

# **Do CEO Short-Term Performance Goals Facilitate Better Performance?**

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## **Abstract**

The study examines the extent to which short-term performance goals for CEOs affect actual performance. We find that firms with CEOs who meet their performance goals tend to have better accounting performance, specifically for the performance metrics that are specified in their compensation contracts. We further find evidence that executives could their own goals to favor their interests. For one thing, powerful CEOs are more likely to meet the compensation goals and set easier goals for themselves. Additionally, CEOs meet their goals by engaging in earnings management behaviors. To make matters worse, earnings management behaviors are exacerbated in those firms when their compensation goals are directly linked with earnings goals. Overall, short-term incentives might boost short-term performance but do not perform in aligning management with long-term goals.

JEL Classification Codes: G30, G34

Keywords: Managerial Short-Termism; Powerful CEOs, Earnings Management

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## **Do CEO Short-Term Performance Goals Facilitate Better Performance?**

### **Abstract**

The study examines the extent to which short-term performance goals for CEOs affect actual performance. We find that firms with CEOs who meet their performance goals tend to have better accounting performance, specifically for the performance metrics that are specified in their compensation contracts. We further find evidence showing that CEOs might attempt to game the system by setting their own goals. For one thing, powerful CEOs are more likely to meet the compensation goals and set easier goals for themselves. Additionally, CEOs meet their goals by engaging in earnings management behaviors. To make matters worse, real earnings management behaviors are exacerbated in those firms when their compensation goals are directly linked with earnings goals. Overall, short-term incentives might boost short-term performance but do not perform in aligning management with long-term goals.

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## 1. Introduction

The concept of pay-for-performance, where managers are compensated with stock and options that benefit from the company's growth, has been advocated as a resolution to the conflict of interest between shareholders and managers. While studies by Frydman and Jenter (2010) and Edmans et al. (2017) suggest that such compensation can result from optimal contracting in a competitive market for managerial talent, the reality in publicly traded companies often presents a different picture. Bebchuk and Fried (2003, 2004) highlight a significant concern: managers might design contracts to primarily maximize their personal benefits. This practice, which supports the 'rent extraction' view, indicates a stark contrast to the traditional agency model and raises questions about the efficacy of pay-for-performance in its current form.

In response to the criticism of paying without performance, firms have been shifting toward compensation packages that are closely linked to preset performance goals. Bettis et al. (2017) find that the usage of performance-based equity awards to top executives in large U.S. companies has grown from 20 to 70 percent from 1998 to 2012. These performance-based grants are diverse, varying across multiple dimensions (Edmans et al., 2017). The metrics to measure performance goals can be based on market valuations, accounting figures, or other criteria set by the board. When the firm meets the performance-based goals, the executive will receive the award from the grant linked with these goals.

In our study, we explore whether CEOs meet short-term performance targets and the consequences. Using the CEO performance goal data from the Incentive Lab database, covering the years 1998 to 2019, our primary interest is in assessing if CEOs achieve their set performance goals, which are typically tied to key financial metrics such as EPS, Earnings (EBIT, EBITDA, EBT, NI, and Operating Income), Profitability Ratios (Profit Margin, ROA, ROE, ROI), Cashflow (FFO, Cashflow) and Sales goals.

We find that firms setting specific performance goals generally exhibit improved outcomes in targeted areas. Companies setting EPS goals, for example, usually attain higher EPS, while those focusing on earnings goals frequently report elevated earnings.

This trend emphasizes the impact of well-defined performance objectives in bolstering financial achievements.

However, we also find evidence that executives could their own goals to favor their interests (Lambert et al., 1993; Core et al., 1999; Fahlenbrach, 2009; Armstrong et al., 2012). For one thing, we find that firms with powerful CEOs are more likely to meet the target goal, and at the same time, we demonstrate that CEOs might yield their powers to set goals that are easier to achieve by comparing with the analyst consensus.

Also, we find that CEOs might sacrifice long-term value for short-term targets by examining the relation between earnings management and meeting the short-term goals. Using discretionary accruals as a proxy for accrual-based earnings management (Jones, 1991; Hribar and Nichols, 2007), we find that firms that meet the target goal have higher abnormal accruals than those that miss the goal.

This study adds to the growing body of research on managerial short-termism. A key focus in existing literature is how such incentives might prompt CEOs to prioritize immediate returns, potentially undermining long-term value (Graham et al. 2005; Terry 2015). Our research contributes a nuanced perspective to this discourse. We provide evidence that while short-term incentives can boost a firm's financial performance in the immediate term, they also carry long-term costs. Specifically, we observe that CEOs driven by meeting short-term goals are more inclined to engage in activities that distort long-term outcomes, such as earnings management.

Moreover, our study delves into how powerful CEOs may exploit their position for personal benefit.. Previous research, such as that by Core et al. (1999), highlights that powerful CEOs tend to have higher total pay than their less influential counterparts. Bebchuk and Fried (2003) argue that in firms where managers wield more power, compensation tends to be higher or less performance-sensitive, aligning with the managerial power approach. We build on this by showing that powerful CEOs are more likely to meet performance-based goals than less powerful ones, indicating their ability to leverage influence to achieve compensation tied to these goals. This finding underscores the necessity for shareholders to closely monitor CEO behavior to ensure alignment with long-term corporate objectives.

The rest of the paper is structured as follows. Section 2 is the Section review relating to this study. Section 3 describes the data and variable construction. Chapter 4 discusses the empirical analysis. Conclusions are provided in section 5.

## **2. Literature Review**

### **2.1. Firm performance and CEO compensation**

Performance-based pay has emerged as the premier model for executive compensation, asserting that managers' remuneration should align with their performance. There's a rich body of literature exploring the link between CEO compensation and firm performance. The nature of executive compensation in the U.S has evolved over time (Hall and Liebman, 1998). There was a notable shift in the composition of CEO pay: from predominantly cash awards in the 1970s to stock options in the 1980s and 1990s, and then to performance-based stocks in the 2000s (Edmans et al., 2017). Jensen and Murphy (1990) notably analyzed the pay-performance relationship for CEOs, finding a correlation where a \$1,000 increase in shareholder wealth results in a \$3.25 change in CEO wealth.

The escalation in CEO compensation levels has been extensively examined. Some researchers attribute this rise to powerful executives shaping their compensation, while others consider it a result of optimal contracting in a competitive managerial talent market (Frydman and Jenter, 2010). Edmans et al. (2017) further dissect the increasing compensation trend, identifying three primary perspectives. The 'shareholder value' view posits that compensation structures are designed to maximize shareholder value, influenced by competitive markets and the need for effective managerial incentives (Hermalin, 2005; Gabaix and Landier, 2008; Edmans et al., 2009; Taylor, 2010; Garrett and Pavan, 2012).

The concept of 'rent extraction' in executive compensation suggests that executives may design contracts primarily for personal gain. This notion challenges the traditional agency model's assumption that contracts are primarily aimed at maximizing shareholder value. Instead, as Bebchuk and Fried (2003, 2004) and others argue, these contracts often serve as tools for executives to enhance their personal benefits. This can manifest in forms

of compensation that are not easily traceable by shareholders, termed 'hidden compensation' (Edmans et al., 2017).

One common form of hidden compensation is stock options grants. When shareholders lack a full understanding of the cost of stock options (Murphy, 2002), these can serve as a means to discreetly increase executive pay. Similarly, the valuation challenges of performance-based equity grants, as noted by Walker (2015), can obscure the true value received by executives, reducing market-based discipline on executive pay. Other mechanisms for rent extraction include practices like spring loading and backdating options (Yermack, 1997; Lie, 2005), as well as less visible forms of compensation like perks, pensions, and severance pay (Bebchuk and Fried, 2004).

The likelihood of rent extraction increases in scenarios where the CEO is more powerful and corporate governance structures are weak. Lambert et al. (1993), Core et al. (1999), Fahlenbrach (2009), and Armstrong et al. (2012) find that more powerful CEOs often secure more favorable compensation packages. Core et al. (1999) found that CEO power correlates positively with compensation levels. Bebchuk and Fried (2003) argue that executive power is typically stronger in firms with ineffective boards, no major blockholders or external shareholders, a small percentage of institutional shareholders, or anti-takeover provisions. Adams et al. (2005) add that CEOs also gain power when serving as board chairs or being company founders, leading to more volatile firm performance.

## **2.2 Managerial Short-termism**

Porter (1992) introduces the concept of 'managerial myopia,' describing it as the tendency to underinvest in long-term, intangible projects like R&D, advertising, and employee training, in favor of short-term goals. Efficient market theory posits that managers focused on high stock prices wouldn't succumb to such myopia, as argued by Jensen (1986), who believes managerial myopia is a concern only when executives fail to monitor stock prices closely. However, Stein (1989) counters that even in efficient markets, a focus on current stock prices can exacerbate myopic behaviors among managers.

Empirical evidence supports these theoretical contentions. Graham et al. (2005) and Terry (2015) demonstrate that managers often compromise long-term value for short-term earnings manipulation and performance targets. Gigler et al. (2014) and Edmans et al. (2016) suggest that increased public disclosure can prompt managers to make myopic investment choices, preferring short-term earnings over total cash flows.

The rise of performance-vesting equity awards in U.S. corporations, as observed by Bettis et al. (2018), introduces another dimension to this issue. Such awards can incentivize managers to achieve explicit performance goals but may also encourage short-term actions detrimental to long-term interests. Bennett et al. (2017) and Gao (2021) find that the pay-performance system, particularly when performance is near the target, can lure executives to take actions with adverse long-term effects.

Earnings management emerges as a key tool in achieving these short-term targets, as detailed by Roychowdhury (2006). Cheng and Warfield (2005), Dechow et al. (2003), and Dechow and Sloan (1991) highlight how executives engage in practices like reducing discretionary expenditures or cutting R&D and SG&A expenses to boost short-term compensation. Edmans et al. (2017) and Ladika and Sautner (2020) further show that executives cut investment when their incentives are more short-term focused.

