Superstar CEOs*

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Abstract

We identify the impact of powerful CEOs on firm performance by measuring changes in behavior following prestigious awards in the business press. We find that award-winning CEOs subsequently underperform, both relative to prior performance and to a sample of "predicted award winners" with matching firm and CEO characteristics. At the same time, award-winning CEOs extract significantly more compensation from their company following the award, both in absolute amounts and relative to other top executives in their firm. They also spend significantly more time on public and private activities outside their company, such as assuming board seats or writing books. Moreover, the incidence of earnings management increases significantly after winning awards. Our results suggest that the media-induced superstar culture enables behavioral distortions in the firm, with negative consequences for shareholders. We also find that the effects are strongest in firms with weak corporate governance, suggesting that firms could prevent the negative consequences of excessive CEO power.

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"The best CEOs love operating their companies and don't prefer going to Business Round Table meetings or playing golf at Augusta National."
-Warren Buffet, Berkshire Hathaway Inc.[1]

1 Introduction

Over the past two decades, CEOs of large corporations have enjoyed increased celebrity. Major media sources like *Business Week* have devoted more attention to their annual CEO awards and publications like *Forbes, Fortune,* and *Time* have initiated their own lists. CEOs have become the faces of their corporations, starring in ad campaigns and courting regular media coverage. Bill Gates (*Frasier*) and Lee Iacocca (*Miami Vice*) have even made cameo appearances on prime time television shows. However, the value consequences of CEO celebrity for shareholders are unclear. Do CEOs matter for corporate decisions?[2] And, if so, does increased exposure for the company boost profitability? Or, do the trappings of celebrity represent perquisite consumption, in the spirit of Jensen and Meckling (1976)?

To answer these questions, we use CEO awards conferred by major national media organizations to identify shifts in CEO status. We then link awards to corporate performance and decision-making, using similar non-winning CEOs as a benchmark. We find that firms with award winning CEOs subsequently underperform, both in terms of stock and operating performance. At the same time, CEO compensation increases, CEOs spend more time on distracting activities like writing books and sitting on outside board seats, and earnings management increases. Moreover, the effects are most prominent in firms with poor corporate governance.

The belief that winners subsequently underperform is widely-held in many different contexts. In sports, the well-known "Sports Illustrated Jinx" applies to athletes who appear on the cover of *Sports Illustrated* magazine. In the entertainment industry, the term "Sophomore Jinx" refers to successful new performers who do not live up to the quality of their debuts. In academia, Paul Samuelson describes (the vulgar view of) "Nobel Prize Disease" as follows:

[1] Quote taken from Lowe (1997).

[2] Recent papers by Bertrand and Schoar (2003) and Bennedsen, Perez-Gonzalez, and Wolfenzon (2006) address this question using fixed effects analysis and unexpected successions. We differ by focusing on a specific channel through which CEOs affect performance.

> After winners receive the award and adulation, they wither away into vainglorious sterility. More than that, they become pontificating windbags, preaching to the world on ethics and futurology, politics and philosophy. At circular tables, where they sit they believe to be the head of the table.[3]

In business, the media has coined the term "CEO Disease" to refer to the tendency of CEOs to underperform after achieving the top position in their organization (Byrne, Symonds, and Siler 1991).

The challenge, however, is to separate real behavioral changes, of the sort implied by Samuelson, from expected declines in performance due to mean reversion. Individuals who achieve lofty success likely had extreme positive draws from the process generating their output. Their next few draws are unlikely to meet or exceed their prior realizations, causing their individual average performance to revert to the population mean. Thus, the popular belief in the curse of celebrity could represent a simple failure to adjust for expected changes in performance.

To solve this problem, we construct a bias-adjusted, nearest-neighbor matching estimator, following Abadie and Imbens (2007).[4] First, we estimate a logit regression to identify observable firm and CEO characteristics which predict CEO awards. Then, we match each award winner to the non-winning CEO who, at the time the award was conferred, had the closest predicted probability of winning, or "propensity score" (Rosenbaum and Rubin, 1983). Though we do not observe the selection criteria the judges use to select their lists of CEO award winners or the set of runners-up for the award, this procedure allows us to "reconstruct" this information using observable characteristics. The limitation of our approach is that it does not correct for unobservable differences that are not correlated with observable firm and CEO characteristics. However, we verify that award winners and the matched control sample are indistinguishable along most observable dimensions, including firm and CEO characteristics not explicitly included in the match procedure.

Using the matched sample as a benchmark, we study the impact of CEO awards on the firm. First, we show, using market model event returns, that award-winning CEOs underperform over the three years following the award, both relative to expectations and to the matched sample

[3] Samuelson, "Is There Life After Nobel Coronation?", http://nobelprize.org/economics/articles/samuelson/index.html.

[4] See Abadie, Drukker, Herr, and Imbens (2001) on the implementation of this estimator.

of predicted winners. We verify these results in a four factor return model, constructing a zero-investment portfolio that is long award winners and short predicted winners. The underperformance of winners relative to predicted winners ranges from 15% to 26% over three years, depending on the specification. We find evidence that operating performance, measured using return on assets, follows a similar pattern. Despite the decline in performance, we find that CEO compensation significantly increases among award-winning CEOs over the three years following the award, an increase not shared either by predicted winners or by the next-highest paid executives in their firms. Moreover, the increase comes in the form of equity-based compensation, but not cash compensation, as predicted by rent extraction theories (Bebchuk and Fried, 2003). Consistent with this interpretation, the increased compensation and declining performance only arise in firms with poor corporate governance (or entrenched management), measured using the index of Gompers, Ishii, and Metrick (2003).

We perform a variety of robustness checks on the results, focusing on the matching procedure. We verify that the results do not depend on using a single match for each award winner: the results are similar using the 2, 3, or 4 nearest neighbors as predicted winners. We also match directly on firm and CEO characteristics, rather than using the propensity score to reduce the dimensionality of the problem. In this setting, we use the bias adjustment procedure of Abadie and Imbens (2007) to ensure that the (few) differences in characteristics that persist in the propensity score framework do not drive our results.

Next, we ask whether award-winning CEOs also undertake more activities that may distract attention from maximizing firm value, like writing books or sitting on outside boards. These outcomes occur at lower frequency than compensation choices or stock price changes and at different times (relative to the award) for each individual, making them less suited to our prior "event-study" framework. Instead, we measure the cumulative effect of CEO awards on distraction, exploiting variation in the number of awards CEOs win. We find that the frequency with which CEOs write books (typically their personal memoirs) increases in the number of awards they have won. We also show that CEOs are more likely to sit on (more) boards of other corporations as they win awards. And, award-winning CEOs have significantly lower golf handicaps than non-winners, suggesting more time spent on leisure activities. As with performance and compensation, we find that these activities are more common in firms with poor corporate governance, consistent with the interpretation that they are not in shareholders'

interest.

Finally, we show that, subsequent to winning an award, the incidence of earnings management increases. We show that award-winning CEOs are significantly more likely to exactly meet analyst forecasts than they were before the award and than CEOs who do not win awards. Further, the distribution of earnings surprises is less symmetric around zero (and more skewed to the left) for award-winning CEOs than other CEOs. Both are typically interpreted as signs of earnings management (DeGeorge, Patel, and Zeckhauser, 1999). As with distracting activities, the increases in earnings management occur mainly in firms with weak corporate governance. Moreover, award-winning CEOs are significantly more likely to have negative earnings once five years have passed from their last award than other CEOs. This pattern suggests that CEOs may be motivated by heightened pressure to maintain "superstar performance."

Our results suggest a mechanism by which superstar status diminishes performance: CEOs increase rent extraction and the consumption of perks. However, we do not identify all channels through which powerful CEOs may destroy shareholder value. Moreover, our results do not allow us to disentangle supply and demand. Award-winners may increase perk consumption because their preferences change toward living the "jet set life" and away from maximizing shareholder value (increased demand). On the other hand, they may have always had a preference toward the trappings of celebrity and awards simply make such perks more available (increased supply). In either case, celebrity status via media attention enables the observed changes in behavior. Thus, the media plays an important role in fostering a celebrity culture with potentially value-destroying consequences (for shareholders). Moreover, the effects appear to be avoidable in well-governed firms, underscoring the importance of strong shareholder protection.

Our results contribute to the recent literature analyzing the value consequences of CEO perks. Yermack (2006) finds that firms which provide the CEO access to a corporate jet significantly underperform. Similarly, Liu and Yermack (2007) find that company performance deteriorates when the CEO acquires a large mansion, particularly if he liquidates company shares or options to finance the transaction. Rajan and Wulf (2006), on the other hand, argue that (less egregious) perks may create value in organizations, in part because they are an observable signal of power and status within the organization. Our analysis supports the view that large-scale

indicators of CEO status destroy value for claimholders.

We also contribute to the literature on CEO power. Existing studies typically measure CEO power using founder status or the accumulation of titles within the organization (i.e. bundling of the titles Chairman of the Board and President with CEO). Morck, Shleifer, and Vishny (1989) find that founder CEOs or "BOSSes", in the sense of title accumulation, are rarely removed internally by the board of directors. But, BOSSes are disproportionately the targets of hostile takeovers. Consistent with BOSSes being more powerful (and entrenched), Adams, Almeida, and Ferreira (2005) find that their performance is more variable than other CEOs. We build on these studies by identifying clear shifts in CEO status (prominent media awards) and linking them to CEO decision-making and performance, allowing us to rule out alternative firm-level explanations that are consistent with the cross-sectional evidence.

Our results also have important governance implications. We find that strong shareholder rights can thwart the ability of powerful CEOs to take value-destroying actions, confirming the importance of the governance provisions studied by Gompers, Ishii, and Metrick (2003). However, it is only after status is attained that behavior deteriorates in poorly governed firms. Thus, our findings suggest that the "tournament for status" provided by prominent media awards–though not set up by the firm itself–can serve to mitigate agency problems inside the firm, consistent with Lazear and Rosen (1981). Under this interpretation, the prospect of attaining "superstar status," in the sense of Rosen (1981), motivates CEOs to maximize value. Our results suggest that explicit incentives and governance mechanisms become more important as the CEO's status increases.

Finally, our results contribute to recent research on the role of media in financial markets. Dyck and Zingales (2002) and Dyck, Volchkova, and Zingales (2007) argue that the media can enhance corporate governance by pressuring managers to reverse value-destroying policies. We find evidence that media coverage may also have a dark side for shareholders. By increasing CEO status, the media may enable CEOs to take actions which destroy value. Or, it may enhance CEO biases, like overconfidence, which negatively impact decision-making (Malmendier and Tate, 2005, forthcoming).

The remainder of the paper is organized as follows. In Section 2, we describe the data we use in our analysis. In Section 3, we asses the subsequent performance of award winners,

contrasting award winners to a matched sample of similar CEOs. We measure stock and operating performance, as well as changes in CEO compensation. In Section 4, we measure CEO distraction, focusing on writing books and sitting on outside board seats. In Section 5, we ask whether winners increase earnings management. Finally, Section 6 concludes.

2 Data

The core of our data set is a hand-collected list of the winners of CEO awards between 1975 and 2002. A variety of publications and organizations conferred awards on CEOs during our sample period: *Business Week, Financial World, Chief Executive, Forbes, Industry Week,* Morningstar.com*, Time, Time/CNN, Electronic Business Magazine,* and Ernst & Young. The key criterion for inclusion in the sample is that the awards are national, so that (1) all CEOs could potentially win and (2) they are prominent enough to plausibly affect CEO status. Below we briefly describe the key features of each of the awards and report circulation information for the print publications. The two predominant sources for our CEO awards are *Business Week* and *Financial World.* Figure 1 presents a histogram of the CEO awards by sample year.

Business Week (circulation: 970,000). There are two types of *Business Week* awards: Best Manager and Best Entrepreneur. The winners are chosen annually by the editorial staff of the magazine. The awards were first given in 1988 and continue to the present. The total number of Best Manager winners during our sample period is 230. Between 1992 and 1995, there were roughly 15 winners per year. Beginning in 1996, however, the magazine switched the format to the 25 top managers of the year. The Best Entrepreneur awards were much less consistent over the sample period. There were 58 winners in total. No winners were chosen in 1992 or 2000 and the number of winners in the remaining years was quite variable, ranging from 3 to 10.

