition benefits not allocated to them *ex ante*.¹⁶ Unlike the acquisition benefits examined in their paper, which executives negotiating an acquisition need to bargain for, the benefits provided to executives under the GPs in our data set are not ones for which executives need to bargain at the time they negotiate an acquisition. These GPs are adopted *ex ante*, are already set and binding, and the executives need not take any step or make any concession in terms of the premium or otherwise to be in a position to benefit from them.

Using our annual dataset, we confirm the predictions of the incentive hypothesis by estimating pooled regressions of 1-week and 4-week acquisition premiums on the presence of GPs and other controls, such as the firm's governance structure and financial characteristics. We also control for deal characteristics, such as the acquiring firm's toehold in the acquired firm's shares prior to the takeover announcement, whether a termination fee is in place,¹⁷ whether the acquisition attempt is hostile, whether the deal is a tender offer, and whether the deal involves a stock swap. Finally, we also proxy for the strength of negotiating effort by including the time to completion (in days) and control for target firms' CEO characteristics by including the log of CEO age and tenure.

Our analysis excludes those transactions in which the bidder and the target companies share the same parent company as well as those transactions with non-negative acquisition premiums (840 non-missing for the 1-week premium and 839 for the 4-week premium),¹⁸ because they reflect abnormal takeover

¹⁶ Similarly, 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.

¹⁷ 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.

¹⁸ The 840 transactions with non-missing 1-week premiums are 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.

circumstances. Including such transactions does not change our results qualitatively, but generally weakens their statistical significance.

Pooled ordinary least squares (OLS) results reported in Table V show a consistent and negative association between GPs and acquisition premiums. Estimation results using the 1-week and 4-week premiums reported in columns (1) and (3) show that the presence of GPs is associated with an average reduction in acquisition premiums of 3.57 and 4.33 percentage points. In columns (2) and (4) we use the log of acquisition premiums as the dependent variables due to acquisition premiums being positively skewed. We find in these columns that the presence of a GP reduces 1-week premiums by 12.8% and 4-week premiums by 19.2%, an economically significant discount. With the exception of column (2), the coefficient on GP is significant at the 5% level. In summary, these findings of a negative association between GPs and acquisition premiums are consistent with the incentives hypothesis.

3.3 Unconditional Expected Premiums

The above analysis suggests an ambiguous relationship between GPs and the *ex ante* unconditional expected premiums due to two counteracting effects. While the presence of GPs is associated with an increased likelihood of acquisition and thus the likelihood of realizing acquisition premiums, the presence of GPs is also associated with a decrease in the size of premiums in the event of an acquisition. The incentives hypothesis is consistent with and predicts these empirical patterns, but does not generate a clear prediction on the product of these two effects. The relationship between GPs and the unconditional expected acquisition premium is therefore an empirical question.

We assess this empirical relation using the full sample of firms in our annual dataset, and we follow the methodology of Comment and Schwert (1995) by setting the acquisition premiums to zero for all non-takeover firm-year observations. Table VI reports pooled OLS estimation results that are similar to those of Table V but using the full sample. Like Table V, we consider 1-week and 4-week premiums in

columns (1) and (3), respectively, and the log of the respective premiums in columns (2) and (4).¹⁹ Unlike Table V, we only control for those firm characteristics that can be observed *ex ante* (i.e., we ignore those controls specific to deal characteristics); moreover, we now interpret the coefficients of this model as marginal effects on the *ex ante* unconditional expected acquisition premiums, which combines GP effects on acquisition likelihood and the conditional acquisition premium.

The results reported in Table VI 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 basis points in both cases. Translating these numbers into percentages, the log specifications reported in columns (2) and (4) of Table VI show that the presence of GPs increases 1-week unconditional premiums by 3.40% and 4-week premiums by 3.67%. These results are not surprising in light of 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 the aggregate, we find a small but positive association between GPs and unconditional premiums.

3.4 Private Information vs. Incentives

The empirical associations we document above, as previously noted, are consistent with both the incentives hypothesis and the private information hypothesis. We empirically examine whether the positive associations of GPs with acquisition likelihood and unconditional expected acquisition premiums are fully driven by the private information hypothesis by utilizing the timing of GP adoption. If the adoption of a GP reflects private information regarding an elevated likelihood of a future acquisition, then the positive association between GPs and takeover likelihood should be stronger for GPs that are adopted

¹⁹ For the log versions of the variable, we fill in zero for log returns for all non-takeover firm-year observations.

more recently, and correspondingly, the positive association between GPs and expected acquisition premiums should be stronger for GPs that are fresh.²⁰

To test these predictions of private information empirically, we categorize all GPs into “Fresh” and “Older” using the 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. We define a GP to be “Older” if it was adopted more than 1 volume ago—i.e., it is more than 2~3 years old.

Table VII, Panel A columns (1) and (2) re-runs the probit specifications of columns (3) and (4) of Table IV using the volume-to-volume data, thus focusing on the association between GPs and the likelihood of being acquired by the next volume. As expected, consistent with the results of Table IV, we find the coefficient of GP to be positive and statistically significant. The magnitudes of the marginal effects on GP are between 2 to 3 times larger compared to those of Table IV, which is unsurprising as our dependent variable is an indicator for being acquired over the next 2~3 calendar years rather than an indicator for being acquired in the next calendar year.