The role of analysts in this ecosystem is also significant. Graham et al. (2005) report that a majority of CFOs consider analyst consensus estimates crucial. Jensen and Meckling (1976) and Healy and Palepu (2001) emphasize the monitoring role of security analysts in reducing agency costs. Bartov et al. (2002) and Skinner and Sloan (2002) find that meeting or beating analysts' forecasts significantly impacts stock returns.

Finally, the relationship between executive power and earnings forecasts is explored by Mande and Son (2012) and Armstrong et al. (2022). They find that powerful CEOs are more likely to meet or exceed analysts' forecasts, using this leverage to manipulate earnings and receive higher compensation. Chen et al. (2015) observe that a drop in analyst coverage can lead to higher CEO pay, indicating the influence of external monitoring on executive compensation.

This body of research collectively illustrates the complex interplay between executive compensation, short-term incentives, market pressures, and the potential for managerial myopia and earnings manipulation.

### **3. DATA AND VARIABLE CONSTRUCTION**

#### **3.1. Sample construction**

Data on performance grants with detailed information for all named executives are from ISS Incentive Lab. The data provide grants of plan-based awards, including performance goals and metrics for performance awards collected from the CD&A section of proxy disclosures. The data also covers executive information, award types, grant date, number of grants, performance periods, payout structures, and vesting schedules. We match Incentive Lab and ExecuComp to retrieve other executive components. Since the Incentive Lab uses CIK (Central Index Key) as the key identifier while ExecuComp uses the GVKEY (Global Company Key), we ensure that by hand-matching executive names to link the two datasets. We focus on CEOs' absolute performance grants by keeping only the CEO in the Incentive Lab, where grants are linked to an absolute performance metric. We then match the financial data from Compustat using GVKEY to obtain the firm's actual performance. The initial sample contains 115,521 observations of absolute performance grants to CEOs at 1,974 firms from 1998 – 2019.

To compare the goals with the actual performance to determine whether the CEOs meet the goal, we only consider the standard accounting metrics in Incentive Lab in this study. Incentive Lab provides several accounting metrics that are standardized. This limits the grants to those metrics linked with the level, the margin, and the growth rate of Cash flow, EBIT, EBITDA, EBT, EPS, Earnings, FFO, Operating Income, Profit Margin, ROA, ROE, ROI, and Sales metrics.

To solve the ambiguous definition problem that metrics might be measured in more than one way and might deviate from the Compustat example, we construct a conservative approach by choosing the lowest measurement that corresponds to the broader metric type. For example, when we check the calculation for Operating income



metric that appeared in Incentive Lab data, a number of measures are involved, such as net operating income, operating income before depreciation, and earnings before interest, etc. With the conservative approach, we keep the minimum value and set it as the actual performance for that metric used for comparing. For instance, the operating income metric has two different calculations, including net operating income (NOI) and Operating income before depreciation and amortization (OIBDA), where the actual value of NOI and OIBDA is \$1 billion and \$1.5 billion, respectively. With the conservative approach, we choose the metric with the lowest value, i.e., the NOI with the actual value is \$1 billion, as the actual performance to compare with the goal. We use the conservative approach because this minimum value implies a safe side not to inflate the actual performance results that the CEO can achieve.

We then exclude grants with missing values on the metric type and grants that do not specify any goal. Given our analyses on whether the firm meets its goals, we restrict the sample to three types of goals, including performance goals for a Threshold payout, Target payout, and Max payout. The remaining sample contains 50,586 observations at 1,701 firms from 1998 - 2019.

Another challenge to the plan-based award data is that one specific grant can be tied with multiple performance goals. For example, a CEO can be required to meet several goals to achieve a payout, such as EPS and EBITDA goals, etc. To address the issue, we keep the grant with the highest amount in dollars paid out for non-equity awards by firm-year level. If the grant is tied with equity awards or option awards, we keep the grant with the highest fair value at the grant date. Then, following Bennett et al. (2017), we combine the performance metrics into five main categories as follows: EPS; Earnings (EBIT, EBITDA, EBT, NI, and Operating Income); Profitability ratios (Profit Margin, ROA, ROE, ROI); Cashflows (FFO, Cashflow); Sales. These classifications are based on the measurements of the metrics. For instance, the Earnings category contains EBIT, EBITDA, EBT, NI, and Operating Income that have a similar nature in measurement. Thus grouping these metrics makes it easy to compare the unit within the Earnings category. Under the conservative perspective, we then keep the most challenging goal within a range of goals of every category, i.e., we choose the most difficult goal within the category. For example, in the Profitability ratios category, a firm sets three performance

goals involving ROA, ROE, and ROI, with values of 0.5, 0.6, and 0.7, respectively. Under the conservative method, we choose the most difficult goal within these three metrics: ROI with the value of 0.7 as the goal for the Profitability ratios category.

### **3.2. Variables**

#### **Assessing the Outcomes of Performance Goal (MEET)**

The main variable is MEET, defined as a binary variable where MEET is equal to one if a firm meets the compensation goal and zero otherwise. There are different yardsticks to which a CEO is considered the compensation package. There are usually three payout levels, threshold, target, and maximum, in the performance grants, which can be achieved by meeting corresponding performance goals. Specifically, the executive receives a threshold, target, or max payout when actual performance is at or above the threshold, target, or max goal, respectively. Below the threshold goal, the payout is zero. In this study, our main analysis is on the target goal.

To the extent of absolute performance grants based on accounting metrics in the form of level, we compare the Target goal with the actual performance. If the actual performance is higher than the target goal value, then MEET will equal 1, otherwise is 0. For absolute performance grants in the form of growth and margin, we first attain the actual growth rate and margin and then compare them with the growth rate goal and margin goal, respectively. We construct the MEET variable for the Threshold and Max goals similar to the Target goals.

#### **Easy goal**

To determine whether CEOs set their own goals below analysts' expectations, we use the I/B/E/S Adjusted Consensus database to retrieve the analysts' estimates. Particularly, we rely on analysts' forecast earnings per share (EPS) because EPS is not only a critical performance measurement of a firm but also one of the most popular metrics, with around 18% of the grants in our sample linking the payout to an EPS goal. We then remove the firm-year observations of foreign firms and keep only the annual

periodicity estimates, i.e., keep only the record for a year-end estimate in the I/B/E/S data.

We determine whether the CEO set an easy goal by comparing the actual EPS performance with the analysts' consensus estimates (Check Appendix D for detailed variable construction). Mainly, we choose the consensus estimate that is recorded just right before the shareholder meeting date in the same year.

We gather these estimates by choosing the analyst estimates calculated on the closest date before the shareholder meeting date, i.e., the date which that firm announces its compensation plan for the executives in the fiscal year. We specify a firm that sets easy goals when its target goal is lower than the analyst consensus estimates. Because the analyst estimates represent the external consensus about the company prospect in the estimating period, if the CEO sets their target below this consensus, the CEO is trying to achieve a goal that is lower than the company's ability.

After attaining the estimates, we compare this consensus estimate with the target goal and create a variable, namely "EASY\_GOAL", where EASY\_GOAL equals one if the consensus estimate is higher than the target goal set by the CEO, otherwise, it will be zero. We determine the "EASY\_GOAL" variable for the threshold and max goals in the same manner as the target goals. To the extent of this study, we use target goals for the final sample.

We aggregate the data for the goals with multiple metrics to have one observation per CEO-year-metric. First, we keep the grant with the highest amount in dollars paid out for non-equity awards by firm-year level. If the grant is tied with equity awards or option awards, then we keep the grant with the highest fair value at the grant date. Under the conservative perspective, for those grants still have more than one metric, we then keep the most challenging goal within a range of goals of each company for each year, i.e., we choose the hardest EPS goal if that firm has multiple EPS goals.

## **Powerful CEO**

We follow Adams et al. (2005) to construct powerful CEO proxies. Our first measure is FOUNDER, a binary variable that equals one if the CEO is one of the company's founders and zero otherwise. The second measure is CHAIR, a binary variable that equals one if the CEO accumulates both the titles of chairman and CEO. In addition, we also consider the pay difference of the CEO versus other top executives (PAY\_GAP), which is calculated by the natural logarithm of the difference between total CEO compensation and the median value of other executive compensation (Kini and Williams, 2012). We calculate PAY\_GAP as well as determine FOUNDER and CHAIRMAN using data on ExecuComp.

### **Earnings management**

We consider discretionary accruals (ACCRUAL) as a proxy for accrual-based earnings management (Jones, 1991; Hribar and Nichols, 2007), where discretionary accruals are computed using the modified Jones model.

We then construct the real earnings management proxies. Following Bennett et al. (2017), we use the Research and Development (R&D) and Selling, General and Administrative (SG&A) expenditures to detect real earnings management behaviors. In which R&D and SG&A variables are calculated as one thousand times the year-on-year change in R&D expenditures and SG&A expenses, respectively. Then these two variables are normalized by book value of total assets.

### **3.3. Types of Performance Goals**

[Insert Table 1 Here]

Panel A of Table 1 reports the summary characteristics of grants based on the goal metrics. Sales goal is the most popular metric in the sample, with 19% (9,723 out of 50,567) of the performance-based grants. EPS goal is the following metrics with approximately 18% (9,001 out of 50,567) of the grants. The award types can comprise a non-equity-based, equity-based, and option-based payout which is classified from a number of award types such as cash, stock, or option payout. In our sample, most grants are tied to non-equity-based payout except for the ROI metric, with 67.42% of grants involving some non-equity

payout. This is followed by equity-based payout with 31.49% of grants, and the option is the least type of payout linking to the grants. Panel B reports the distribution based on the metrics of the variables that compare actual performance to corresponding performance goals. The SALE goals are the most reached when compared with other metrics. Specifically, SALE goals have the highest number of grants that meet the threshold goal and target goals, respectively. Panel C of Table 1 gives the distribution of Meet the goal versus Miss the goal classified by year. The percentage of grants that firms meet the threshold, target, and max goals is 57.2%, 44.9%, and 26.2%, respectively. The decreasing trend in the meet-goals percentage reflects the structure of the compensation arrangement, where the threshold goals usually are achievable, and the target goals are more challenging for the managers.

