

# Superstar CEOs\*

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## Abstract

Compensation, status, and press coverage of managers in the U.S. follow a highly skewed distribution: a small number of ‘superstars’ enjoy the bulk of the rewards. We evaluate the impact of CEOs achieving superstar status on the performance of their firms, using prestigious business awards to measure shocks to CEO status. We find that award-winning CEOs subsequently underperform, both relative to their prior performance and relative to a matched sample of non-winning CEOs. At the same time, they extract more compensation following the award, both in absolute amounts and relative to other top executives in their firms. They also spend more time on public and private activities outside their companies, such as assuming board seats or writing books. The incidence of earnings management increases after winning awards. The effects are strongest in firms with weak governance, even though the frequency of obtaining superstar status is independent of corporate governance. Our results suggest that the ex-post consequences of media-induced superstar status for shareholders are negative.

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# 1 Introduction

A superstar system, as defined by Rosen (1981), is characterized by a highly skewed distribution of income, market share, and public attention. Over the last two decades, the market for top U.S. corporate executives has evolved to closely fit this description. Prominent chief executive officers (CEOs) in the U.S. have enjoyed a surge in income and income shares (Murphy, 1999; Saez, 2006). They have also attracted increased public attention. Media sources like *Business Week* dedicate several issues per year to various 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, courting regular media coverage, and making cameo appearances on prime time television shows (e.g., Bill Gates in *Frasier* and Lee Iacocca in *Miami Vice*).

Evaluated from an ex-ante perspective, a superstar system may induce a higher surplus than a less skewed distribution of rewards. Lazear and Rosen (1981) show that tournaments that reward workers based on their ordinal rank can provide optimal incentives. Moreover, the tournament system and skewed distribution of rewards may attract the best talent. However, whether the large compensation of top-level executives reflects optimal incentive design in the interest of shareholders or rent extraction by entrenched CEOs remains the subject of debate (Bertrand and Mullainathan, 2001; Bebchuck and Fried, 2003; Gabaix and Landier, 2008). The “tournament” for CEO status and public attention is not designed by shareholders as an incentive device, but is instead largely conducted by the media. As a result, the value consequences of superstar status are unclear. A media-designed tournament is unlikely to account for winners’ changing behavior ex-post, once the incentives provided by competition for superstar status disappear. While the increased media exposure may boost profitability, it could also shift power towards the CEO and induce perquisite consumption in the spirit of Jensen and Meckling (1976).

In this paper, we analyze the ex-post value consequences of the managerial superstar system. We exploit shifts in CEO status due to CEO awards conferred by major national media organizations. We link award-induced changes in status to corporate performance and CEO decision-making, using matched non-winning CEOs as a benchmark. We find that firms with award-winning CEOs subsequently underperform, both in terms of stock and operating perfor-

mance. At the same time, CEO compensation increases, CEOs spend more time on activities outside the company like writing books and sitting on outside boards, and they are more likely to engage in earnings management. The ex-post effects are strongest in firms with poor corporate governance, but governance does not affect the ex-ante likelihood of attaining superstar status. Our findings suggest that the superstar system has negative ex-post value consequences for shareholders. While the net effect of the superstar system, after accounting for ex-ante incentives, is hard to assess, the prevalence of ex-post value destruction in firms with poor corporate governance suggests that it is optimal to increase monitoring after CEOs win awards.

The belief that prominent achievers subsequently underperform is widely-held in many different contexts. In sports, the “Sports Illustrated Jinx” is believed to affect athletes who appear on the cover of *Sports Illustrated*. 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 winners withering away “into vainglorious sterility” and “preaching to the world on ethics and futurology, politics and philosophy.”<sup>1</sup> And 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 organizations (Byrne, Symonds, and Siler 1991). In all of these cases, however, the popular belief in the curse of celebrity could represent a failure to distinguish between a real decline in performance and mean reversion. Individuals who achieve outstanding success likely had extreme positive draws from the process generating their output. Their next draws are unlikely to meet or exceed prior realizations, causing their individual average performance to revert to the population mean. A second concern in evaluating the performance of winners is that they are unobservably different from the losers, making a direct comparison problematic.