Financial World (circulation: 430,000). Financial World ceased publication in 1997, but published an annual "CEOs of the Year" list, chosen by the magazine's editorial staff, for more than 20 years prior to 1997. The CEOs of the Year were classified into 4 categories: "Gold," "Silver," "Bronze," and "Certificates of Distinction." There was 1 Bronze winner chosen per industry. The magazine's division of industries evolved over the years, however, there were

always roughly 60. There were also 2 Certificate of Distinction winners per industry. Since we are interested in "superstars" and there are relatively many recipients of these honors per year, we restrict our analysis to the Gold and Silver winners. There was 1 Gold winner per year – the CEO of the Year. Up to 1994, there were approximately 10 Silver winners each year. In 1995 and 1996, the magazine awarded 1 Silver award per industry. We check the robustness of our results to excluding these two anomalous years. In 1997, the magazine only conferred 5 Silver awards.

Chief Executive (circulation: 42,000). *Chief Executive* magazine has chosen a CEO of the Year each year since 1987. The magazine's intended audience is CEOs and the award is chosen by a panel of CEOs.

Forbes (circulation 910,000). *Forbes* began publishing a list of "Best Performing CEOs," selected by the editorial staff, in 2001. There were 5 winners in 2001 and 10 winners in 2002.

Industry Week (circulation: 250,000). The *Industry Week* awards are chosen based on a CEO survey. Prior to 1993, there was no consistent format for the awards. In 1986 and 1987, winners were chosen in each of 4 categories: "Consumer Goods Companies" (2 per year), "Finance and Other Companies" (3 in 1986; 2 in 1987), "High-Tech Companies" (3 in 1986; 4 in 1987) and "Heavy Industry Companies" (4 per year). In 1989 and 1991, the awards had only two categories: "Industrial Sector" (6 per year) and "Services Sector" (6 per year). Starting in 1993, the magazine stopped dividing the winners into categories. In 1994, there were 3 winners and in 1995 5 winners, but otherwise there has been a single CEO of the Year named each year.

Morningstar.com. Morningstar.com began naming a CEO of the year, chosen by the editorial staff, in 1999. There have been two winners twice (1999 and 2001) and a single winner in each of the remaining years.

Time (circulation: 4,000,000). *Time* magazine has awarded a "Person of the Year" each year for more than 50 years. The winners are chosen by the editorial staff and three times since 1975 (in 1991, 1997, and 1999) the honor has gone to a CEO.

Time/CNN. In 2001, *Time* together with CNN compiled a list of the 25 Most Influential Global Executives.

Electronic Business Magazine (circulation: 65,000). Electronic Business Magazine has awarded a CEO of the Year, chosen by the editorial staff, each year since 1997.

Ernst & Young. Ernst & Young has awarded an "Entrepreneur of the Year" each year since 1989. The winners are chosen by a panel of independent judges. Three times there have been multiple winners in a year: 1990 (2), 1994 (3), and 1997 (2).

To connect awards to subsequent corporate outcomes, we match our CEO award data with additional data on CEO characteristics and with data on firm characteristics and performance. We obtain CEO data from the Compustat Execucomp database. This data set contains demographic and compensation data for all of the CEOs of firms in the S&P 500, S&P MidCap 400 and S&P SmallCap 600 since 1992. It also records this data for the 4 other highest paid executives in each firm. We use the tdc1 measure of total executive compensation, which includes salary, bonus, other annual compensation (e.g., perquisites and other personal benefits), restricted stock grants, LTIP payouts, the Black-Scholes value of new option grants, and all other total compensation (e.g. severance pay, debt forgiveness, etc.). Cash compensation (tcc) is salary plus bonus. We use this data to construct two measures of CEO power. First, we construct the ratio of CEO total compensation to total compensation of the next highest paid executive in the firm. And, second, we construct the ratio of CEO cash compensation to cash compensation of the next highest paid executive in the firm. Due to the necessity of CEO data to our analysis, we restrict our attention only to firms in the Execucomp universe. Though we do not use awards prior to 1992 for much of our analysis, the pre-1992 awards data is important in Section 4 in which we measure the cumulative effect of prior awards. There, we estimate the regressions on the 1992 to 2002 sample period, but can avoid censoring the CEO's history of past awards due to the pre-1992 awards data.

To measure company characteristics and performance, we merge in data from CRSP and Compustat. We measure return on assets (ROA) as income before extraordinary items (item 18) plus interest expense (item 15), scaled by assets (item 6). Market capitalization is the stock price multiplied by common shares outstanding. The book-to-market ratio is book equity over market equity, where book equity is stockholders' equity (item 216) (if available, else book value of common equity (item 60) + par value of preferred stock (item 130) or assets (item 6) - total liabilities (item 181) [in that order]) + balance sheet deferred taxes and investment tax

credit (item 35), if available, minus the book value of preferred stock (redemption (item 56), liquidation (item 10), or par value (item 130) [in that order] depending on availability). We also merge in the Fama-French return factors. The Fama-French SMB and HML factors are constructed using the six Fama-French value-weighted portfolios formed on size and book-to-market. SMB (Small Minus Big) is the average return on the three small portfolios minus the average return on the three big portfolios. HML (High Minus Low) is the average return on the two value portfolios minus the average return on the two growth portfolios. Rm-Rf, the excess return on the market, is the value-weighted return on all NYSE, AMEX, and NASDAQ stocks (from CRSP) minus the one-month Treasury bill rate (from Ibbotson Associates). UMD (Up Minus Down) is constructed using the six Fama-French value-weighted portfolios formed on size and 2-12 month prior returns. UMD is the average return on the two high prior return portfolios minus the average return on the two low prior return portfolios.

We also merge in data on books, outside board seats, and golf handicaps to measure the CEO's propensity to undertake external activities. We collect data on books authored by CEOs in our sample using listings on Barnes and Noble.com. The searches use the CEO's name in the author field under the following categories of publications: Management & Leadership, Business Biography, General & Miscellaneous, Careers & Employment, Business History, Economics, Women in Business, International Business, Professional & Corporate Finance, and Human Resources. We collect information on board seats from the SEC using the Edgar Database. The data on CEOs' golf handicaps covers CEOs in Fortune 1000 companies and comes from rankings published in *Golf Digest*.

Finally, we match quarterly earnings announcement data with our awards data set. The data is described in detail in DellaVigna and Pollet (2004) and is derived from I/B/E/S and media sources. We use an indicator for negative earnings and a measure of the earnings surprise over the consensus analyst forecast, where the consensus forecast is measured using the median analyst forecast among all analysts who make a forecast in the 30 calendar days prior to the earnings announcement.

Table 1 provides selected summary statistics of the data, split into CEO award winners and other sample CEOs.

3 Performance and Extraction

Major CEO awards increase the CEO's status and power within the firm. In this section, we link awards to changes in market valuations, operating performance, and executive compensation to assess the value consequences of increased status for claimholders. We also test whether the effects vary depending on the quality of the firm's corporate governance.

3.1 Empirical Specification

In an ideal empirical experiment, we would compare the performance of the CEO award winner to her own performance had she not won the award. Since this counterfactual is not observed, we must find an empirical proxy for the hypothetical performance of award winners had they not experienced an increase in status. The natural starting point is to compare average ex post (or changes in) performance among award winners to the average among all non-winning CEOs. This approach provides a valid estimate of the treatment effect of the treated under the assumption that assignment to the treatment group is random. Unfortunately, this assumption does not hold in our data. In Table 1, we test differences in firm characteristics across the treatment group (CEO award winners) and the set of all non-winning CEOs. We find statistically significant differences along almost all dimensions. Notably, firm size, past performance (measured by book-to-market ratios, returns over months 2-3, 4-6, 7-12, and 13-36 prior to the award month, and ROA), CEO tenure, and CEO compensation (both cash and total) are significantly higher among award winners (at the 1% level). Economically, these differences reflect the endogeneity of CEO awards: they are chosen by a panel of judges based, at least partially, on strong past performance. Thus, if we use the full set of non-winning CEOs as our control sample, we will potentially mix predictable performance effects based on selection to the treatment group with real performance effects resulting from treatment itself. In our application, the predictable performance effect is mean reversion: If earnings were completely random, CEOs who experience success (i.e. sequences of earnings from the upper tail of the distribution) would tend to experience a subsequent decline in performance toward the mean, since subsequent earnings would tend to be lower than their initial draws.

We take several steps to isolate the real effects of CEO status on corporate outcomes from

selection effects. Our main strategy is to construct a nearest-neighbor matching estimator, following the approach of Rosenbaum and Rubin (1983) and Abadie and Imbens (2007). CEOs enter the treatment group when they receive an award. Though we cannot observe the exact criteria which resulted in the CEOs' selection, one way to identify the effect of treatment would be to compare the winners to the group of "runners-up" for the award. Unfortunately, this information is typically not available.[5] But, our matching procedure "reconstructs" this set of CEOs based on observable firm and CEO characteristics at the time of the award.

We construct a two-stage estimator. First, we run a logit regression to predict CEO awards based on firm and CEO characteristics. The sample consists of each month in which one of our sample awards was granted (e.g., January of each year for the Business Week awards). For all firms in our sample, we set the binary dependent variable to 1 if the firm's CEO won the award granted in that month. Months in which no awards are granted are not included in the logit regression. We then regress this award indicator on controls for firm and CEO characteristics. Given the differences in Table 1, we include firm size (the natural logarithm of market capitalization at the beginning of the month before the award), book-to-market at the end of the last fiscal year which ended at least 6 months prior to the award month, and returns for months two to three, four to six, seven to 12, and 13 to 36 before the award month.[6] We also include the 48 Fama and French industry dummies[7], year dummies, and award type dummies in the regression. The award type dummies control for variation in the number of winners across the various awards, which shifts the baseline probability that a CEO will be named the winner. So, for example, any award month that corresponds to a Business Week award (January of every sample year) will receive a 1 for the Business Week dummy, while all other award months will receive a 0. Finally, we include controls for CEO age, tenure and gender.

[5] In principle, we could use the Bronze Award winners from Financial World as a control sample for the Gold and Silver Award winners. However, Financial World is the only set of awards for which we observe a group of "runners-up." Since the magazine ceased publication in 1997, we would not only introduce concerns about the representativeness of the results by restricting attention only to these awards, but we would also eliminate roughly half of the sample years.

[6] These regressors are standard in cross-sectional return regressions and have been used, for example, by Brennan, Chordia, and Subrahmanyam (1998) and Gompers, Ishii, and Metrick (2003).

[7] See Ken French's website (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html) for definitions.

Table 2 presents the results of this logit regression in the form of odds ratios. Overall, they confirm the patterns from Table 1. As expected, CEOs of larger firms with lower book-to-market ratios and higher past returns are significantly more likely to win awards. More interestingly, we find that the CEO variables have significant predictive power, even controlling for firm and industry characteristics. CEOs with more experience in their firm are significantly more likely to win awards. Women and younger CEOs are also more likely to win awards, though the results are less robust statistically.[8]

Next, we use the predicted values from this logit regression (or "propensity scores") to construct a nearest-neighbor matched sample for the award winners. In each award month, we choose, with replacement, the non-winning CEO with the closest propensity score to each actual award winner. We refer to this sample as "Predicted Winners." We use the propensity score as the match variable to reduce the dimensionality of the matching problem. The natural alternative would be to choose the match by attempting to simultaneously minimize the distance between each treated observation and its match across all the characteristics we include in our first stage (according to some priority rule). We find that the propensity score approach results in a match sample with fewer significant characteristic-by-characteristic differences to the treatment sample. Thus, we report the results from this approach. We also use the procedure of Abadie and Imbens (2007) to correct for remaining bias due to (ex ante) differences between the treatment and control samples.[9] First, we correct for differences in the propensity scores of winners and Predicted Winners. This correction ensures, for example, that an outlier winner with a propensity score too high to closely match does not drive our results. We also rematch on the characteristics directly and use the bias adjustment to ensure that any significant differences in characteristics that remain after the propensity score match do not drive our results.

Table 1 provides the summary statistics for the Predicted Winners, side-by-side with the summary statistics for the actual winners and the full sample of non-winners. For each variable, it also provides p-values for a test of the hypothesis that the difference between award winners

[8] The effect of the binary Female variable, though significant at the 5% level, is identified using only 5 female award winners.

[9] Essentially, the procedure estimates an auxiliary OLS regression of the effect of the match variable(s) on the outcome variable (in the control sample). It then uses the estimates to adjust for differences in the match variable(s) between the treatment and control samples.

and Predicted Winners is zero. Among the variables included in the first-stage estimation, seven are significantly different at the 1% level between award winners and the sample of all non-winners. But, no differences meet the 1% threshold between winners and Predicted Winners. Only returns from months 13 to 36 prior to the award (5% level) and CEO tenure (10% level) have significant differences across the winner and Predicted Winners samples. In both cases, the medians are not significantly different across the samples, suggesting that a small number of outliers with respect to the characteristic drive the differences in means.