[Insert Table 2 Here]

Table 2 presents the distribution of MEET the target goal versus MISS the target goal classified by categories. EPS, Earnings, and Profitability ratios category are those that have the number of firms that missed higher than meet the target goal. Notably, 89.2% (1,733 out of 1,942) of firms in the sample missed the target goals classified in the Profitability ratios category. Firms that set goals classified in the Cashflows and SALES category have a higher percentage of achieving than missing the target goal. Table 3 presents the distribution of Easier goals by year. In this study, we only consider the sample of the EPS metric from 2009 to 2018. As can be seen, half of the EPS goals are set easier during this period.

### **3.4 Summary statistics**

[Insert Table 4 Here]

Table 4 reports the summary statistics of the main variables and control variables for the entire sample. All continuous variables are winsorized at the top and bottom 1 percent of their distributions. The mean value of MEET\_TAR, MEET\_THRE, and MEET\_MAX is 0.45, 0.57, and 0.26, respectively, suggesting that the threshold goals usually are achievable, and the target goals are more challenging while the max goals are the most

difficult to meet. Additionally, the mean value of the EPS grants determined as the easier goal is 0.499, showing that half of the EPS goals are set easier.

Table 4 also reports the summary statistics of various CEO characteristics, including founder CEO duality, chairman CEO duality, tenure, CEO pay gap, the ratio of CEO total compensation to the sum of all top executives' total compensation as well as firm characteristics, including size, return on asset, leverage, liquidity, earning per share, earnings before interest and taxes, return on equity, SALE, operating cash flow.

Regarding the earnings management summary statistic, Table 4 also provides information on various proxies. The mean value of the discretionary accruals variable is 0.081, and the mean value of one thousand times the year-on-year change in SG&A, and R&D expenditure normalized by the book value of total assets are 9.5 and 2.5, respectively. In this study, we also use real earnings management to examine the relation between meeting the target and engaging in earnings management. The mean values of abnormal cash flow from operations (ACFO), abnormal production cost (APRO), abnormal discretionary expenditure (AEXP) are 0.026, -0.61, and 0.21, respectively. In addition, the sum of real activities manipulation proxies, measured as  $ACFO - APRO + AEXP$ , has the mean value of 0.379.

## **4. Empirical Analysis**

### **4.1 Meeting performance goals and short-term profitability**

Performance-based compensation plans can be designed to provide the kinds of high-powered incentives for managers to achieve the firm's performance target. Bennett et al. (2017) show that many firms exceed their goals by a small margin compared to those that fall short of the goal. They argue that CEOs might manage performance reports to meet the target. Cheng et al. (2015) find that a firm with a CEO's compensation pay tied to EPS goals is more likely to conduct repurchase shares. Thus the CEO can increase the probability to receive a bonus. Therefore, we expect that a firm that meets the goals is associated with a higher actual performance than those that miss the goals. This phenomenon is due to the incentives from performance-based awards that make them attempt to reach the goal and enhance the firm performance accordingly.

**Hypothesis 1: Firms with CEOs that meet the target goals perform better in accounting performance.**

To examine how achieving the target relates to short-term profitability, we begin the analysis by running the following regression:

$$\begin{aligned} \text{PROFITABILITY}_{i,t} = & \alpha + \beta_1 * \text{MEET}_{\text{TAR}_{i,t}} + \beta_2 * \text{FOUNDER}_{i,t-1} + \beta_3 * \text{CHAIRMAN}_{i,t-1} \\ & + \beta_4 * \text{TENURE}_{i,t-1} + \beta_5 * \text{TENURE}_{i,t-1}^2 + \beta_6 * \text{SIZE}_{i,t-1} \\ & + \beta_7 * \text{LEV}_{i,t-1} + \beta_8 * \text{LIQUIDITY}_{i,t-1} + \beta_9 * \text{PROFITABILITY}_{i,t-1} \\ & + \text{Two - digit SIC industry dummies} + \text{Year dummies} + \varepsilon_{i,t} \quad (1) \end{aligned}$$

Where the dependent variable, "PROFITABILITY" , is the short-term profitability proxies, including:

- + EPS: Basic earnings per share excluding extraordinary items
- + EBIT\_GROWTH: the percentage change in earnings before interest and taxes with respect to the previous fiscal year
- + ROA: return on assets
- + SALE\_GROWTH: the percentage change revenue with respect to the previous fiscal year
- + CASHFLOW\_GROWTH: the cashflow growth rate, the percentage change in income before extraordinary items plus depreciation and amortization with respect to the previous fiscal year.

The main independent study is the MEET\_TAR variable, defined as a binary variable where MEET\_TAR is equal to 1 if the CEO meets the target goal and 0 otherwise in the current year.

Control variables include CEO managerial proxies, such as founder CEO duality (FOUNDER), chairman CEO duality (CHAIRMAN), and CEO tenure (TENURE), CEO

tenure square (TENURE2r). In addition to CEO proxies, we control for firm characteristics, including firm size (SIZE), Leverage (LEV), and liquidity (LIQUIDITY) (Bennett et al., 2017; Gao, 2021). Besides, we also control for the lagged profitability in year t-1. All these control variables have been taken lagged in year t-1. Finally, we include year fixed effects to control for time-series effects as well as the industry fixed effects at the two-digit SIC code level. We estimate equation (1) with standard errors clustered at the firm level. The sample for this test includes one observation per metric-firm-year. The results are reported in Table 6.

[Insert Table 6 Here]

Column 1 shows the model (1) result for the EPS category. A positive and significant coefficient on MEET\_TAR indicates that firms meeting the EPS goals have higher actual EPS performance than firms that miss the EPS goals in the same fiscal year. In column 2, we also find a positive and significant coefficient when considering the Earnings category, suggesting that firms meeting the Earnings goals have higher actual earnings before interest and taxes growth performance than firms that miss the Earnings goals. We observe similar results from the regression of the Profitability ratios category and Sales category in columns 3 and 5, respectively. It is worth noting that when firms meet the target goals in the Profitability ratios category and Sales category, they strongly associate with a higher return on assets and sale growth rate, respectively. However, the coefficient of the regression of the Cashflows category is insignificant, indicating that whether the firm meets the target goal does not relate to the cashflow growth rate.

Overall, the regression results indicate that when the firm meets the target goal, they tend to have higher actual performance corresponding with the performance metric applied in the compensation grant. This emphasizes the bright side of the pay-performance compensation, where firms can achieve higher performance by linking the CEO's compensation to the short-term performance they aim to improve.

To test whether firms that met goals in the previous year is associated with the short-term profitability in the current year, we run the same regression but replace the current MEET\_TAR variable with the lagged MEET\_TAR ( $MEET\_TAR_{i,t-1}$ ).



$$\begin{aligned} \text{PROFITABILITY}_{i,t} = & \alpha + \beta_1 * \text{MEET\_TAR}_{i,t-1} + \beta_2 * \text{FOUNDER}_{i,t-1} + \beta_3 * \text{CHAIRMAN}_{i,t-1} \\ & + \beta_4 * \text{TENURE}_{i,t-1} + \beta_5 * \text{TENURE}_{i,t-1}^2 + \beta_6 * \text{SIZE}_{i,t-1} \\ & + \beta_7 * \text{LEV}_{i,t-1} + \beta_8 * \text{LIQUIDITY}_{i,t-1} + \beta_9 * \text{PROFITABILITY}_{i,t-1} \\ & + \text{Two - digit SIC industry dummies} + \text{Year dummies} + \varepsilon_{i,t} \quad (2) \end{aligned}$$

Where the dependent variable, PROFITABILITY<sub>*i,t*</sub>, is the short-term profitability proxies in year *t*, including earnings per share excluding extraordinary items (EPS), the percentage change in earnings before interest and taxes (EBIT\_GROWTH), return on assets (ROA), the percentage change revenue (SALE\_GROWTH), and the cashflow growth rate (CASHFLOW\_GROWTH).

The main independent in model (2) is the MEET\_TAR<sub>*t-1*</sub> variable, defined as a binary variable where MEET\_TAR<sub>*t-1*</sub> is equal to 1 if the CEO meets the target goal and 0 otherwise in the previous year. We keep all the control variables as same as the model (1), including CEO attribute proxies, firm characteristics, and lagged profit in year *t-1*. All these control variables have been taken lagged in year *t-1*. We also include year fixed effects to control for time-series effects as well as the industry fixed effects at the two-digit SIC code level. We estimate equation (2) with standard errors clustered at the firm level.

[Insert Table 7 here]

As can be seen in Table 7, the regression results from the EPS category (column 1), Earnings category (column 2), and Cashflows category (column 4) show that the coefficient of MEET\_TAR<sub>*t-1*</sub> is insignificant on the earnings per share, earnings before interest and taxes growth rate, and cashflow growth rate, respectively. It is interesting that the coefficient on MEET\_TAR<sub>*t-1*</sub> is negative and significant with the return on assets in column 3, suggesting that firms meeting the target last year are associated with a decrease in the return on assets in the current year when considering the Profitability ratios category. On the other hand, we find that the coefficient on lagged MEET\_TAR is positive and significant on the sale growth in the Sales category.

In summary, the evidence in Table 7 indicates that whether the firm meets the target goal in the previous year is not guaranteed to achieve higher actual performance corresponding with the performance metric in the current year, except for the goals relating to the sale metric.

## 4.2 Do powerful CEOs set their own goals?

While setting short-term performance goals do achieve better performance outcome, Bebchuk and Fried (2003) argue that in firms where managers have relatively more power, the compensation will be higher or less sensitive to performance. Therefore, we extend our analysis to examine the relation between powerful CEOs and how likely they are to meet the target goal.