We use several empirical methods to address both issues and to identify a credible counterfactual for the winning CEOs. As our main identification strategy, we construct a nearest-neighbor matching estimator, both with and without bias adjustment, following Abadie and Imbens (2007). We estimate a logit regression to identify observable firm and CEO characteristics that predict CEO awards. We then match each award winner to the non-winning CEO

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<sup>1</sup>Samuelson, “Is There Life After Nobel Coronation?”, <http://nobelprize.org/economics/articles/samuelson/index.html>.

who, at the time of the award, had the closest predicted probability of winning, or “propensity score” (Rosenbaum and Rubin, 1983). CEO awards are a natural application for matching since the awards are given by corporate outsiders who, like the econometrician, have to rely on publicly available information to assess CEO quality. Though we do not observe the criteria that judges use to select award winners, nor the set of runners-up for the award, the matching procedure “reconstructs” this information using observable characteristics. A concern, however, is that remaining heterogeneity across winners and their matches, which is not correlated with the observable firm and CEO characteristics on which we match, biases our estimation. To minimize this concern, 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 firm outcomes. We find that award-winning CEOs underperform over the three years following the award, both relative to expectations and to the matched sample of predicted winners. The results are similar when we compute abnormal performance using market-model event returns or the alpha from a four-factor return model in which the zero-investment portfolio is long in award winners and short in predicted winners: relative underperformance is between 15 and 26%. Operating performance, measured as return on assets, follows a similar pattern. Despite the decline in performance, the compensation of award-winning CEOs increases significantly 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. The increase comes in the form of equity-based compensation, but not in cash. One interpretation is that firms boost performance-based compensation to offset heightened agency problems after CEOs become superstars. An alternative interpretation is rent extraction by powerful CEOs (Bebchuk and Fried, 2003). Consistent with the latter interpretation, the concurrent increases in compensation and decreases in performance only arise in firms with poor corporate governance (or entrenched management), as measured by the Gompers, Ishii, and Metrick (2003) index.

We perform a variety of robustness checks on the matching procedure. We verify that the results do not depend on using a single match for each award winner, but are similar using the two, three, or four nearest neighbors as predicted winners. We also match directly on firm and CEO characteristics, rather than using the propensity score. 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.<sup>2</sup> We also verify our estimates of the treatment effect using two methodologies which do not require a nearest-neighbor match: propensity score weighting (DiNardo, Fortin, and Lemieux, 1996; Hirano, Imbens, and Ridder, 2003) and control functions (Heckman and Navarro-Lozano, 2004).

Next, we explore one channel through which changes in the behavior of CEOs who become superstars may affect firm outcomes: increased involvement in activities outside CEOs' core responsibilities, such as writing books or joining outside boards. Since such activities occur at lower frequency than compensation choices or stock price changes and at different times (relative to the award) for each individual, we cannot apply our matched "event-study" framework. Instead, we measure the cumulative effect of CEO awards on these distractions, exploiting variation in the number of awards across CEOs and over time. We find that the frequency with which CEOs write books increases in the number of prior awards. CEOs also increase their membership on external boards as they win awards. Further, award-winning CEOs have significantly lower golf handicaps than non-winners, consistent with 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.

Finally, we show that, subsequent to winning an award, CEOs are more likely to engage in earnings management. Following DeGeorge, Patel, and Zeckhauser (1999), we analyze two measures of active earnings management: exactly meeting analyst earnings forecasts and left-skewness of the earnings-surprise distribution. We find that both phenomena increase after CEOs win awards and are more common among award-winning CEOs than among CEOs who do not win awards. As with distracting activities, the increase in earnings management occurs mainly in firms with weak corporate governance. Moreover, award-winning CEOs are significantly more likely to report negative earnings once five years have passed from their last award than other CEOs. One interpretation is that CEOs artificially inflate earnings numbers to maintain expected "superstar performance" for as long as possible.