In columns (3) and (4) of Table VII, Panel A, we repeat the regressions of columns (1) and (2) except that we split GPs into “Fresh” and “Older” GPs. Controlling for the strength of takeover protection and firm characteristics, we find that the coefficients of both “Fresh” GPs and “Older” GPs are positive and statistically significant. Furthermore, while the marginal effect “Fresh” GPs is slightly larger in magnitude than that of “Older” GPs, we find no statistical difference between them (p -value = 0.324). These findings are consistent with the view that positive association of GPs with acquisitions is at least partly due to incentives rather than driven solely by private information.

Panel B of Table VII examines the associations of “Fresh” and “Older” GPs with unconditional expected premiums. We re-run the OLS specifications of Table VI using volume-by-volume data instead of annual data and splitting the GP variable into “Fresh” and “Older” GPs. In all four regressions, we find

²⁰ Note that the private information hypothesis does not provide a basis for predicting that the negative association between GPs and premiums conditional on an acquisition to be different for Fresh and Old GPs.

positive and significant associations between unconditional acquisition premiums and both “Fresh” GPs and “Older” GPs. Estimation results using 1-week [4-week] premiums reported in column (1) [(3)] show that the presence of “Fresh” and “Older” GPs are associated with an average increase in unconditional acquisition premiums of 139 [115] and 99 [94] basis points, respectively.

Translating these figures into percentages, the log specifications reported in column (2) [(4)] of Table VII, Panel B show that the presence of “Fresh” and “Older” GPs increases 1-week [4-week] unconditional premiums by 11.1% [10.16%] and 8.49% [8.69%], respectively. Further, while the marginal effect of “Fresh” GPs is somewhat lower than the marginal effect of “Older” GPs, we find no statistical difference between them in any of the four regression specifications (p -value = 0.25, 0.31, 0.47, and 0.53, respectively).

By utilizing the timing of GP adoption, our empirical analysis suggests that the positive associations that GPs have with both acquisition likelihood and unconditional expected premiums are not fully driven by the private information hypothesis. Instead, our results are consistent with the hypothesis that these positive associations are at least partly driven by the effect of GPs on executive incentives.

4. GPs and Evolution of Firm Value

Having analyzed the effects of GPs on expected acquisition premiums, we now turn to examine the overall effects of GPs on shareholder value. One way in which that GPs might adversely affect shareholder value is through a “managerial slack” effect. The disciplinary force of the market for corporate control is often viewed as conducive to reducing managerial “slack” (Shleifer and Vishny, 1989; Gompers, Ishii, and Metrick, 2003). By making acquisitions less costly to executives, or even making such acquisitions beneficial, GPs weaken the disciplinary force of the market for corporate control and they can contribute to increased managerial slack (Bebchuk, Cohen, and Ferrell (2009)).

In addition, GPs might have an adverse effect through what may be termed a “selling out” effect. It is widely believed that executives might have some private information about the long-term independent value of their company (Black and Kraakman (2002)). When GPs are large enough, they might give

executives an incentive to go along with an acquisition even when the executives' private information indicate that doing so would not be in the shareholders' long-term interest. That is, in addition to facilitating some acquisitions that are value-increasing from a long-term perspective, GPs that are large enough may facilitate some additional acquisitions that are value-decreasing from such a perspective. Adding such acquisitions to the mix increase the expected acquisition premiums shareholders can be expected to capture but does not serve shareholder interests; it can be expected to decrease shareholders long-term returns and, to the extent that it is reflected in current market prices, can be expected to reduce firm valuation.

Finally, we should note two positive effects that GPs might have on shareholder value. First, by making managers less fearful of an acquisition attempt, a GP may reduce short-termism distortions and facilitate a long-term focus (Stein, 1988). In addition, making managers less fearful of an acquisition attempt may also encourage them to make investments in firm-specific human capital (Jensen, 1988; Shleifer and Vishny, 1989).

Given the lack of an unambiguously clear theoretical prediction, empirical evidence on the subject would be useful. 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).²¹ Such a correlation could arise either due to GPs having a negative effect on shareholder value or due to a selection effect (i.e., the greater tendency of low value firms to have GPs). However, we do not believe that the current literature has addressed the issue of disentangling these two effects, and thereby proceed to examine further the impact of GPs on shareholder value.

We examine this issue empirically by studying the evolution of firm value over time, in the period prior to, around, and after the adoption of GPs. Our analysis below considers both changes in industry-adjusted Tobin's Q over time as well as the performance of buy-and-hold portfolios. Our buy-and-hold portfolios do not represent implementable trading strategies, as they use some future information; rather,

²¹ Tobin's Q has long been a standard measure used in the literature on corporate governance. See, for example, Morck et al. (1988), Yermack (1996), Gompers et al. (2003), Bebchuk and Cohen (2005), and Bebchuk et al. (2013).,

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.

4.1. GPs and Evolution of Tobin's Q

We begin by studying the level of Tobin's Q in the years prior to GP adoption. We focus our analysis on all firms that do not have a GP in the subsequent IRRC volume, and define a firm to be a "Future GP Adopter" if the firm does not have a GP in the current IRRC volume but has a GP in the next IRRC volume. We benchmark these future GP adopters against a comparison group of non-adopters (i.e., firms for which the variable "Future GP Adopter" takes a value of 0), consisting of firms that do not have GPs in both the current and subsequent IRRC volumes.

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 three Tobin's Q regressions, 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 is 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. Our finding that future adopters of GPs tend to have lower Q is consistent with the hypothesis that the association between GP and lower value is at least partly driven by a selection effect, because managers of underperforming (e.g., lower Q or negative abnormal returns) firms are more likely to get a GP.