### **Hypothesis 2: Powerful CEOs are more likely to meet the target goal.**

CEOs can also set easier goals to meet the target more easily and achieve the compensation payout accordingly. To test this Hypothesis, we first investigate whether the CEOs who set easier goals are more likely to meet them. we determine whether the CEO set an easy goal by comparing the target goal set by the firm with the analysts' consensus estimates. Unlike Armstrong et al. (2022), we choose the consensus estimate that is just right before the shareholder meeting because the analyst estimates represent the external consensus about the company prospect in the estimating period. If the CEO sets their target below this consensus, she is trying to achieve a goal lower than the company's ability and, therefore, easier to achieve.

To examine the relation between powerful CEOs and how likely they meet the target goal, we use the logit regression as follows

$$\begin{aligned} \text{logit}(\text{MEET\_TAR}_{i,t}) = & \alpha + \beta_1 * \text{PAY\_GAP}_{i,t} + \beta_2 * \text{FOUNDER}_{i,t} + \beta_3 * \text{CHAIRMAN}_{i,t} \\ & + \beta_4 * \text{TENURE}_{i,t} + \beta_5 * \text{TENURE}_{i,t}^2 + \beta_6 * \text{SIZE}_{i,t} \\ & + \beta_7 * \text{ROA}_{i,t} + \beta_8 * \text{LEV}_{i,t} + \beta_9 * \text{MTB}_{i,t} + \beta_{10} * \text{LIQUIDITY}_{i,t} \\ & + \text{Two - digit SIC industry dummies} + \text{Year dummies} + \varepsilon_{i,t} \quad (3) \end{aligned}$$

where the dependent variable, MEET\_TAR, is defined as a binary variable where MEET\_TAR is equal to 1 if the CEO meets the target goal and 0 otherwise in the current year.

The main independent variables are a set of variables proxy for the powerful CEO measurements:

- + PAY\_GAP: Difference of pay of CEO versus other top executives. This variable is calculated by the natural logarithm of the difference between total CEO compensation and the median value of total other executive compensation.
- + FOUNDER: chairman founder CEO duality
- + CHAIRMAN: chairman CEO duality
- + TENURE: CEO tenure and CEO tenure squared (TENURE<sup>2</sup>).

In addition, we control for firm characteristics, including firm size (SIZE), leverage (LEV), return on assets (ROA), market-to-book ratio (MTB), and liquidity (LIQUIDITY). we include year fixed effects to control for time-series effects as well as the industry fixed effects at the two-digit SIC code level. We estimate equation (3) with standard errors clustered at the firm level. The sample for this test includes one observation per metric-firm-year. The results are provided in Table 8.

[Insert Table 8 Here]

We follow Adams et al., (2005) consider CEOs to be more powerful when they serve as chairman of the board and have the status of a founder. The regression results from the EPS category (column 1) and Cashflows category (column 4) show that the coefficient of chairman CEO duality (CHAIRMAN) is positive and significant with meeting the target goal variable. Moreover, we also find that the coefficient of founder CEO duality (FOUNDER) is positive and significant when considering the Sales category (column 5). In the Profitability ratios and Sales category, it can be observed that the coefficient of PAY\_GAP, the pay of the CEO versus other top executives, is positive and significant (column 3, 5). Besides, no powerful CEO proxy variables are significant in the Earnings category. In summary, Table 8 reports estimates of logit models to show that powerful CEOs are more likely to meet the target goal. These results support the Hypothesis that managers can use their influence to meet target goals in the firm.

Additionally, Mande and Son (2012) find that firms with the CEO have relative power within the top executive team are associated with a higher probability of meeting

or barely beating financial analysts' earnings forecasts. we form a test to investigate whether CEOs use their power to set goals that are easier to exceed the goals.

**Hypothesis 3: Powerful CEOs are more like to set easier goals.**

To determine whether or not the performance goals are easy, we rely on analysts' earnings per share (EPS) because EPS is not only a critical performance measurement of a firm but also one of the most popular metrics, with around 18% of the grants in our sample linking the payout to an EPS goal. To test whether or not our Easy\_Goal assessment is reliable, we run the logit regressions as follows:

$$\begin{aligned} \text{logit}(\text{MEET\_TAR}_{i,t}) = & \alpha + \beta_1 * \text{EASY\_GOAL}_{i,t} + \beta_2 * \text{MTB}_{i,t} + \beta_3 * \text{SIZE}_{i,t} + \beta_4 * \text{LEV}_{i,t} \\ & + \beta_5 * \text{LIQUIDITY}_{i,t} + \beta_6 * \text{TENURE}_{i,t} + \beta_7 * \text{PAY\_SLICE}_{i,t} \\ & + \beta_8 * \text{NO\_ESTIMATES}_{i,t} + \beta_9 * \text{ESTIMATE\_STDEV}_{i,t} \\ & + \text{Two – digit SIC industry dummies} + \text{Year dummies} + \varepsilon_{i,t} \quad (4) \end{aligned}$$

[Insert Table 9 Here]

The results are provided in Table 9. In column 1, the positive coefficient on EASY\_GOAL indicates that CEOs who set easier goals are more likely to meet the target goal, which lends support to our measure Easy\_Goal. The estimation results are consistent with other sets of controls in column 2, including the CEO characteristic as well as controls relating to analyst estimates.

To understand if powerful CEOs set the easier goal in their firm, we test the following regression model:

$$\begin{aligned} \text{logit}(\text{EASY\_GOAL}_{i,t}) = & \alpha + \beta_1 * \text{FOUNDER}_{i,t} + \beta_2 * \text{CHAIRMAN}_{i,t} + \beta_3 * \text{TENURE}_{i,t} \\ & + \beta_4 * \text{TENURE}_{i,t}^2 + \beta_5 * \text{PAY\_GAP}_{i,t} + \beta_6 * \text{PAY\_SLICE}_{i,t} \\ & + \beta_7 * \text{SIZE}_{i,t} + \beta_8 * \text{MTB}_{i,t} + \beta_9 * \text{LEV}_{i,t} + \beta_{10} \\ & \quad * \text{LIQUIDITY}_{i,t} \\ & + \text{Two – digit SIC industry dummies} + \text{Year dummies} + \varepsilon_{i,t} \quad (5) \end{aligned}$$

Where the dependent variable, EASY\_GOAL, is defined as a binary variable equal to 1 if the consensus estimate is higher than the target goal set by the CEO, otherwise, it will be 0.

The main independent study is a set of variables proxy for the powerful CEO measurements:

+ FOUNDER: founder CEO duality

+ CHAIRMAN: chairman CEO duality

+ TENURE: CEO tenure and CEO tenure square (TENURE2)

+ PAY\_GAP: Difference of pay of CEO versus other top executives. This variable is calculated by the natural logarithm of the difference between total CEO compensation and the median value of total other executive compensation

+ PAY\_SLICE: the ratio of CEO total compensation to the sum of all top executives' total compensation

We also account for firm characteristics controls, including firm size (SIZE), leverage (LEV), market-to-book ratio (MTB), and liquidity (LIQUIDITY). In addition, we include year fixed effects to control for time-series effects as well as the industry fixed effects at the two-digit SIC code level. we estimate equation (5) with standard errors clustered at the firm level. The sample for this test includes one observation per metric-firm-year.

[Insert Table 10 Here]

The results are provided in Table 10. As seen in columns 1, 2, and 3, the coefficients on chairman CEO duality (CHAIRMAN) and founder CEO duality (FOUNDER) are positive and statistically significant at the 1% level. This evidence is consistent with the Hypothesis that firms with powerful CEOs tend to set easier goals for them to achieve more easily.

### **4.3 Meeting performance goals and earnings management behaviors**

Earnings management is one of the tools that executives use to meet short-term targets. Several studies examining the relationship between earnings management and corporate performance find that managers can use earnings management activities to increase short-term earnings (Dechow et al., 2003; Roychowdhury, 2006; Cheng and Warfield, 2005). A number of researches highlight the effects of earnings management on the extent of corporate performance. When firms manipulate operating activities such as R&D, capital investments, and production expenditure, these behaviors cause straying from ordinary operations and thus could potentially lead to a decline in subsequent performance. Specifically, Gunny (2005) used a set of variables to proxy for real earnings management activities, including myopically investing in R&D to increase income, myopically investing in SG&A to increase revenue, recognizing gains from sales of long-term assets and investments, and cutting prices to boost sales in the current period and /or overproducing to decrease COGS expense. She finds that firms engaged in real earnings management experience a significant negative decline in their subsequent earnings as well as operating cash flows. To test whether CEOs meet their goals by engaging in earnings management activities, we form a number of tests relating to discretionary accruals as well as real earnings management (Jones, 1991; Cohen et al., 2008; Kim, Park, and Wier, 2012).

**Hypothesis 4: CEOs who meet the target goal are positively correlated with earnings management behaviors.**

To capture the relation between earnings management using discretionary accrual to meet the target, we estimate the following model:

$$\begin{aligned}
 ACCRUAL_{i,t} = & \alpha + \beta_1 * MEET\_TAR_{i,t} + \beta_2 * FOUNDER_{i,t} + \beta_3 * CHAIRMAN_{i,t} \\
 & + \beta_4 * TENURE_{i,t} + \beta_5 * TENURE_{i,t}^2 + \beta_6 * SIZE_{i,t} \\
 & + \beta_7 * ROA_{i,t} + \beta_8 * LEV_{i,t} + \beta_9 * LIQUIDITY_{i,t} \\
 & + \text{Two - digit SIC industry dummies} + \text{Year dummies} + \varepsilon_{i,t} \quad (6)
 \end{aligned}$$

Where the dependent variable is the signed abnormal accruals and is calculated following the procedure in Jones (1991). The main independent variable is MEET\_TAR, a binary variable that equals 1 if the CEO meets the target goal and 0 otherwise. We also

include CEO characteristics and firm conditions as additional controls with year and industry fixed effects in the model (6).

[Insert Table 11 Here]

Table 11 reports the results. In the EPS category (column 1), Earnings category (column 2), and Cashflows category (column 4), the estimated coefficient on MEET\_TAR is positive and significant, suggesting that firms that meet the target engage in earnings management through accruals. However, the coefficients on MEET\_TAR in the Profitability ratios and Sales category are insignificant. To better understand whether firms engage in earnings management activities, we further test the Hypothesis that firms meeting the target goal are associated with real earnings management.