Our results suggest a mechanism by which superstar status diminishes performance: CEOs

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<sup>2</sup>Consistent with Abadie and Imbens (2007), we find that the bias adjustment has little impact on our estimate of the treatment effect when we match on propensity scores, but matters when we match on covariates.

increase both rent extraction and the consumption of perks. However, our analysis does not identify all channels through which powerful CEOs affect shareholder value and does not measure potentially positive ex-ante effects created by the tournament for status. We also do not distinguish supply from 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). Or, managers may have always had a preference for the trappings of celebrity and awards make such perks more available (increased supply). In either case, our results show that the media plays a causal role in fostering a celebrity culture and enables the observed changes in behavior, 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 literature analyzing the effect of managerial power on corporate outcomes. Prior literature measures CEO power using founder status or the accumulation of titles within the organization. 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 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 that of other CEOs. Our paper goes beyond these prior 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. Our results also imply that explicit incentives and governance mechanisms become more important as the CEO’s status increases: strong shareholder rights limit the ability of powerful CEOs to take value-destroying actions. Our paper also relates to the broader literature asking whether managers matter for corporate outcomes. Bertrand and Schoar (2003) and Bennedsen, Perez-Gonzalez, and Wolfenzon (2006) use fixed-effects analyses and unexpected successions to identify time-invariant managerial effects on corporate decisions. Our analysis differs by focusing on a specific, time-varying channel through which CEOs affect performance: CEO status.

Our results also relate 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 perks may create value in organizations, in part because they are an observable signal of power and status within the organization.

Finally, we contribute to recent research on the role of the media in financial markets. Reuter and Zitzewitz (2006) show that the financial media responds to past advertising by mutual funds in their publications when making buy and sell recommendations. In the context of corporate governance, Dyck, Volchkova, and Zingales (forthcoming) argue that the media enhances value by pressuring managers to reverse value-destroying policies. Our paper shows that media coverage may also have a dark side for shareholders. By increasing CEO status, the media enables CEOs to take actions which destroy value.

The remainder of the paper is organized as follows. In Section 2, we describe the different data sets. In Section 3, we assess the stock and operating performance of award winners and measure changes in CEO compensation. In Section 4, we measure CEO distractions, focusing on writing books and sitting on outside board seats. In Section 5, we ask whether winners increase earnings management. Section 6 concludes.

## 2 Data

The core of our data 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 award is national, so that (1) any CEO can potentially win it and (2) it is prominent enough to plausibly affect CEO status. Figure 1 presents a histogram of the CEO awards by sample year. The two predominant sources are *Business Week* and *Financial World*. The key features of each of the awards are as follows:

*Business Week* (circulation: 970,000). The editorial staff chooses two types of annual award

winner: Best Manager and Best Entrepreneur. The awards have been given since 1988. The total number of Best Managers during our sample period is 230. Between 1992 and 1995, there were roughly 15 winners per year, and since 1996 there have been 25 per year. The total number of Best Entrepreneurs during our sample period is 58. The latter award was given less consistently, with no winners in 1992 or 2000 and variable quantities, ranging from 3 to 10, in the remaining years.

*Financial World* (circulation: 430,000). *Financial World* published an annual “CEOs of the Year” list, chosen by the editorial staff, for more than 20 years until 1997, when the magazine ceased publication. The CEOs of the Year were classified into “Gold” (1 winner), “Silver” (about 10 winners per year until 1994, 1 award per industry per year in 1995 and 1996, and 5 winners in 1997), “Bronze” (1 winner per industry), and “Certificates of Distinction” (2 winners per industry.) There were always roughly 60 industries, though the classifications varied some from year-to-year. Since we are interested in “superstars,” and there are a relatively large number of Bronze and Certificate of Distinction recipients, we restrict our analysis to the Gold and Silver winners. We check the robustness of our results to excluding the two anomalous years 1995 and 1996, in which the number of silver awards was unusually large.

