# Growth-promoting Bonuses and Mergers and Acquisitions

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## Abstract

Approximately one-third of U.S. top executives receive bonuses explicitly tied to firm size measures like sales growth. We study how such "growth-promoting bonuses" influence firms' mergers and acquisitions (M&A) activities. We find that firms with such bonus structures are more prone to make acquisitions — especially acquisitions of a scale that help meet the bonus size target. Such acquisitions result in lower announcement returns for acquiring firms and are more likely to destroy value. These lower returns can be attributed to the selection of targets with lower synergies and, to a lesser extent, higher premiums paid.

**JEL Classification:** G32, G35, J23

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# Introduction

*"Show me the incentive and I will show you the outcome."*

Charlie Munger

Mergers and acquisitions (M&A) regularly destroy value for the acquiring firms (Moeller et al. 2004, 2005).[1] A common explanation for why firms so often engage in value-destroying acquisitions is related to agency problems, and in particular, executives' incentives to "empire-build" (Harford et al. 2012; Masulis et al. 2007; Morck et al. 1990; Williamson 1963). The idea is that an acquisition can be in an executive's individual interest because they get to run a bigger firm—with higher prestige, pay, and prerequisites (Yermack 2006)—even if shareholders do not gain anything from the merger.

In the empire-building literature, the benefits that can accrue to an executive from acquisitions and running a bigger firm tend to be indirect and not specified in advance. The goal of this paper is to build on this literature by studying the role of *direct* ex-ante monetary incentives to grow the firm, which we refer to as "growth-promoting bonuses" (henceforth, GPBs).

We define GPBs as compensation contracts that directly tie bonus payouts to measures of firm size, typically sales. A consequence when firms have such a bonus structure is that executives know they can acquire another company to meet the bonus target and thereby receive the bonus even if the firm's internal growth is not sufficient. Executives can also know how large a deal needs to be in order to meet the bonus target and how much money they will earn from hitting it. Bonuses that executives can earn this way thus provide an explicit link between doing an M&A deal and individual monetary incentives, compared with the more indirect benefits from general empire-building concerns. While companies could, at least in principle, exclude "inorganic" growth via M&A when calculating whether an executive has met the bonus target, very few firms do so in practice (fewer than 3% of the GPB contracts we identify).

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[1]See also, for example, *The Financial Times* (July 20, 2022) "Mergers destroy value. Without reform, nothing will change"; *The Economist* (August 24, 2022) "Firms' unwise addiction to mergers and acquisitions."

Growth-promoting bonuses are common: We document that over one-third of firms in the U.S. have them at any given point. However, despite the wide use of these incentives and the direct link to growing firm size, the role of these monetary incentives in influencing M&A activity has not—to the best of our knowledge—previously been analyzed.[2]

We establish three main results regarding firms' use of GPBs and their acquisition activities. First, companies are more likely to make acquisitions when executives have growth-promoting bonuses. Second, these "extra" acquisitions tend to be of a size that helps executives meet the target and thus often make the difference between just meeting vs. missing the size target. Third, these acquisitions are more likely to be value-destroying for the acquiring company's shareholders—a finding we identify is related to selecting targets with worse synergies.

Our sample consists of firms from IncentiveLab—which covers about 1,200 of the largest firms by market capitalization listed on U.S. exchanges—from 2007 to 2017. Growth-promoting bonuses are part of the broader category of "non-equity incentive" plans that tie cash bonuses to performance metrics such as earnings per share or other operating metrics.[3] Non-equity incentive plans constitute a significant part of executive compensation, accounting for roughly 20% of total CEO compensation in recent years (De Angelis and Grinstein 2015; Martin et al. 2017). IncentiveLab includes data on these bonus grants, the metrics they are tied to, and the threshold and target levels at which bonuses are paid. Data on mergers and acquisitions is from SDC. Among firms that can be linked to IncentiveLab, there are a total of about 5,000 acquisitions. 27% of these acquisitions involve targets that are either publicly listed or subsidiaries of publicly listed firms.

We define a bonus grant as being "growth promoting" if it is tied to a quantifiable measure of firm size. The vast majority (96%) of the grants we identify are tied to the metric of sales or sales growth, with the remainder being tied to either market share, production, or "bookings."

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[2]By comparison, several papers, including Anderson et al. (2004); Avery et al. (1998); Bliss and Rosen (2001); Harford and Li (2007) and Ozkan (2012) examine the relationship between the more implicit growth-promoting incentives that arise from the size-elasticity of executive pay, with mixed evidence.

[3]De Angelis and Grinstein (2015) show that firms use a relatively wide array of accounting measures in these bonus contracts.

At the individual grant level (an executive can have several grants at any given time, and a grant can involve multiple metrics), 21% of all grants meet our definition of GPBs. After aggregating across all top-5 executives in a firm and their grants, we find that over one-third of firms have outstanding GPB grants at any given time, and 65% of firms in our sample have had a GPB at some point during our sample period. These incentives are economically important to the executives in many firms: the average value of the bonuses underlying GPBs (across the top-5 executives in the firm) is $3.24 million.

Our first hypothesis is that executives who have GPBs are more likely to acquire other firms. Consistent with this hypothesis, we find that firms where a larger fraction of the top executives have GPBs, and firms with more bonus dollars tied to size metrics, are significantly more likely to do acquisitions. In economic terms, a one-standard-deviation in either the fraction of top executives with GPBs or the total value of GPBs is associated with a 25% increase in the likelihood of announcing an acquisition. This result is consistent with an explanation that executives with GPBs game the incentive system and use acquisitions to meet their bonus targets.

A possible alternative explanation as to why firms with GPBs do more deals than other firms is that the boards of these firms *want* to see the firm grow, and executives are merely responding to what the board wants but might have done so even without contracts that reward this behavior explicitly. Nevertheless, we present several findings suggesting that this alternative possibility is unlikely to explain why firms with GPBs do more deals than others.

First, if the board desires growth and there are no agency problems, we might expect to see more acquisitions in general. On the other hand, if these deals are motivated by a desire to meet the target, we should see more deals, particularly of the size that is "just enough" to achieve the target. We find that GPBs are primarily associated with more acquisitions of relatively "smaller" target firms that are around 1%–2% of the acquirer's size. Such deals can make an important difference since GPBs usually involve percent growth targets in the middle-single-digits. By contrast, we do not observe a higher likelihood of relatively larger deals, e.g.,

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deals that are around 5% (relative to the acquirer's size) or larger.

Second, we find that the relationship between GPBs and the likelihood of announcing an acquisition is more pronounced in firms with poorer governance (proxied by CEO-Chair duality) and firms with larger cash holdings, suggesting agency problems are likely to be at play. Third, we find that GPBs are associated with more acquisitions where cash instead of stock is used as a payment method. Taken together with the fact that the acquisitions made by executives with GPBs tend to be smaller, this suggests that GPBs are associated with more acquisitions that can be executed relatively easily, which is important since the vesting periods of these rewards are around 11 months on average.

To illustrate how these acquisitions contribute to meeting the payout thresholds for GPBs, we next study the likelihood that a firm that otherwise (without making an acquisition) would have missed a target instead ends up meeting the target with an acquisition. To simplify this analysis, we exclusively focus on GPBs tied to the sales metric, which is by far the most common metric for GPBs. Specifically, we compare the realized sales of acquiring firms with GPBs—sales at the first fiscal year end following the completion of the acquisition—to a "counterfactual" estimate of what the acquiring firm's sales would have been without the acquisition. To compute the counterfactual sales, we subtract the target's sales from the acquirer's sales, weighting the target sales by the portion of the fiscal year remaining following the completion of the acquisition. Since many targets are private and their sales are unknown, we estimate the target's sales by dividing the transaction value by the median enterprise-value-to-EBITDA ratio of the target firm's 2-digit SIC industry.[4] This analysis shows that 30% of firms whose counterfactual sales would have missed the threshold by 5% or less actually exceed the threshold following the acquisition—i.e., these firms meet the threshold but for the acquisition.

Collectively, our results point to executives with GPBs using acquisitions to meet their bonus targets. Given existing evidence suggesting that many executive bonus plans have design flaws that incentivize executives to destroy rather than create value for their shareholders

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[4]Our results are similar if we instead focus only on public firms and estimate the target's sales using the actual sales reported at the last fiscal year-end prior to the acquisition's completion.

(Murphy and Jensen 2011), we next turn to analyzing how acquisitions by executives with GPBs impact their shareholders. We hypothesize that—if many of these acquisitions result from agency problems whereby executives game the incentive system to make acquisitions that the board did not intend—such acquisitions will have adverse value implications for shareholders.

Our results show that growth-promoting bonuses are strongly associated with lower acquirer returns around acquisition announcements—almost a full percentage point lower. Given that the full-sample average acquirer returns are only slightly positive (0.3%), acquisitions by firms with GPBs thus destroy value for the acquiring shareholders on average (the average acquisition announcement returns of firms with GPBs is -0.21% versus 0.64% for firms without GPBs). Notably, this happens despite the fact that GPBs are associated with an increase in the kinds of acquisitions that other studies suggest are more likely to create value for firms — acquisitions of smaller targets, cash acquisitions, and within-industry acquisitions (e.g. Fich et al. 2018; Harford et al. 2012; Morck et al. 1990). These results broadly support the view that managers with GPBs undertake value-destroying acquisitions, which are detrimental to shareholders but help meet the executives' sales-related bonus targets. Moreover, it is hard to reconcile these results with the alternative possibility that boards intend for such firms to make these acquisitions and encourage their executives to do so by awarding them more GPBs.

We next investigate the source of the lower bidder announcement returns: whether this happens because the acquirer is more likely to overpay for the target or because the deals selected tend to have lower synergies. To measure possible overpayment, we examine target premia and returns, and to study synergies, we measure the combined announcement returns of the bidder and target. On the one hand, we find directionally consistent but statistically weak evidence that GPBs are associated with higher target premiums and target announcement returns, suggesting that the GPB-motivated acquirers are not hugely overpaying for the targets (at least compared with M&A deals in general). On the other hand, we find that GPBs are associated with significantly lower *combined* bidder and target announcement returns. These results suggest that the mechanism through which GPBs are associated with lower returns for

acquirers is primarily the selection of low-synergy acquisition targets and, to a lesser extent, overpayment.

Finally, we quantify the financial rewards for executives from making acquisitions that help them meet the performance goals in their GPB contracts. Using details of each GPB contract, the post-acquisition sales, and our estimated post-acquisition counterfactual sales (what sales would have been absent an acquisition), we estimate that the average executive with a GPB gains an additional $211,747 in bonus compensation as a result of making an acquisition. This figure translates to a 22.1% and 3.9% increase in bonus pay and total compensation, respectively, on average. These gains far outweigh the average losses to executives' equity portfolios that result from the fact that the acquisitions by GPB-motivated firms tend to be value-destroying: we estimate those losses to be $17,8237 on average. Overall, these estimates suggest that it is likely that executives with GPBs have significant monetary incentives to use acquisitions to meet the GPB performance goals.[5]

We carefully consider a possible alternative explanation for our results: that an omitted variable drives both GPBs and value-destroying acquisitions. For example, a plausible candidate for such an omitted variable is weak corporate governance—the idea being that firms with weak governance might be more likely to award GPBs and that executives in these firms are also likely to make worse acquisitions but that they would do so even without having the GPB. Our regressions control for governance measures, but it is difficult to completely rule out the possibility that some unobserved aspect of governance is related to both awarding GPBs and announcement returns. Still, to help rule this out, we compare firms that have GPBs and firms that do not have GPBs, and we find that, after matching on the same industry and year, these groups of firms are very similar across a wide range of observable characteristics, including governance metrics.[6] This suggests it is less likely that some omitted unobserved

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[5]In addition to the explicit monetary incentive associated with growth-promoting bonuses, executives also have a "career concern" incentive to meet the growth target in their bonus plans because they face an increased risk of turnover if they fail to meet the targets under these plans (Bennett et al. 2017). For the 260 executives in our sample (10% of our sample) who would not have met their bonus threshold absent an acquisition, we estimate an expected loss in income of $307,558 from forced turnover had they not made an acquisition.

[6]If we do not match on the industry, there are somewhat larger differences between the GPB and non-GPB

difference exists that is driving the relation between GPB and acquisitions. Furthermore, from a conceptual standpoint, it appears somewhat unlikely that a firm with weak governance that intends to "overpay" their CEO would have created GPB incentives just so that they could be gamed; if that were the goal, it would be easier to make the targets themselves easier to beat, shift the weight toward performance measures that are easier to meet, or award more pay that is not performance-sensitive (Bennett et al. 2017; Morse et al. 2011). In particular, the fact that a substantial fraction of firms with GPBs would have just missed the payout threshold and thus meet the threshold only because of an acquisition appears inconsistent with the target intentionally being "too easy."