## **5. Conclusion**

In our study, we conduct extensive analyses to explore both the advantages and the potential downsides associated with short-term incentives in performance-based compensation systems. We first examine the relationship between meeting set targets and the firm's short-term profitability. We find that firms achieving their targets typically show enhanced actual performance in line with the chosen performance metrics in their compensation plans. However, meeting targets in one year does not necessarily predict improved performance in the subsequent year. This finding underscores the positive aspects of pay-for-performance schemes, where aligning CEO compensation with specific short-term objectives can lead to improved firm performance.

We also explore the strategies CEOs use to meet these goals, shedding light on the less favorable aspects of the CEO pay-performance relationship. We find that CEOs might use their influence to achieve targets or set less challenging goals. Interestingly, firms with more powerful CEOs often establish easier targets, possibly to facilitate goal attainment. Furthermore, our study investigated whether CEOs resort to earnings management to meet these goals, potentially to the detriment of long-term firm health. We find that firms meeting their targets are more inclined to manage earnings through accruals than those missing their targets. Our findings suggest that while short-term

incentives may boost immediate financial performance, they do not necessarily align with the long-term objectives of the firm.

This study enriches the executive compensation literature by highlighting the complex interplay between benefits and potential long-term costs in performance-based CEO compensation plans. It contributes to our understanding of the implications of short-term incentives for firm performance, as well as the broader discussion on managerial behavior, emphasizing the need for vigilant shareholder oversight of CEO actions.



**Table 1: Distribution and summary characteristics of grants to the firm’s CEO linked to an absolute accounting-based metric**

Panel A reports the summary characteristics of grants based on the metric applied. There are three main award types, including *non-equity-based*, *equity-based*, and *option-based payout*, which are classified from a number of different award types such as cash, stock, restricted stock, option payout, etc. Panel B reports the distribution based on the metrics of the variables that compare actual performance to corresponding performance goals. *MEET\_THRE* is a binary variable that equals one if the CEO meets the threshold goal and 0 otherwise. *MEET\_TAR* is a binary variable that equals one if the CEO meets the target goal and 0 otherwise. *MEET\_MAX* is a binary variable that equals one if the CEO meets the max goal and 0 otherwise. Metrics linked with the goals in the compensation contract contain Cash flow, EBIT, EBITDA, EBT, EPS, Earnings, FFO, Operating Income, Profit Margin, ROA, ROE, ROI, and Sales. Panel C reports the distribution of meeting and missing the goals of the grant based on year. The data covers the period 1998–2019. The compensation data are from Incentive Lab (IL), Compustat, and ExecuComp.

Panel A: Distribution of grant characteristics based on metrics applied

	Cashflow	EBIT	EBITDA	EBT	EPS	Earnings	FFO	Operating Income	Profit Margin	ROA	ROE	ROI	Sales
Number of grants	4,763	1,185	5,020	1,584	9,011	3,930	862	6,301	1,484	857	2,156	3,691	9,723
Non-equity-based payout	3,427	945	3,612	1,242	5,340	2,820	599	4,853	980	476	1,103	1,587	7,108
Equity-based payout	1,296	235	1,305	336	3,538	1,071	257	1,397	491	370	1,034	2,081	2,510
Option payout	38	5	96	6	130	35	6	44	13	10	19	22	98

Panel B: Distribution of meeting and missing the goals of grant based on the metrics applied

	Cashflow	EBIT	EBITDA	EBT	EPS	Earnings	FFO	Operating Income	Profit Margin	ROA	ROE	ROI	Sales	Total
<b>MISS_THRE</b>	808	176	801	154	2,083	552	54	953	376	248	574	1,345	821	8,945
<b>MEET_THRE</b>	1,388	345	1,655	479	1,855	703	63	1,496	51	84	267	131	3,461	11,978
<b>TOTAL</b>	2,196	521	2,456	633	3,938	1,255	117	2,449	427	332	841	1,476	4,282	20,923
<b>MISS_TAR</b>	1,462	459	2,024	286	3,779	1,119	80	2,103	621	348	1,287	1,926	2,604	18,098
<b>MEET_TAR</b>	1,719	418	1,718	752	2,214	1,146	83	2,032	66	107	271	177	4,026	14,729
<b>TOTAL</b>	3,181	877	3,742	1,038	5,993	2,265	163	4,135	687	455	1,558	2,103	6,630	32,827
<b>MISS_MAX</b>	1,247	404	1,680	303	3,021	898	54	1,666	350	246	820	1,399	2,561	14,649
<b>MEET_MAX</b>	903	129	490	284	784	341	46	588	6	72	39	47	1,466	5,195
<b>TOTAL</b>	2,150	533	2,170	587	3,805	1,239	100	2,254	356	318	859	1,446	4,027	19,844

Panel C: Summary of meeting and missing the goals of grant based on the year

	Total	1998-2005	2006-2013	2014-2019
	(1)	(2)	(3)	(4)
<b>MISS_THRE</b>	8,945	203	4385	4357
<b>MEET_THRE</b>	11,978	95	5956	5927
TOTAL	20,923	298	10341	10284
<b>MISS_TAR</b>	18,098	322	9348	8428
<b>MEET_TAR</b>	14,729	115	7848	6766
TOTAL	32,827	437	17196	15194
<b>MISS_MAX</b>	14,649	255	6998	7396
<b>MEET_MAX</b>	5,195	43	2625	2527
TOTAL	19,844	298	9623	9923

**Table 2: Distribution of MEET the target goal versus Miss the target goal in the categories.**

Table 2 presents the five main categories combined from the performance metrics. The EPS category contains EPS goals. The Earnings category contains EBIT, EBITDA, EBT, NI, and Operating Income goals. The Profitability ratios category contains Profit Margin, ROA, ROE, ROI goals. The Cashflows category contains FFO, Cashflow goals. The Sales category contains SALE goals. These category classifications are based on the measurements of the metrics. *MEET\_TAR* is a binary variable that equals one if the CEO meets the target goal and 0 otherwise. *MISS\_TAR* is a binary variable that equals one if the CEO misses the target goal and 0 otherwise. The data covers the period 1998–2019. The compensation data are from Incentive Lab (IL), Compustat, and ExecuComp.

		Total	1998-2005	2006-2013	2014-2019
<b>EPS</b>	MISS_TAR	1,874	47	1,041	786
	MEET_TAR	961	19	564	378
<b>Earnings</b>	MISS_TAR	3,935	22	1,897	2,016
	MEET_TAR	2,824	27	1,569	1,228
<b>Profitability ratios</b>	MISS_TAR	1,733	64	962	707
	MEET_TAR	209	4	118	87
<b>Cashflows</b>	MISS_TAR	1,163	8	583	572
	MEET_TAR	1,315	9	675	631
<b>Sales</b>	MISS_TAR	1,767	4	884	879
	MEET_TAR	2,132	6	1,012	1,114

**Table 3: Distribution of easier goal**

Table 3 presents the five main categories combined from the performance metrics. EASY\_GOAL is a binary variable that equals one if the consensus estimate is higher than the target goal set by the CEO and 0 otherwise. NOT EASY\_GOAL is a binary variable that equals one if the consensus estimate is lower than the target goal set by the CEO and 0 otherwise. The data covers the period 2009–2018. The compensation data are from Incentive Lab (IL), Compustat, and ExecuComp. The consensus estimate is from the Institutional Brokers' Estimate System (I/B/E/S) database.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
<b>NOT EASY_GOAL</b>	66	45	48	48	41	61	58	25	17	10	421
<b>EASY_GOAL</b>	36	59	47	32	51	62	41	31	28	31	419
<b>TOTAL</b>	102	104	95	80	92	123	99	56	45	41	840

#### **Table 4: Summary statistics**

This table reports the summary statistics of the main variables and control variables for the full sample. *MEET\_THRE* is a binary variable that equals one if the CEO meets the threshold goal and 0 otherwise. *MEET\_TAR* is a binary variable that equals one if the CEO meets the target goal and 0 otherwise. *MEET\_MAX* is a binary variable that equals one if the CEO meets the max goal and 0 otherwise. *FOUNDER* is a dummy variable that equals one if the CEO is one of the firm's founders and zero otherwise. *CHAIRMAN* is a dummy variable equals one if the CEO accumulates both the titles of CEO and chairman. *AGE* is the age of the CEO. *TENURE* is the number of years since the CEO was appointed CEO. *PAY\_GAP* is the pay difference of the CEO versus other top executives calculated by the natural logarithm of the difference between total CEO compensation and the median value of other executive compensation. *PAY\_SLICE* is the ratio of CEO total compensation to the sum of all top executives' total compensation. *SIZE* is the natural logarithm of total (book) assets. *ROA* is the return on assets calculated as the net income ratio to total assets. *LEV* is the ratio of the sum of debt divided by the book value of total assets. *LIQUIDITY* is the ratio of current liabilities divided by current assets. *EBIT* is the earnings before interest and taxes. *ROE* is the return on equity. *SALE* is the firm revenue. *CASHFLOW* is the income before extraordinary items plus depreciation and amortization. *ACCRUAL* is the discretionary accruals from the modified Jones model. *R&D* is one thousand times the year-on-year change in R&D expenditure normalized by book value of total assets. *SG&A* is one thousand times the year-on-year change in SG&A expenditure normalized by book value of total assets. *ACFO* is the abnormal cash flow from operations. *APRO* is the abnormal production cost. *AEXP* is the abnormal discretionary expenditure. *RAM* is the combined measure of real activities manipulation. *EASY\_GOAL* is a binary variable that equals one if the consensus estimate is higher than the target goal set by the CEO and 0 otherwise.