*Chief Executive* (circulation: 42,000). *Chief Executive* 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 based on a CEO survey. 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. There were three winners in 1994, five in 1995, and a single CEO of the Year otherwise.

*Morningstar.com*. Morningstar.com began naming a CEO of the year, chosen by the editorial



staff, in 1999. There were two winners in 1999 and 2001 and a single winner each year otherwise.

*Time* (circulation: 4,000,000). *Time* magazine has named a “Person of the 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 named 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).

We match the CEO award data with additional data on CEO characteristics, firm characteristics and performance. We obtain CEO data from the Compustat Execucomp database. This data set covers the CEOs and the four other highest-paid executives of S&P 500, S&P Mid-Cap 400 and S&P SmallCap 600 firms since 1992 and contains information on demographics and compensation. 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 also calculate the ratio of CEO total compensation to total compensation of the next highest paid executive in the firm and the ratio of CEO cash compensation to cash compensation of the next highest paid executive. Using Execucomp data restricts our analysis to CEOs in the Execucomp universe. Thus, 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 and can avoid censoring the CEOs’ history of past awards.

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]) plus 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.  $R_m - R_f$ , 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 hand-collect data on books, outside board seats, and golf handicaps to measure CEOs' propensity to undertake external activities. We obtain data on books authored by sample CEOs from Barnes and Noble.com. Our search uses 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 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 derived from I/B/E/S and media sources and described in detail in DellaVigna and Pollet (2004). We measure the consensus quarterly analyst forecast using the median 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. We discuss the sample characteristics and the differences across the sub-samples in Section 3.1.

### 3 Performance and Extractions

Major CEO awards enhance CEOs' status and power within the firm. In this section, we assess the value consequences of increased status, linking awards to changes in market valuation, operating performance, and executive compensation. We also test whether the effects vary depending on the quality of the firms' corporate governance.

#### 3.1 Empirical Specification

In the ideal empirical experiment, we would compare the performance of an award winner's firm to the same firm's performance had the CEO not won the award. Since the counterfactual is not observed, we must find an empirical proxy for the hypothetical performance without the status increase. A natural starting point is to compare average ex-post performance of award winners to the average among all non-winning CEOs. This approach would provide a valid estimate of the treatment effect of the treated if assignment to the treatment group were random. However, 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 based, at least partly, on past performance. Thus, using the full set of non-winning CEOs as our control sample, we would mix real performance effects resulting from the treatment with predictable performance based on selection to the treatment group. In this case, the main concern is mean reversion: CEOs who have experienced earnings from the upper tail of the distribution tend to experience lower subsequent earnings.

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).<sup>3</sup> While

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<sup>3</sup>See Abadie, Drukker, Herr, and Imbens (2001) on the implementation of this estimator.

we do not observe the criteria used to select award winners or the set of runners-up for the award,<sup>4</sup> the matching procedure reconstructs this information using observable characteristics. One limitation is that we do not know the exact information set used to choose the winners. Heterogeneity across winners and their matches could bias our estimation if it is uncorrelated with the observable firm and CEO characteristics on which we match. To minimize this concern, we test for differences between award winners and the matched control sample along many observable dimensions, including firm and CEO characteristics not included in the match variables (Table 1; described below).

We construct the control sample in two steps. 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). Months in which no awards are granted are not included in the logit regression. 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. 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.<sup>5</sup> We also include dummies for years, award types, and the 48 Fama and French industries<sup>6</sup>. The award-type dummies control for variation in the number of winners across awards, which shifts the baseline probability of winning. For example, each Business Week award month (January of every sample year) receives a 1 for the Business Week dummy, while all other award months receive a 0. Finally, we include controls for CEO age, tenure and gender.