Our paper builds on the literature that studies value-destroying acquisitions (Harford 1999; Harford et al. 2012; Jensen 1986, 1993; Moeller et al. 2005). Previous studies examining the drivers and determinants of value-destroying acquisitions point to antitakeover provisions (Masulis et al. 2007), shareholder investment horizons (Gaspar et al. 2005), hedge fund activism (Gantchev et al. 2020), director gender (Levi et al. 2014), stock liquidity (Chatterjee et al. 2021), and operating performance (Baker et al. 2012). We contribute to this literature by showing that the design of ex-ante bonus plans can contribute to value-destroying acquisitions.

Our paper also contributes to the literature that studies the role of managerial incentives more generally around acquisitions. For instance, equity-based compensation and pay-for-performance sensitivity are associated with value-enhancing acquisitions (Datta et al. 2001; Minnick et al. 2011). Other characteristics of compensation, such as pay-risk sensitivity (Hagendorff and Vallascas 2011), inside debt (Phan 2014), and duration (Li and Peng 2021) have also been shown to be associated with acquisition performance. Anderson et al. (e.g. 2004); Avery et al. (e.g. 1998); Bliss and Rosen (e.g. 2001); Harford and Li (e.g. 2007); Ozkan (e.g. 2012) analyze the role of implicit empire-building incentives for mergers.[7] Our paper offers new insights into this literature by focusing on compensation incentives explicitly linked to firm size and reward growth.

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firms; however, all our regressions control for possible industry and year confounders through fixed effects.

[7]See also Williams et al. (2008) for a survey.

Our paper is also related to Grinstein and Hribar (2004) who study discretionary bonus payments awarded following the completion of acquisitions, i.e., *ex-post*. In contrast, the GPB grants we study are awarded *ex-ante*. Even though Grinstein and Hribar (2004) find that such bonuses are more likely to be paid to more powerful CEOs, they do not find that such grants are related to deal performance. Moreover, such bonuses are also predominantly associated with large deals, whereas GPBs, in addition to being used far more frequently, appear to impact smaller deals. Our paper also complements the studies of Dasgupta et al. (2019) and Aboody et al. (2000), who show that compensation tied to earnings per share (EPS) impacts the structure of M&A deals.

Finally, our paper is broadly related to papers that study the impact of bonuses tied to EPS metrics on corporate outcomes such as share buybacks (Cheng et al. 2015), as well as accruals, discretionary spending, and R&D (Bennett et al. 2017). We expand this literature by focusing on a second metric that is very common in these bonus contracts, namely sales and related size-based measures. In this context, our findings speak to the issue of multi-tasking in a principal-agent setting (Holmstrom and Milgrom 1991) in that they are consistent with the idea that incentive pay can lead to an agent sacrificing some dimensions of their task (e.g., shareholder value) to achieve a more narrowly defined goal (e.g., growth) that is explicitly specified in their contract.

# 2    Data and Sample

We obtain data from ISS Incentive Lab that identifies metrics used in executive compensation bonus contracts for the five highest-paid executives. Our data spans the years between 2007 and 2017, and during this period, Incentive Lab covers around 1,200 of the largest firms by market capitalization listed on U.S. exchanges each year. We match the Incentive Lab data to Compustat and CRSP.

We next obtain data on M&A transactions from SDC announced between 2007 and early

2017, with a status of either completed or withdrawn, and for which the acquirer is U.S.-domiciled and either a publicly-listed firm or a subsidiary of a publicly-listed firm. We match acquirers to Compustat using a list provided by Ewens et al. (2019) (on Ewens' Github page). We use data from CRSP to compute abnormal returns around the transaction announcement date as specified in SDC.

Finally, we merge firms in our panel from incentive lab to the firms in the M&A data, to identify firm-years in which there is an acquisition announcement.

## 2.1 Summary Statistics

We start by reporting summary statistics for the grant-level data from IncentiveLab in Table 1. Panel A shows that our data consists of a total of 159,178 bonus grants in IncentiveLab across 1,403 unique firms. Of these bonus grants, 33,837 (21% of the total) are specifically tied to quantifiable measures of firm size, i.e. our definition of growth-promoting bonuses (GPB). 909 (65%) of the unique firms in the sample have at some point had a GPB, indicating that a majority of these largest firms at least occasionally employ bonus grants that hinges specifically on firm size.

It is important to note that 2.5% of awards that are tied to a firm size measure (e.g., sales) specify that the growth must be "organic," effectively prohibiting the use of acquisitions to meet the performance goal.[8] We exclude such grants from our classification of GPBs.[9]

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TABLE 1 ABOUT HERE

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Panel B of Table 1 details which specific measures of firm size that these grants depend on. By far the most common is sales (96.1% of grants). Around one quarter of these are

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[8]Our estimate of 2.5% is roughly consistent with (Cheng et al. 2015) who study the impact of bonuses tied to performance metrics (EPS) on corporate share buybacks. They report that in 0.5% of their sample, boards adjust for the impact of repurchases when determining whether the EPS goal had been achieved.

[9]Another 0.1% of the observations explicitly prohibit using acquisitions as a means to achieve the performance goal. We exclude such grants as well.

specifed in relative terms (i.e., as percent growth in sales), and the remaining are expressed as absolute sales targets. The other and less commonly used metrics include market share (1.7%), production (0.9%), and bookings (0.7%).[10]

We next construct a panel dataset for the fims within Incentive Lab, where we collapse the grant level data to the firm-year level, resulting in a sample of 15,863 firm-years. Table 2 reports summary statistics at the firm-year level.

Panel A of Table 2 summarizes the extent of growth-promoting bonuses. This data shows that The average fraction of a firm's top 5 executives with outstanding GPB grants is 34%. These are about equally prevalent for CEOs (33%) and CFOs (32%). These potential bonuses are also sizable in economic magnitude, which means that executives have a strong incentive to meet them. The mean total value of GPB grants outstanding per year is about $1.3 million, with about $553,000 for CEOs and $150,000 for CFOs. Among firm-years with non-zero outstanding GPB grant values, these values are correspondingly higher; the amount of bonuses that explicitly depend on firm size across the named executives is $3.24 million. Finally, most of these outstanding bonuses have a relatively short remaining time until the end of the evaluation period when the target is evaluated: the average remaining vesting period is 11 months.

Each bonus grant can depend on more than one measure, and Panel B of Table 2 describes the most common measures that are evaluated. On average, executives in a firm are subject to bonuses that depend on almost 7 unique performance measures (these might be across different grants and different executives). The most common of these is earnings, which is present in 70% of firm-years on average, and EPS, which is part of bonuses for 41% of firm-years. Earnings, in particular, can also be viewed as a measure that encourages larger size (as sales and earnings are correlated), and our analysis will separately study the role of earnings incentives as well.

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[10]Note that these percentages add up to slightly more than 100%, because some grants depend on more than one of these metrics.

Less commonly used measures for determining bonuses include stock price (13% of firm-years) and measures of operating performance (14%).

Panels C–E describes summary statistics for M&A outcomes. First, Panel C shows that 21% of all firm-years in the sample (i.e., not conditional on having a GPD) have at least one acquisition announcement, and 7% of firm-years have announcements of the acquisition of a public target or a public target's subsidiary.

A total of 4,989 deals meet our sample criteria, of which 1,343 deals (27%) involve targets that are either publicly listed or are subsidiaries of publicly-listed firms. We report summary statistics for the deal characteristics in Table 2 for all acquisitions (Panels C and D) as well as separately for acquisitions of public targets or their subsidiaries (Panel E).

The mean relative size (to the bidder) of acquisitions is about 6% (12% for public targets alone). The mean (median) abnormal returns for target firms, bidders, and their combined abnormal returns are 16% (5.91%), 0.33% (0.20%), and 1.39% (0.71%). The average target abnormal returns are notably lower than many M&A studies because we compute abnormal returns of the parent firms of targets that are subsidiaries (if the parent is publicly listed). The average premium paid for a publicly-listed target is 43% (median 55%). The method of payment includes a cash component in the majority of deals, with 53% of deals being all-cash and 43% having both cash and stock as payment—only 4% of deals are all-stock.

# 3    Results

In this section, we study the relationship between firm's use of growth-promoting bonuses and firms' merger and acquisition activity and outcomes.

## 3.1    Likelihood of becoming an acquirer

We posit that firms with more top executives compensated with growth-promoting incentive contracts or that award their executives larger amount of such incentives, have a higher

likelihood of becoming an acquirer. To the extent that growth-promoting incentives provide an incentive to grow the size of the corporation, managers of these firms may choose to achieve their bonus thresholds by buying size by undertaking mergers and acquisitions.

In Table 3, we present the results of linear probability models (LPM) where we examine whether granting growth-promoting bonuses to executives is associated with higher likelihood to become an acquirer.[11] The analysis in Table 3 include all deals (both publicly traded and privately held target firms).

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In Panel A of Table 3, the key independent variable is the % of top executives who receive growth-promoting bonuses (*GPB(% of executives)*). In Panel B of Table 3, we replace this variable with the logarithm of the dollar value of growth-promoting bonuses granted to the firm's executives each year (*GPB(log $ value)*). Models (2), (3) and (4) include firm specific control variables that could be correlated with the firm's decision to become an acquirer. Specifically, we control for governance measures such as CEO compensation delta, CEO-chairman duality indicator, CEO tenure, board size and the extent that the board is co-opted. We also control for the firm's size and age, cash holdings, capital expenditure, profitability (OIBDA/assets) and industry Tobin's Q. Moreover, in model (4), we control for whether the executives receive bonuses with earning-based measures (e.g., EPS) as the metric. All variables are defined in the Appendix. In model (4), to control for unobserved industry-specific shocks all specifications include interacted year-industry (2-digit-SIC) fixed effects(Gormley and Matsa (2014)).

In model (1) in Panels A and B, the coefficient on the measure of growth promoting incentives is positive and statistically significant at the 1% level. We find similar statistically significant results including control variables (models (2) and (3)) and industry-by-year fixed effects (model (4)). In terms of economic significance, in model (4) of Panel A, we find that

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[11]The estimates of economic significance for LPM in this section are based on marginal effects computed with all other variables held fixed at their mean.

having executives receiving growth-promoting bonuses is associated with a 4.4 percentage-point increase in the likelihood of becoming an acquirer. In Panel B, a one-standard deviation increase in the amounts at stake predicts a 4.5 percentage point increase (log(3.65 million)*0.003=4.5) in the likelihood of becoming an acquirer. Overall, these estimates represent around a 25% increase relative to a base likelihood of 21%.[12] Finally, we do not find any evidence that earning-based bonuses affect the probability of becoming an acquirer.

Next, we investigate whether our findings differ by deal type. In Panel A of Table 4, we study whether the relation between growth-promoting bonuses and likelihood of becoming an acquirer changes with the relative size of the target firm to the bidder firm. To this end, we use specifications similar to those in Panel A of Table 3, but with the dependent variable in each model indicating whether the deal is in a specific relative size bracket. All specifications in 4 include similar control variables as those in model (4) of Table 3 as well as year-industry fixed effects. Notably, we find statistically significant results only for deals in which the target is smaller than 2% of the sum of the target and the bidder market capitalization. The results for these relatively smaller targets are also economically significant as having executives receiving growth-promoting bonuses is associated with a 1.8 percentage point increase in the likelihood of acquiring a firm that is between 1%–2% of the overall market cap of the bidder and the target.

These findings are consistent with smaller acquisitions being motivated by a desire to meet growth-promoting performance thresholds. By contrast, we find little evidence that explicit incentives to promote growth encourages "megadeals". Therefore these results indicate that executives may use M&A deals on the margin to meet sales targets in their bonus contracts. This may be because smaller deals are less likely to be challenged, scrutinized or renegotiated - and that at the same time, smaller targets may be sufficient to reach sales targets in the executives' growth-promoting incentive contracts.

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[12]In untabulated tests, instead of the LPM in Table 3, we run logistic regressions and find similar results.

In Panel B of Table 4, we investigate whether our findings vary with the deals method of payment. For cash and mixed deals we find similar and statistically significant results as in Table 3. However, in stock deals we do not find a relationship between growth-promoting incentives and likelihood of becoming an acquirer. This is consistent with cash deals, as they are less scrutinized by the board, providing an easier opportunity relative to stock deals for the managers to buy growth in order to meet their growth-promoting goals in their compensation contracts. This finding is also consistent with Harford et al. (2012) that shows value-destroying deals by entrenched managers are less likely to be all-equity offers.

We also find that our findings are concentrated among deals in which both bidder and target are from the same industry. Therefore as with cash deals, to the extent that within-industry deals are less likely to face scrutiny from the board, within-industry deals are also more likely to be used by managers to meet growth-promoting goals in their bonuses.[13] Finally, we find that growth-promoting bonuses are associated with higher likelihood of acquiring publicly traded targets. This finding is consistent with Harford et al. (2012) who show one way entrenched managers destroy value in acquisitions is that they disproportionately avoid private targets, which have been shown to be generally associated with value creation.