	N	Mean	Std.	Min	Max	p25	Median	p75
<i>Panel A: Meeting goals variables</i>								
MEET_TAR	32827	0.45	0.49	0.00	0.00	0.00	0.00	1.00
MEET_THRE	20923	0.57	0.49	0.00	1.00	0.00	1.00	1.00
MEET_MAX	19844	0.26	0.44	0.00	1.00	0.00	0.00	1.00
<i>Panel B: CEO managerial variables</i>								
FOUNDER	43557	0.06	0.24	0.00	1.00	0.00	0.00	0.00
CHAIRMAN	43557	0.51	0.50	0.00	1.00	0.00	1.00	1.00
AGE	42901	56.40	6.20	32.00	86.00	52.00	56.00	60.00
TENURE	44686	6.20	4.70	1.00	28.00	3.00	5.00	9.00
PAY_GAP	43638	8.30	0.94	.58	12.22	7.87	8.45	8.94
PAY_SLICE	44662	0.34	0.11	0.00	1.00	0.33	0.40	0.46
<i>Panel C: Firm-level characteristic</i>								
SIZE	50586	8.84	1.46	5.50	12.60	7.82	8.74	9.78
ROA	48965	0.13	0.08	-0.08	0.39	0.08	0.12	0.17
LEV	50586	3.20	5.07	-17.6	29.60	1.74	2.38	3.62
LIQUIDITY	43111	0.70	0.40	0.13	2.37	0.44	0.62	0.86
EPS	48824	2.17	3.44	-11.0	16.6	0.7	1.8	3.37
EBIT	49135	1376.5	2645.1	-339.8	17083	198.93	488.6	1261
ROE	47816	0.13	0.25	-0.84	1.41	0.06	0.12	0.19
SALE	49132	10507	19140	157.5	122489	1704.3	3946.7	10299
CASHFLOW	48698	1320.0	2638.3	-1019	17263	176.01	445	1217
<i>Panel D: Earnings management variables</i>								
ACCRUAL	45011	0.08	0.18	-16.4	2.34	-0.01	0.05	0.14
R&D	25833	2.53	18.81	-348.1	511.24	-0.02	0.33	3.69
SG&A	42847	9.48	46.79	-1015	670.83	-1.22	5.11	19.89
RAM	14266	0.38	0.48	-1.46	4.25	0.08	0.34	0.64
ACFO	47726	0.03	0.144	-1.89	2.32	-0.03	0.03	0.10
APRO	46175	-0.06	0.21	-1.19	2.04	-0.16	-0.05	0.02
AEXP	14400	0.21	0.32	-1.22	4.13	0.03	0.16	0.33
<i>Panel E: Easier goal variable</i>								
EASY_GOAL	840	0.49	0.5	0.00	1.00	0.00	0.00	1.00

**Table 5: Correlation matrix**

Panel A presents the correlation matrix of meet the target goal and CEO managerial variables. Panel B presents

correlation matrix of meet the target goal and firm financial conditions. Panel C presents correlation matrix of meet the target goal and earnings management variables.

Panel A: Correlation matrix of Meet the target goal and CEO managerial variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) MEET_TAR	1.000						
(2) FOUNDER	0.018	1.000					
(3) CHAIRMAN	-0.009	0.128	1.000				
(4) AGE	0.038	0.139	0.289	1.000			
(5) TENURE	0.027	0.271	0.320	0.452	1.000		
(6) PAY_GAP	0.004	-0.052	0.154	0.079	0.085	1.000	
(7) PAY_SLICE	-0.006	-0.019	0.105	0.015	0.126	0.549	1.000

Panel B: Correlation matrix of Meet the target goal and firm financial conditions

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) MEET_TAR	1.000									
(2) SIZE	-0.020	1.000								
(3) ROA	0.138	-0.118	1.000							
(4) LEV	-0.018	0.084	-0.028	1.000						
(5) LIQUIDITY	-0.004	0.363	-0.141	0.161	1.000					
(6) EPS	0.131	0.177	0.352	-0.061	0.003	1.000				
(7) EBIT	0.022	0.663	0.139	0.018	0.170	0.226	1.000			
(8) ROE	0.114	0.046	0.551	0.316	-0.004	0.524	0.165	1.000		
(9) SALE	-0.003	0.633	-0.000	0.077	0.200	0.160	0.761	0.085	1.000	
(10) CASHFLOW	0.037	0.664	0.100	-0.002	0.197	0.273	0.940	0.181	0.743	1.000



Panel C: Correlation matrix of Meet the target goal and earnings management variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) MEET_TAR	1.000							
(2) ACCRUAL	0.024	1.000						
(3) R&D	0.056	0.036	1.000					
(4) SG&A	0.116	0.044	0.501	1.000				
(5) RAM	0.088	-0.067	0.162	0.290	1.000			
(6) ACFO	0.082	-0.122	0.126	0.149	0.484	1.000		
(7) APRO	-0.069	0.183	-0.077	-0.201	-0.835	-0.408	1.000	
(8) AEXP	0.044	0.098	0.134	0.239	0.741	-0.109	-0.393	1.000

**Table 6: Meeting compensation goals and profitability**

The table presents the results from the OLS regression of meeting the compensation target in the current year on profitability. The dependent variables from Column 1 to Column 5 are EPS, EBIT\_GROWTH, ROA, CASHFLOW\_GROWTH, and SALE\_GROWTH, respectively. The main independent is MEET\_TAR. Other variable definitions are in Appendix A. In parentheses are standard errors adjusted for heteroscedasticity and clustering at the firm level. \*\*\*, \*\*, \* stand for statistical significance based on two-sided tests at the 1%, 5%, 10% level, respectively. We control for year and industry fixed effects in all regression, whose coefficient estimates are suppressed.

	(1) EPS <sub>t</sub>	(2) EBIT_ GROWTH <sub>t</sub>	(3) ROA <sub>t</sub>	(4) CASHFLOW_ GROWTH <sub>t</sub>	(5) SALE_ GROWTH <sub>t</sub>
	EPS Goals	Earnings Goals	Profitability Goals	Cashflow Goals	Sales Goals
MEET_TAR <sub>t</sub>	2.065*** (0.381)	0.481*** (0.172)	0.033** (0.015)	0.284 (0.694)	0.069*** (0.013)
FOUNDER <sub>t-1</sub>	-0.848** (0.385)	0.07 (0.165)	0.01 (0.008)	0.054 (1.077)	0.016 (0.020)
CHAIRMAN <sub>t-1</sub>	0.068 (0.287)	0.063 (0.166)	-0.001 (0.01)	1.360 (0.910)	-0.002 (0.010)
TENURE <sub>t-1</sub>	-0.121 (0.090)	-0.074* (0.040)	0.001* (0.001)	-0.169 (0.354)	-0.001 (0.003)
TENURE <sup>2</sup> <sub>t-1</sub>	0.009* (0.005)	0.002 (0.002)	-0.001 (0.000)	0.008 (0.017)	0.001 (0.000)
SIZE <sub>t-1</sub>	0.198** (0.096)	0.073 (0.066)	-0.006*** (0.002)	0.192 (0.431)	-0.017*** (0.004)
LEV <sub>t-1</sub>	0.001 (0.000)	0.001 (0.000)	0.000 (0.000)	-0.003 (0.002)	0.000 (0.001)
LIQUIDITY <sub>t-1</sub>	0.112 (0.303)	-0.310 (0.398)	0.0102*** (0.003)	3.713 (2.697)	-0.028 (0.017)
EPS <sub>t-1</sub>	0.465*** (0.095)				
EBIT_GROWTH <sub>t-1</sub>		-0.011 (0.008)			
ROA <sub>t-1</sub>			0.625*** (0.084)		
CASHFLOW_ GROWTH <sub>t-1</sub>				-0.016* (0.009)	
SALE_ GROWTH <sub>t-1</sub>					0.180** (0.0716)
Constant	7.366 (5.977)	0.556 (1.053)	0.094*** (0.033)	-3.929 (3.508)	0.193*** (0.065)
R <sup>2</sup>	0.380	0.032	0.644	0.031	0.145
N	1688	3356	859	1237	1902

**Table 7. Meeting compensation targets in the previous year and profitability**

The table presents the results from the OLS regression of meeting the compensation target in the previous year on profitability. The dependent variables from Column 1 to Column 5 are EPS, EBIT\_GROWTH, ROA, CASHFLOW\_GROWTH, and SALE\_GROWTH, respectively. The main independent is MEET\_TAR. Other variable definitions are in Appendix A. In parentheses are standard errors adjusted for heteroscedasticity and clustering at the firm level. \*\*\*, \*\*, \* stand for statistical significance based on two-sided tests at the 1%, 5%, 10% level, respectively. We control for year and industry fixed effects in all regression, whose coefficient estimates are suppressed.

	(1) EPS <sub>t</sub>	(2) EBIT_ GROWTH <sub>t</sub>	(3) ROA <sub>t</sub>	(4) CASHFLOW_ GROWTH <sub>t</sub>	(5) SALE_ GROWTH <sub>t</sub>
	EPS Goals	Earnings Goals	Profitability Goals	Cashflow Goals	Sales Goals
MEET_TAR <sub>t-1</sub>	0.036 (0.210)	0.133 (0.168)	-0.022*** (0.008)	0.818 (0.607)	0.030*** (0.011)
FOUNDER <sub>t-1</sub>	-0.857*** (0.316)	0.047 (0.170)	-0.001 (0.007)	0.588 (0.945)	0.026 (0.019)
CHAIRMAN <sub>t-1</sub>	0.092 (0.292)	0.060 (0.168)	-0.002 (0.003)	1.279 (0.916)	-0.017 (0.012)
TENURE <sub>t-1</sub>	-0.111 (0.093)	-0.074* (0.043)	0.002* (0.001)	-0.134 (0.350)	0.001 (0.003)
TENURE <sup>2</sup> <sub>t-1</sub>	0.009* (0.005)	0.002 (0.002)	-0.001 (0.001)	0.007 (0.016)	-0.001 (0.001)
SIZE <sub>t-1</sub>	0.129 (0.096)	0.085 (0.066)	-0.005** (0.002)	0.229 (0.402)	-0.017*** (0.005)
LEV <sub>t-1</sub>	-0.001 (0.001)	0.001 (0.001)	-0.001 (0.000)	-0.001 (0.002)	0.001* (0.001)
LIQUIDITY <sub>t-1</sub>	0.232 (0.311)	-0.301 (0.393)	0.009*** (0.003)	2.838 (2.261)	0.025 (0.039)
EPS <sub>t-1</sub>	0.511*** (0.071)				
EBIT_ GROWTH <sub>t-1</sub>		-0.012* (0.006)			
ROA <sub>t-1</sub>			0.625*** (0.085)		
CASHFLOW_ GROWTH <sub>t-1</sub>				-0.016 (0.010)	
SALE_ GROWTH <sub>t-1</sub>					0.161** (0.077)
Constant	0.536 (3.384)	2.015 (1.699)	0.088** (0.041)	-4.593 (4.445)	0.208*** (0.065)
R <sup>2</sup>	0.359	0.025	0.631	0.029	0.123
N	1629	3283	849	1214	1866