Table 2 presents the results of this logit regression. The coefficient estimates are shown as odds ratios. Overall, they confirm the patterns from Table 1. As expected, CEOs of larger firms

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<sup>4</sup>For Financial World Gold and Silver Awards, the Bronze Awards could serve as a control sample of runners-up. However, since the magazine ceased publication in 1997, an analysis restricted to Financial World awards would introduce concerns about the representativeness of the results and eliminate half of the sample years.

<sup>5</sup>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).

<sup>6</sup>See Ken French’s website ([http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data\\_library.html](http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html)) for definitions.

with lower book-to-market ratios and higher past returns are significantly more likely to win awards. Several CEO characteristics also have significant predictive power, even controlling for firm and industry characteristics: CEOs with more experience are more likely to win awards. Women and younger CEOs are also more likely to win awards, though the results are less robust. The effect of gender, though significant at the 5% level, is identified using only four female award-winners.

Next, we use the predicted values from the logit regression (propensity scores) to construct a nearest-neighbor matched sample for the award winners. In each award month, we choose, with replacement, the non-winning CEOs with propensity scores closest to those of 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 match by simultaneously minimizing the distance across all characteristics included in the 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.<sup>7</sup> 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. The bias adjustment has a negligible impact on the estimates. As a robustness check, designed to address concerns about any remaining differences in characteristics after the propensity score match, we also rematch on the characteristics directly and adjust for bias due to differences in each characteristic between treated observations and their matches.

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 and non-winners is zero (second-to-last column) and that the difference between award winners and Predicted Winners is zero (last column). Among the variables included in the first-stage

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<sup>7</sup>The procedure estimates an auxiliary OLS regression of the effect of the match variable(s) on the outcome variable (in the control sample) and uses the estimates to adjust for differences in the match variable(s) between the treatment and control samples.

estimation, seven are significantly different between award winners and non-winners at the 1% level, but none are between winners and Predicted Winners. Only returns from months 13 to 36 prior to the award are significantly different across winners and Predicted Winners at the 5% level, and CEO tenure at the 10% level. In both cases, the medians are not significantly different, suggesting that a small number of outliers drive the differences in means.

We perform several additional tests to further check the quality of the match. First, 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), and all five involve either returns from months 13 to 36 prior to the award or CEO tenure.<sup>8</sup> Hence, the significant level effects likely drive the significant interaction effects. Second, we perform out-of-sample tests for significant differences in variables not included in the first stage estimation. Among 15 such variables, reported in Table 1, none are significantly different across the winners and Predicted Winners samples, while 11 are significantly different at the 10% level between winners and all non-winner CEOs (9 at the 1% level). For example, net operating assets (or “balance sheet bloat”), which is used by Hirshleifer, Hou, Teoh, and Zhang (2004) to proxy for earnings management, is not significantly different between winners and Predicted Winners in the month prior to the award, but is significantly lower among winners than among all non-winners. These results corroborate the choice of match variables and confirm that the match procedure selects CEOs and firms that are similar to the treatment sample. We also confirm that our findings are robust to larger numbers of matches (two, three, or four nearest neighbors; untabulated).<sup>9</sup> Finally, we supplement the propensity score with additional controls when operating performance or compensation, rather than stock returns, are the dependent variable. Our match variables contain standard predictors of stock returns, including lagged performance. Though the match appears to correct for differences between treated and control observations along most dimensions, we include lags of dependent variables

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<sup>8</sup>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 ( $p = 0.026$ ).

<sup>9</sup>As we increase the number of matches, the differences in match variables between the treated and matched observations increase, making the bias adjustment procedure more important. The single match case makes the side-by-side comparisons of the treated and control samples, without bias adjustment, easier to interpret.

other than returns to control for any residual ex ante differences.