We also examine the changes in Tobin's Q during the inter-volume period surrounding GP adoption. Focusing again on comparing future adopters versus non-adopters, we estimate an OLS of the changes in Q on "Future GP Adopter" indicator and changes in other controls. Results reported in Panel B of Table VIII finds that, on average, future GP adopters experience a change in Tobin's Q, from one volume to the next, of 4.75%~5.82% lower than that of non-adopters, controlling for governance and firm characteristics. These differences in the change in Q are statistically significant at the 5% level in all three models.

Since we do not observe exact GP adoption dates, our finding of a decline in the firm's value around GP adoption might be least partly driven by a selection effect—an executive's decision to adopt a GP in response to a decrease in firm value between the time of one volume to the next and/or the executive's anticipation that the firm's value will decline subsequent to the next volume. Alternatively, these results on the inter-volume change in the firm value around GP adoption might also be partly due to the negative incentive effects of GPs subsequent to their adoptions.

To examine the incentive effect further, we complete the analysis by documenting the evolution of Q in the aftermath of GP adoption. We follow a similar approach as above but limit our analysis to the set of firms that are long-term GP adopters or long-term GP non-adopters. We define "LT GP Adopter" as an indicator that equals 1 if a firm has a GP in the previous, current, and next IRRC volumes, and benchmark these firms against a comparison group of long-term non-adopters (i.e., firms for which the variable "LT GP Adopter" takes a value of 0), consisting of firms that do not have GPs in the previous, current, and next IRRC volumes.

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 Tobin's Q that is 4.84%~6.19% lower. While these are economically large effects, statistical significance here is weaker: all coefficients on "LT GP Adopter" are statistically significant at the 12% level, while two of the three specifications were significant at the 10% level. In the post-adoption period, the presence of a GP can affect shareholder interests by influencing 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, thereby impacting shareholder value in the absence of an acquisition. Our findings that the changes in Tobin's Q for long-term GP adopters tend to be lower than long-term non-adopters are consistent with the incentive hypothesis— i.e., GPs negatively affecting executives' incentives, playing an important role in explaining the relationship between GPs and firm value.

As an additional test, we include all firms and study the associations between changes (adoptions and removals) in and changes in firm valuation from one IRRC volume to the next. The results in Panel D of

Table VIII show that, controlling for changes in the strength of antitakeover defenses and firm characteristics, the adoption of GPs is associated with a decrease in Tobin's Q of 4.35%~4.60%, all statistically significant at the 5% level.

Together, our results show a clear pattern. Relative to non-adopters, GP adopters have low Tobin's Q *prior* to GP adoption and that Tobin's Q continues to decrease *around and after* adoption.

4.2. GPs and Stock Returns over Time

We complement the above analysis on the evolution of Tobin's Q around GP adoption by studying the evolution of stock returns. Unlike earlier studies that look at stock returns within a short window surrounding the announcements of a GP adoption (Mogavero and Toyne (1995) and Hall and Anderson (1997)), we take a long horizon approach by considering a 2-to-3-year window around GP adoption.²² We examine long-term returns on particular 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 later.

We study stock returns of firms prior to GP adoption by considering long-term returns on the following portfolios. We go long a portfolio of stocks that adopt GPs two volumes from the current one (i.e., no GPs in the current and next IRRC volumes, but with GPs in the following one) while, simultaneously, shorting another portfolio of stocks that do not have GPs in the current and 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; in addition, it

²² Mogavero and Toyne focus on the 5 trading days prior to and following the announcement date, while Hall and Anderson consider a variety of event windows, with the largest extending from 20 trading days prior to 20 trading days following the announcement date. Event studies focusing on short windows suffer from the uncertainty around what is the appropriate date on which the GP adoption becomes public. Further, adoptions of GPs may be correlated with other changes in the firm that may be value-relevant, e.g., 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 was done by Gompers, Ishii, and Metrick (2003), by taking a longer-term horizon approach.

is updated whenever information on firm corporate governance provisions becomes available: in July 1993; July 1995; February 1998; February 2000; February 2002; January 2004; and January 2006.²³ After calculating monthly returns on this portfolio, we estimate its risk-adjusted excess returns by estimating the intercept term from the standard four-factor asset-pricing model, using the Fama and French (1993) three factors and the Carhart (1997) momentum factor:

$$(Monthly\ Portfolio\ Return)_t = \alpha + \beta_1 \cdot (Rm - Rf)_t + \beta_2 \cdot (SMB)_t + \beta_3 \cdot (HML)_t + \beta_4 \cdot (Carhart)_t + \varepsilon_t$$

where $Rm - Rf_t$, SMB_t , and HML_t are the month t market, size, and value factor returns, respectively, and $Carhart_t$ reflects the momentum factor return.

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 that 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, consistent with the hypothesis that the adoption of GPs is driven at least partially by selection.

To study the stock performance around the period of GP adoption, we consider the following portfolio strategy: go long a portfolio of “Future Adopter” firms while simultaneously shorting a portfolio of non-“Future Adopters”. As above, 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 1990 to December 2005. While the equal-weighted portfolio generates average monthly abnormal return of -20

²³ These are the earliest dates on which the information in the 1990, 1993, 1995, 1998, 2000, 2002, 2004, and 2006 IRRC volumes, respectively, became publicly known.

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. As with our interpretation of the evolution of Tobin's Q around GP adoption, since we do not have 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 incentive effect further, we analyze stock performance in the aftermath of GP adoption by considering the following portfolio exercise: long a portfolio of "LT Adopter" firms and short a portfolio of non-"LT Adopter" firms. 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.