**Table 8. Meeting compensation goals and powerful CEOs**

The table presents the results from the logit regression of powerful CEO proxies on meeting the compensation target. The dependent variables from Column 1 to Column 5 are MEET\_TAR of the EPS, Earnings, Profitability, Cashflow, Sales goals. The main independent variable is PAY\_GAP, FOUNDER, CHAIRMAN. Other variable definitions are in Appendix A. In parentheses are standard errors adjusted for heteroscedasticity and clustering at the firm level. \*\*\*, \*\*, \* stand for statistical significance based on two-sided tests at the 1%, 5%, 10% level, respectively. We control for year and industry fixed effects in all regression, whose coefficient estimates are suppressed.

	(1)	(2)	(3)	(4)	(5)
	MEET_TAR	MEET_TAR	MEET_TAR	MEET_TAR	MEET_TAR
	EPS Goals	Earnings Goals	Profitability Goals	Cashflow Goals	Sales Goals
PAY_GAP	0.128 (0.100)	0.065 (0.055)	0.565** (0.244)	-0.020 (0.113)	0.126** (0.056)
FOUNDER	0.229 (0.305)	-0.255 (0.217)	0.539 (0.943)	0.006 (0.605)	0.534** (0.267)
CHAIRMAN	0.275** (0.137)	0.123 (0.109)	0.329 (0.373)	0.336** (0.169)	-0.080 (0.131)
TENURE	-0.077** (0.036)	-0.019 (0.026)	-0.099 (0.124)	0.0060 (0.048)	-0.006 (0.035)
TENURE <sup>2</sup>	0.004** (0.001)	0.001 (0.001)	0.002 (0.006)	-0.001 (0.002)	0.001 (0.002)
SIZE	-0.014 (0.072)	0.080 (0.050)	-0.103 (0.230)	0.324*** (0.102)	-0.072 (0.048)
ROA	6.610*** (1.185)	7.547*** (0.829)	10.82*** (2.672)	9.317*** (1.759)	1.027 (0.739)
LEV	-0.003 (0.009)	0.003* (0.002)	-0.087 (0.169)	-0.013 (0.010)	-0.009 (0.015)
MTB	0.001 (0.002)	-0.001 (0.001)	-0.434** (0.211)	-0.001 (0.004)	0.001 (0.003)
LIQUIDITY	-0.044 (0.181)	0.051 (0.138)	-0.403 (0.419)	-0.301 (0.271)	0.253* (0.137)
Constant	-2.459*** (0.941)	-2.454 (1.622)	-5.943** (2.585)	-4.443*** (1.172)	-0.011 (0.930)
Pseudo R <sup>2</sup>	0.101	0.105	0.196	0.108	0.066
N	2178	4430	970	1812	2729

**Table 9. Meeting compensation goals and easy goals**

The table presents the results from the logit regression of setting easier goals on meeting the compensation target. The dependent variable is MEET\_TAR. The main independent variable is EASY\_GOAL. Other variable definitions are in Appendix A. In parentheses are standard errors adjusted for heteroscedasticity and clustering at the firm level. \*\*\*, \*\*, \* stand for statistical significance based on two-sided tests at the 1%, 5%, 10% level, respectively. We control for year and industry fixed effects in all regression, whose coefficient estimates are suppressed.

	(1) MEET_TAR	(2) MEET_TAR
EASY_GOAL	3.085*** (0.329)	3.097*** (0.328)
MTB	-0.013 (0.018)	-0.019 (0.018)
SIZE	-0.278* (0.158)	-0.244 (0.157)
LEV	0.002 (0.005)	0.003 (0.005)
LIQUIDITY	0.853* (0.438)	0.885* (0.464)
TENURE		0.040 (0.029)
PAY_SLICE		1.119 (1.378)
NO_ESTIMATES		-0.031 (0.296)
ESTIMATE_STDEV		-0.627 (0.792)
Constant	0.832 (1.478)	0.036 (1.664)
Pseudo R <sup>2</sup>	0.306	0.314
N	604	603

**Table 10: Powerful CEOs and easy goals**

The table presents the results from the logit regression of powerful CEO proxies on setting easier goals. The dependent variables is EASY\_GOAL. The main independent variables are FOUNDER AND CHAIRMAN. Other variable definitions are in Appendix A. In parentheses are standard errors adjusted for heteroscedasticity and clustering at the firm level. \*\*\*, \*\*, \* stand for statistical significance based on two-sided tests at the 1%, 5%, 10% level, respectively. We control for year and industry fixed effects in all regression, whose coefficient estimates are suppressed.

	(1) EASY_GOAL	(2) EASY_GOAL	(3) EASY_GOAL
FOUNDER	1.281** (0.522)	1.393** (0.594)	1.384*** (0.494)
CHAIRMAN	0.750*** (0.251)	0.720*** (0.233)	0.712*** (0.247)
TENURE	-0.033 (0.061)	-0.021 (0.066)	-0.022 (0.061)
TENURE <sup>2</sup>	0.001 (0.003)	0.001 (0.003)	0.001 (0.003)
PAY_GAP	-0.082 (0.164)		
PAY_SLICE		-0.225 (0.9566)	
SIZE	0.458*** (0.131)	0.465*** (0.114)	0.467*** (0.116)
MTB	0.108* (0.055)	0.114* (0.058)	0.114** (0.057)
LEV	-0.008 (0.014)	-0.011 (0.014)	-0.011 (0.013)
LIQUIDITY	0.199 (0.393)	0.197 (0.364)	0.186 (0.391)
Constant	-3.541*** (1.371)	-4.210*** (1.292)	-4.303*** (1.187)
Pseudo R <sup>2</sup>	0.155	0.159	0.159
N	603	620	620

**Table 11: Meeting compensation goals and discretionary accruals**

The table presents the results from the OLS regression of meeting the compensation target on discretionary accruals. The dependent variable is ACCRUAL. The independent variables from Column 1 to Column 5 are MEET\_TAR of the EPS, Earnings, Profitability, Cashflow, Sales goals. Other variable definitions are in Appendix A. In parentheses are standard errors adjusted for heteroscedasticity and clustering at the firm level. \*\*\*, \*\*, \* stand for statistical significance based on two-sided tests at the 1%, 5%, 10% level, respectively. We control for year and industry fixed effects in all regression, whose coefficient estimates are suppressed.

	(1) ACCRUAL	(2) ACCRUAL	(3) ACCRUAL	(4) ACCRUAL	(5) ACCRUAL
	EPS Goals	Earnings Goals	Profitability Goals	Cashflow Goals	Sales Goals
MEET_TAR	0.013** (0.006)	0.010** (0.004)	0.002 (0.016)	0.024*** (0.006)	0.003 (0.005)
FOUNDER	-0.014 (0.014)	-0.009 (0.009)	0.022 (0.018)	-0.014 (0.015)	-0.0092 (0.012)
CHAIRMAN	0.010 (0.006)	0.003 (0.004)	-0.007 (0.008)	-0.001 (0.008)	0.005 (0.006)
TENURE	-0.001 (0.002)	-0.002 (0.001)	-0.001 (0.003)	0.001 (0.003)	-0.001 (0.002)
TENURE <sup>2</sup>	0.001 (0.000)	0.001 (0.000)	0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
SIZE	-0.001 (0.002)	0.005** (0.002)	0.007* (0.004)	0.004 (0.004)	0.003 (0.002)
ROA	0.129 (0.088)	0.075 (0.050)	0.345 (0.216)	0.128* (0.068)	0.033 (0.044)
LEV	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.001)	0.000 (0.001)	-0.000 (0.000)
LIQUIDITY	-0.001 (0.007)	-0.016*** (0.005)	-0.011 (0.008)	-0.009 (0.009)	-0.008 (0.008)
Constant	-0.094** (0.039)	-0.060 (0.092)	-0.093 (0.091)	-0.112* (0.057)	-0.009 (0.075)
Adjusted R <sup>2</sup>	0.432	0.377	0.408	0.420	0.414
N	2253	4852	1279	1944	2950

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## APPENDIX

### APPENDIX A: VARIABLE DEFINITIONS

- *MEET\_THRE* is a binary variable that equals one if the CEO meets the threshold goal and 0 otherwise.
- *MEET\_TAR* is a binary variable that equals one if the CEO meets the target goal and 0 otherwise.
- *MEET\_MAX* is a binary variable that equals one if the CEO meets the max goal and 0 otherwise.
- *FOUNDER* is a dummy variable that equals one if the CEO is one of the firm's founders and zero otherwise.
- *CHAIRMAN* is a dummy variable that equals one if the CEO accumulates both the titles of CEO and chairman.
- *AGE* is the age of the CEO.
- *TENURE* is the number of years since the CEO was appointed CEO.
- *PAY\_GAP* is the pay difference of the CEO versus other top executives calculated by the natural logarithm of the difference between total CEO compensation and the median value of other executive compensation.
- *PAY\_SLICE* is the ratio of CEO total compensation to the sum of all top executives' total compensation.
- *SIZE* is the natural logarithm of total (book) assets.
- *ROA* is the return on assets calculated as the net income ratio to total assets.
- *LEV* is the ratio of the sum of debt divided by the book value of total assets.
- *LIQUIDITY* is the ratio of current liabilities divided by current assets.
- *EBIT* is the earnings before interest and taxes. *ROE* is the return on equity.
- *SALE* is the firm revenue.
- *CASHFLOW* is the income before extraordinary items plus depreciation and amortization.
- *MTB* is the market-to-book ratio.
- *ACCRUAL* is the discretionary accruals from the modified Jones model.
- *R&D* is one thousand times the year-on-year change in R&D expenditure normalized by book value of total assets.
- *SG&A* is one thousand times the year-on-year change in SG&A expenditure normalized by book value of total assets.
- *EASY\_GOAL* is a binary variable that equals one if the consensus estimate is higher than the target goal set by the CEO and 0 otherwise.