Next, we investigate whether the CEO's relative power over the board could affect whether growth-promoting bonuses affect the likelihood of becoming an acquirer. To test this hypothesis, in Table 5 we run regressions similar to those in Panel A of Table 3 where as an independent variable, we also include the interaction of the fraction of executives who receive growth-promoting bonuses in a given year (GPB(% of executives)) with a CEO-chairman duality indicator variable. In Table 5 we find the coefficient on this interaction term to be statistically significant at the 5% level in both models (1) and (2). This suggests that the positive association between growth-promoting bonuses and likelihood of engaging in M&A activities is higher among firms where the CEO is also the chairman of the board. Given that this governance proxy measures

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[13]In untabulated tests, we verify that our findings in Tables 4, 5 and 6 remain similar if we replace the fraction of executives who receive growth-promoting bonuses (GPB(% of executives)) with the logarithm of the dollar value of their growth-promoting bonuses (GPB(log $ value)).

the power of the CEO over the board, this result is consistent with these deals not being desirable for the shareholders of the bidder firm. This finding relates to Masulis et al. (2007) who show that stronger external governance can mitigate empire-building acquisitions that destroy shareholder value and Harford and Li (2007) who finds that even in mergers where bidding shareholders are worse off, bidding CEOs are often better off following the mergers.

<div align="center">TABLE 5 ABOUT HERE</div>

Finally, we investigate the role of firm's cash holdings in whether growth-promoting bonuses affect likelihood of engaging in M&A activities. We posit that firms's decision to become an acquirer may be influenced by the level of cash they hold on their balance sheet. Seminal papers such as Jensen (1986) and Harford (1999) argue that cash-rich firms are more likely than other firms to attempt acquisitions and that these deals are more likely to destroy shareholder wealth. In Table 6 we run similar regressions as those in Panel A of Table 3 where as an independent variable, we also include the interaction of the fraction of executives who receive growth-promoting bonuses in a given year with firm's cash to assets ratio. Our findings indicate that firms that are both cash-rich and have a larger fraction of their managers receiving growth-promoting bonuses are more likely to attempt acquisitions. This result is statistically significant at the 5% level. Notably, when we divide the deals based on their method of payment, we find that this result is concentrated among cash deals as we do not find statistically significant coefficient on the interaction term for stock offers.

<div align="center">TABLE 6 ABOUT HERE</div>

To summarize, our results suggest that growth-promoting bonuses are incentivizing M&A activities - a result that is more pronounced for cash-rich bidders and firms with powerful CEOs. The natural question is whether these deals are different from others in terms of the value creation and value transfer between the bidder and the target shareholders. Thus, next

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we turn our attention to how shareholder value of the bidder and target firms change in deals where the bidder executives receive more growth-promoting bonuses.

## 3.2   Shareholder value implications of growth-promoting bonuses

Are growth-promoting bonuses awarded to bidder executives associated with lower shareholder returns for the bidder shareholders? Do target firm shareholders benefit in M&A deals where the bidder executives receive growth-promoting bonuses? Is value created or destroyed beyond what is transfered between the bidder and target shareholders? We address these questions in turn in this section.

First, we test whether executives who receive growth-promoting bonuses engage in M&A deals that benefit their shareholders. If these deals are merely the consequence of managers trying to meet their growth goals in their compensation contacts, it is possible that bidder shareholders wealth could be destroyed via these acquisitions. In Table 7, we run OLS regressions where the dependent variable is the acquirer returns around the announcement of the deal. In this analysis, we focus on the sample of all deals between 2007 and 2017 where the target is publicly traded.[14] This results in 1271 observations. In addition to all the control variables included in our analysis in Table 3, we also include deal specific control variables such as the logarithm of the dollar value of the transaction, an indicator for cash deals, an indicator for mixed payment deals and an indicator for within-industry deals.

<div align="center">

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We compute the gain of the bidder by the cumulative daily dollar abnormal returns of the bidder around the announcement. We focus on the day (-3,+1) window around the announcement date so our event window captures the possibly leaked information in the immediate days prior to the merger agreements. The key independent variable in Panel A is the fraction of

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[14]Our results remain unchanged if we include deals where the target is privately held (see the appendix).

executives who receive growth-promoting bonuses (*GPB(% of executives)*). In model (1), the coefficient on this variable is negative and statistically significant at the 1% level. This implies that having executives with growth-promoting bonuses is associated with around 1 percentage points lower returns for the bidder shareholders around the takeover announcement. Given that the average acquirer returns are only slightly positive (0.3%), this means that the average return for these deals is negative, and these deals destroy bidder shareholder value on average.[15] The results are similar when we control for firm and deal specific characteristics (models (2), (3) and (4)). In Panel B of Table 7, we replace the key dependent variable with the size of the growth-promoting incentives in dollars (*GPB(log $ value)*) and find similar and statistically significant results in all specifications with and without control variables and year and industry fixed effects.

If increased merger activity is motivated by the acquirer managers' explicit incentives to boost firm growth, we expect target firms to benefit from such deals in which the bidder manager overpays in order to achieve the growth goals in her incentive contracts. Therefore, we next investigate whether the offer premium is higher where managers of the bidder firm are granted growth-promoting bonuses (Panel A of Table 8). In this table we run OLS regressions where the explanatory variable of interest is the fraction of bidder firm executives receiving growth-promoting incentives (*GPB(% of executives)*). All the specifications include year and industry fixed effects. In models (1) and (2) in Panel A, the coefficient on the fraction of executives receiving growth-promoting bonuses is positive and statistically significant at the 10% level implying that on average, bidder firm managers' growth-promoting bonuses are associated with larger offer premium paid to target shareholders.[16] However, this coefficient is not statistically significant in models (3) and (4) in which we also control for bidder firm governance.

<center>Table 8 About Here</center>

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[15]The average acquirer returns for firms with GPB is -0.21% compared to 0.64% for firms without GPB.

[16]The sample size in Panel A of Table 8 is smaller than that in Panel B (602 versus 1271 in model (1)) because to be able to estimate the offer premium we restrict the sample to deals in which the entire target firm is acquired in the deal.

In Panel B of 8, we replace the dependent variable with the cumulative daily dollar abnormal returns of the target firm around the deal announcement ((-3,+1) window). Similar to Panel A, we find statistically significant results in models (1) and (2) but results become statistically insignificant in models (3) and (4) where bidder governance control variables are included. Overall, we find some evidence of benefits to target shareholders in the form of larger offer premiums and higher target abnormal returns upon the announcement of deals in which the acquiring firms' management receives more growth-promoting bonuses.

The significantly lower acquirer abnormal returns for deals in which managers had growth-promoting incentive contracts hand in hand with the higher target announcement returns for such deals suggest value transfers from bidder shareholders to target shareholders. Next, we study whether the combined target and acquirer returns are lower for deals where the bidder executives receive growth-promoting bonuses. We compute the combined gain of the bidder and target by summing up the cumulative daily dollar abnormal returns of the target and bidder around the announcement and then dividing by the combined market capitalizations of the bidder and target 50 trading days before the announcement (following e.g. Ahern (2011)).

<u>TABLE 9 ABOUT HERE</u>

Table 9 reports results of OLS regressions where the dependent variable is the combined announcement returns of the bidder and target in the (-3,+1) window. All specifications include industry and year fixed effects. The explanatory variable of interest is the fraction of bidder executives receiving growth-promoting bonuses (*GPB(% of executives)*). The coefficient on this variable is positive and statistically significant at 1% level in models (1) and (2) and statistically significant at the 5% and 1% levels in models (3) and (4), respectively.In terms of economic significance, one standard deviation increase in the fraction of executives receiving growth-promoting bonuses decreases the the combined gains by 0.6–0.8%. This finding is consistent with growth-promoting incentive compensation encouraging managers to engage in empire-building merger activity with significantly lower synergies, thus destroying wealth for the bidder

firm.

In summary, these results suggest deals conducted by bidders who receive growth-promoting bonuses tend to have lower acquirer announcement returns due to higher value transfers to the target and lower value creation from synergies.

## 3.3  Counterfactuals and threshold goals in growth-promoting bonuses

Similar to any executive bonus contract, a bonus grant linked to firm's sales identifies threshold, target and maximum value for firm's sales (or sales growth). The payout from the grant or the vesting schedule of the grant is then tied to the firm achieving these particular goals. The range between the threshold and the maximum value is called the incentive zone. In a typical growth-promoting contract, the manager would receive no payout if sales is below the threshold and her payout increases as sales exceeds the threshold up to the maximum value sales indicated in the contract. There exists discontinuity in the pay-performance relationship at both the threshold and the maximum value.

In this section, we focus on the threshold of growth-promoting bonus contracts of executives of the acquiring firms to investigate whether they would have missed their bonus threshold without conducting the merger. Instead of the target goals - where upon reaching the manager receives the expected bonus - we focus on the thresholds as the discontinuity in the payout function around the threshold could potentially create a more meaningful incentive to engage in M&A activities.[17]

We begin our empirical analysis by comparing the threshold sales in the executive compensation contracts to the firm's reported sales for all firms - not only for those that engage in M&A.[18] The data are at the grant level. We construct the difference between the realized sales

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[17]For the analysis in this section, in order to focus on whether acquisitions affect beating bonus thresholds, we exclude Relative Performance Evaluation (RPE) contracts where the thresholds are set relative to a peer group. Thus, for all the grants in this sample the exact thresholds are known to the managers at the start of the year as they are either sales levels or sales growth rates.

[18]We calculate threshold sales using lagged realized sales and the threshold sales growth if the metric identified in the growth-promoting bonus is sales growth instead of sales level. This allows inclusion of all growth-promoting contracts - where the metric is either sales level or sales growth - in all our analysis in this section.

and the threshold sales to identify the clustering of sales at the bonus threshold. This measure is the relative difference in percentages between actual sales as reported in Compustat and the threshold goal as identified in the pay contract.

In Figure 1 we report the histogram of this difference and find that the distribution of the difference between realized and threshold sales has a discontinuity at zero. A disproportionately large number of firms exceed the sales threshold by a small amount as compared to the number of firms that fail to meet the sales threshold by a small amount. Due to the jump in pay at the threshold sales for a typical grant in our sample, the clustering of sales around the threshold is less of a surprise. This result is also consistent with Bennett et al. (2017) that reports a similar discontinuity in bonus contracts.

<br>

FIGURE 1 ABOUT HERE

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Next, we focus on the sample of firms that completed an M&A. We include all deals - both publicly traded and privately held target firms and aggregate the grant data at the deal level, including any outstanding grants that vest after the completion of the deal. In Panel A of Figure 2, we report the histogram of the difference between the realized sales and the threshold sales for the merged firms. To calculate the difference, we use the first realized sales after the completion of the deal reported by Compustat. In Panel B of Figure 2, we report the counterfactual results where we compare what the sales would have been in the absence of the merger with the threshold sales in the contract. In order to estimate the coutnerfactual sales of the acquirer, we subtract the weighted target firm's sales (weighted by the fraction of the year remaining in the fiscal year from the date the deal is completed) from the first realized sales after deal completion. Because the sample for this figure includes deals where the target is a private firm, we estimate target firm's sales by using the median Enterprise Value (EV) to sales multiple for the target firms' 2-digit-SIC industry multiplied by the EV of the target firm.

Comparing the two histograms in Panel A and Panel B suggests executives of some firms that would have missed the threshold sales in their contracts meet their threshold goals because of conducing the deal. This is visually evident from the shift of the mass of firms from just below 0 in Panel A to just above zero in Panel B. There are 140 firms that without the acquisition appear to be barely missing their threshold sales in their executives bonuses (i.e., within 5% of the threshold). Among these firms, 42 firms (30%) exceed their threshold goal because of the acquisition. 23% (18%) of those barely missing their threshold sales achieve them when they complete the acquisition if we widen the sample of firms that barely miss their threshold sales to those missing them by 10% (20%) in the absence of the deal. This result indicates that a large fraction of executives with growth-promoting bonuses who would have not been paid in the absence of the M&A, receive their bonus payments because of the deal. This further suggests that these deals are likely conducted because of growth-promoting bonuses of the bidder executives as these acquisitions have a meaningful effect on the payout to these executives.

Finally, in Figure 3 we redo Figure 2 for the sample of firms where the target firm is publicly traded. This reduces the sample size significantly; however, it allows a more accurate estimate of the counterfactual sales in the absence of the deal. This is because, unlike for private target firms, we can use the actual pre-merger target sales reported in Compustat before the deal completion to estimate the counterfactual sales. The results are similar to those in Figure 2 as 47% of firms which would have barely missed their threshold sales without the acquisition (i.e., withing 5% of the threshold sales) meet their threshold sales in the presence of the acquisition. This further suggests that among the firms that grant growth-promoting bonuses, many would have missed their bonus goals without conducting the merger.