It could be suggested that these negative abnormal returns are driven by a selection effect. Under this explanation, the firms with GPs, which face higher acquisition likelihood but yet are not acquired for three consecutive IRRC volumes, could be very poorly performing firms. To explore this possibility, we re-run the above long-short strategy but include all firms that are acquired between the current and next IRRC volumes. *Ex ante*, we should expect the inclusion of these stocks to decrease the portfolio 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. As expected, these returns are smaller in magnitude (by about 15%) than 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 value tends to deteriorate in the presence of a GP. Moreover, the last set of portfolio tests, which incorporates the positive acquisition premiums earned by shareholders of long-term GP firms, is consistent with the hypothesis that GPs have an overall negative effect on firm value, i.e., the negative effects of GPs dominate the positive effects of facilitating some value-increasing acquisitions.

4.3. Discussion

In summary, we find a pattern of deterioration in stock prices and shareholder value before, around, and after GP adoption. Relative to non-adopters, future GP adopters experience a decline in Tobin's Q and stock returns prior to adoption, consistent with selection; GP adopters continue to experience a decline in Tobin's Q and stock returns in the around adoption, consistent with both selection and managerial slack; finally, long-term GP adopters decline in Q and stock returns, consistent with managerial slack.

Overall, the patterns documented here contribute to understanding the source of the negative association between GPs and firm value identified in prior research. Our findings are consistent with the possibility that this negative association is at least partly due to GPs bringing about, rather than merely reflecting, reduced value for shareholders.

Our findings concerning the erosion of firm value following GP adoption could be at least partly driven by a "managerial slack" due to GPs weakening the discipline of the market for corporate control and thereby leading to increased managerial slack. Our findings could also be partly driven by a "selling out" effect due to GPs providing executives to go along with acquisition even when the executives' private information indicates that doing so would not be in the shareholders' long-term interest. Our results indicate that the combination of the managerial slack effect and the selling out effect dominates the positive effects that GPs have by facilitating some value-increasing acquisitions or otherwise (including by inducing a focus on the long-term or encouraging investment in firm-specific human capital).

While we find that GPs are, on average, associated with reduced value for shareholders, they do not rule out the possibility that some types of GPs, or the use of GPs in some types of circumstances, has an overall positive effect on shareholder wealth. Future empirical work may build on our findings by examining whether such types of GPs or such circumstances can be identified. Such work could assist companies in deciding what types of GPs to adopt and when and assist shareholders in assessing the GPs adopted by companies.

5. Conclusion

This paper contributes to understanding the relationship of GPs with firm and shareholder value. We find that GPs are associated with higher expected acquisition premiums and that this association is at least partly due to the effect of GPs on executive incentives. However, we also find that, notwithstanding the association of GPs with higher expected acquisition premiums, firms adopting a GP experience a reduction in their industry-adjusted Tobin's Q, as well as negative abnormal stock returns, prior to, during, and after the inter-volume period of adoption.

Our findings raise the possibility that, despite their positive effect on facilitating some value-increasing acquisitions, golden parachutes have, on average, an overall negative effect on shareholder wealth. This average negative effect could be due to GPs increasing managerial slack and/or by GPs providing executives with incentives to go along also with some acquisitions that do not serve shareholder interest.

Our findings have significant implications for ongoing debates on golden parachutes. They also suggest the need for additional empirical work that would seek to identify the type of GPs that drive the identified correlation between GPs and reduced shareholder value. We hope that our findings contribute to the ongoing discussion and evaluation of GPs by investors and policymakers.

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Table 1: Summary Statistics – Stock and Adoption of GPs

Table 1 reports summary statistics on the stock and the adoption of GPs. Panel A reports summary statistics on the stock of GPs – the number and the % of firms – in each IRRC volume. Panel B reports summary statistics on the adoption of GPs for those firms that appear in two consecutive IRRC volumes – the number of firms without GPs in the first of the two IRRC volumes (“Firms w/o GP Initially”) but have GPs by the second volume (“Firms adopting GP” or “% of Adopters”).

Panel A: Stock of Golden Parachutes

IRRC Volume	Firms in	Firms	% of Firms
	IRRC Volume	w/ GP	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	Firms in both IRRC Volumes	Firms w/o GP Initially	Firms adopting GP	% of Adopters
1990~1993	1,272	639	101	15.81%
1993~1995	1,344	641	79	12.32%
1995~1998	1,214	594	142	23.91%
1998~2000	1,667	768	214	27.86%
2000~2002	1,416	533	160	30.02%
2002~2004	1,654	529	131	24.76%
2004~2006	1,656	455	100	21.98%

Table 2: Summary Statistics – Firms with and without GPs

Table 2 reports means and standard deviations (in parentheses) of firm characteristics, measured on the as-of date of each IRRC volume, for all IRRC firms (“All Firms”), those IRRC firms with GPs (“GP”), and those IRRC firms without GPs (“No GP”). The last two columns report the differences in means and the statistical significance from a standard unpaired two-sided t-test. Significance levels are indicated by *, **, and *** for 10%, 5%, and 1%, respectively.