To further test the quality of the match, we test for significant differences in the pairwise interactions of the match variables across the winners and Predicted Winners samples. If these interactions are important determinants of performance or compensation, then matching on levels without also matching the interactions could bias our results. Of the 36 pairwise interactions, only five are statistically significant (none at the 1% level).[10] And, all five significant interactions involve either returns from months 13 to 36 prior to the award or CEO tenure. So, it is likely that the significant level effects drive the significant interaction effects. Finally, we perform "out-of-sample" tests for significant differences across winners and Predicted Winners in variables not included in the first stage estimation. Among the 15 such variables reported in Table 1, 11 are significantly different at the 10% level between winners and all non-winner CEOs (9 at the 1% level). But, none of the variables are significantly different across the winners and Predicted Winners samples. For example, we report net operating assets (or "balance sheet bloat") as defined by Hirshleifer, Hou, Teoh, and Zhang (2004) as a rough proxy for earnings management prior to the award month. We find *less* earnings management among winners than among all non-winners, but no significant differences between winners and Predicted Winners.[11] These results again suggest that the choice of match variables is appropriate and that our match procedure accurately selects CEOs and firms that are similar to the treatment sample.

Throughout our analysis, we take additional steps to test the robustness of our results to the matching assumptions. Though we do not tabulate the results, our findings are robust to using

[10] The significant interactions are size * returns from month 13 to 36 ($p = 0.056$), book-to-market * returns from month 13 to 36 ($p = 0.071$), returns from month 4 to 6 * tenure ($p = 0.029$), returns from month 13 to 36 * age ($p = 0.033$), and returns from month 13 to 36 * tenure ($p = 0.026$).

[11] We also look at accruals as an alternative proxy for earnings management, but find no significant differences across any of the samples.

larger numbers of matches (specifically the 2, 3, or 4 nearest neighbors).[12] We also examine differences in the impact of awards on performance and compensation across firms with good and bad corporate governance. If uncorrected selection effects are biasing our results, we would not expect the results to be concentrated in either governance subsample. However, if the results reflect CEO abuses, we should find stronger effects among poorly governed firms. Finally, the set of match variables was chosen, in part, based on characteristics known to matter in return regressions. Though we have found little evidence of significant differences even in firm characteristics excluded from the first stage logit, we will supplement the propensity score with additional controls to verify the robustness of our findings when stock returns are not the outcome variable of interest.

3.2 Performance and Compensation

3.2.1 Stock Returns

Our first step toward understanding the impact of increases in CEO status on performance is to measure the market reaction to CEO awards. For magazine awards, we use the cover date of the magazine in which the award recipients were published as the event date. For awards conferred by an organization, we use the date on which they publicly announced the winners. To measure investor reaction, we compute the cumulative abnormal returns around the event date over several intervals. We calculate abnormal returns using a market model with the CRSP value-weighted index as our proxy for market returns. We estimate α and β for the award winning firms using the three years ending 23 trading days prior to the event. As event windows, we consider the short run investor reaction over the 11 trading days surrounding the award announcement (or days [-5,+5] with day 0 as the event date).[13] We also consider the long run reaction over the year ([+6,+255]), two years ([+6,+510]), and three years ([+6,+765]) following the award.

[12] As we increase the number of matches, the differences in match variables between the treated observations and their matched observations increase, making the bias adjustment procedure more important. Thus, our reason for focusing on the single match case is that the side-by-side comparisons of the treated and control samples, without bias adjustment, are easier to interpret.

[13] We consider a long short run window because it is difficult to measure precisely the time at which information about the award enters the market. For example, magazines routinely ship prior to their cover dates. So, the news of the awards may reach subscribers substantially before our event date.

Panel I of Table 3 contains the results. The left two columns show the average CARs in the Award and Predicted Award samples. Column 3 reports the cross-sample difference, Column 4 adjusts the difference for bias due to differences in the propensity scores of winners and their matches, and Column 5 rematches directly on the characteristics themselves (including industry), adjusting for bias due to differences across winners and their matches. This specification allows us to verify that the significant differences between winners and their propensity score matches in CEO tenure and returns over months 13 to 36 before the award do not drive our results.

We find no evidence of an immediate market reaction to CEO awards. However, we find strong evidence that winners underperform expectations over the long run: average CARs among award winners are significantly negative over the one, two, or three years following the award. Moreover, the long run underperformance remains evident and strongly significant when we test the difference between winners and Predicted Winners in columns 3 through 5, mitigating concerns about selection, mean reversion, or the mismeasurement of expected returns. Economically, the difference in underperformance between winners and Predicted Winners ranges from 15% to 26% over three years, depending on the specification.

As a robustness check of the long run underperformance evidence, we redo the analysis taking a portfolio approach. We construct a zero-investment strategy that is long award winners and short Predicted Winners.[14] In updating the portfolio, we drop firms when the CEO leaves the company to test the extent to which CEO succession matters for the return results. CARs over different time intervals due to succession would be difficult to compare; however, it is easy to allow for succession within the portfolio approach.[15] Moreover, analysis of the zero-investment strategy does not incorporate any backward-looking measure of expected returns, but simply compares average performance of winners and Predicted Winners controlling for known patterns in returns. We run a time series regression of the value-weighted average portfolio return on the three factors from Fama and French (1993) – size (smb), book-to-

[14] This strategy is not fully implementable because the selection of Predicted Winners uses forward-looking information: we estimate the first-stage logit on the entire sample of awards. The most natural fully implementable alternative, estimating a separate first stage logit for each "award month" using only data from that month and before, is not feasible. For several awards, e.g. Chief Executive magazine, there is only one winner in any particular award month. Thus, the first stage logit could not be identified.

[15] The results are qualitatively similar ignoring CEO exit and, if anything, weaker, suggesting that the underperformance is tied to the award winning CEO.

market (hml), and market excess returns (retrf) – and the momentum factor (Carhart, 1997). We find that the portfolio has an alpha of roughly 50 basis points per month over the three years following the award month. When firms remain in the portfolio for three years following an award or Predicted Award, the effect is significant at the 5% level. Economically, this translates to underperformance of roughly 18% among winners relative to Predicted Winners, consistent with the results from the CAR estimations.

Overall, we find robust evidence of long run stock underperformance following CEO awards. Predictable long run stock underperformance is challenging to interpret. In an efficient market, investors should incorporate bad news into stock prices immediately upon announcement. Thus, in the remainder of the paper, we will test the reaction of operating performance and other real corporate outcomes to CEO awards. If increases in status cause CEOs to make decisions which destroy firm value, we should find evidence of declining earnings and for some of the underlying economic mechanisms.

3.2.2 Operating Performance

To see whether the stock underperformance reflects deteriorating operating performance, we measure changes in ROA around CEO awards. We consider the interval beginning at the end of the last fiscal year prior to an award month and ending four years later. The top panel of Figure 2 graphs ROA over this interval for award winners, Predicted Winners, and all non-winning CEOs. The pattern among Predicted Winners and all non-winners is strikingly similar: it is modestly downward-sloping with a slight dip at the end of the first full fiscal year following an award month. Award winners, however, have a decidedly different pattern. Though ROA among award winners and Predicted Winners is nearly the same in the year prior to the event (both are significantly higher than non-winners), there is a clear downward trend in performance over the entire interval among award winners.

In Panel A of Table 4, we quantify and test the significance of these patterns. Column 1 reports changes in ROA for award winners, using the last fiscal year prior to the award as the base year. The difference in ROA from the first to the last year of the interval is four percentage points, which is statistically significant at the 1% level. Among predicted winners (Column 2), the three year change is a little less than half as large, but still significant at the 5% level.

The difference in differences (Column 3) is insignificant. The result is similar if we adjust for bias due to differences in propensity scores between winners and Predicted Winners or if we include the lag of ROA as a match variable in addition to the propensity score.

Given the similarity in the paths of ROA between Predicted Winners and non-winners, we also check the significance of the difference between the three year change in ROA of award winners and all non-winners. Here, the test is more powerful since the mean is measured with more precision in the larger non-winner sample than in the Predicted Winner sample. And, the difference is indeed statistically significant at the 1% level (the difference is -0.026). Thus our failure to find a significant difference between winners and Predicted Winners despite the large economic effect is likely due to a lack of power. We will also see in Section 3.3 that the lack of significance is partially due to averaging the effect over good and bad governance firms.

3.2.3 CEO Compensation

Award-winning CEOs underperform after attaining increased status, even beyond the effects of mean reversion. Next, we ask what the CEO does differently compared to what he did before. First, we consider whether CEOs are able to use their increased power to extract more rents from the company after winning awards. In this section, we test for increased compensation. But, extraction could also be in the form of perks, like airplanes or mansions (Yermack, 2006; Liu and Yermack, 2007), or in more subtle forms like increases in firm contributions to the CEO's favorite charities, increases in the frequency and size of corporate loans to the CEO, or initiation of costly sports stadium sponsorships.

As in Section 3.2.2, we consider the interval beginning at the end of the last fiscal year prior to an award month and ending three years later. In the second row of panels on Figure 2, we graph mean CEO total compensation and cash compensation for award winners, Predicted Winners, and the sample of all non-winning CEOs. Like ROA, both award winners and Predicted Winners have significantly higher total and cash compensation than the sample of all non-winners prior to the award, but no significant differences to each other. Among award winners, there is an immediate and striking increase in total compensation at the time of the CEO award: the increase in total compensation from the last fiscal year ending at least 6 months

prior to the award to the end of the fiscal year containing the award is 44%.[16] Neither Predicted Winners nor the sample of all non-winners enjoy a significant increase in total compensation over the same interval. We do not see a parallel jump in cash compensation among award winning CEOs. Instead, both winners and Predicted Winners experience (indistinguishable) mildly increasing paths of cash compensation over the three year interval.

In Panel B of Table 4, we quantify these patterns. The mean immediate increase in total compensation among award winners ($7.816M) is significant at the 5% level. There is an insignificant decrease ($829K) over the same interval among Predicted Winners. We also test the significance of the cross-group difference. Recall that our match already controls for differences in characteristics like firm size, performance, age, and tenure, which are important determinants of compensation levels. Thus, in Column 3, we test the significance of the difference in means, without further adjustment. It is statistically significant at the 5% level. In Column 4, we adjust for bias due to differences in propensity scores between winners and their matches and find only a negligible impact on the result. Finally, in Column 5, we add the lag of compensation as an additional match variable to proxy for potential differences in the determinants of compensation levels across winners and Predicted Winners that the return-inspired match variables fail to capture. Again, the results are largely unaffected. We also find some evidence, particularly at the three year horizon, that the differences in total compensation increases between winners and Predicted Winners remain significant over longer horizons. Turning to cash compensation, the formal hypothesis tests confirm that (1) there is a significant three year increase in cash compensation both for winners and Predicted Winners and (2) there are no significant differences over any horizon or using any methodology between winners and their matches.

Summing up, we find that award winners experience abnormal and significant increases in total compensation, but not cash compensation. The increases are immediate and, though they diminish somewhat, remain significant over a three year horizon. One possible interpretation is that firms use increased equity-based compensation following increases in CEO status to offset increased agency problems. Under this interpretation, the increases in compensation are

[16] Most firms end the fiscal year in December, but the bulk of awards occur in January (*Business Week*, *Morningstar*) and March or April (*Financial World*, *Forbes*), leaving ample time for compensation to respond to the award within the fiscal year.

good for claimholders. However, it is difficult to reconcile this story with the underperformance of award winners over the same interval and to understand why increases in performance pay are not even partially offset by decreases in fixed compensation. An alternative explanation is that award-winning CEOs use their increased power within the firm to extract greater rents in the form of equity-based compensation. Rent extraction is most likely to occur in the form of equity-based compensation (and particularly stock option grants), since these less transparent forms of compensation are less likely to violate the shareholders' "outrage constraint" (Bebchuk and Fried, 2003).

Finally, to confirm the importance of CEO power to the compensation effect, we plot the ratio of CEO total (cash) compensation to total (cash) compensation of the next highest paid executive in the firm (Hayward and Hambrick, 1997). As with compensation levels, we consider the three year interval beginning with the last fiscal year to end at least 6 months prior to the award month and analyze (separately) award winners, Predicted Winners, and all non-winning CEOs. The bottom panels of Figure 2 show the results. We find that the increase in total compensation enjoyed by award winners is not shared by the next highest paid executives in their firm. There are no major changes in this ratio among either Predicted Winners or the full sample of non-winning CEOs. We also test the significance of these patterns. There is some evidence that the difference between the change in total compensation ratios among winners and Predicted Winners is statistically significant over the short run. However, the three year difference is not significant. Moreover, the increase in the total compensation ratio among award winners is not itself statistically significant: the variance is high given that we are measuring the ratio of two noisy compensation measures (particularly over long horizons). We do not tabulate these results, given their questionable significance. Nevertheless, the pattern is broadly supportive of an important role for CEO power or status: only the CEO receives increased compensation as a result of strong performance (and only if the media recognizes the performance via an award).