## 3.4 Incentives to grow and gains to executives from M&A deals

Having established that firms are more likely to make acquisitions when their executives have GPB contracts, we turn to examining the gains to executives from making acquisitions that affect the payment of GPBs, with the goal of making a comparison to what executives would have been paid had they not made the acquisitions. We do so by comparing executives' realized payouts from GPB contracts to their counterfactual payouts from those contracts had they not made these acquisitions. We focus on the sample of firms that completed an acquisition while having GPBs, and include acquisitions of both publicly traded and privately-held target firms. We estimate executives' monetary gain from their GPB contracts as follows. We take the realized sales to be the first value of sales reported after the completion of a deal in Compustat and estimate the counterfactual sales for each acquiring firm, had the acquisition not taken place, as we do in the previous section. For each growth-promoting grant, we use Incentive Lab data on the threshold, target and maximum value for firm's sales (or sales growth) to estimate the realized payout to the executive from each GPB grant. We repeat then this process for each GPB grant using the counterfactual sales (see previous section) to estimate the payout to the executive from the GPB grant had the acquisition not taken place.[19] For those grants where the payout is equity we estimate the cash equivalent of the grant on the grant date using the grant-date stock price. We aggregate the sum of the cash and cash equivalent payouts for each executive in each year of our sample to construct a realized and a counterfactual payout for each executive-year observation.

In Panel A of Table 10, we report the difference between the realized and counterfactual payouts from GPB contracts for each executive-year observation.[20] We also report this difference aggregated at the firm level indicating how much more the top executives of a firm collectively receive from their GPB contracts due to acquisitions. We find that an individual

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[19]We use interpolation to estimate the payout for each grant if sales is between the threshold and the maximum value indicated in the contract (i.e., if sales is within the incentive zone). We estimate two different slopes - one for sales below target sales and one for sales above target sales.

[20]The sample size in our analysis in Table 10 is smaller than our previous analyses because only a subsample of these firms disclose the bonus threshold, target and maximum value for each grant.

executive receives around \$82,000 more from their GPB contract from making an acquisition. This represents an increase of 9.7% (2%) in the executive's bonus compensation (total compensation). Top executives of a firm that does an acquisition collectively receive \$335,136 more as a result. These findings are statistically significant at the 1% level. 38% of the executives in this sample received a higher bonus pay as a result of an acquisition (994 out of 2628). Absent an acquisition, 10% of the executives would have missed the GPB payout threshold and therefore not received any payout whatsoever (260 out of 2628).

In Panel B of Table 10, we repeat the analysis in Panel A, restricting to the sample of firms to those that acquire publicy-traded targets. While this restriction reduces the sample size significantly (as is also the case in Figure 3), it allows for a more accurate estimate of counterfactual sales, and consequently the counterfactual payout, absent the acquisition. We find an average increase of \$211,747 in an executive's GPB payout as a result of doing an acquisition. This result is statistically significant, albeit only at the 10% level, which is likely to be a result of having a much smaller sample from the restriction of having only publicly-traded targets. These results indicate that making an acquisition in the presence of a GPB increases the value of bonus and total compensation for executives by about 22.1% and 3.9%. 31% of the executives in this sample received a higher bonus pay because of an acquisition (158 out of 506). 14% of the executives would have not received any GPB payout whatsoever absent an acquisition (71 out of 506).

We next focus on estimating losses in the values of executives' equity portfolios as a result of making value-destroying acquisitions associated with GPBs. We use the compensation delta of executives and the abnormal announcement returns around acquisition announcements to estimate these losses and find that on average executives lose \$5,526 when we consider both public and private targets, and lose \$17,827 when we consider only public targets. It is not surprising that the estimated loses are small in magnitude given that acquirer announcement returns are small, though still negative. More importantly, the gains to executives from GPB payouts that are triggered as a result of doing acquisitions far exceed the losses to their equity

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portfolios as a result of the (value-destroying) acquisitions. It is therefore clear that there is a monetary incentive for executives to make acquisitions when they have GPBs.

It is also important to consider the career concern incentives associated with GPBs given that executives face an increased risk of forced turnover if they fail to meet the performance goals under bonus plans. For instance, Bennett et al. (2017) estimate that missing a performance goal is associated with an increase of 1.5% in the likelihood of forced turnover. We use their estimate to approximate the monetary losses associated with forced turnovers as a result of not meeting GPB goals. Here we focus our analysis only on executives that would have missed their GPB threshold were it not for an acquisition (N=260), as such executives are most likely to face forced turnover if they did not do an acquisition, and we include acquisitions of both public and private targets. We compute the present value of the expected future compensation for each executive assuming they would remain in their job for at least as long as the average tenure of the other executives in our sample who remained employed for at least as long as that particular executive (i.e. the conditional mean executive tenure in our sample).[21] Using each executive's total compensation and tenure in the year of the acquisition and a cost of capital of 10%, we estimate an average loss of $20.503 million in earnings if an executive is fired. We then use the Bennett et al. (2017) estimate of a 1.5% increase in the likelihood of forced turnover, to obtain an expected loss of $307,558 for the executives had they not engaged in an acquisition and missed the GPB goal as a result.

As we report in Panel C of Table 10, executives in our sample gain an incremental $744,797 from their GPB as a result of doing an acquisition, in addition to a career concern incentive that has a monetary equivalent of $307,558, from mitigating the loss in earnings from a forced turnover following a failure to meet a GPB threshold. Thus the monetary gain for executives from the payout of GPB contract is more than twice as large as the expected loss from forced turnover.[22] Overall, our analyses in this section support the notion that there are significant

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[21]That is, if an executive is in his fifth year on the job, we calculate the average tenure for all executives who made it to year five and subtract five from that number to estimate the expected remaining years.

[22]Reputational costs from forced turnovers, such as the negative impact on executives' future employment opportunities and income, would further add to our estimate of the value of executives career concern incentives.

monetary incentives for executives with GPBs to grow their firms by making acquisitions.

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## 3.5   Alternative explanations and interpretations

In summary, our results indicate that firms with managers who have growth-promoting bonuses (GPBs) tend to engage in more M&A activity and that these mergers tend to be value-destroying for the manager's firm (i.e., the bidder).

One possible interpretation of these results is that managers with GPBs increase M&A activity to boost sales with an eye to increasing their payouts under their GPBs. This is consistent with GPBs promoting empire building behavior. Another possibility is reverse causality. For example, companies that optimally plan to engage in M&A activities may award their managers more GPBs to encourage merger activity. However, this reverse causality story is inconsistent with firms with more GPBs engaging in mergers that destroy value for bidder shareholders. Moreover, having executive incentive contracts tied to shareholder value seems more prudent for motivating optimal investment decisions including mergers relative to GPBs (see e.g. Datta et al. 2001). Indeed Baker and Hall (2004) point out that the appropriate incentive for activities whose dollar impact does not scale with the size of a firm that includes acquisitions, is the dollar change in CEO wealth per dollar change in firm value from Jensen and Murphy (1990).

Another interpretation for our main results is that an omitted variable causes both higher GPBs and more merger activity. Although we control for firm characteristics including governance variables as well as firm and industry-year fixed effects, it is possible that salient unobservable variables may explain our results. For example, to the extent that our governance proxies are imperfect, and because poorly governed firms may have both more GPBs and conduct more value-destroying mergers, our results could be explained by a governance story.

Although we cannot completely rule out this possibility, our evidence in Figures 2 and

3 is consistent with GPBs promoting empire building motives. This is because we find that a significant fraction of firms with GPBs whose executives would have just missed the GPB growth threshold, meet the threshold due to a merger. This is suggestive of managers using mergers to meet growth thresholds. That said, although less likely, alternative explanations such as the governance story discussed above may still play a role; for example, the poorly governed firms may be precisely the ones in which mergers are used to beat growth thresholds if these thresholds would have been missed without the merger. In this scenario, actively gaming the growth-promoting contracts by engaging in suboptimal merger activity is facilitated by both the poor governance and the existence of the GPBs. This possibility is however rendered unlikely given existing evidence such as Morse et al. (2011) and Bennett et al. (2017) that indicates that executives manipulate payout metrics and thresholds ex ante to make them weaker and more easily attainable — such manipulation is likely to be a preferable option for executives over to making acquisitions to attain payout thresholds ex post.

Finally, in order to further alleviate concerns that our results emanate from GPB granting firms being fundamentally different from other firms, in Table 11 we present a comparison of the characteristics of firms with GPBs and those without. The comparison in Panel A shows that firms that grant GPB contracts, on average, appear somewhat different on observable characteristics from those that do not. However, these differences are mostly driven by differences across industries, with firms in some industries being more likely to have GPBs than in others, and industries tending to exhibit differences in average characteristics, particularly those based on accounting metrics. Indeed, when we compare firms with and without GPBs *within* the same industry and year, we find the two groups are mostly similar across firm characteristics. The two groups differ on average in only three characteristics, with GPB firms being more profitable, having higher market-to-book ratios and having CEO's with shorter tenures. Still, in economic terms these differences are quite small, and we also control for these variables in our regression specifications throughout the paper. Taken together with the similarity of GPB and non-GPB firms within industries and years, the fact that we include industry-year fixed effects

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in our specifications examining the incidence of acquisitions further mitigates the possibility that our findings are an artifact of an omitted variable.

In Panel B, we repeat the comparison of characteristics of firms with and without GPBs only for firms that are M&A bidders in our sample. This is necessary because firms that engage in M&A could be fundamentally different from the broader sample firms that we examine in Panel A. We find a similar pattern to Panel A in that GPB firms appear to be somewhat different from non-GPB firms overall, but that they are mostly similar within industries and years. The differences that persist within industries and years are that firms with GPB contracts tend to have more cash, are more profitable and have higher market-to-book ratios.

A final alternative explanation of our results that we consider is that acquisition announcements signal what the future prospects of acquirers are. Acquirer announcement CARs would then be driven by the information revealed about acquirers future prospects rather than the value impact of the acquisition itself. For instance an acquisition announcement could signal an acquirer's need to purchase growth because its internal growth opportunities are limited. While we cannot fully rule out this possibility, our comparisons in Panel B of Table 11 contradict it because, within industry and year, firms with GPBs have *higher* market-to-book ratios, which is likely to indicate *more* internal growth opportunities. Furthermore, firms with and without GPBs exhibit similar rates of sales growth, suggesting that it is ultimately unlikely that acquisitions by firms with GPBs stem from a lack of internal growth opportunities.

# 4 Conclusion

Linking executive pay to firm performance is typically desirable in principal-agent theory but can result in unintended consequences. We show that a consequence of tying bonus pay to size-based metrics, sales in particular, is that executives undertake more acquisitions to trigger

the payouts of such bonuses, even if these acquisitions are value-destroying. The financial rewards that executives get from such bonus payouts are substantial, and the bonus payouts exceed the losses executives incur in their equity portfolio from making acquisitions that are value-destroying on average.

Value-destroying acquisitions that executives undertake at the expense of shareholders have long been linked to executives' inherent preferences for higher future compensation and perquisites that can come from running a larger firm. Our findings imply that the ex-ante design of compensation contracts is also an important factor that can incentivize value-destroying acquisitions. In light of the growing use of non-equity incentive plans that explicitly award hitting various operating performance targets, including sales, EPS, and several other metrics, the possible unintended consequences that come from focusing on a select few measures (that critically often can be independent of shareholder value creation) deserves higher scrutiny.