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

Table 3: Summary Statistics – Incidence of Acquisition

Table 3 reports, as of the end of each calendar year, summary statistics on the percentage and number (in parentheses) of firms with and without GP (“GP” and “No GP”, respectively) that receive an initial bid over the next calendar year and the direction of the difference (where “+” [“-”] indicates a greater [smaller] percentage of No GP firms receiving acquisition bids or being acquired in the next year). The last two rows report the time series average and standard deviation of the annual means and the differences in the annual means. Significance levels for a two-sided t-test on the null of no differences between the No GP and GP means are indicated by *, **, and *** for 10%, 5%, and 1%, respectively.

	% Receiving Initial Bid in the Next Year			% Acquired in the Next Year		
	No GP	GP	Diff	No GP	GP	Diff
1990	4.6% (28)	4.7% (32)	+	2.5% (15)	2.3% (16)	-
1991	2.7% (16)	3.6% (24)	+	1.9% (11)	2.6% (17)	+
1992	3.0% (17)	3.4% (22)	+	2.8% (16)	3.1% (20)	+
1993	3.2% (19)	4.6% (33)	+	1.9% (11)	2.1% (15)	+
1994	5.8% (33)	8.0% (56)	+	1.9% (11)	5.5% (38)	+
1995	4.0% (24)	7.4% (54)	+	2.6% (16)	4.4% (32)	+
1996	4.8% (28)	9.9% (68)	+	3.9% (23)	8.6% (59)	+
1997	8.4% (47)	9.1% (57)	+	5.0% (28)	7.3% (46)	+
1998	7.8% (54)	12.7% (112)	+	6.3% (43)	10.2% (90)	+
1999	6.2% (41)	9.7% (78)	+	6.5% (43)	9.4% (76)	+
2000	3.7% (18)	5.1% (48)	+	3.7% (18)	5.6% (52)	+
2001	1.9% (9)	2.6% (23)	+	1.1% (5)	2.8% (24)	+
2002	3.5% (17)	3.9% (44)	+	2.3% (11)	2.6% (29)	+
2003	3.2% (15)	4.7% (52)	+	3.0% (14)	4.0% (44)	+
2004	4.3% (17)	6.1% (74)	+	1.8% (7)	4.6% (56)	+
2005	7.0% (27)	8.1% (94)	+	5.4% (21)	4.8% (56)	-
2006	5.3% (17)	9.8% (120)	+	5.6% (18)	8.2% (100)	+
Mean	4.7%	6.7%	2.01% ***	3.4%	5.2%	1.76% ***
SD	(0.03)	(0.02)		(0.02)	(0.03)	

Table 4: Golden Parachutes and Acquisition Likelihood

Table 4 reports the results for pooled probit regressions. For columns (1) and (2), the dependent variable is an indicator equaling 1 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 1 if the firm is acquired in the next calendar year and zero otherwise. Standard controls are used in these specifications. Columns (1) and (2) differ based on how the industry effect is taken into account. All models estimated use cluster robust standard errors, clustering by 2-digit SIC industries, and have year fixed effects. Coefficients for industry and year fixed effects, as well as the constant term, are suppressed for ease of reporting. 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	0.0186 *** (0.003)	0.0175 *** (0.003)	0.0164 *** (0.002)	0.0157 *** (0.002)
EIndex-GP	-0.0037 ** (0.001)	-0.0044 *** (0.001)	-0.0013 (0.001)	-0.0018 * (0.001)
GIndex - EIndex	0.0004 (0.001)	0.0009 (0.001)	0.0008 (0.001)	0.001 * (0.001)
Delaware Inc	0.0111 *** (0.003)	0.0092 *** (0.003)	0.007 *** (0.002)	0.0071 *** (0.002)
Log(Q)	-0.0147 *** (0.004)	-0.0194 *** (0.004)	-0.0048 * (0.003)	-0.0069 ** (0.003)
Log(Asset)	-0.0029 *** (0.001)	-0.0058 *** (0.001)	-0.0023 *** (0.001)	-0.0041 *** (0.001)
Log(Debt/Asset)	0.0089 (0.008)	0.0157 ** (0.008)	-0.0047 (0.006)	-0.0029 (0.007)
Inside Ownership	-0.0004 (0.000)	-0.0006 ** (0.000)	-0.0002 (0.000)	-0.0003 (0.000)
Log(CEO Age)	0.0029 (0.015)	0.0055 (0.014)	-0.0008 (0.013)	0.0002 (0.012)
Log(CEO Tenure)	-0.0038 ** (0.002)	-0.0039 *** (0.001)	-0.0016 (0.001)	-0.0017 (0.001)
Herfindahl Index	-0.0387 *** (0.011)		-0.0302 *** (0.009)	
Dependent Var Mean	0.0596	0.0598	0.0454	0.0456
Proportional Marginal Effect	0.3121	0.2926	0.3612	0.3443
Industry FE	No	Yes	No	Yes
Pseudo R-squared	0.0400	0.0580	0.0640	0.0800
Observations	23,794	23,732	23,794	23,662

Table 5: Golden Parachutes and Premiums in Acquisitions

Table 5 reports pooled regression results of 1-week and 4-week acquisition premiums on target firm 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.