3.3 Corporate Governance

Thus far our results suggest that CEO awards decrease value for claimholders. Awards may increase "supply" for CEOs with a taste for leisure or private benefits. Or, status itself may

change the "demand" of the CEO for activities that are not in the interest of claimholders. In this section, we test whether the underperformance and increased compensation of award winners differs depending on the firm's governance structure. If the underperformance indeed arises from increased abuses by the CEO, then the effects should be concentrated in firms with weaker shareholder protection and more entrenched management.

To conduct the test, we use the governance index (GIM) of Gompers, Ishii, and Metrick (2003) to classify firms into three subsamples. The index measures the extent to which charter provisions, like staggered boards and poison pills, insulate management from external pressure to maximize value. Since it counts the number of such provisions, firms with high values of the index have the weakest shareholder rights (or most entrenched management). We use the 33rd and 66th percentile of the distribution of the index among award winners to split the sample.[17] We then redo the analysis of Section 3.2, separately on each subsample. By re-matching within each governance category, we ensure that good (poor) governance firms can only match to other good (poor) governance firms. Thus, the resulting differences in outcomes across the treated and control sample can be interpreted as the effect of the award within firms of that governance type and are distinct from any direct effect of governance on the outcome in question.

In Table 5, we present the results. For brevity, we focus on the significant differences from Section 3.2. Column 1 presents bias-adjusted differences in outcome variables between award winners and Predicted Winners in the sample of firms with low governance index levels (GIM$\leq$7; "Good Governance"). Column 5 presents differences in the sample of firms with high index values (GIM>9; "Bad Governance"). Column 3 reports firms with intermediate levels of the index. For operating performance and compensation, we also report bias-adjusted differences including the lagged outcome as an additional match variable to supplement the propensity score (Columns 2, 4, and 6).

In rows 1 to 3, we measure the differences between the stock performance of winners and Predicted Winners over the 1, 2, and 3 years following an award month for each of the three governance regimes. We find that the underperformance of award winners is only present

[17] Since the index is discrete, there are masses of observations exactly at the cutpoints. Thus, the split does not result in equal numbers of award winners in each subsample. But, our results are robust to minor changes in the cutpoints.

among poorly governed firms. Moreover, performance seems to deteriorate monotonically as we move from the good to the bad governance subsample. Turning to operating performance, we find a similar pattern. The decline in ROA is significantly lower for winners than Predicted Winners in the bad governance sample (though it remains insignificant controlling for the lag of ROA). Among good governance firms, ROA, if anything, appears to *improve* among winners relative to Predicted Winners (the effect is not significant) and, again, the difference declines monotonically across the subsamples. Finally, we examine the compensation effects. Total compensation significantly increases for winners relative to Predicted Winners only in firms with poor governance. The differences are small and insignificant in good governance firms and again increase monotonically across the subsamples. As a placebo, we examine the effect of governance on cash compensation. The governance split reveals no new patterns: the evolution of cash compensation is not significantly different between award winners and their matches.

Both the immediate increases in equity-based compensation and the long run underperformance following CEO awards are concentrated in firms with weak pre-existing corporate governance. These results support the view that increases in status captured by major media awards lead to rent extraction and worse job performance by CEOs. However, they also provide a silver lining: award-winning CEOs in firms with strong corporate governance display modest, though insignificant, improvements in performance relative to matched non-winning CEOs. Thus, our results underscore the importance of good institutions as a constraint on agency problems within the firm.

4 Distraction

Award-winning CEOs underperform expectations and their peer group. Increased rent extraction is one channel that may partially explain the gap in performance. In this section, we ask whether award-winning CEOs also increase the frequency with which they engage in outside tasks that may distract attention from maximizing firm value. We focus on two such activities: authoring books and sitting on outside board seats. We also provide some suggestive evidence on leisure activity (golf handicaps).

In Section 3, we estimated the impact of awards on performance and compensation by compar-

ing differences in differences across winners and a matched sample. However, the relatively low frequency of books and board changes makes such an approach difficult to replicate here. To measure changes in behavior, we would need to match CEOs on the frequency with which they engage in the activity prior to each award month. This step would require a large pre-award window of observation (e.g. we could match on the average number of books per year over the three years prior to the award month). We would also need a long post-award window over which to observe changes in the (predicted) winners' behavior. Our data is not sufficiently rich to attempt such an estimation; for example, our board seats data is available beginning only in 1994. Moreover, the number of CEO-authors is small (there are 85 CEO books in our sample), which reduces the size and quality of the pool of potential matches. An additional complication in this context is that authoring books or adding outside board seats occur at different times relative to the award month for each individual (unlike, e.g., stock performance which can be measured at a fixed point in event time for all observations), making it more difficult to control for confounding predictors of the outcome in the matching specification.

Because of these issues, we rely on ordinary least squares and fixed effects regressions to estimate the impact of awards on the intensity of outside activities. As a result, the control group for award-winning CEOs is either all non-winning CEOs or the pre-award behavior of the winners themselves. We also introduce an additional source of variation by measuring the marginal impact of each successive award for CEOs who win multiple awards. We include controls for factors like firm size, performance, and CEO characteristics which may correlate both with winning awards and with the outcome variables. Finally, we examine the interactions of the award effects with corporate governance. If outside tasks distract CEOs from firm business, then we should expect to see more indulgence in firms with weaker corporate governance.

We begin by measuring the effect of CEO awards on the likelihood of writing a book. In our data, we observe two main types of books: memoirs and books offering strategic advice. Though we focus on authoring books as an activity that distracts attention from managing the company, it is possible that books serve as a marketing tool to increase firm profitability. It is not clear, however, that revealing successful strategies to the market would increase firm value. Moreover, we find that books more often focus on the virtues of the CEO than the company. For example, Andrew Grove of Intel writes three books during our sample period: two in the "strategy" category (*High Output Management* and *Only the Paranoid Survive*)

and one a memoir (*Swimming Across: A Memoir*). Of the latter, Amazon.com writes: "In *Swimming Across*, a true American hero reveals his origins and what it takes to survive...and to triumph."

In the top panel of Figure 3, we plot the likelihood of writing a book against the number of awards a CEO has won in the past. Not surprisingly, the baseline probability of a CEO writing a book in any given firm year is low (0.0037). However, having won an award in the past nearly doubles the likelihood of authoring a book. For the biggest superstars–CEOs who have won three or more awards in the past–the likelihood of writing a book in a given firm year is more than three times higher than the baseline probability in the full sample of CEO years.

In Table 6, we examine these patterns in a regression framework. In Column 1, we regress the number of books per year on the CEO's award history: we include indicators for having won at least x awards in the past, where x ranges from 1 to 3. We control for firm size (the natural log of market capitalization), firm performance (book-to-market ratio), CEO age, CEO tenure, and firm and year fixed effects.[18] The firm fixed effects capture variation in the type of firm in which managers write books (e.g. CEO authors may be more common in firms with popular consumer products). The year effects capture time series variation in consumer taste for CEO books. The controls are generally not significant. The pattern of the coefficients on the award dummies mirrors Figure 3. Though the positive marginal effect of winning the first award is not statistically significant, the marginal impact of each additional award is also positive and larger in magnitude. As a result, the cumulative impact of winning at least 3 awards is statistically significant at the 1% level (p-value = 0.0064). In Columns 2 - 4, we re-estimate the regression separately for firms in each of the three corporate governance regimes defined in Section 3.3. We find no significant marginal or cumulative award effects in firms with strong corporate governance (GIM$\leq$ 7). For firms with intermediate values of the governance index, we find that the marginal effect of winning a second award is positive and significant, but the effect of winning at least 3 awards is not significant. Among firms with weak governance (GIM$>$ 9), the marginal and cumulative effects of winning at least 3 awards are statistically significant (the p-value for the cumulative effect is < 0.0001). Thus, the likelihood of CEOs becoming serial authors–like Andrew Grove–increases as the number of awards increases, but

[18] We exclude the CEO gender control since only one female CEO in our sample, Lillian Vernon of Lillian Vernon Corp, authors a book.

primarily when the quality of governance is also poor.

We perform a parallel analysis of the number of external board seats award-winning CEOs assume. Serving on outside boards entails a tradeoff between value-increasing networking opportunities and time that could be spent on internal firm business. As an external director, the CEO has to spend time preparing for board meetings, travelling to meetings, and communicating outside the meetings with the CEO and other board members about company issues. Corporate governance ratings and best practices guidelines from watchdogs such as the *Institutional Shareholder Services* (ISS) suggest that the distraction effect dominates when the CEO sits on five or more external boards.[19] Thus, we use an indicator for sitting on five or more external boards as a distraction measure.

In the lower panel of Figure 3, we plot the frequency of sitting on at least 5 outside boards against the number of prior awards. In this case, the main impact appears to occur with the first award. Award-winning CEOs are roughly twice as likely to sit on 5 or more boards than non-winning CEOs (6.8% vs. 3.2%), but the graph is relatively flat as we increase the number of past awards from 1 to 3.

In Column 5 of Table 6, we measure the effects in a regression framework. As before, we include firm size, firm performance, CEO age, CEO tenure, CEO gender, and firm and year fixed effects as controls. Here, the firm effects capture differences in demand for the CEO's services as a director depending on the type of firm and the year effects capture time series patterns in the overall demand for CEO-directors. Among the controls, we find that CEO age and tenure significantly increase the likelihood of serving on at least 5 boards. We also find that CEOs in value firms (i.e. firms with low book-to-market ratios) are more likely to sit on outside boards. This result could arise if there is more CEO turnover in growth firms. Regardless, the economic magnitude of the effect is small (decreasing book-to-market by one standard deviation increases the likelihood of sitting on at least 5 boards by roughly 0.005). We also confirm the pattern from Figure 3: only winning the first award (marginally) significantly increases the frequency of outside directorship. In Columns 6 - 8, we re-estimate the regression on the three corporate governance subsamples. We find that the positive impact of winning an

[19] Concretely, five or more board seats do negatively affect corporate governance measures such as the *Corporate Governance Quotient* of ISS.

award comes entirely from the weak governance subsample (GIM> 9); there are no significant award effects in the other subsamples.

We perform several robustness checks on the books and board seats evidence, with mixed results. Both results are qualitatively similar if we include CEO fixed effects: CEOs who win awards are more likely to write books or sit on external boards after they win awards than they were before, particularly when governance is weak. However, the results are generally not robust to clustering the standard errors at the firm level. This result likely arises due to the relative rarity of the outcomes. Thus, though the results are suggestive, we must interpret them with some caution.

As a final measure of their propensity to engage in activities that distract attention from firm business, we look at CEOs' golf handicaps. In general, as CEOs play more golf their handicaps should decrease. We collect information on golf handicaps from the CEO rankings published by *Golf Digest* in 1998, 2000 and 2002. Unfortunately, the short time series of data does not allow us to (systematically) identify *changes* in handicaps among award-winning CEOs. We do find, however, that award-winning CEOs have lower handicaps on average than their peers (14.29 vs. 15.46; difference p-value = 0.097). Moreover, the (absolute) difference in handicaps is largest in firms with poor corporate governance and declines monotonically to 0 as governance improves (GIM> 9: difference = -1.833, p = 0.092; 7 <GIM≤ 9: difference = -0.774, p = 0.540; GIM≤ 7: difference = -0.075, p = 0.958). These cross-sectional patterns are consistent with powerful CEOs spending time on the golf course that shareholders would prefer them to spend on firm business.

5 Earnings Management

One external effect of having an award-winning CEO is that market and analyst expectations for future firm performance may increase. If CEOs use their status to extract rents from the firm and allow the consumption of perks to distract them from effectively running the company, then they may find it increasingly difficult to meet or exceed these expectations. However, repeatedly underperforming expectations is a sure-fire way for the CEO to undermine his celebrity status. Thus, we hypothesize that award-winning CEOs are more likely to manage

earnings than other CEOs.