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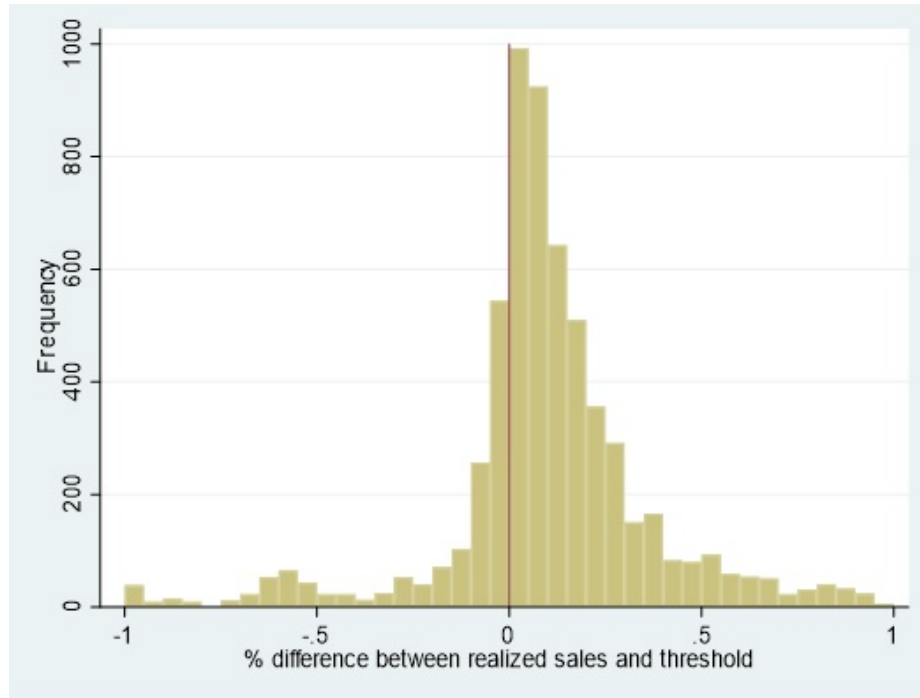
**Figure 1: Distribution of the difference between realized sales and bonus thresholds for all firms with GPB**

This figure shows the distribution of the relative difference in percentages between actual sales as reported in Compustat and the threshold goals as identified in the pay contracts for all firms - not only those that engage in M&A.
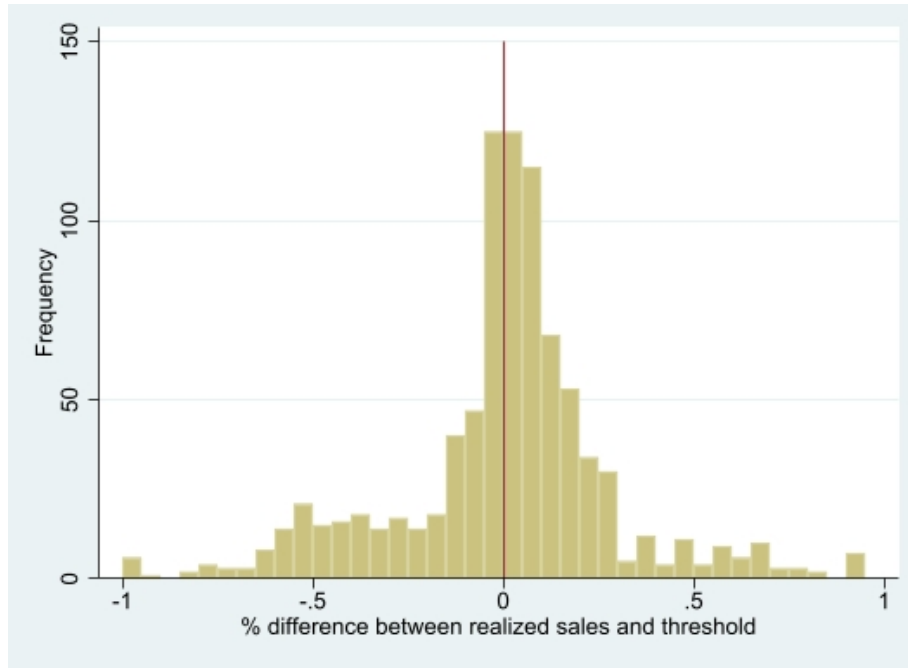
Panel A: Actual sales
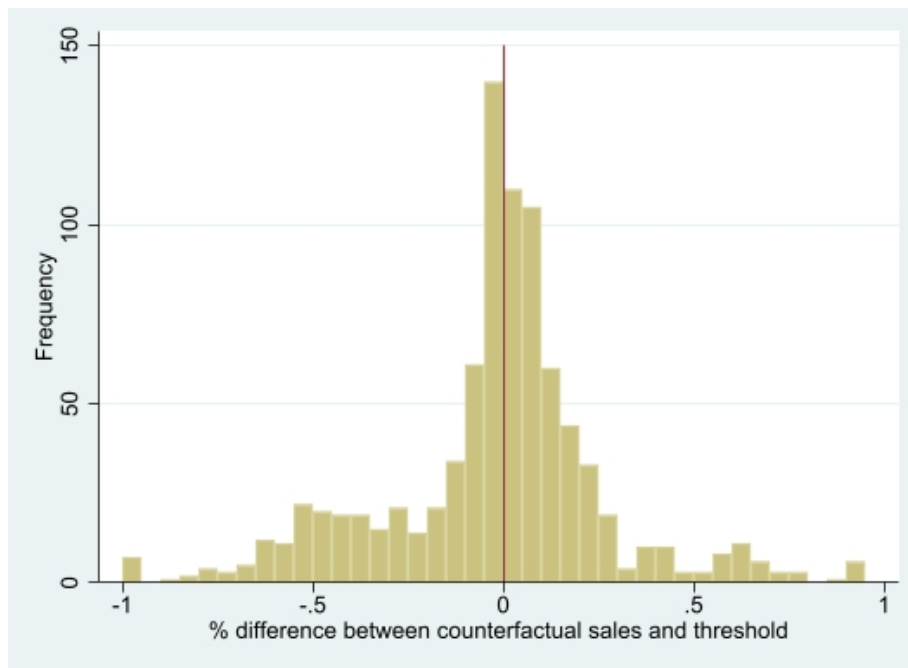


Panel B: Counterfactual sales

**Figure 2: Actual vs. counterfactual distributions of the difference between realized sales and bonus thresholds for acquirers with GPB**

Panel A, for the sample of firms that completed an M&A, shows the distribution of the relative difference in percentages between actual sales as reported in Compustat and the threshold goals as identified in the pay contracts. To calculate the difference for very firm, we use the first realized sales after the completion of the deal reported by Compustat. Panel B, for the sample of firms that completed an M&A, shows the distribution of the relative difference in percentages between counterfactual sales (i.e., what would have been in the absence of the merger) and the threshold sales in the contracts. To estimate the coutnerfactual sales of the acquirer, we subtract the weighted target's sales (weighted by the fraction of the year remaining in the fiscal from the date the deal is completed) from the first realized sales after deal completion. We estimate target's sales by using the median Enterprise Value (EV) to sales multiple for the target firms' 2-digit-SIC industry multiplied by the EV of the target firm.

Panel A: Actual sales
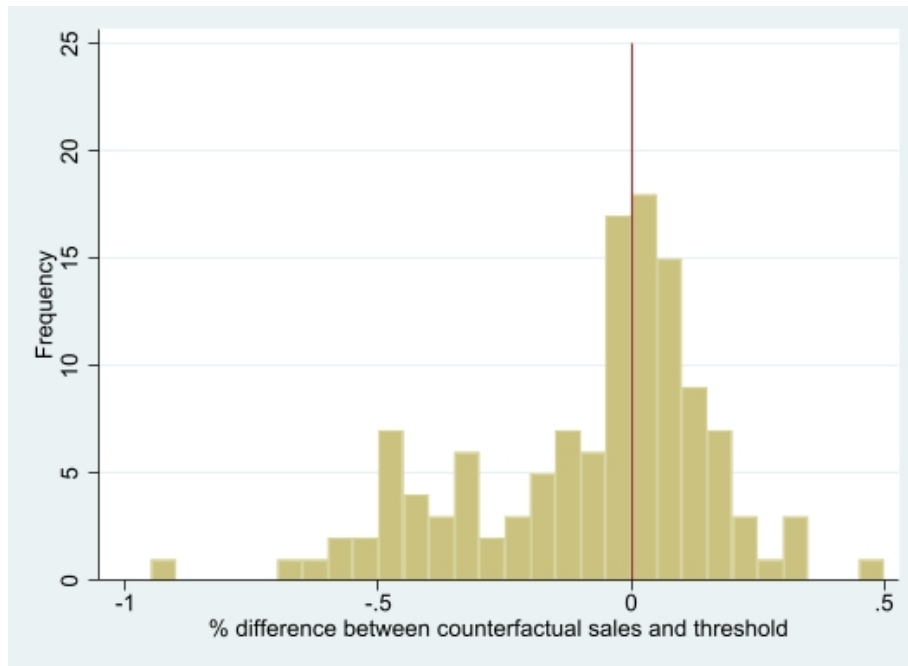


Panel B: Counterfactual sales

**Figure 3: Actual vs. counterfactual distributions of the difference between realized sales and bonus thresholds for acquirers with GPB - only public targets**

Panel A, for the sample of firms that completed an M&A with a publicly traded target, shows the distribution of the relative difference in percentages between actual sales as reported in Compustat and the threshold goals as identified in the pay contracts. To calculate the difference for very firm, we use the first realized sales after the completion of the deal reported by Compustat. Panel B, for the sample of firms that completed an M&A with a publicly traded target, shows the distribution of the relative difference in percentages between counterfactual sales (i.e., what would have been in the absence of the merger) and the threshold sales in the contracts. To estimate the coutnerfactual sales of the acquirer, we subtract the weighted target's sales (weighted by the fraction of the year remaining in the fiscal from the date the deal is completed) from the first realized sales after deal completion. We estimate target's sales by the actual pre-merger target sales reported in Compustat before the deal completion.

**Table 1**
**Growth-promoting Bonuses**

This table reports summary statistics for growth-promoting bonus grants (GPB). The sample consists of Incentive Lab firms for the period between 2007 and 2017 for which data are available in Compustat and CRSP. GPB grants are defined as grants whose payment is made contingent upon meeting a threshold in one of the following metrics: sales, market share, bookings, production, book value, net asset value or acquisitions. Panel A reports the prevalence of GPB in the sample of grants in Incentive Lab. Panel B reports the incidence of metrics we classify as growth-promoting.

| Panel A: Prevalence of Growth-promoting bonuses (GPB) | | | |
|---|---|---|---|
| | N | % of all grants | % of of all firms |
| Total number of grants | 159,178 | | |
| Number of grants with GPB | 33,837 | 21 % | |
| Total number of unique firms | 1,403 | | |
| Number of unique firms with GPB | 909 | | 65% |
| Panel B: GPB metrics | | | |
| | Number of grants | % of all GPB grants | Number of unique firms |
| Sales | 32,753 | 96.8% | 862 |
| Market share | 574 | 1.7% | 51 |
| Production | 309 | 0.9% | 19 |
| Bookings | 236 | 0.7% | 27 |
| (Adjusted) Book value | 140 | 0.4% | 11 |
| Acquisitions | 126 | 0.4% | 17 |
| Net asset value | 72 | 0.2% | 7 |

## Table 2
## Summary Statistics - Growth-promoting Bonuses and M&A

This table reports descriptive statistics for growth-promoting bonuses (GPB) and M&A deals. In Panel A, the sample consists of Incentive Lab firms for the 2007-2017 period with data available in Compustat and CRSP. The grant data is aggregated at the annual level and the unit of observation is a firm-year. *GPB (% of executives)* is the fraction of executives who receive growth-promoting bonuses in that year. *GPB (CEO)* and *GPB (CFO)* are indicator variables equal to one if the CEO and the CFO receive GPB, respectively. *GPB ( $ value, all execs)* is the dollar value of the growth promoting bonuses granted to the executives in that year. *GPB ($ value, CEO)* and *GPB ($ value, CFO)* are the dollar value of the GPB granted to the CEO and the CFO, respectively. We also separately report statistics for 6m371 firm-year observations where at least one of the firm's executives receiving GPB. Panel B reports descriptive statistics on the prevalence of "other" (i.e., not explicitly growth-dependent) measures in the bonus contracts. Panel C reports descriptive statistics for the firm-year observations on the incidence of acquisition announcements by the sample firms. Data on acquisitions is obtained from SDC and includes any deal with a disclosed value that is either completed or withdrawn. Panel D reports descriptive statistics on characteristics of acquisitions/deals announced by firms in our sample. Panel E reports descriptive statistics only for acquisitions of targets that are either publicly-listed or are subsidiaries of publicly-listed firms, by firms in our sample. All variables are defined in the Appendix.