Dependent Var	1Wk Prem	ln(1Wk Prem)	4Wk Prem	ln(4Wk Prem)
	(1)	(2)	(3)	(4)
Golden Parachute	-0.0352 ** (0.017)	-0.1298 * (0.078)	-0.0388 * (0.020)	-0.1828 ** (0.089)
EIndex-GP	0.0188 *** (0.007)	0.0511 * (0.026)	0.0147 (0.009)	0.0362 (0.029)
GIndex-EIndex	0.0047 (0.004)	0.0154 (0.019)	-0.0016 (0.005)	-0.0043 (0.015)
Delaware Inc	0.0091 (0.014)	-0.033 (0.057)	0.0125 (0.017)	-0.0193 (0.070)
Log(Q)	-0.028 (0.025)	-0.0071 (0.066)	-0.0289 (0.036)	-0.0051 (0.087)
Log(Assets)	-0.0189 (0.009)	-0.0433 (0.035)	-0.022 (0.009)	-0.0631 (0.031)
Debt/Asset	0.0602 ** (0.048)	0.1999 (0.199)	0.0386 ** (0.047)	0.2472 ** (0.170)
Inside Ownership	-0.0011 (0.002)	0.0011 (0.006)	-0.0022 (0.002)	-0.0047 (0.008)
Hostile Bid	0.0968 * (0.054)	0.2695 * (0.140)	0.0579 (0.040)	0.2974 *** (0.106)
Tender Offer	0.0639 * (0.033)	0.2283 ** (0.090)	0.1033 *** (0.037)	0.2694 ** (0.114)
Toehold	-0.001 (0.002)	-0.0037 (0.006)	-0.002 (0.001)	-0.0027 (0.005)
Termination Fee	-0.007 (0.023)	-0.0013 (0.070)	-0.0004 (0.021)	0.1221 (0.089)
Stock Swap	-0.0105 (0.025)	-0.1555 * (0.081)	-0.0175 (0.024)	-0.1631 * (0.084)
Log(Time)	0.0143 (0.021)	0.0447 (0.066)	0.0106 (0.024)	0.0373 (0.067)
Log(CEO Age)	-0.0904 (0.132)	-0.4266 (0.483)	-0.1927 (0.126)	-0.8904 ** (0.410)
Log(CEO Tenure)	0.0185 (0.019)	0.0988 ** (0.047)	0.0139 (0.021)	0.064 (0.049)
Adjusted R ²	0.1110	0.0770	0.1460	0.0730
Observations	773	773	770	770

Table 6: Golden Parachutes and Expected Premiums from Acquisitions

Table 6 reports pooled regression results of 1-week and 4-week acquisition premiums on target firm governance characteristics and fundamentals across all firms in the annual IRRC data set, where any firm that does not undergo a completed acquisition over the next year has 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	log(1Wk Prem)	4Wk Prem	log(4Wk Prem)
	(1)	(2)	(3)	(4)
Golden Parachute	0.0033 *** (0.001)	0.0345 *** (0.008)	0.0033 *** (0.001)	0.0327 *** (0.008)
EIndex-GP	0.0002 (0.000)	-0.0020 (0.003)	0.0000 (0.000)	-0.0024 (0.003)
GIndex-EIndex	0.0000 (0.000)	-0.0006 (0.002)	-0.0003 (0.000)	-0.0013 (0.002)
Delaware Inc	0.0020 * (0.001)	0.0155 (0.009)	0.0022 * (0.001)	0.0159 (0.010)
Log(Q)	-0.0032 *** (0.001)	-0.0206 * (0.011)	-0.0033 ** (0.001)	-0.0195 (0.012)
Log(Assets)	-0.0025 *** (0.000)	-0.0206 *** (0.003)	-0.0029 *** (0.000)	-0.0219 *** (0.003)
Debt/Asset	-0.0012 (0.003)	-0.0199 (0.027)	0.0008 (0.005)	-0.0014 (0.034)
Inside Ownership	-0.0002 *** (0.000)	-0.0014 ** (0.001)	-0.0002 *** (0.000)	-0.0014 ** (0.001)
Log(CEO Age)	-0.0004 (0.003)	0.0232 (0.028)	0.0001 (0.005)	0.0183 (0.032)
Log(CEO Tenure)	0.0003 (0.000)	0.0000 (0.004)	0.0002 (0.000)	0.0007 (0.004)
Adjusted R ²	0.013	0.017	0.015	0.018
Observations	23,577	23,577	23,577	23,574

Table 7: Old vs. Fresh GPs

Panel A: Old and Fresh GPs and Acquisition Likelihood

Table 7 reports marginal effects from pooled probit results. Results from columns (1) and (2) are comparable to those in Table 5, with the difference that the dependent variable is an indicator for whether a firm is acquired by the current date of publication for the next IRRC volume. Columns (3) and (4) represent the same models as columns (1) and (2), respectively, but split 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	0.0328 *** (0.005)	0.0326 *** (0.005)		
Fresh GP			0.0395 *** (0.012)	0.0404 *** (0.012)
Old GP			0.0302 *** (0.006)	0.0319 *** (0.006)
Eindex-GP	-0.0012 (0.002)	-0.0019 (0.002)	-0.0001 (0.002)	-0.0009 (0.002)
Gindex - Eindex	0.0014 (0.001)	0.0019 (0.001)	0.0011 (0.001)	0.0016 (0.001)
Delaware Inc	0.0151 (0.005)	0.0144 * (0.005)	0.0162 *** (0.005)	0.0157 *** (0.005)
Log(Q)	-0.0041 *** (0.005)	-0.0089 *** (0.005)	-0.0031 (0.005)	-0.0078 (0.005)
Log(Assets)	-0.0057 (0.002)	-0.009 (0.002)	-0.0062 *** (0.002)	-0.0099 *** (0.002)
Debt/Assets	0.0024 *** (0.012)	0.0078 *** (0.012)	0.0055 (0.012)	0.0111 (0.013)
Inside Ownership	-0.0016 *** (0.000)	-0.0017 *** (0.000)	-0.0016 *** (0.000)	-0.0017 *** (0.000)
Log(CEO Age)	-0.0092 (0.028)	-0.0068 (0.027)	-0.0102 (0.028)	-0.0078 (0.027)
Log(CEO Tenure)	-0.0048 * (0.003)	-0.0053 ** (0.003)	-0.0049 * (0.003)	-0.0055 ** (0.003)
Herfindahl Index	-0.0358 ** (0.018)		-0.0369 ** (0.018)	
Dependent Var Mean	0.0985	0.0990	0.0985	0.0990
Proportional Marginal Effect	0.3330	0.3293	0.4010	0.4081
			[0.3066]	[0.3222]
Industry FE	No	Yes	No	Yes
Pseudo R ²	0.1930	0.2080	0.1920	0.2070
Observations	12,236	12,173	12,236	12,173