To test the earnings management hypothesis, we follow the approach of DeGeorge, Patel, and Zeckhauser (1999). In Figure 4, we plot the mean deviation between quarterly earnings announcements and the consensus analyst forecast, separately for CEOs who have won 1, 2, 3, or 4 awards in the past. We measure the consensus forecast as the median forecast among all analysts who make a forecast in the 30 calendar days prior to the announcement. In each figure, we include the distribution of earnings surprises in the complementary set of CEOs as a benchmark. Following DeGeorge et al, we interpret "extra mass" at 0 or 1¢, relative to a symmetric distribution, as evidence of earnings management. That is, we ask whether CEOs are more likely to just meet or barely exceed expectations than they should be under a symmetric distribution of earnings realizations. Consistent with our hypothesis, we find that award winners appear to have an asymmetric distribution of earnings surprises. Moreover, the distribution among award winners is less symmetric than among non-winners and the deviation generally increases with the number of awards. Economically, among CEOs with at least 1 award, there is a roughly 3.5 percentage point higher frequency of reporting a zero earnings surprise; among CEOs with at least 4 awards, the increase is more than 10 percentage points.

In Table 7, we test the pattern in a regression framework. We focus on the probability that a firm experiences an earnings surprise of exactly zero. This variable is analogous to the distraction variables in the sense that it would require long windows pre- and post- award to measure changes in the frequency of zero surprises. Thus, we adapt our empirical specification from Section 4 to conduct the formal tests. As before, we control for firm performance (book-to-market ratio), CEO age and CEO tenure. We also control for firm size. Following DellaVigna and Pollet (2004), we allow for a non-linear effect by including 10 indicator variables for deciles of market capitalization at the time of the earnings announcement.[20] Since the data is quarterly, we include month effects in addition to the year fixed effects to control for cross-sectional correlation of earnings surprises at different points in time. We also cluster the standard errors by earnings announcement date.[21] Finally, we include CEO fixed effects to

[20] The coefficients of the award dummies are largely unaffected by instead including size as a continuous control.

[21] The results are qualitatively unchanged if we instead cluster at the firm level to correct for autocorrelation of earnings surprises.

separate the impact of winning awards from a (potentially) higher baseline propensity to manage earnings among award-winning CEOs.[22] In unreported estimations, we verify that the results are robust to including the number of analysts making earnings forecasts for the firm as an additional control.

In the full sample (Column 1), we find that firms with lower book-to-market ratios, measured at the end of the last fiscal year to end at least six months prior to the announcement, are more likely to report exactly zero earnings surprises. The other controls do not have significant effects. The pattern among the award dummies is consistent with the evidence in Figure 4. The marginal effect of winning the first award on the frequency of reporting a zero surprise is positive and significant at the 1% level: CEOs increase earnings management after they win an award. There is no significant additional impact of the second or third award on the likelihood of a zero surprise. But, the fourth award has a large and significant positive effect. The cumulative increase in the frequency of zero surprises among CEOs with at least 4 prior awards is roughly 10 percentage points and is statistically significant (p-value = 0.025). In Columns 2 - 4, we re-estimate our regressions on the three corporate governance subsamples (GIM$\leq$ 7, 7 <GIM$\leq$ 9, and GIM$>$ 9). In firms with strong governance, we find no significant impact of CEO awards on the likelihood of reporting a zero surprise. In the intermediate range, there is some evidence of increased earnings management among winners: the cumulative effect of winning at least 4 awards on the likelihood of reporting a zero surprise is roughly 17 percentage points and is statistically significant (p-value = 0.084). Among the firms with poor corporate governance, the effect of 1 award is already strong and statistically significant. Curiously, the effect reverses and becomes negative for a CEO who wins exactly 2 awards. However, the cumulative effect of winning at least 4 awards, while marginally insignificant (p-value = 0.137), is positive and economically large (roughly 15 percentage points). Overall, the evidence suggests that award-winning CEOs increase their frequency of earnings management, particularly when corporate governance is weak.

Finally, in untabulated estimations, we confirm that CEOs are not able to follow this strategy indefinitely. We measure the frequency with which CEOs in the sample report negative earnings. Overall, negative earnings reports are a rare event, occurring less than 10% of the time.

[22] Because of the CEO effects, the CEO gender dummy cannot be identified.

We find few significant differences between the likelihood of winning CEOs and non-winning CEOs reporting negative earnings. However, once 5 years have passed since the winning CEO's last award, the frequency of negative earnings announcements is significantly higher than among non-winning CEOs.

6 Conclusion

We use major awards in the national media to measure the impact of sudden increases in CEO status on corporate performance. The quantity and prominence of CEO awards has increased drastically over the past two decades as the celebrity culture has permeated the business world. We show that this development has clear consequences for claimholders and implications for how effective governance should be structured:

- Firms with award-winning CEOs suffer declining performance. This decline is observed in stock performance for the three years following the award and in the return on assets over the same horizon. The decline is also observed both relative to the firm's own performance prior to the award and to the performance of similar firms in which the CEO did not win an award.
- Award-winning CEOs extract higher compensation from the firm, largely in the form of stock and stock options. They obtain significant and economically meaningful increases in total compensation in the years following their award despite sub-par firm performance. The increases, however, are not shared by other top executives in the firm.
- Both increased compensation and deteriorating performance occur primarily in poorly governed firms.
- Award-winning CEOs increase their indulgence in tasks which provide private benefits, but have little (if any) positive influence on firm value. They are significantly more likely to author books and sit on outside boards seats than non-winning CEOs. They also have lower golf handicaps. These effects are most prominent in firms with weak corporate governance.

- CEOs increase earnings management following awards, particularly in poorly governed firms. Moreover, they are significantly more likely to report negative earnings after five years have passed from their last award.

Together these results suggest there is distortion in behavior induced by increased status and that it does affect ultimate firm performance. However, the negative effects can be avoided if strong corporate governance institutions are in place. Moreover, the good performance of award-winning CEOs *prior* to the award suggests that the implicit tournament for media recognition may mitigate agency problems inside the firms ex ante, inducing value-maximizing decisions.

References

[1] Abadie, Alberto; David Drukker; Jane Leber Herr and Guido W. Imbens, 2001, Implementing Matching Estimators for Average Treatment Effects in Stata, *The Stata Journal* 1, pp. 1-18.

[2] Abadie, Alberto and Guido W. Imbens, 2007, Bias Corrected Matching Estimators for Average Treatment Effects, Mimeo.

[3] Adams, Renee; Heitor Almeida and Daniel Ferreira, 2005, Powerful CEOs and Their Impact on Corporate Performance, *Review of Financial Studies* 18, pp. 1403-1432.

[4] Bebchuk, Lucian Arye and Jesse M. Fried, 2003, Executive Compensation as an Agency Problem, *Journal of Economic Perspectives* 17(3), pp. 71-92.

[5] Bennedsen, Morten; Francisco Perez-Gonzalez and Daniel Wolfenzon, 2006, Do CEOs Matter? Mimeo.

[6] Bertrand, Marianne and Antoinette Schoar, 2003, Managing with Style: The Effect of Managers on Firm Policies, *Quarterly Journal of Economics* 118, pp. 1169-1208.

[7] Brennan, Michael J.; Tarun Chordia and Avanidhar Subrahmanyam, 1998, Alternative Factor Specifications, Security Characteristics, and the Cross-section of Expected Stock Returns, *Journal of Financial Economics* XLIX, pp. 345-375.

[8] Byrne, John A.; William C. Symonds and Hulia Flynn Siler, 1991, CEO Disease, *Business Week* 3206(April 1), pp. 52.

[9] Carhart, Mark, 1997, On Persistence in Mutual Fund Performance, *Journal of Finance* XLIX, pp. 345-375.

[10] Cremers, K.J. Martijn and Vinay B. Nair, 2004, Governance Mechanisms and Equity Prices, *Yale International Center for Finance (ICF) Working Paper No. 03-15.*

[11] DeGeorge, Francois; Jayendu Patel and Richard Zeckhauser, 1999, Earnings Management to Exceed Thresholds, *Journal of Business* 71(1), pp. 1-33.

[12] DellaVigna, Stefano and Joshua Pollet, 2004, Strategic Release of Information on Fridays: Evidence from Earnings Announcements, Mimeo.

[13] DeBondt, Werner and Richard Thaler, Does the stock market overreact? *Journal of Finance* 40, pp. 793-808.

[14] Dyck, Alexander and Luigi Zingales, 2002, The Corporate Governance Role of the Media in *The Right to Tell: The Role of Mass Media in Development*, Washington: The World Bank.

[15] Dyck, Alexander; Natalya Volchkova and Luigi Zingales, 2007, The Corporate Governance Role of the Media: Evidence from Russia, Mimeo.

[16] Fama, Eugene and Kenneth R. French, 1988, Permanent and Temporary Components of Stock Prices, *Journal of Political Economics* 96, pp. 246-273.

[17] Fama, Eugene and Kenneth R. French, 1993, Common Risk Factors in the Returns on Stocks and Bonds, *Journal of Financial Economics* 33(1), pp. 3-56.

[18] Gompers, Paul; Joy Ishii and Andrew Metrick, 2003, Corporate Governance and Equity Prices, *Quarterly Journal of Economics* 118(1), pp. 107-155.

[19] Hayward, Matthew L.A. and Donald D. Hambrick, 1997, Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris, *Administrative Science Quarterly* 42, pp. 103-127.

[20] Hirshleifer, David; Kewei Hou; Siew Hong Teoh and Yinglei Zhang, 2004, Do Investors Overvalue Firms with Bloated Balance Sheets? Mimeo.

[21] Jensen, Michael C. and William H. Meckling, 1976, Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure, *Journal of Financial Economics* 3, pp. 395-360.

[22] Lazear, Edward P. and Sherwin Rosen, 1991, Rank-Order Tournaments as Optimum Labor Contracts, *Journal of Political Economy* 89(5), pp. 841-864.

[23] Liu, Crocker and David Yermack, 2007, Where are the Shareholders' Mansions? CEOs' Home Purchases, Stock Sales, and Subsequent Company Performance, Mimeo.

[24] Lowe, Janet, 1997, *Warren Buffet Speaks. Wit and Wisdom from the World's Greatest Investors.* John Wiley & Sons, New York, N.Y.

[25] Malmendier, Ulrike and Geoffrey Tate, 2005, CEO Overconfidence and Corporate Investment, *Journal of Finance* 60, pp. 2661-2700.

[26] Malmendier, Ulrike and Geoffrey Tate, forthcoming, Who Makes Acquisitions? CEO Overconfidence and the Market's Reaction, *Journal of Financial Economics.*

[27] Morck, Randall; Andrei Shleifer and Robert W. Vishny, Alternative Mechanisms for Corporate Control, *American Economic Review* 79, pp. 842-852.

[28] Rajan, Raghuram and Julie Wulf, 2006, Are Perks Purely Managerial Excess? *Journal of Financial Economics* 79, pp. 1-33.

[29] Rosen, Sherwin, 1981, The Economics of Superstars, *American Economic Review* 71(5), pp. 845-858.

[30] Rosenbaum, Paul and Donald Rubin, 1983, The Central Role of the Propensity Score in Observational Studies for Causal Effects, *Biometrika* 70, pp. 41-55.

[31] Samuelson, Paul A., 2002, Is There Life After Nobel Coronation? *Nobelprize.org.*

[32] Yermack, David, 2006, Flights of Fancy: Corporate Jets, CEO Perquisites, and Inferior Shareholder Returns, *Journal of Financial Economics* 80, pp. 211-242.