### Panel A: Growth-promoting bonuses (GPB)

|  | Mean | SD | p1 | p25 | Median | p75 | p99 | N |
|---|---|---|---|---|---|---|---|---|
| GPB (% of executives) | 0.34 | 0.45 | 0 | 0 | 0 | 1 | 1 | 15,863 |
| GPB (CEO) | 0.33 | 0.47 | 0 | 0 | 0 | 1 | 1 | 15,863 |
| GPB (CFO) | 0.32 | 0.46 | 0 | 0 | 0 | 1 | 1 | 15,863 |
| GPB ($ value '000, all execs) | 1,299 | 3,654 | 0 | 0 | 0 | 821 | 21,300 | 15,863 |
| GPB ($ value '000, CEO) | 553 | 1,682 | 0 | 0 | 0 | 263 | 9,555 | 15,863 |
| GPB ($ value '000, CFO) | 150 | 426 | 0 | 0 | 0 | 86 | 2,465 | 15,863 |
| GPB ($ value '000, all execs) $\parallel GPB > 0$ | 3,236 | 5,194 | 11 | 492 | 1,231 | 3,357 | 27,000 | 6,371 |
| Months until evaluation $\parallel GPB > 0$ | 11 | 6 | 0 | 6 | 11 | 14 | 28 | 6,371 |

### Panel B: Other metrics used in bonus contracts

|  | Mean | SD | p1 | p25 | Median | p75 | p99 | N |
|---|---|---|---|---|---|---|---|---|
| Number of unique metrics in grant | 6.64 | 5.16 | 0 | 3.08 | 5.25 | 8.17 | 26.92 | 15,863 |
| Stock price metric (% of execs) | 0.13 | 0.32 | 0 | 0 | 0 | 0 | 1 | 15,863 |
| Earnings metric (% of execs) | 0.7 | 0.43 | 0 | 0.08 | 1 | 1 | 1 | 15,863 |
| EPS metric (% of execs) | 0.41 | 0.47 | 0 | 0 | 0 | 1 | 1 | 15,863 |
| Operating metric (% of execs) | 0.14 | 0.32 | 0 | 0 | 0 | 0 | 1 | 15,863 |

Table 2 continued...

| Panel C: Likelihood of deals | Mean | SD | p1 | p25 | Median | p75 | p99 | N |
|---|---|---|---|---|---|---|---|---|
| Any deal | 0.21 | 0.41 | 0 | 0 | 0 | 0 | 1 | 15,863 |
| # Deals (firm-year) | 0.3 | 0.65 | 0 | 0 | 0 | 0 | 3 | 15,863 |
| Any public target deal | 0.07 | 0.26 | 0 | 0 | 0 | 0 | 1 | 15,863 |
| Panel D: Deal characteristics | Mean | SD | p1 | p25 | Median | p75 | p99 | N |
| Relative target size | 0.06 | 0.11 | 0 | 0 | 0.02 | 0.07 | 0.56 | 4,989 |
| Acquirer CAR[-3,+1] (%) | 0.33 | 4.09 | -9.82 | -1.82 | 0.2 | 2.36 | 10.94 | 4,989 |
| Target CAR[-3,+1] (%) | 16.12 | 22.87 | -8.49 | 0.17 | 5.91 | 26.75 | 91.59 | 1,343 |
| Combined gains(%) | 1.39 | 4.53 | -7.73 | -1.06 | 0.71 | 3 | 15.19 | 1,343 |
| Offer premium (%) | 43 | 31 | -6 | 24 | 38 | 55 | 141 | 620 |
| Cash deal | 0.53 | 0.5 | 0 | 0 | 1 | 1 | 1 | 4,989 |
| Stock deal | 0.04 | 0.2 | 0 | 0 | 0 | 0 | 1 | 4,989 |
| Mixed deal | 0.43 | 0.49 | 0 | 0 | 0 | 1 | 1 | 4,989 |
| Merger | 0.38 | 0.49 | 0 | 0 | 0 | 1 | 1 | 4,989 |
| Acquisition of assets | 0.62 | 0.49 | 0 | 0 | 1 | 1 | 1 | 4,989 |
| Public target | 0.27 | 0.44 | 0 | 0 | 0 | 1 | 1 | 4,989 |
| Panel E: Deal characteristics - only public targets | Mean | SD | p1 | p25 | Median | p75 | p99 | N |
| Relative target size | 0.12 | 0.16 | 0 | 0.01 | 0.04 | 0.16 | 0.6 | 1,343 |
| Acquirer CAR[-3,+1] (%) | 0.28 | 4.64 | -9.82 | -2.19 | 0.07 | 2.59 | 10.94 | 1,343 |
| Target CAR[-3,+1] (%) | 16.12 | 22.87 | -8.49 | 0.17 | 5.91 | 26.75 | 91.59 | 1,343 |
| Combined gains (%) | 1.39 | 4.53 | -7.73 | -1.06 | 0.71 | 3 | 15.19 | 1,343 |
| Offer premium (%) | 42.87 | 30.87 | -6.11 | 24 | 38.04 | 54.58 | 141.21 | 620 |
| Cash deal | 0.56 | 0.5 | 0 | 0 | 1 | 1 | 1 | 1,343 |
| Stock deal | 0.06 | 0.24 | 0 | 0 | 0 | 0 | 1 | 1,343 |
| Mixed deal | 0.37 | 0.48 | 0 | 0 | 0 | 1 | 1 | 1,343 |

# Table 3
# Incentives to Grow and Merger Probability

The sample consists of 15797 firm-year observations from 2007 to 2017. The sample reduces to 13597 and 11678 firm-year observations, when adding governance and firm specific control variables, respectively. All specifications are linear probability models and include interacted 2-digit-SIC industry and year fixed effects. The dependent variable in all specifications is *Any Deal* which indicates whether the firm is an acquirer in that year. Model (2) includes governance control variables. Models (3) and (4) include additional firm specific control variables. In Panel A, the main independent variable is growth-promoting bonuses (*GPB (% of executives)*) measured as the fraction of executives who receive growth-promoting bonuses in that year. In Panel B, the main independent variable is the logarithm of the dollar value of the growth promoting bonuses granted to the executives in that year (*GPB (log $ value)*). *Earnings incentives (% of executives)* is the fraction of executives who receive bonuses with earnings-based metrics. *Earnings incentives (log $ value)* is the logarithm of the dollar value of the executives bonuses with earnings-based metrics. CEO delta is log $ value of CEO delta. All variables are defined in the Appendix. The t-statistics are based on robust standard errors clustered at the firm level and are reported in brackets. The notation ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| Panel A | | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| GPB (% of executives) | 0.051*** | 0.044*** | 0.043*** | 0.044*** |
| | [4.78] | [4.00] | [3.66] | [3.77] |
| Earnings incentives (% of executives) | | | | -0.009 |
| | | | | [-0.76] |
| CEO delta | | 0.027*** | 0.017*** | 0.017*** |
| | | (7.11) | (4.35) | (4.31) |
| CEO-chairman duality | | 0.002 | -0.004 | -0.004 |
| | | (0.22) | (-0.41) | (-0.40) |
| Co-opted board | | -0.007 | -0.002 | -0.001 |
| | | (-0.33) | (-0.09) | (-0.04) |
| CEO tenure | | -0.024*** | -0.016 | -0.017* |
| | | (-2.69) | (-1.63) | (-1.67) |
| Board size | | 0.089*** | 0.003 | 0.004 |
| | | (3.87) | (0.12) | (0.14) |
| Industry Q | | | -0.096 | -0.096 |
| | | | (-1.54) | (-1.54) |
| Cash/assets | | | -0.019 | -0.021 |
| | | | (-0.47) | (-0.52) |
| OIBDA/assets | | | 0.189*** | 0.190*** |
| | | | (3.18) | (3.19) |
| Capex/assets | | | -0.409*** | -0.413*** |
| | | | (-2.78) | (-2.80) |
| Firm size | | | 0.035*** | 0.036*** |
| | | | (6.69) | (6.74) |
| Firm age | | | -0.021** | -0.021** |
| | | | (-2.34) | (-2.37) |
| Industry × Year FE | Yes | Yes | Yes | Yes |
| N | 15797 | 13597 | 11678 | 11678 |
| Adjusted-$R^2$ | 18.8% | 19.2% | 21.0% | 21.0% |

Table 3 continued...

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| GPB (log $ value) | 0.004*** | 0.003*** | 0.003*** | 0.003*** |
| | [5.33] | [4.22] | [3.54] | [3.56] |
| Earnings incentives (log $ value) | | | | -0.000 |
| | | | | [-0.01] |
| CEO delta | | 0.027*** | 0.017*** | 0.017*** |
| | | (7.11) | (4.34) | (4.35) |
| CEO-chairman duality | | 0.002 | -0.004 | -0.004 |
| | | (0.23) | (-0.38) | (-0.38) |
| Co-opted board | | -0.006 | -0.002 | -0.002 |
| | | (-0.32) | (-0.08) | (-0.08) |
| CEO tenure | | -0.024*** | -0.017* | -0.017 |
| | | (-2.69) | (-1.65) | (-1.65) |
| Board size | | 0.087*** | 0.002 | 0.002 |
| | | (3.77) | (0.08) | (0.08) |
| Industry Q | | | -0.095 | -0.095 |
| | | | (-1.54) | (-1.54) |
| Cash/assets | | | -0.020 | -0.020 |
| | | | (-0.50) | (-0.50) |
| OIBDA/assets | | | 0.192*** | 0.192*** |
| | | | (3.23) | (3.22) |
| Capex/assets | | | -0.408*** | -0.408*** |
| | | | (-2.77) | (-2.77) |
| Firm size | | | 0.035*** | 0.035*** |
| | | | (6.63) | (6.62) |
| Firm age | | | -0.021** | -0.021** |
| | | | (-2.35) | (-2.35) |
| Industry × Year FE | Yes | Yes | Yes | Yes |
| N | 15797 | 13597 | 11678 | 11678 |
| Adjusted-$R^2$ | 18.9% | 19.2% | 21.0% | 21.0% |

## Table 4
## Incentives to Grow and Deal Types

The sample consists of 11678 firm-year observations from 2007 to 2017. All specifications are linear probability models and include interacted 2-digit-SIC industry and year fixed effects. The dependent variable in all specifications is *Any Deal* which indicates whether the firm is an acquirer in that year. All specifications include the following governance and firm specific control variables: CEO compensation delta, CEO-chairman duality indicator, CEO tenure, board size, the extent that the board is co-opted, firm size and age, cash/assets, capex/assets, OIBDA/assets and industry Tobin's Q. The main independent variable is growth-promoting bonuses (*GPB (% of executives)*) measured as the fraction of executives who receive growth-promoting bonuses in that year. In Panel A, the dependent variable is an indicators variable that specifies whether a firm is an acquirer of a target firm that is in the specific relative size bracket (e.g., *Deal (1-2 pct)* equals one if the firm acquires a target firm that its market capitalization is within 1 to 2 % of the sum of the market capitalizations of the bidder and the target). In Panel B, *Cash deal* (*Stock deal*, *Mixed deal*) is an indicator variable that equals one if the deal is paid with cash (stock, combination of cash and stocks). *Within-ind* (*Across-ind*) is an indicator variable that equals one if the target and the acquirer are (not) from the same 2-digit-SIC industry. *public-target* is an indicator variable that equals one if the target firm is publicly traded. All variables are defined in the Appendix. Corresponding t-statistics are reported in brackets. The t-statistics are based on robust standard errors clustered at the firm level. The notation ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| Panel A: Relative size ((target/(target+acquirer)) | | | | | |
|---|---|---|---|---|---|
| Dependent variable | Deal ($<$ 1 pct) | Deal (1–2 pct) | Deal (2–5 pct) | Deal (5–10 pct) | Deal (10–25 pct) |
| | (1) | (2) | (3) | (4) | (5) |
| GPB (% of executives) | 0.018** | 0.018** | 0.005 | 0.005 | 0.005 |
| | [2.25] | [2.86] | [0.97] | [1.10] | [1.14] |
| Governance controls | Yes | Yes | Yes | Yes | Yes |
| Company controls | Yes | Yes | Yes | Yes | Yes |
| Industry $\times$ Year FE | Yes | Yes | Yes | Yes | Yes |
| N | 11678 | 11678 | 11678 | 11678 | 11678 |
| Adjusted-$R^2$ | 15.5% | 9.7% | 9.0% | 7.2% | 8.4% |
| Panel B: Deal characteristics | | | | | |
| Dependent variable | Cash deal | Mixed deal | Stock deal | Within-ind | Across-ind | Public-target |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| GPB (% of executives) | 0.028*** | 0.019** | -0.001 | 0.028*** | 0.015 | 0.019*** |
| | [2.72] | [2.29] | [-0.45] | [2.83] | [1.62] | [2.69] |
| Governance controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Company controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry $\times$ Year FE | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 11678 | 11678 | 11678 | 11678 | 11678 | 11678 |
| Adjusted-$R^2$ | 15.7% | 13.5% | 0.07% | 15.2% | 15.2% | 11.7% |

**Table 5**
**Incentives to Grow, Mergers and Governance**

The sample consists of 13597 firm-year observations from 2007 to 2017. The sample reduces to 11678 firm-year observations, when adding firm specific control variables. All specifications are linear probability models and include interacted 2-digit-SIC industry and year fixed effects. The dependent variable in all specifications is *Any Deal* which indicates whether the firm is an acquirer in that year. All specifications include the following governance control variables: CEO compensation delta, CEO-chairman duality indicator, CEO tenure, board size and the extent that the board is co-opted. Model (2) also includes the following additional firm specific control variables: firm size and age, cash/assets, capex/assets, OIBDA/assets and industry Tobin's Q. Growth-promoting bonuses (*GPB (% of executives)*) is measured as the fraction of executives of the firm who receive growth-promoting bonuses in that year. *CEO-chair duality* is an indicator variable that equals one if the CEO is also the chairman of the board. All variables are defined in the Appendix. Corresponding t-statistics are reported in brackets. The t-statistics are based on robust standard errors clustered at the firm level. The notation ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| | (1) | (2) |
|---|---|---|
| GPB (% of executives) | 0.022 | 0.018 |
| | [1.56] | [1.24] |
| GPB (% of executives) × CEO-chairman duality | 0.048** | 0.052** |
| | [2.43] | [2.53] |
| Governance controls | Yes | Yes |
| Company controls | No | Yes |
| Industry × Year FE | Yes | Yes |
| N | 13597 | 11678 |
| Adjusted-$R^2$ | 19.3% | 21.1% |