## APPENDIX B: METRIC DEFINITION IN INCENTIVE LAB DATA

The table below shows the standardized metrics used for collecting performance metrics and the different name variations collected under the same metric provided in the Incentive Lab data.

<i>Metric</i>	<i>Description and Name Variations</i>
<b>SALES</b>	Revenue
<b>EPS</b>	Earnings per Share
<b>EARNINGS</b>	Net Income, Profit, Income after Tax
<b>EBT</b>	Earnings before Taxes, Pre-tax Income, Profit before Tax
<b>EBIT</b>	Earnings before Interest and Taxes, Profit before Interest and Taxes
<b>EBITDA</b>	<ul style="list-style-type: none"> <li>• Earnings before Interest Taxes Depreciation and Amortization,</li> <li>• Operating Income before Depreciation and Amortization (OIBDA),</li> <li>• Earnings before Interest Taxes and Amortization (EBITA),</li> <li>• Earnings before Interest Taxes Depreciation Amortization and Restructuring (EBITDAR),</li> <li>• Earnings before Interest Taxes Depreciation Depletion Amortization and Exploration (EBITDAX),</li> <li>• Earnings before Interest Taxes Depreciation Amortization Rent and Management fees (EBITDARM)</li> </ul>
<b>OPERATING INCOME</b>	Operating Income, Earnings from Operations, Operating Profit
<b>PROFIT MARGIN</b>	Operating Margin
<b>ROE</b>	Return on Equity
<b>ROA</b>	Return on Assets, Return on Net Assets, Return on Total Assets
<b>ROI</b>	Return on Investment
<b>CASHFLOW</b>	Operating Cashflow

## **APPENDIX C: DETAILS OF DATA CONSTRUCTIONS**

Data on performance grants with detailed information for all named executives are from ISS Incentive Lab. The data provide grants of plan-based awards, including performance goals and metrics for performance awards collected from the CD&A section of proxy disclosures. The data also covers executive information, award types, grant date, number of grants, performance periods, payout structures, and vesting schedules. Incentive Lab covers 750 companies by market capitalization, and the identity of the set of the largest firm also changes from year to year. Hence Incentive Lab backfills and forward fill the data for all the firms to yield a total sample of 2,001 firms for 1998 – 2019. To the extent of my research, we rely on the performance metrics tied to the grant and the performance goals, including threshold, target, and maximum.

We match Incentive Lab and ExecuComp to retrieve other executive components. Since the Incentive Lab uses CIK (Central Index Key) as the key identifier while ExecuComp uses the GVKEY (Global Company Key), we ensure that by hand-matching executive names to link the two datasets. We focus on CEOs' absolute performance grants by keeping only the CEO in the Incentive Lab, where grants are linked to an absolute performance metric. We then match the financial data from Compustat using GVKEY to obtain the firm's actual performance. The initial sample contains 115,521 observations of absolute performance grants to CEOs at 1,974 firms from 1998 - 2019.

To compare the goals with the actual performance to determine whether the CEOs meet the goal, we only consider the standard accounting metrics in Incentive Lab in this study. Based on the CD&A section of proxy disclosures that are used for collecting performance metrics, Incentive Lab provides several accounting metrics that are standardized. This limits the grants to those metrics linked with the level, the margin, and the growth rate of Cash flow, EBIT, EBITDA, EBT, EPS, Earnings, FFO, Operating Income, Profit Margin, ROA, ROE, ROI, and Sales metric.

Even though the performance metrics are standard, the definitions themselves are ambiguous. Therefore, Incentive Lab also provides the information about Metric other (the "metric other" field), a supplement set of measurements for each metric. For example, when we check the "metric other" field for the Operating income metric, a number of

measures are involved, such as net operating income, operating income before depreciation, or earnings before interest. Therefore, it is not proper to compare only one unique actual performance with a goal that might not be calculated in the same manner as the actual performance.

To solve the ambiguous definition problem that metrics might be measured in more than one way and might deviate from the Compustat example, we construct a conservative approach by choosing the lowest measurement that corresponds to the broader metric type. For example, when we check the calculation for Operating income metric that appeared in Incentive Lab data, a number of measures are involved, such as net operating income, operating income before depreciation, or earnings before interest, etc. With the conservative approach, we keep the minimum value and set it as the actual performance for that metric used for comparing. For instance, for the operating income metric that have two different calculations, including net operating income (NOI) and Operating income before depreciation and amortization (OIBDA), where the actual value of NOI and OIBDA diluted is \$1 billion and \$1.5 billion, respectively. With the conservative approach, we choose the metric with the lowest value, i.e., the NOI with the actual value is \$1 billion, as the actual performance to compare with the goal. We use the conservative approach because this minimum value implies a safe side not to inflate the actual performance results that the CEO can achieve. We then exclude grants with missing values on the metric type and grants that do not specify any goal.

Given my analyses on whether the firm meets its goals, we restrict the sample to three types of goals, including performance goals for a Threshold payout, Target payout, and Max payout. The remaining sample contains 50,586 observations at 1,701 firms.

In the pay-performance relationship, one can find many different specific metrics linking to a grant, i.e., a CEO can be tied with multiple metrics in his compensation payout. Thus, another challenge to the incentive data is that one specific grant can be tied with multiple performance goals. For example, a CEO can be required to meet several goals to achieve a payout, such as EPS and EBITDA goals, etc. Given my interest in estimating the CEO's short-term incentives, we aim to aggregate a grant with multiple metrics to have one observation per CEO-year-metric. First, we keep the grant with the highest amount

in dollars paid out for non-equity awards by firm-year level. If the grant is tied with equity awards or option awards, we keep the grant with the highest fair value at the grant date. Then, following Bennett (2017), we combine the performance metrics into five main categories as follows: EPS; Earnings (EBIT, EBITDA, EBT, NI, and Operating Income); Profitability ratios (Profit Margin, ROA, ROE, ROI); Cashflows (FFO, Cashflow); Sales. These classifications are based on the measurements of the metrics. For instance, the Earnings category contains EBIT, EBITDA, EBT, NI, and Operating Income that share a similar nature in measurement and make it easy to compare the unit within the Earnings category.

Under the conservative perspective, we then keep the most challenging goal within a range of goals of every category, i.e., we choose the most difficult goal within the category. For example, in the Profitability ratios category, a firm sets three performance goals involving ROA, ROE, and ROI, with values of 0.5, 0.6, and 0.7, respectively. Under the conservative method, we choose the most difficult goal within these three metrics: ROI with the value of 0.7 as the goal for the Profitability ratios category.



## **APPENDIX D: DETAILS OF CONSTRUCTING EASY GOAL**

We obtain analyst estimation from the Institutional Brokers' Estimate System (I/B/E/S) database. To determine whether CEOs set their own goals below analysts' expectations, we use the I/B/E/S Adjusted Consensus database to retrieve the analysts' estimates. Particularly, we rely on analysts' earnings per share (EPS) because EPS is not only a critical performance measurement of a firm but also one of the most popular metrics, with around 18% of the grants in my sample liking the payout to an EPS goal. We then remove the firm-year observations of foreign firms and keep only the annual periodicity estimates, i.e., keep only the record for a year-end estimate.

We determine whether the CEO set an easy goal by comparing the actual EPS performance with the analysts' consensus estimates. Mainly, we choose the consensus estimate that is just right before the shareholder meeting. We gather these estimates by choosing the analyst estimates calculated on the closest date before the shareholder meeting date. The firm boards likely believe that the performances estimated by the analysts are appropriate evaluations because analysts are among the stakeholder groups that affect executive behaviors (Graham et al., 2005). Additionally, analysts play an essential role in setting the benchmark for the firm because they often interact directly with managers and raise questions on different aspects through many channels. Therefore, we specify a firm that sets easy goals when its target goal is lower than the analyst consensus estimates. Because the analyst estimates represent the external consensus about the company prospect in the estimating period, if the CEO sets their target below this consensus, the CEO is trying to achieve a goal that is lower than the company's ability.

To attain the analyst estimates calculated on the closest date before the shareholder meeting date, we merge the I/B/E/S data with the Incentive Lab data. Then we calculate the difference between the recorded estimate date in the I/B/E/S data and the annual meeting of shareholder date in the Incentive Lab data. Next, we keep only the observation with a minimum difference between the estimate and shareholder meeting date, i.e., the estimated date just before the meeting date. To mitigate the risk of different EPS measures provided by Incentive Lab, we drop the observations containing

information in the "metric other" field to ensure that the comparison of the target EPS and the estimated EPS is not due to differences in how EPS is computed.

After attaining the estimates, we compare this consensus estimate with the target goal and create a variable, namely "EASY\_GOAL", equal to 1 if the consensus estimate is higher than the target goal set by the CEO, otherwise it will be 0. We determine the Easy goal for the threshold goal and max goal in the same manner as the target goal.

We aggregate the data set for the goals with multiple metrics to have one observation per CEO-year-metric. First, we keep the grant with the highest amount in dollars paid out for non-equity awards by firm-year level. If the grant is tied with equity awards or option awards, then we keep the grant with the highest fair value at the grant date. Under the conservative perspective, for those grants still have more than one metric, we then keep the most challenging goal within a range of goals of each company for each year, i.e., we choose the hardest EPS goal if that firm has multiple EPS goals.