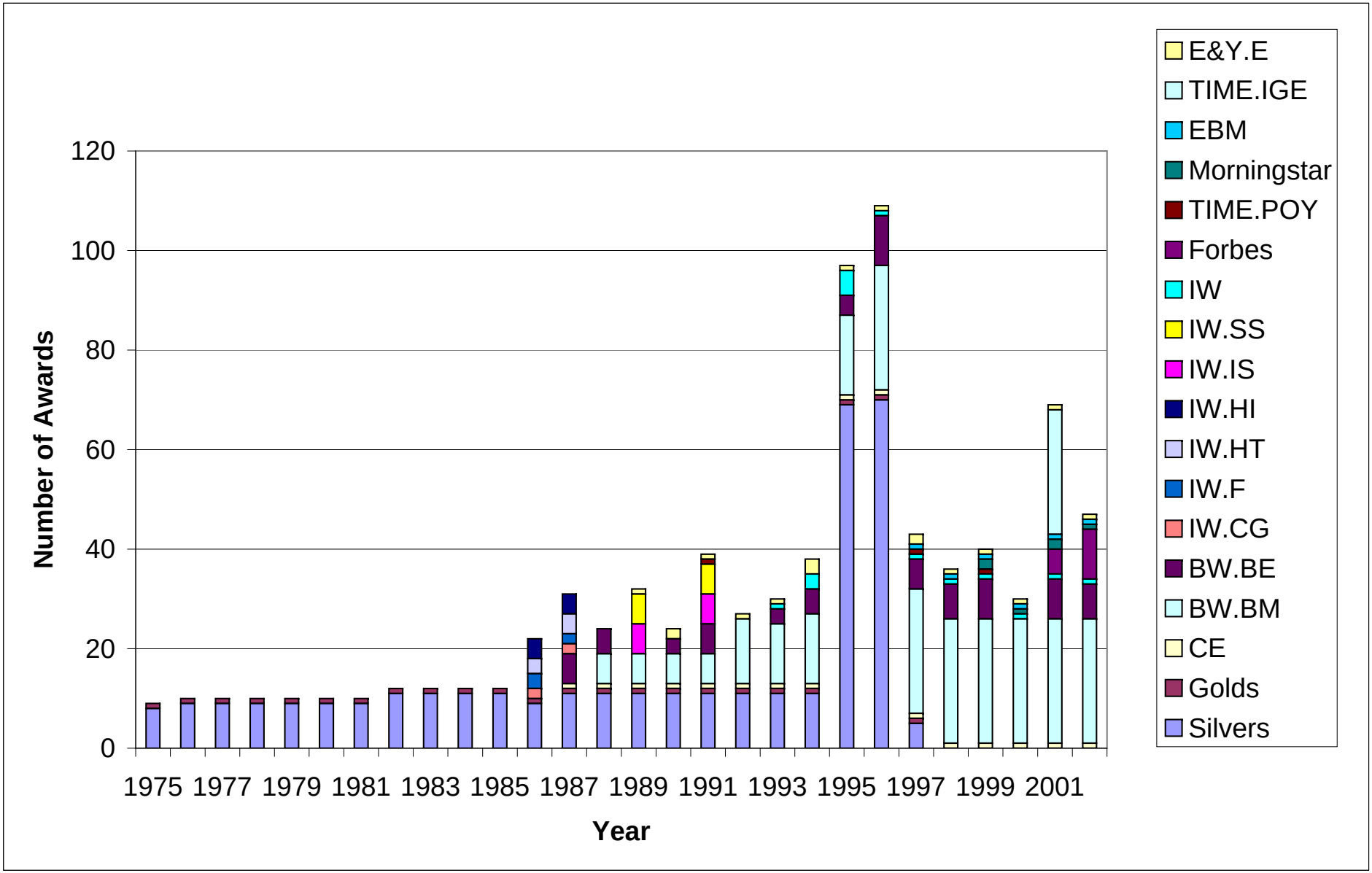
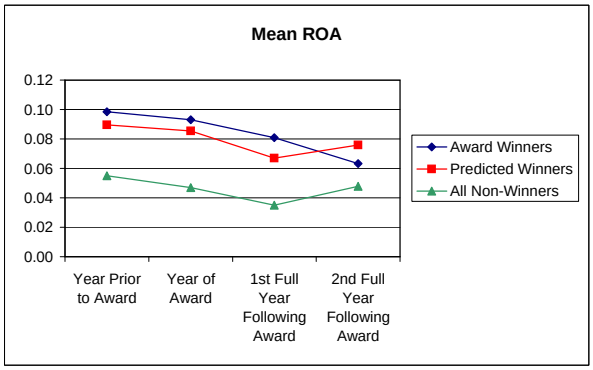
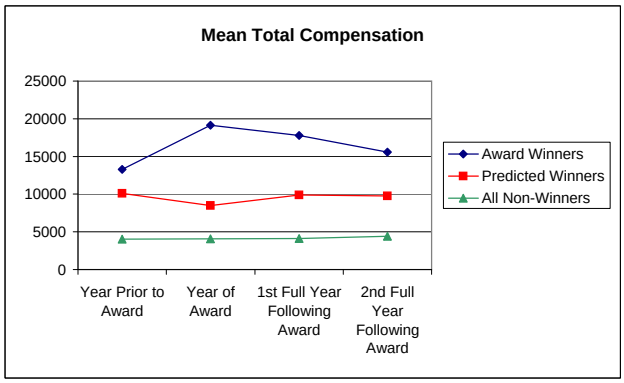
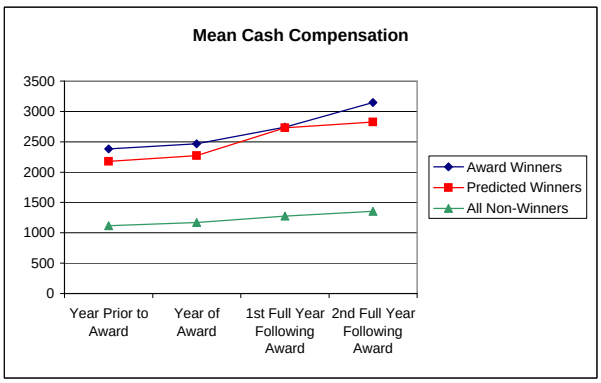
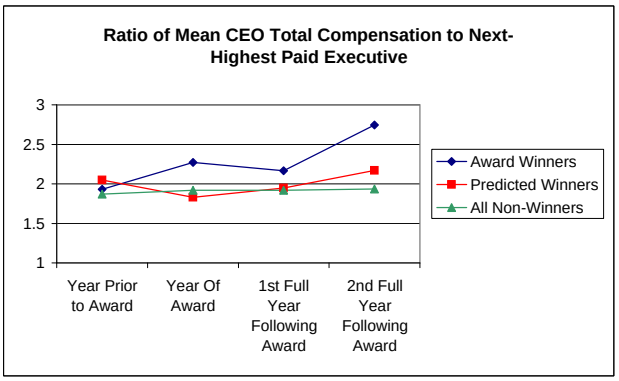


Figure 1. CEO awards by year. E&Y.E are Ernst & Young Entrepreneurs of the Year. TIME.IGE are *Time/CNN* Most Influential Global Executives. EBM are *Electronic Business Magazine* CEOs of the year. Morningstar are *Mornngstar.com* CEOs of the year. TIME.POY are winners of the *Time* Person of the Year award. Forbes are *Forbes* Best Performing CEOs. IW are *Industry Week* CEOs of the year (from the Annual CEO Survey) for years in which the winners are not broken into categories. IW.SS are *Industry Week* CEOs of the year in the "Services Sector." IW.IS are *Industry Week* CEOs of the year in the "Industrial Sector." IW.HI are *Industry Week* CEOs of the year in the "Heavy Industry Companies" category. IW.HT are *Industry Week* CEOs of the year in the "High-tech Companies" category. IW.F are *Industry Week* CEOs of the year in the "Finance and Other Companies" category. IW.CG are *Industry Week* CEOs of the year in the "Consumer Goods" category . BW.BE are *Business Week* Best Entrepreneur awards. BW.BM are *Business Week* Best Manager awards. CE are *Chief Executive* CEOs of the year. Golds are *Financial World* CEOs of the Year "Gold" category winners. Silvers are *Financial World* CEOs of the Year "Silver" category winners.









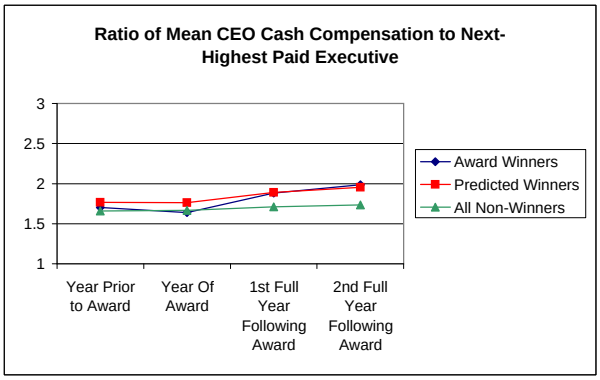
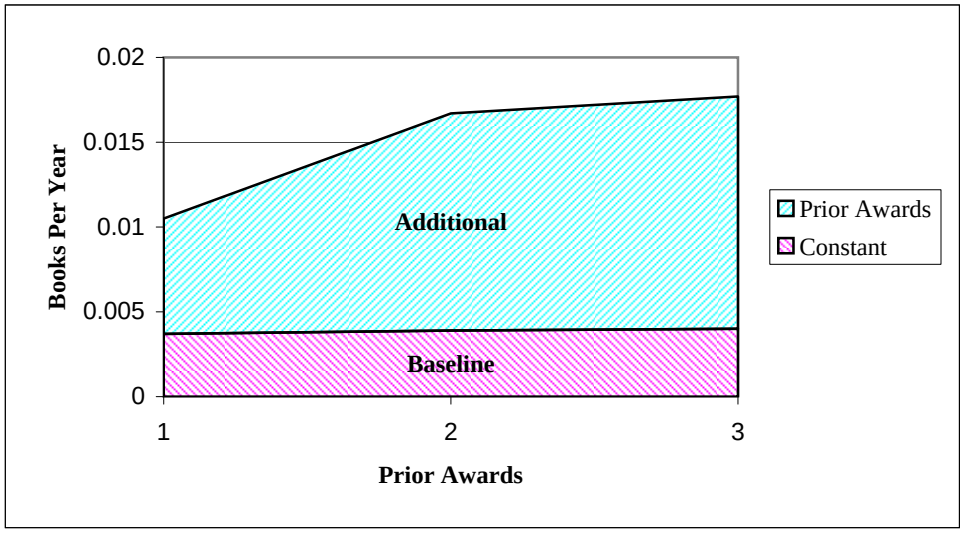


Figure 2. Operating performance and compensation of award winners. Predicted winners are chosen using a nearest-neighbor propensity score match with controls for firm size; book-to-market ratio; returns 2 to 3, 4 to 6, 7 to 12, and 13 to 36 months prior to the award month; CEO age; CEO tenure; CEO gender; and year-, Fama-French 48 industry, and award fixed effects. Matching is done in each month in which an award is conferred, with replacement. Year of Award gives the value of the outcome variable at the end of the fiscal year in which the award was conferred. ROA is income before extraordinary items plus interest expense, scaled by assets. Total Compensation (tdc1) is salary plus bonus plus other annual plus restricted stock grants plus LTIP payouts plus all other plus value of options grants. Cash Compensation (tcc) is salary plus bonus. Total and Cash Compensation are reported in $K. Total (Cash) Compensation ratio is the ratio of the CEO's total (cash) compensation to the total (cash) compensation of the next highest paid executive in the firm.



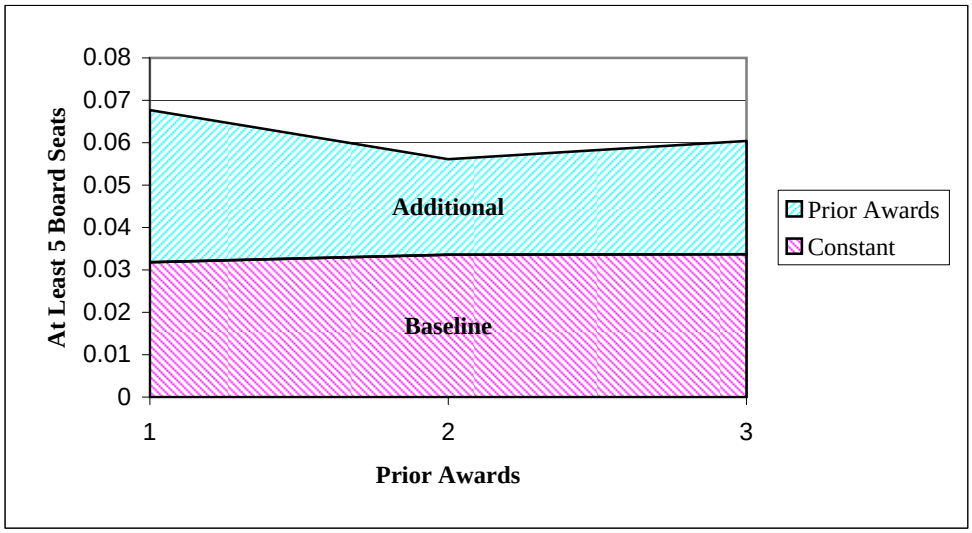


Figure 3. CEO awards and distractions. Books measures the number of books the CEO published during the fiscal year. At least 5 board seats is a dummy variable equal to 1 if the CEO sat on at least 5 outside boards during the fiscal year. The figures count the number of awards the CEO has won in prior years, inclusive of awards won in other companies.