Panel B: Old and Fresh GPs and Expected Premiums from Acquisitions

This table reports pooled regression results of 1-week and 4-week acquisition premiums on target firm governance characteristics and fundamentals across all firms in the IRRC volume data set, where any firm that does not undergo a completed acquisition over the next year has 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)	
Fresh GP	0.0116 *** (0.004)	0.1020 *** (0.030)	0.0139 *** (0.004)	0.1115 *** (0.030)	
Old GP	0.0095 *** (0.001)	0.0876 *** (0.013)	0.0100 *** (0.002)	0.0855 *** (0.013)	
EIndex-GP	-0.0001 (0.001)	-0.0024 (0.004)	-0.0004 (0.001)	-0.0027 (0.004)	
GIndex-EIndex	0.0005 (0.000)	0.0034 (0.003)	0.0004 (0.000)	0.0033 (0.003)	
Delaware Inc	0.0000 (0.001)	-0.0035 (0.012)	0.0004 (0.002)	-0.0008 (0.012)	
Log(Q)	0.0001 (0.001)	0.0086 (0.008)	0.0007 (0.001)	0.0124 (0.008)	
Log(Assets)	0.0000 (0.000)	0.0013 (0.003)	0.0000 (0.000)	0.001 (0.003)	
Debt/Asset	-0.0030 (0.003)	-0.0361 (0.023)	-0.0017 (0.004)	-0.0259 (0.025)	
Inside Ownership	-0.0002 *** (0.000)	-0.0020 *** (0.001)	-0.0003 *** (0.000)	-0.0019 *** (0.001)	
Log(CEO Age)	-0.0024 (0.002)	-0.0293 (0.019)	-0.0027 (0.002)	-0.0291 (0.019)	
Log(CEO Tenure)	0.0007 *** (0.000)	0.0054 *** (0.002)	0.0007 *** (0.000)	0.0052 *** (0.002)	
Adjusted R ²	0.064	0.083	0.063	0.083	
Observations	13,588	13,588	13,589	13,589	

Table 8: Golden Parachutes and Evolution of Tobin's Q

Table 8 column (1) reports 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) 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 (no GP in current and next IRRC). Column (2) reports coefficients from a regression of volume-to-volume change in log industry-relative Q on an indicator for Future GP Adopter (no GP in the current IRRC volume and has GP in the following IRRC volume) 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). Column (3) reports coefficients from a changes regression of volume-to-volume change in log industry-relative Tobin's Q on an indicator for LT GP adopter (having GP in the previous, current, and succeeding IRRC volumes) 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 (no GP in the previous, current, and next IRRC volumes). Column (4) reports coefficients from a regression of volume-to-volume change in log industry-relative Q on changes in GP and changes in other firm characteristics. SIC2 industry and year fixed effects are included throughout. All standard errors are cluster robust, clustered by 2-digit SIC industries and reported in parentheses below the coefficient estimates. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1%, respectively.

Dependent Var	Log(Rel Q)		ΔLog(Industry Relative Q)	
	(1)	(2)	(3)	(4)
Future GP Adopter	-0.0511 (0.022)	-0.0452 (0.019)		
LT GP Adopter			-0.0561 (0.032)	*
Δ GP				-0.0379 (0.015) **
(Δ) Other Provisions in E	-0.0303 (0.012)	-0.0277 (0.019)	0.0017 (0.026)	-0.0208 (0.011) *
(Δ) Other Provisions in G	0.0114 (0.007)	-0.0002 (0.009)	-0.0049 (0.012)	0.0029 (0.006)
(Δ) Delaware Inc	-0.0070 (0.029)			
(Δ) ROA	0.4583 (0.175)	0.2114 (0.104)	1.0255 (0.160)	0.3377 (0.151) **
(Δ) Log(Assets)	-0.0106 (0.012)	-0.1113 (0.027)	-0.1218 (0.042)	-0.1698 (0.019) ***
(Δ) CAPEX / Assets	0.7638 (0.239)	0.3923 (0.194)	-0.0658 (0.237)	0.4865 (0.135) ***
(Δ) Log(Age)	-0.0991 (0.018)	-0.2082 (0.043)	-0.3037 (0.129)	-0.1210 (0.026) ***
(Δ) Debt / Assets	-0.3807 (0.114)	-0.3964 (0.082)	-0.3280 (0.127)	-0.2246 (0.060) ***
(Δ) R&D / Sales	0.0287 (0.016)	-0.0093 (0.007)	-0.0518 (0.011)	-0.0045 (0.007)
(Δ) Inside Ownership	0.0009 (0.001)	-0.0010 (0.002)	-0.0015 (0.002)	-0.0003 (0.001)
(Δ) CEO Age	-0.2907 (0.119)	0.0532 (0.088)	0.1552 (0.087)	* 0.0286 (0.062)
(Δ) CEO Tenure	0.0291 (0.011)	0.0012 (0.008)	-0.0079 (0.009)	0.0063 (0.005)
Adjusted R-squared	0.2765	0.1293	0.1548	0.1227
Observations	3,102	3,000	1,495	7,488