As a final robustness check, we estimate the average treatment effect using two alternate methodologies which do not rely on nearest-neighbor matching. First, we use the propensity score weighting estimator developed by DiNardo, Fortin, and Lemieux (1996). We use the first-stage propensity scores as weights (rather than as a matching variable) in a regression of the outcome variable on the treatment indicator. The resulting weighted least-squares regression gives more weight to non-treated observations with larger estimated probabilities of receiving treatment.<sup>10</sup> Second, following Heckman and Navarro-Lozano (2004), we run a full sample OLS regression of the outcome variable on the treatment indicator, using control functions to correct for differential probabilities of treatment across observations. As control functions, we include first-, second-, and third-order polynomials in the propensity score, estimated, again, as above. Both alternative methodologies employ the entire sample instead of restricting the sample to treated observations and a matched control sample. Thus, they confirm that our results are not reliant on the exact subsamples chosen by the matching technology. For brevity, we do not tabulate the results of the weighting and control function analyses. When the nearest-neighbor match estimates are significant, we provide the weighting and control function estimates as a robustness check in the text. We also note (rare) cases in which the sets of estimates disagree. In these cases, we find significant treatment effects that are not present using the match estimators. In our application, the match appears to provide a more conservative set of results.

## 3.2 Stock Returns

Our first step toward understanding the impact of increases in CEO status on performance is to measure the stock 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 the winners were publicly announced. We compute the cumulative abnormal returns around the event date, using a market model

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<sup>10</sup>To estimate the average treatment effect of the treated, the exact regression weights for non-treated observations are  $\frac{P\text{Score}_i}{1-P\text{Score}_i} \frac{1-P\text{Treat}}{P\text{Treat}}$ , where  $P\text{Score}_i$  is the estimated propensity score for observation  $i$ . The second term is a scaling factor that does not vary with  $i$ , where  $P\text{Treat}$  is the fraction of treated observations in the sample. Treated observations receive a regression weight of 1.

with the CRSP value-weighted index as the proxy for market returns. We estimate  $\alpha$  and  $\beta$  for the award-winning firms using the three years ending 23 trading days prior to the event. As the event window, we consider the eleven trading days surrounding the award announcement (days  $[-5,+5]$  with day 0 as the event date).<sup>11</sup> We also consider the long-run reaction over one year ( $[+6,+255]$ ), two years ( $[+6,+510]$ ), and three years ( $[+6,+765]$ ) following the award.

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

We find no evidence of a short-term market reaction to awards, possibly due to the lack of a precise event date. However, we find strong evidence that winners underperform in the long run. Their average CARs are significantly smaller (more negative) than those of Predicted Winners over the one, two, or three years following the award. Economically, the difference in underperformance between winners and Predicted Winners ranges from 15% to 26% over three years, depending on the specification.

As robustness checks, we construct the propensity-score weighting and control function estimators described in Section 3.1. The results are similar both in magnitude and significance. At the three-year horizon, the propensity-score weighting estimate is  $-0.223$  (p-value = 0.001) and the control function estimate is  $-0.155$  (p-value = 0.026). We also redo the analysis taking a portfolio approach. We construct a zero-investment strategy that is long in award winners and short in Predicted Winners. In updating the portfolio, we drop firms when the CEO leaves the company.<sup>12</sup> The analysis of the zero-investment strategy does not incorporate any

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<sup>11</sup>We consider a relatively 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, informing subscribers substantially before our event date.

<sup>12</sup>The results are qualitatively similar ignoring CEO exit and, if anything, weaker, suggesting that the underperformance is tied to the award-winning CEO.



backward-looking measure of expected returns, but simply compares average performance of winners and Predicted Winners controlling for known patterns in returns. Note, however, that the portfolio strategy is not fully implementable since it uses forward-looking information to estimate the first-stage logit on the entire sample of awards. The most natural fully implementable alternative, namely, to estimate a separate first-stage logit for each “award month” using only data from that month and before, is not feasible since there is only one winner in any particular award month for some awards.