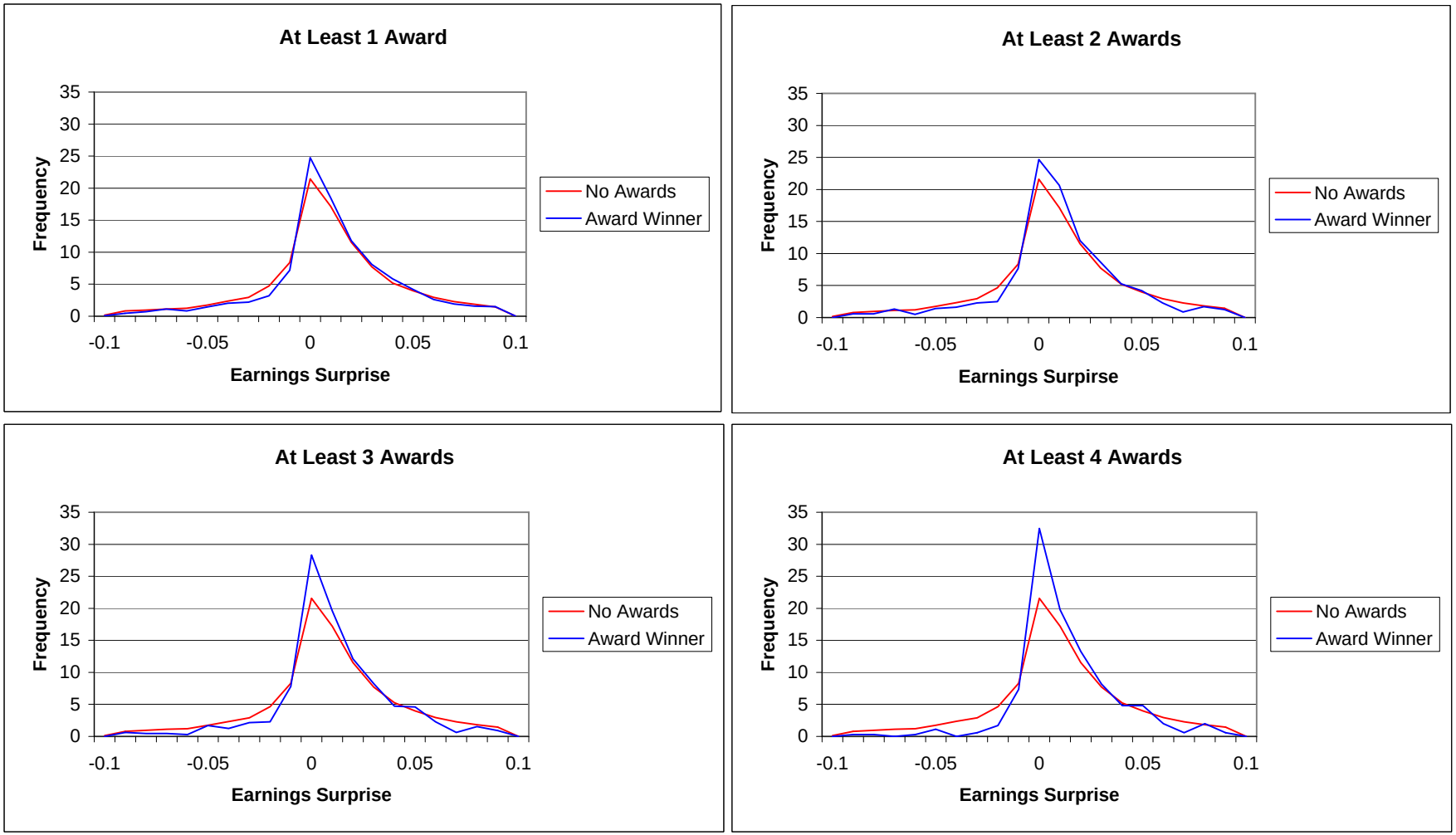


Figure 4. CEO awards and earnings manipulation. Earnings surprise is the difference between the firm's quarterly earnings announcement and the median analyst forecast among all analysts that make a forecast in the 30 calendar days prior to the announcement. The figures count the number of awards the CEO has won in prior years, inclusive of awards won in other companies.

Table 1. Summary Statistics

Market capitalization (price * shares outstanding) is taken two months prior to the award month and is in log form. Book-to-market ratio is book equity over market capitalization. Returns_*x*_*y* are the total compound returns from the *y* th to the *x* th month prior to the award month. Net Operating Assets (NOA) are operating assets minus operating liabilities, scaled by the lag of book assets. Accruals are the change in current assets minus the change in cash and short-term investments minus depreciation and amortization minus the quantity the change in liabilites minus the change in debt in current liabilities minus the change in income taxes payable, scaled by the lag of book assets. NOA and Accruals are winsorized at the 1% level in the overall sample. Total Compensation (tdc1) is salary plus bonus plus other annual plus restricted stock grants plus LTIP payouts plus all other plus value of options grants. Cash Compensation (tcc) is salary plus bonus. Total and Cash Compensation are reported in $K. Total (Cash) Compensation ratio is the ratio of the CEO's total (cash) compensation to the total (cash) compensation of the next highest paid executive in the firm. Governance Index (GIM) is constructed as in Gompers, Ishii, and Metrick (2003). Institutional Blockholder is constructed as in Cremers and Nair (2004). Book-to-Market Ratio, Total Compensation, Cash Compenstion, Total Compensation Ratio, and Cash Compensation Ratio, Net Operating Assets and Accruals are measured at the end of the most recent fiscal year that ends at least six months prior to the award month. ROA (income before extraordinary items plus interest expense, scaled by asets), ROE (net income, scaled by book equity), and Q (assets plus market equity minus book equity, scaled by assets) are measured at the end of the most recent fiscal year that ends prior to the award.

Months with CEO Awards

	CEO Award Winners				*All Non-Award Winners*				*Predicted Winners*				*Differences in Means*	
	Obs.	Mean	Median	Std. Dev.	Obs.	Mean	Median	Std. Dev.	Obs.	Mean	Median	Std. Dev.	p(W - A)	p(W - P)
Match Variables:														
Market Capitalization	264	9.636	9.676	1.579	60,356	7.079	6.939	1.602	264	9.689	9.988	1.655	0.000***	0.709
Book-to-Market Ratio	264	0.377	0.307	0.304	60,356	0.581	0.482	0.626	264	0.411	0.321	0.309	0.000***	0.192
Returns_2_3	264	0.068	0.055	0.186	60,356	0.034	0.027	0.207	264	0.066	0.046	0.203	0.007***	0.872
Returns_4_6	264	0.075	0.070	0.198	60,356	0.020	0.011	0.244	264	0.068	0.046	0.190	0.000***	0.671
Returns_7_12	264	0.268	0.156	0.608	60,356	0.106	0.068	0.380	264	0.328	0.108	1.076	0.000***	0.432
Returns_13_36	264	1.137	0.498	2.997	60,356	0.604	0.281	1.792	264	0.724	0.474	1.461	0.000***	0.045**
CEO age	264	55.508	56	8.180	60,356	55.155	55	7.628	264	55.616	56	6.904	0.453	0.869
CEO female (dummy)	264	0.015	0	0.122	60,356	0.011	0	0.106	264	0.022	0	0.140	0.567	0.542
CEO tenure	264	9.708	8	7.346	60,356	8.362	6	7.539	264	8.569	7	7.027	0.004***	0.069*
Other Firm Variables:														
Assets	264	53,563.76	11,858.04	138,544.40	60,350	9,612.28	1,249.60	41,624.75	264	50,594.96	20,013.96	107,002.70	0.000***	0.783
Sales	264	20,753.49	9,266.53	30,185.48	60,346	4,014.42	1,071.50	10,879.21	264	23,904.41	13,959.00	31,012.16	0.000***	0.237
ROA	246	0.10	0.09	0.06	53,970	0.05	0.07	0.14	251	0.09	0.08	0.07	0.000***	0.114
ROE	264	0.20	0.18	0.43	60,251	0.09	0.11	4.92	264	0.17	0.16	0.23	0.731	0.441
Q	264	3.68	1.94	6.16	60,261	2.01	1.42	1.94	264	3.15	1.99	4.02	0.000***	0.243
Net Operating Assets	263	0.590	0.616	0.324	60,308	0.650	0.663	0.321	263	0.605	0.593	0.268	0.003***	0.560
Accruals	207	-0.044	-0.044	0.082	52,219	-0.039	-0.043	0.087	217	0.004	-0.044	0.063	0.418	0.550
Governance Index (GIM)	252	9.067	9	2.558	48,782	9.361	9	2.736	258	8.777	9	2.653	0.089*	0.208
Institutional Blockholder (dummy)	254	0.496	0	0.501	53,703	0.709	1	0.454	254	0.455	0	0.468	0.000***	0.342
Other CEO Variables:														
CEO stock ownership (%)	262	0.040	0.002	0.100	58,725	0.031	0.004	0.078	264	0.029	0.001	0.088	0.058*	0.165
Total Compensation (tdc1)	231	13,289.66	5,054.80	29,774.55	52,325	4,048.15	1,646.06	13,870.43	229	10,111.22	3,947.94	21,419.98	0.000***	0.190
Cash Compensation (tcc1)	236	2,383.86	1,644.39	2,577.64	53,654	1,116.59	791.30	1,609.53	234	2,177.50	1,530.76	2,083.46	0.000***	0.341
Total Compensation Ratio	231	1.93	1.58	1.48	52,212	1.87	1.57	1.81	229	2.05	1.64	1.94	0.597	0.473
Cash Compensation Ratio	236	1.70	1.52	0.88	53,609	1.66	1.54	1.39	234	1.77	1.60	0.97	0.613	0.463
Chm., Pres. & CEO (dummy)	260	0.158	0	0.37	54,988	0.26	0	0.44	261	0.210	0	0.377	0.000***	0.110
Fama French 12 Industries:														
Consumer Nondurables	5%	Telecommunications		3%	C. NonD	5%	Telecom.	2%	C. NonD	4%	Telecom.	5%		
Consumer Durables	7%	Utilities		4%	C. Dur	3%	Utilities	7%	C. Dur	5%	Utilities	9%		
Manufacturing	8%	Shops		0%	Man.	12%	Shops	0%	Man.	5%	Shops	0%		
Energy	3%	Health		6%	Energy	5%	Health	7%	Energy	2%	Health	10%		
Chemicals	2%	Money		14%	Chem.	4%	Money	13%	Chem.	5%	Money	12%		
Business Equipment	27%	Other		22%	Bus. Eq.	16%	Other	26%	Bus. Eq.	29%	Other	15%		

Absolute value of t statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 2. Determinants of Award Winners

The sample includes all firms in each month in which a CEO award was given. The dependent variable is a dummy variable equal to 1 if the CEO of the company won the award. Market capitalization (price * shares outstanding) is taken two months prior to the award month and is in log form. Book-to-market ratio is book equity over market capitalization and is measured at the end of the last fiscal year to end at least six months prior to the award month. Returns_*x*_*y* are the total compound returns from the *y* th to the *x* th month prior to the award month. Coefficients are displayed as odds ratios.

	logit
Market Capitalization	3.072
	(21.85)***
Book-to-Market Ratio	0.635
	(2.38)**
Returns_2_3	1.878
	(2.41)**
Returns_4_6	3.891
	(5.47)***
Returns_7_12	2.105
	(7.97)***
Returns_13_36	1.053
	(2.73)***
CEO female (dummy)	3.175
	(2.12)**
CEO age	0.982
	(1.68)*
CEO tenure	1.037
	(4.02)***
Industry dummies	yes
Year dummies	yes
Award type dummies	yes
Pseudo R^2	0.36
Observations	71,418

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3. Stock Performance of Award Winners vs. Predicted Winners

I. Cumulative Abnormal Returns Around Awards and Predicted Awards

Predicted winners are chosen in columns 2 to 4 using a nearest-neighbor propensity score match with controls for firm size; book-to-market ratio; returns 2 to 3, 4 to 6, 7 to 12, and 13 to 36 months prior to the award month; CEO age; CEO tenure; CEO gender; and year-, Fama-French 48 industry, and award fixed effects. The bias-adjustment accounts for differences between the propensity scores of award winners and their nearest match. The final column matches on the characteristics directly, also adjusted for the bias created by differences in characteristics across winners and their matches. Each sample contains 264 observations. Matching is done in each month in which an award is conferred, with replacement. Windows are expressed in trading days. Expected returns are calculated using a market model with the CRSP value-weighted index as market returns and a three year estimation period ending 23 trading days prior to the award date [-778,-23].