**Table 6**
**Incentives to Grow, Mergers and The Role of Cash**

The sample consists of 11678 firm-year observations from 2007 to 2017. All specifications are linear probability models and include interacted 2-digit-SIC industry and year fixed effects. The dependent variable model (1) is *Any Deal* which indicates whether the firm is an acquirer in that year. The dependent variable in model (2) (3) is *Stock deal* (*Cash deal*) which is an indicator variable that equals one if the deal is paid with stock (cash). All specifications include the following governance and firm specific control variables: CEO compensation delta, CEO-chairman duality indicator, CEO tenure, board size, the extent that the board is co-opted, firm size and age, cash/assets, capex/assets, OIBDA/assets and industry Tobin's Q. Growth-promoting bonuses (*GPB (% of executives)*) is measured as the fraction of executives of the firm who receive growth-promoting bonuses in that year. *Cash/assets* is the lagged cash to assets ratio. All variables are defined in the Appendix. Corresponding t-statistics are reported in brackets. The t-statistics are based on robust standard errors clustered at the firm level. The notation ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| Dependent variable | Any deal | Stock deal | Cash deal |
|---|---|---|---|
| | (1) | (2) | (3) |
| GPB (% of executives) | 0.019 | -0.001 | 0.003 |
| | [1.21] | [-0.25] | [0.20] |
| GPB (% of executives) × Cash/assets | 0.161** | -0.002 | 0.169*** |
| | [2.27] | [-0.16] | [2.78] |
| Governance controls | Yes | Yes | Yes |
| Company controls | Yes | Yes | Yes |
| Industry × Year FE | Yes | Yes | Yes |
| N | 11678 | 11678 | 11678 |
| Adjusted-$R^2$ | 21.1% | 7.0% | 15.8% |

## Table 7
## Incentives to Grow and Acquirer Returns

This table reports estimates from OLS regressions that examine the acquirer returns in takeovers. The sample consists of takeovers announced between 2007 to 2017 involving acquirer and targets that were both publicly listed U.S. firms. The sample consists of 1271 observations. The sample reduces to 1188 and 957 observations, when adding governance and firm specific control variables, respectively. The dependent variable is the market reaction around the takeover announcement for the acquirer which is computed as the acquirer's 5-day cumulative dollar abnormal returns around the takeover announcement (CAR[-3,+1]). Model (2) includes the following deal characteristics as control variables: cash deal indicator, mixed deal indicator, the logarithm of the dollar value of the transaction and the within-industry indicator. Model (3) includes the additional following governance control variables: CEO compensation delta, CEO-chairman duality indicator, CEO tenure, board size, the extent that the board is co-opted. Model (4) includes the additional following firm specific control variables: firm size and age, cash/assets, capex/assets, OIBDA/assets and industry Tobin's Q. In Panel A, the main independent variable is growth-promoting bonuses (*GPB (% of executives)*) measured as the fraction of executives who receive growth-promoting bonuses in that year. In Panel B, the main independent variable is the logarithm of the dollar value of the growth promoting bonuses granted to the executives in that year (*GPB (log $ value)*). All specifications include 2-digit-SIC industry and year fixed effects. All variables are defined in the Appendix. Corresponding t-statistics are reported in brackets. The t-statistics are based on robust standard errors clustered at the bidder firm level. The notation ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| Panel A: | | | | |
|---|---|---|---|---|
| **Dependent variable: Acquirer CAR[-3,+1]** | | | | |
| | (1) | (2) | (3) | (4) |
| GPB (% of executives) | -1.186*** | -1.160*** | -1.097*** | -0.965*** |
| | [-3.94] | [-3.83] | [-3.38] | [-2.76] |
| Deal controls | No | Yes | Yes | Yes |
| Governance controls | No | No | Yes | Yes |
| Company controls | No | No | No | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| N | 1271 | 1271 | 1188 | 957 |
| Adjusted-$R^2$ | 8.2% | 9.6% | 11.5% | 14.6% |
| Panel B: | | | | |
| **Dependent variable: Acquirer CAR[-3,+1]** | | | | |
| | (1) | (2) | (3) | (4) |
| GPB (log $ value) | -0.077*** | -0.074*** | -0.069*** | -0.057** |
| | [-3.94] | [-3.75] | [-3.35] | [-2.53] |
| Deal controls | No | Yes | Yes | Yes |
| Governance controls | No | No | Yes | Yes |
| Company controls | No | No | No | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| N | 1271 | 1271 | 1188 | 957 |
| Adjusted-$R^2$ | 8.1% | 9.5% | 11.4% | 14.4% |

**Table 8**

**Incentives to Grow, Offer Premium and Target Returns**

This table reports estimates from OLS regressions that examine the offer premium and target returns in takeovers. The sample consists of takeovers announced between 2007 to 2017 involving acquirer and targets that were both publicly listed U.S. firms. In Panel A, to be able to estimate the takeover premium we restrict the sample to deals in which the entire target firm is acquired in the deal. In Panel A the sample consists of 602 observations. The sample reduces to 556 and 447 observations, when adding governance and firm specific control variables, respectively. In Panel B the sample consists of 1271 observations. The sample reduces to 1188 and 957 observations, when adding governance and firm specific control variables, respectively. In Panel A, the dependent variable is the *Offer premium*, estimated as the initial offer price per share divided by the target's stock price 50 trading days before the takeover announcement. In Panel B, the dependent variable is the the market reaction around the takeover announcement for the target which is computed as the target's 5-day cumulative dollar abnormal returns around the takeover announcement (CAR[-3,+1]). Model (2) includes the following deal characteristics as control variables: cash deal indicator, mixed deal indicator, the logarithm of the dollar value of the transaction and the within-industry indicator. Model (3) includes the additional following governance control variables: CEO compensation delta, CEO-chairman duality indicator, CEO tenure, board size, the extent that the board is co-opted. Model (4) includes the additional following firm specific control variables: firm size and age, cash/assets, capex/assets, OIBDA/assets and industry Tobin's Q. The main independent variable is growth-promoting bonuses (*GPB (% of executives)*) measured as the fraction of executives who receive growth-promoting bonuses in that year. All specifications include 2-digit-SIC industry and year fixed effects. All variables are defined in the Appendix. Corresponding t-statistics are reported in brackets. The t-statistics are based on robust standard errors clustered at the target firm level. The notation ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| Panel A: | | | | |
|---|---|---|---|---|
| Dependent variable: Offer premium | | | | |
| | (1) | (2) | (3) | (4) |
| GPB (% of executives) | 5.226* | 4.901* | 3.297 | 3.682 |
| | [1.81] | [1.70] | [1.09] | [1.05] |
| Deal controls | No | Yes | Yes | Yes |
| Governance controls | No | No | Yes | Yes |
| Company controls | No | No | No | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| N | 602 | 602 | 556 | 447 |
| Adjusted-$R^2$ | 23.9% | 28.0% | 29.8% | 30.4% |
| Panel B: | | | | |
| Dependent variable: Target CAR[-3,+1] | | | | |
| | (1) | (2) | (3) | (4) |
| GPB (% of executives) | 3.184** | 2.869* | 2.290 | 1.794 |
| | [2.01] | [1.87] | [1.40] | [0.97] |
| Deal controls | No | Yes | Yes | Yes |
| Governance controls | No | No | Yes | Yes |
| Company controls | No | No | No | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| N | 1271 | 1271 | 1188 | 957 |
| Adjusted-$R^2$ | 10.9% | 14.2% | 14.3% | 15.3% |

# Table 9
# Incentives to Grow and Wealth Gains from Takeovers

This table reports estimates from OLS regressions that examine wealth gains in takeovers. The sample consists of takeovers announced between 2007 to 2017 involving acquirer and targets that were both publicly listed U.S. firms. The sample consists of 1271 observations. The sample reduces to 1188 and 957 observations, when adding governance and firm specific control variables, respectively. The dependent variable is the combined gain of the acquirer and target around the takeover announcement which is computed as the sum of the bidder and target's 5-day cumulative dollar abnormal returns around the takeover announcement (CAR[-3,+1]) divided by the sum of the acquirer 's and target's market capitalizations 50 trading days before the takeover announcement. Model (2) includes the following deal characteristics as control variables: cash deal indicator, mixed deal indicator, the logarithm of the dollar value of the transaction and the within-industry indicator. Model (3) includes the additional following governance control variables: CEO compensation delta, CEO-chairman duality indicator, CEO tenure, board size, the extent that the board is co-opted. Model (4) includes the additional following firm specific control variables: firm size and age, cash/assets, capex/assets, OIBDA/assets and industry Tobin's Q. The main independent variable is growth-promoting bonuses (*GPB (% of executives)*) measured as the fraction of executives who receive growth-promoting bonuses in that year. All specifications include 2-digit-SIC industry and year fixed effects. All variables are defined in the Appendix. Corresponding t-statistics are reported in brackets. The t-statistics are based on robust standard errors clustered at the bidder firm level. The notation ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| Panel A: | | | | |
|---|---|---|---|---|
| Dependent variable: Combined Gains | | | | |
| | (1) | (2) | (3) | (4) |
| GPB (% of executives) | -0.780*** | -0.806*** | -0.748** | -0.579* |
| | [-2.67] | [-2.82] | [-2.47] | [-1.76] |
| Deal controls | No | Yes | Yes | Yes |
| Governance controls | No | No | Yes | Yes |
| Company controls | No | No | No | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| N | 1271 | 1271 | 1188 | 957 |
| Adjusted-$R^2$ | 9.4% | 11.8% | 12.8% | 16.8% |

## Table 10
## Incentives to Grow and Gains to Executives from M&A Deals

This table reports the payout for growth-promoting bonus grants (GPB) to executives. The sample consists of Incentive Lab firms that completed an M&A in the period between 2007 and 2017. GPB grants are defined as grants whose payment is made contingent upon meeting a threshold in one of the following metrics: sales, market share, bookings, production, book value, net asset value or acquisitions. GPB payout (exec.) is the estimated payout to the executive from his GPB contract. GPB payout (firm) is the sum of GPB payout to the top executives in the firm. Realized payout is estimated using the the first realized sales after the completion of the deal reported by Compustat and the threshold, target and maximum value of the GPB contracts. Counterfactual payout is estimated using counterfactual sales (i.e., what would have been in the absence of the merger) and the threshold, target and maximum value of the GPB contracts. The sample in Panel A includes acquirers in deals with both publicly traded and privately held target firms. In Panel A, to estimate the counterfactual sales of the acquirer, we subtract the weighted target's sales (weighted by the fraction of the year remaining in the fiscal from the date the deal is completed) from the first realized sales after deal completion. We estimate target's sales by using the median Enterprise Value (EV) to sales multiple for the target firms' 2-digit-SIC industry multiplied by the EV of the target firm. The sample in Panel B includes acquirers in deals only with publicly traded targets. In Panel B, to estimate the coutnerfactual sales of the acquirer, we subtract the weighted target's sales (weighted by the fraction of the year remaining in the fiscal from the date the deal is completed) from the first realized sales after deal completion. We estimate target's sales by the actual pre-merger target sales reported in Compustat before the deal completion. The Sample in Panel C includes includes acquirers in deals with both publicly traded and privately held target firms. However, we limit the sample to those executives that meet their GPB threshold using the realized sales but miss it using the counterfactual sales (i.e, meet the threshold only due to the merger). Lost compensation is the estimated expected present value of the lost compensation associated with the potential forced turnover of the executive following missing his GPB contract's thresholds. The present value is estimated assuming an annuity (discount rate=10% and N=the difference between the mean of tenure of executives with longer tenure and the executive's tenure). Marginal likelihood of forced turnover if GPB threshold is missed is assumed 1.5% (see Bennett et al. 2017). t-statistics are computed for one-tailed test of the mean against 0. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels.

| Panel A: Public and private target firms | | | | | |
|---|---|---|---|---|---|
| | Realized Payout | Counterfactual Payout | | | |
| | Mean($) | Mean($) | N | Difference($) | t-stat |
| GPB payout (exec.) | 527,902 | 445,903 | 2628 | 81,999 | 3.03*** |
| GPB payout (firm) | 2,157,585 | 1,822,449 | 643 | 335,136 | 2.51*** |
| Panel B: Only public targets | | | | | |
| | Realized Payout | Counterfactual Payout | | | |
| | Mean($) | Mean($) | N | Difference($) | t-stat |
| GPB payout (exec.) | 699,818 | 488,071 | 506 | 211,747 | 1.55* |
| GPB payout (firm) | 3,000,913 | 2,092,916 | 118 | 907,997 | 1.33* |
| Panel C: If meets threshold only due to the merger | | | | | |
| | Realized Payout | Counterfactual Payout | | | |
| | Mean($) | Mean($) | N | Difference($) | t-stat |
| GPB payout (exec.) | 1,323,067 | 578,269 | 260 | 744,797 | 2.79*** |
| Lost compensation (exec.) | 0 | -307,558 | 260 | 307,558 | |