Table 9: Stock Returns and Golden Parachutes

Table 9 Panel A (B) reports monthly abnormal returns estimated from regressing monthly value-weighted “VW” (equal-weighted “EW”) portfolio returns on the three Fama-French (Fama and French 1993) factors and the Carhart (1997) momentum factor. Column (1) in each panel considers the strategy for the period September 1990–December 2003 that goes 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, shorts the portfolio of stocks that do not have a golden parachute in the current and the succeeding two IRRC volumes. Column (2) in each panel considers the trading strategy for the period September 1990–December 2005 that goes long a portfolio of stocks that adopt golden parachutes in the next IRRC volume and, simultaneously, shorts the portfolio of stocks that do not have golden parachutes between the current and succeeding IRRC volumes. Columns (3) and (4) consider the trading strategy for the period July 1993–December 2005 that goes long the 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 and, simultaneously, shorts the portfolio of stocks that do not have golden parachutes in the previous, current, and next IRRC volumes. Column (4) differs column (3) by including all firms 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. None of the strategies are implementable in real time as each requires future information. Long and short portfolios are adjusted when updated information on firm corporate governance provisions became available: July, 1993; July, 1995; February 1998; February 2000; February 2002; January 2004; January 2006. Robust standard errors are reported in parentheses below the coefficients, and levels of significance are indicated by *, **, and *** for 10%, 5%, and 1%, respectively.

Panel A: VW Portfolio Returns

Dep Var	Monthly VW Portfolio Returns					
	Long:		(1)	(2)	(3)	
	Pre-Adopters	Adopters	LT Adopters	LT Adopters (w/ acquired)		
Short:	Non-Adopters	Non-Adopters	LT Non-Adopters	LT Non-Adopters (w/ acquired)		
Alpha	-0.0059 (0.002)	*** (0.002)	-0.0037 (0.002)	*** (0.001)	-0.0037 (0.001)	** (0.001)
Rm-Rf	0.0034 (0.056)		-0.032 (0.040)		0.0183 (0.039)	0.0155 (0.040)
SMB	0.0834 (0.067)		0.2017 (0.050)	*** (0.040)	0.1203 (0.040)	0.1189 (0.041)
HML	0.2827 (0.096)	*** (0.066)	0.212 (0.066)	*** (0.062)	0.5274 (0.062)	0.5306 (0.062)
Carhart	-0.0175 (0.043)		-0.0585 (0.025)		0.0285 (0.028)	0.0269 (0.028)
N	160		184		150	150
Adj. R ²	0.0861		0.1185		0.5094	0.5156

Table 9: Stock Returns and Golden Parachutes [Cont'd]

Table 9 Panel A (B) reports monthly abnormal returns estimated from regressing monthly value-weighted “VW” (equal-weighted “EW”) portfolio returns on the three Fama-French (Fama and French 1993) factors and the Carhart (1997) momentum factor. Column (1) in each panel considers the strategy for the period September 1990–December 2003 that goes 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, shorts the portfolio of stocks that do not have a golden parachute in the current and the succeeding two IRRC volumes. Column (2) in each panel considers the trading strategy for the period September 1990–December 2005 that goes long a portfolio of stocks that adopt golden parachutes in the next IRRC volume and, simultaneously, shorts the portfolio of stocks that do not have golden parachutes between the current and succeeding IRRC volumes. Columns (3) and (4) consider the trading strategy for the period July 1993–December 2005 that goes long the 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 and, simultaneously, shorts the portfolio of stocks that do not have golden parachutes in the previous, current, and next IRRC volumes. Column (4) differs column (3) by including all firms 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. None of the strategies are implementable in real time as each requires future information. Long and short portfolios are adjusted when updated information on firm corporate governance provisions became available: July, 1993; July, 1995; February 1998; February 2000; February 2002; January 2004; January 2006. Robust standard errors are reported in parentheses below the coefficients, and levels of significance are indicated by *, **, and *** for 10%, 5%, and 1%, respectively.

Panel B: EW Portfolio Returns

Dep Var	Monthly EW Portfolio Returns					
	(1)		(2)		(3)	
	Long:	Pre-Adopters	Adopters	LT Adopters	LT Adopters (w/ acquired)	
Short:	Non-Adopters	Non-Adopters	LT Non-Adopters	LT Non-Adopters	LT Non-Adopters (w/ acquired)	
Alpha	-0.0059 *** -0.002	-0.002 * -0.001	-0.0028 *** -0.001	-0.0024 ** -0.001		
Rm-Rf	0.0034 -0.056	-0.0195 -0.027	0.0127 -0.021	0.013 -0.023		
SMB	0.0834 -0.067	0.131 *** -0.037	0.0242 -0.028	0.0141 -0.03		
HML	0.2827 *** -0.096	0.0942 * -0.051	0.2904 *** -0.031	0.2866 *** -0.033		
Carhart	-0.0175 -0.043	-0.1262 *** -0.024	0.0063 -0.013	0.0133 -0.013		
N	160	184	150	150		
Adj. R ²	0.0861	0.2695	0.4876	0.4755		