	Award (W)	*Predicted Award (P)*	*Difference (W - P)*	*Bias-Adjusted Difference*	*Characteristic-Matched, Bias-Adjusted Difference*
Event Window [-5,+5]	-0.002	-0.006	0.005	0.005	0.003
	(0.35)	(1.37)	(0.65)	(0.61)	(0.57)
Event Window [+6,+255]	-0.183	-0.101	-0.082	-0.082	0.024
	(7.03)***	(4.48)***	(2.38)**	(2.44)**	(0.94)
Event Window [+6,+510]	-0.404	-0.235	-0.169	-0.168	-0.077
	(9.43)***	(5.68)***	(2.84)***	(2.77)***	(1.97)**
Event Window [+6,+765]	-0.607	-0.349	-0.257	-0.256	-0.147
	(10.42)***	(6.14)***	(3.16)***	(3.09)***	(2.69)***

II. Long Run Returns to Difference Portfolio

The dependent variable is the value-weighted monthly return to the portfolio that is long award winners and short predicted winners. Firms enter the portfolio at the beginning of the first month after the award date and exit 1, 2, or 3 years later or upon CEO exit. Alpha is the alpha from a four factor model: mktrf is the market factor, smb the size factor, hml the book-to-market factor, and umd the momentum factor.

	1 Year	2 Years	3 Years
mktrf	0.125	0.055	0.052
	(1.23)	(0.68)	(0.75)
smb	-0.209	-0.110	-0.079
	(2.01)**	(1.34)	(1.11)
hml	-0.173	-0.178	-0.096
	(1.35)	(1.75)*	(1.10)
umd	0.274	0.229	0.162
	(3.86)***	(4.06)***	(3.35)***
alpha	-0.005	-0.005	-0.005
	(1.16)	(1.52)	(1.99)**
Observations	141	143	143
R-squared	0.13	0.14	0.09

Absolute value of t statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4. Operating Performance and Compensation Around CEO Awards

ROA is income before extraordinary items plus interest expense, scaled by assets. Total Compensation (tdc1) is salary plus bonus plus other annual plus restricted stock grants plus LTIP payouts plus all other plus value of options grants. Cash Compensation (tcc) is salary plus bonus. Predicted winners are chosen in columns 2 to 4 using a nearest-neighbor propensity score match with controls for firm size; book-to-market ratio; returns 2 to 3, 4 to 6, 7 to 12, and 13 to 36 months prior to the award month; CEO age; CEO tenure; CEO gender; and year-, Fama-French 48 industry, and award fixed effects. The bias-adjustment accounts for differences between the propensity scores of award winners and their nearest match. The final column re-matches on the propensity score and the lagged level of the outcome variable, adjusting for the bias created by differences in propensity scores and the lagged outcome. Matching is done in each month in which an award is conferred, with replacement. Windows are expressed in fiscal years.

	Award (W)	*Predicted Award (P)*	*Difference (W - P)*	*Bias-Adjusted Difference*	*Bias-Adjusted Difference with Lag*
		Panel A. Performance			
ROA [-1, 0]	-0.005	-0.004	-0.001	-0.002	0.000
	(1.58)	(1.25)	(0.16)	(0.57)	(0.09)
ROA [-1, +1]	-0.019	-0.023	0.004	0.001	0.000
	(3.15)***	(2.29)**	(0.37)	(0.08)	(0.01)
ROA [-1, +2]	-0.040	-0.017	-0.023	-0.016	-0.020
	(2.76)***	(2.52)**	(1.43)	(0.95)	(1.25)
		Panel B. CEO Compensation			
Total Compensation [-1, +0]	7,816.21	-829.75	8,645.96	8,577.07	8,017.35
	(2.16)**	(0.57)	(2.21)**	(2.21)**	(2.39)**
Total Compensation [-1, +1]	6,399.23	711.86	5,687.37	4,161.52	6,546.25
	(1.59)	(0.44)	(1.33)	(0.95)	(1.65)*
Total Compensation [-1, +2]	7,332.71	2,329.09	5,003.62	3,992.49	5,856.76
	(2.96)***	(1.53)	(1.74)*	(1.24)	(2.39)**
Cash Compensation [-1, 0]	197.27	202.74	-5.465	-30.30	14.81
	(1.53)	(1.45)	(0.03)	(0.17)	(0.09)
Cash Compensation [-1, +1]	454.01	660.10	-206.09	-135.03	14.60
	(1.63)	(6.15)***	(0.70)	(0.45)	(0.05)
Cash Compensation [-1, +2]	1,236.09	960.51	275.58	288.91	187.59
	(3.45)***	(6.15)***	(0.72)	(0.70)	(0.48)

Absolute value of t statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 5. Performance and Compensation by Corporate Governance

CAR are cumulative abnormal returns, where expected returns are calculated using a market model with the CRSP value-weighted index as market returns and a three year estimation period ending 23 trading days prior to the award date [-778,-23]. ROA is income before extraordinary items plus interest expense, scaled by assets. Total Compensation (tdc1) is salary plus bonus plus other annual plus restricted stock grants plus LTIP payouts plus all other plus value of options grants. Cash Compensation (tcc) is salary plus bonus. GIM is the governance index of Gompers, Ishii, and Metrick (2003). Estimates are the difference in the outcome variable between award winners and predicted winners in each governance category. In columns 1, 3, and 5, predicted winners are chosen using a nearest-neighbor propensity score match with controls for firm size; book-to-market ratio; returns 2 to 3, 4 to 6, 7 to 12, and 13 to 36 months prior to the award month; CEO age; CEO tenure; CEO gender; and year-, Fama-French 48 industry, and award fixed effects. The bias-adjustment accounts for differences between the propensity scores of award winners and their nearest match. In columns 2, 4, and 6, predicted winners are chosen by matching on the propensity score and the lagged level of the outcome variable, adjusting for the bias created by differences in propensity scores and the lagged outcome. Matching is done in each month in which an award is conferred, with replacement. CAR windows are expressed in trading days; all other windows are expressed in fiscal years. N is the number of award winners (and matches) in each category.

	Good Governance (GIM ≤ 7)		**(7 < GIM ≤ 9)**		**Bad Governance (GIM > 9)**	
	Bias-Adjusted Difference	Bias-Adjusted Difference with Lag	Bias-Adjusted Difference	Bias-Adjusted Difference with Lag	Bias-Adjusted Difference	Bias-Adjusted Difference with Lag
CAR [6, 255]	0.110	N/A	0.004	N/A	-0.127	N/A
	(1.01)		(0.08)		(2.77)***	
	N=68		N=81		N=103	
CAR [6, 510]	0.137	N/A	-0.026	N/A	-0.221	N/A
	(0.78)		(0.31)		(2.93)***	
	N=68		N=81		N=103	
CAR [6, 765]	0.066	N/A	-0.041	N/A	-0.229	N/A
	(0.28)		(0.38)		(2.17)**	
	N=68		N=81		N=103	
ROA [-1, +2]	0.036	0.004	0.017	0.014	-0.020	-0.011
	(1.07)	(0.11)	(0.68)	(0.99)	(1.98)**	(1.16)
	N=53	N=53	N=56	N=56	N=87	N=87
Total Compensation [-1, 0]	-831.18	357.39	5,483.33	7,140.69	9,412.38	8,741.06
	(0.12)	(0.08)	(0.58)	(0.79)	(2.16)**	(2.15)**
	N=63	N=63	N=70	N=70	N=91	N=91
Cash Compensation [-1, 0]	-247.20	-191.67	326.08	213.53	-100.69	-266.51
	(0.85)	(0.67)	(0.79)	(0.59)	(0.62)	(1.43)
	N=64	N=64	N=71	N=71	N=94	N=94

Absolute value of t statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 6. Distractions

Books measures the number of books the CEO published during the fiscal year. At least 5 board seats is a dummy variable equal to 1 if the CEO sat on at least 5 outside boards during the fiscal year. Market capitalization (price * shares outstanding) is taken at the end of the prior fiscal year and is in log form. Book-to-market ratio is book equity over market capitalization and is measured at the end of prior fiscal year (or the last fiscal year to end at least six months prior to the current fiscal year). CEO age and tenure are measured in years. The award dummies measure the number of awards the CEO has won in prior years, inclusive of awards won in other companies. GIM is the governance index of Gompers, Ishii, and Metrick (2003).

	Books				**At Least 5 Board Seats**			
	Full Sample	Good Governance (GIM≤7)	7<GIM≤9	Bad Governance (GIM>9)	Full Sample	Good Governance (GIM≤7)	7<GIM≤9	Bad Governance (GIM>9)
Award Dummies								
At least 1 award	0.0022	0.0059	0.0060	-0.0025	0.0193	-0.0033	-0.0126	0.0471
	(0.64)	(0.56)	(0.91)	(0.50)	(1.95)*	(0.14)	(0.54)	(2.65)***
At least 2 awards	0.0083	-0.0019	0.0255	0.0017	-0.0206	-0.0513	0.0074	-0.0719
	(1.10)	(0.09)	(2.42)**	(0.11)	(0.99)	(1.15)	(0.20)	(1.44)
At least 3 awards	0.0093	0.0009	-0.0242	0.0496	0.0093	-0.0017	0.0906	-0.0797
	(1.03)	(0.04)	(1.61)	(2.92)***	(0.37)	(0.03)	(1.58)	(1.37)
Book-to-Market Ratio	-0.0005	-0.0014	-0.0011	-0.0009	-0.0067	-0.0064	-0.0285	-0.009
	(0.51)	(0.48)	(0.44)	(0.44)	(2.53)**	(0.95)	(3.53)***	(1.23)
Market Capitalization	-0.0001	-0.0021	-0.0013	0.0005	0.0003	0.0033	-0.0097	-0.0072
	(0.15)	(0.74)	(0.67)	(0.26)	(0.13)	(0.51)	(1.41)	(1.07)
CEO age	0.0001	0.0005	0.0000	0.0003	0.0012	-0.0002	0.0041	0.0022
	(1.06)	(1.26)	(0.07)	(1.21)	(3.19)***	(0.20)	(4.07)***	(2.75)***
CEO tenure	-0.0001	-0.0008	-0.0001	0.0000	0.0016	0.002	0.0020	0.0014
	(1.05)	(1.86)*	(0.38)	(0.15)	(4.14)***	(2.22)**	(2.06)**	(1.84)*
Year Fixed Effects	X	X	X	X	X	X	X	X
Firm Fixed Effects	X	X	X	X	X	X	X	X
Observations	17,850	3,656	3,371	6,409	14,190	2,919	2,627	4,978
Number of Firms	2,421	818	827	1,032	2,381	774	777	1,005
R^2	0.00	0.00	0.01	0.01	0.02	0.03	0.04	0.03

Absolute value of t statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7. Earnings Management

The dependent variable is binary, where 1 signifies that the firm's quarterly earnings announcement exactly equals the median analyst forecast among all analysts that make a forecast in the 30 calendar days prior to the announcement. Book-to-market ratio is book equity over market capitalization and is measured at the end of last fiscal year to end at least six months prior to the earnings announcement. CEO age and tenure are measured in years. Market capitalization deciles are constructed from the natural log of market capitalization at the time of the earnings announcement. The award dummies measure the number of awards the CEO has won in prior years, inclusive of awards won in other companies. GIM is the governance index of Gompers, Ishii, and Metrick (2003). All standard errors are clustered by earnings announcement date.

	Full Sample	Good Governance (GIM≤7)	7<GIM≤9	Bad Governance (GIM>9)
Award Dummies				
At least 1 award	0.0372	0.0284	0.0215	0.0752
	(2.84)***	(1.07)	(0.74)	(2.93)***
At least 2 awards	-0.0187	-0.0537	0.0293	-0.1022
	(0.69)	(1.03)	(0.50)	(1.95)*
At least 3 awards	-0.0151	-0.0431	0.0098	0.0554
	(0.46)	(0.72)	(0.19)	(0.77)
At least 4 awards	0.1001	0.0683	0.1139	0.1196
	(2.18)**	(0.94)	(1.45)	(1.46)
Book-to-Market Ratio	-0.0273	-0.0173	-0.0241	-0.0193
	(5.27)***	(1.97)*	(1.34)	(2.20)**
CEO age	0.0007	-0.0229	-0.033	0.0029
	(0.11)	(1.87)*	(1.43)	(0.32)
CEO tenure	0.0021	0.0057	0.0131	-0.0031
	(0.88)	(0.81)	(0.95)	(0.60)
Market Capitalization Deciles	X	X	X	X
Month Fixed Effects	X	X	X	X
Year Fixed Effects	X	X	X	X
CEO Fixed Effects	X	X	X	X
Observations	55,266	11,335	10,607	20,787
Number of CEOs	3,638	1,063	1,045	1,559
R^2	0.17	0.22	0.22	0.18

Absolute value of t statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.