# Table 11
## Comparison of Firm Characteristics for Firms with and without GPB

This table reports summary statistics for firm characteristics. "with (without) GPB" indicates firms that do (not) grant GPB contracts to at least one of their executives in that year. All other variables are defined in the Appendix. In Panel A, the sample consists of 12,169 firm-year observations from 2007 to 2017. In Panel B, the sample includes only 3,316 firm-year observations in which the firm is a bidder in an M&A deal in that year. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively in the differences in means of the variables in the two groups using the t-test for means. Differences with fixed effects are within-industry-year differences in means of the variables in the two groups.

| Panel A: Firms with and without GPB contracts - all firms | | | | | | |
|---|---|---|---|---|---|---|
| | with GPB (N=4,645) | | without GPB (N=7,524) | | Difference | |
| Variable | Mean | Median | Mean | Median | Raw | With fixed effects |
| Firm size (log assets) | 8.511 | 8.373 | 8.866 | 8.780 | -0.3549*** | 0.0112 |
| Firm age | 26.897 | 23.000 | 28.839 | 25.000 | -1.9412** | -0.3921 |
| Cash/assets | 0.171 | 0.123 | 0.118 | 0.071 | 0.0531*** | 0.0071 |
| OIBDA/assets | 0.144 | 0.140 | 0.119 | 0.110 | 0.0247*** | 0.0126** |
| Sales growth | 0.050 | 0.029 | 0.032 | 0.013 | 0.0179* | 0.0119 |
| M/B | 4.427 | 2.844 | 3.291 | 2.066 | 1.1355*** | 0.4219* |
| Capex/assets | 0.038 | 0.027 | 0.042 | 0.027 | -0.0041** | 0.0015 |
| CEO delta | 5.736 | 5.792 | 5.633 | 5.648 | 0.103** | -0.0151 |
| CEO-chairman duality | 0.483 | 0.000 | 0.518 | 1.000 | -0.0351** | -0.0053 |
| Co-opted board | 0.442 | 0.375 | 0.454 | 0.417 | -0.0123** | -0.0157 |
| Board size | 9.640 | 9.000 | 9.922 | 10.000 | -0.2813* | 0.0377 |
| CEO tenure | 7.206 | 5.422 | 7.929 | 6.000 | -0.7233** | -0.8008* |

| Panel B: Firms with and without GPB contracts - sample of bidder firms in M&A deals | | | | | | |
|---|---|---|---|---|---|---|
| | with GPB (N=4,645) | | without GPB (N=7,524) | | Difference | |
| Variable | Mean | Median | Mean | Median | Raw | With fixed effects |
| Firm size | 8.744 | 8.539 | 9.090 | 8.886 | -0.3462*** | -0.1762 |
| Firm age | 26.798 | 23.000 | 27.809 | 24.000 | -1.0114** | -0.7082 |
| Cash/assets | 0.176 | 0.131 | 0.111 | 0.073 | 0.0653*** | 0.0248** |
| OIBDA/assets | 0.151 | 0.142 | 0.123 | 0.117 | 0.0285*** | 0.0142** |
| Sales growth | 0.063 | 0.036 | 0.043 | 0.020 | 0.0192* | 0.0136 |
| M/B | 4.370 | 2.924 | 2.990 | 2.137 | 1.38*** | 0.8221** |
| Capex/assets | 0.034 | 0.025 | 0.038 | 0.022 | -0.0037** | 0.0018 |
| CEO delta | 5.966 | 6.006 | 5.837 | 5.891 | 0.1292** | -0.078 |
| CEO-chairman duality | 0.531 | 1.000 | 0.523 | 1.000 | 0.0087* | 0.04 |
| Co-opted board | 0.439 | 0.375 | 0.463 | 0.429 | -0.0241** | -0.0058 |
| Board size | 9.789 | 10.000 | 10.060 | 10.000 | -0.2709** | -0.1619 |
| CEO tenure | 7.087 | 5.507 | 7.709 | 6.000 | -0.6222** | -0.3244 |

**Table A1**
**Summary Statistics for Control Variables**

This table reports descriptive statistics for the control variables used in our study of growth-promoting bonuses. The sample consists of Compustat firms for the period between 2007 to 2017. All variables are lagged. All variables are defined in the Appendix.

|  | Mean | SD | p1 | p25 | Median | p75 | p99 | N |
|---|---|---|---|---|---|---|---|---|
| CEO delta | 857 | 1,749 | 4 | 113 | 304 | 774 | 10,250 | 15,080 |
| CEO-chair duality | 0.47 | 0.5 | 0 | 0 | 0 | 1 | 1 | 14,860 |
| Co-opted board (%) | 0.45 | 0.32 | 0 | 0.18 | 0.4 | 0.7 | 1 | 14,300 |
| CEO tenure | 7.64 | 6.75 | 0.5 | 2.81 | 5.67 | 10.22 | 32.02 | 14,860 |
| Board size | 9.88 | 2.15 | 5 | 8 | 10 | 11 | 15 | 14,669 |
| Industry Q | 2 | 0.71 | 1.03 | 1.42 | 1.87 | 2.42 | 4.05 | 14,413 |
| Cash/assets | 0.13 | 0.14 | 0 | 0.03 | 0.08 | 0.19 | 0.64 | 14,414 |
| OIBDA/assets | 0.13 | 0.09 | -0.09 | 0.07 | 0.12 | 0.17 | 0.39 | 13,641 |
| Capex/assets | 0.04 | 0.04 | 0 | 0.01 | 0.03 | 0.05 | 0.22 | 14,390 |
| Firm size | 25,408 | 64,975 | 232 | 2,467 | 6,424 | 18,629 | 496,943 | 14,414 |
| Firm age | 30 | 17 | 2 | 16 | 26 | 46 | 60 | 15,863 |

## Table A2
## Incentives to Grow and Acquirer Returns - Including Deal with Private Targets

This table reports estimates from OLS regressions that examine the acquirer returns in takeovers. The sample consists of takeovers announced between 2007 to 2017 involving acquirer and targets that were the the acquirer is publicly listed U.S. firms but the target can be either publicly traded U.S firm or privately held US firm. The sample consists of 4386 observations. The sample reduces to 4105 and 3323 observations, when adding governance and firm specific control variables, respectively. The dependent variable is the market reaction around the takeover announcement for the acquirer which is computed as the acquirer's 5-day cumulative dollar abnormal returns around the takeover announcement (CAR[-3,+1]). Model (2) includes the following deal characteristics as control variables: cash deal indicator, mixed deal indicator, the logarithm of the dollar value of the transaction and the within-industry indicator. Model (3) includes the additional following governance control variables: CEO compensation delta, CEO-chairman duality indicator, CEO tenure, board size, the extent that the board is co-opted. Model (4) includes the additional following firm specific control variables: firm size and age, cash/assets, capex/assets, OIBDA/assets and industry Tobin's Q. In Panel A, the main independent variable is growth-promoting bonuses (*GPB (% of executives)*) measured as the fraction of executives who receive growth-promoting bonuses in that year. In Panel B, the main independent variable is the logarithm of the dollar value of the growth promoting bonuses granted to the executives in that year (*GPB (log $ value)*). All specifications include 2-digit-SIC industry and year fixed effects. All variables are defined in the Appendix. Corresponding t-statistics are reported in brackets. The t-statistics are based on robust standard errors clustered at the bidder firm level. The notation ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| Panel A: | | | | |
|---|---|---|---|---|
| Dependent variable: Acquirer CAR[-3,+1] | | | | |
| | (1) | (2) | (3) | (4) |
| GPB (% of executives) | -0.493*** | -0.497*** | -0.516*** | -0.358** |
| | [-3.23] | [-3.28] | [-3.30] | [-2.08] |
| Deal controls | No | Yes | Yes | Yes |
| Governance controls | No | No | Yes | Yes |
| Company controls | No | No | No | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| N | 4386 | 4386 | 4105 | 3323 |
| Adjusted-$R^2$ | 3.4% | 3.6% | 4.4% | 6.5% |
| Panel B: | | | | |
| Dependent variable: Acquirer CAR[-3,+1] | | | | |
| | (1) | (2) | (3) | (4) |
| GPB (log $ value) | -0.035*** | -0.035*** | -0.037*** | -0.022** |
| | [-3.56] | [-3.59] | [-3.64] | [-1.98] |
| Deal controls | No | Yes | Yes | Yes |
| Governance controls | No | No | Yes | Yes |
| Company controls | No | No | No | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| N | 4386 | 4386 | 4105 | 3323 |
| Adjusted-$R^2$ | 3.5% | 3.6% | 4.5% | 6.4% |

# Variable Definitions

**Table A3**
**Variable Definitions**
This table contains the definitions and descriptions of the variables used in the paper.

| Variable | Definition |
| --- | --- |
| GPB (% of executives) | Fraction of named executives in Execucomp in the firm who have bonuses explicitly tied to firm size/growth. Measured as of end of fiscal year in firm-year summary statistics; measured as of calendar month for merger outcomes analysis. (Source: ISS IncentiveLab) |
| GPB (log $ value) | Dollar value of bonuses explicitly tied to firm size/growth. Constructed separate for all named executives, CEO only, and CFO only, respectively. Measured as of end of fiscal year in firm-year summary statistics; measured as of calendar month for merger outcomes analysis. (Source: ISS IncentiveLab) |
| Relative target size | The ratio of the target firm's market capitalization (if public, or deal value if private) to the sum of the market capitalizations of the bidder and the target (or deal value), where market capitalizations are measured 50 trading days before the announcement (Source: CRSP and SDC). |
| Any deal | Equals 1 if the firm is an acquirer in an M&A deal and 0 otherwise (Source: SDC). |
| Cash deal | Equals 1 if the firm is an acquirer and the method of payment offered by bidder was consisted only of cash and 0 otherwise (Source: SDC). |
| Stock deal | Equals 1 if the firm is an acquirer and the method of payment offered by bidder was consisted only of the bidder's stock and 0 otherwise (Source: SDC). |
| Mixed deal | Equals 1 if the firm is an acquirer and the method of payment offered by the bidder consisted of both the bidder's stock and cash and 0 otherwise (Source: SDC). |
| Offer premium | Initial offer price per share divided by the target's stock price 50 trading days before the takeover announcement (Source: CRSP and SDC). |

| | |
|---|---|
| Combined gain | The sum of the target and bidder's cumulative dollar abnormal returns in the (-5,+1) day-window around the announcement of the takeover divided by the sum of the target and bidder's market capitalizations 50 trading days before the takeover announcement date (Source: CRSP). |
| Acquirer CAR (-i,+j) | The cumulative abnormal return of the acquirer from day i to j relative to the announcement of the deal, computed using a 4-factor return model (Fama and French (1993), Carhart (1997)) with a 250-dayestimation window ending 30 days before the announcement with at least 60 observations (Source: CRSP) |
| Target CAR (-i,+j) | The cumulative abnormal return of the target from day i to j relative to the announcement of the deal, computed using a 4-factor return model (Fama and French (1993), Carhart (1997)) with a 250-dayestimation window ending 30 days before the announcement with at least 60 observations (Source: CRSP) |
| Cash/assets | Cash and Short-term Investments divided by total assets (Source: Compustat). |
| OIBDA/assets | Operating income before depreciation and amortization divided by total assets (Source:Compustat). |
| CEO-chairman duality | Equals 1 if the CEO is also the Chair of the board of directors and 0 otherwise (Source: Execucomp and BoardEx). |
| Co-opted board | The fraction of the directors on the board appointed after the current CEO took office (Source: Lalitha Naveen). |
| Sales | Net sales divided by total assets (Source: Compustat). |
| Tobin's Q (industry-level) | The average ratio of the market value of assets to book value of assets computed following Baker and Wurgler (2002) for the 2-digit SIC industry. (Source: Compustat). |
| Firm size | The logarithm of firm's total assets (Source: Compustat). |
| Firm age | The number of years since the firm first appeared in Compustat (Source: Compustat). |

| | |
|---|---|
| CEO compensation delta | The change (in thousands of dollars) in the dollar value of the executive's wealth derived from ownership of stock and stock options in the firm when the firm's stock price changes by 1%. We calculate the delta of the executive's compensation as the sum of the deltas of the options holdings and the delta of the stock holdings. The delta of options holdings are calculated based on the methodology in Guay (1999) and Core and Guay (1999) (Source: Execucomp, calculated using code provided by Lalitha Naveen). |
| Capex/assets | Property, plant and equipment divided by total assets (Source: Compustat). |
| Board size | The logarithm of the number of directors firm's board (Source: BoardEx). |
| CEO tenure | Number of years since the CEO has become the CEO (Source: Execucomp). |