We run a time series regression of the value-weighted average portfolio return on the three Fama-French (1993) factors – size (smb), book-to-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 one, two, and three years following the award month. The effect is significant at the 5% level when firms remain in the portfolio for three years following an award or Predicted Award. Economically, this translates to roughly 18% underperformance of winners relative to Predicted Winners, consistent with the results from the CAR estimations. We also find that the momentum factor loads significantly at all three horizons. However, as we have seen in Table 1, this finding does not reflect significant differences at the time of the award in short-horizon past returns, nor does it alter our conclusion, given the results from the other specifications.

Predictable long-run stock underperformance is challenging to interpret. In an efficient market, investors should incorporate bad news into stock prices at announcement. In order to test whether the stock underperformance reflects deteriorating operating performance and lower firm value, we will test for changes in ROA and other real corporate outcomes following CEO awards. If increases in status cause CEOs to make value-destroying decisions, we should find evidence of declining earnings and of the underlying economic mechanisms.

### **3.3 Operating Performance**

We measure changes in ROA around CEO awards, beginning at the end of the last fiscal year prior to an award month and ending three 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 slopes down

(modestly) 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. While 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. The difference ( $-0.026$ ) is indeed statistically significant at the 1% level. 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. Moreover, we will see in Section 3.5 that the lack of significance is partially due to averaging the effect over good and bad governance firms.

### **3.4 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 and compared to matched non-winners. 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. Extraction, however, 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 3.3, 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 in Figure 2, we graph mean CEO total compensation and cash compensation for award winners, Predicted Winners, and 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%.<sup>13</sup> 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 match variables fail to capture. Again, the results are largely unaffected. We also find some evidence, particularly at the three-year horizon, that the compensation differences between winners and Predicted Winners remain significant over longer horizons. Turning to cash compensation, the

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<sup>13</sup>Note that “Year of Award” gives the value of the outcome variable at the end of the fiscal year in which the CEO won the (predicted) award. 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.

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.

The results are qualitatively similar using the propensity score weighting and control function approaches. In both cases, the immediate increase in total compensation is significantly different for winners and non-winners (weighting estimate of difference = 6,455.26, p-value = 0.002; control function estimate = 6,202.24, p-value < 0.001). The differences decline as the horizon increases. Using the weighting estimator, the difference is marginally significant at the two-year horizon and insignificant at the three-year horizon (p-value = 0.191). Using the control function estimator, the differences are significant at all horizons.

Summing up, we find that award winners experience abnormal and significant increases in total compensation, but not in cash compensation.<sup>14</sup> The increases are immediate and, though they diminish somewhat, remain significant over a three year horizon. One possible interpretation is that firms increase equity-based compensation to offset increased agency problems following increases in CEO status. Under this interpretation, the increases in compensation are 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 pay. An alternative interpretation is that award-winning CEOs use their increased power 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, 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 six 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

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<sup>14</sup>We do find some evidence using the weighting and control function estimators that the difference between winners and non-winners in cash compensation over the three-year horizon is positive and significant. Here, the control samples look similar to the unadjusted, full non-winner sample from Figure 2, suggesting that the nearest-neighbor match may better control for selection effects.

that, among award winners, the ratio increases over the interval. Thus, the increase in total compensation enjoyed by award winners is not shared by the next-highest paid executives in their firm. For Predicted Winners and for the full sample of non-winning CEOs, instead, there are no major changes in this ratio over time. We also test the significance of these patterns (untabulated). The difference between the change in total compensation ratios among winners and Predicted Winners is statistically significant over the short run, but not over the three-year horizon.<sup>15</sup> However, the increase in the total compensation ratio among award winners is not itself statistically significant, reflecting the high variance of the ratio of two noisy compensation measures. Nevertheless, the pattern is broadly supportive of an important role for CEO power or status: only award-winning CEOs receive increased compensation following strong performance, not other CEOs with equally strong performance and not other executives in the award winner’s firm.

### 3.5 Corporate Governance

Thus far our results suggest that CEO awards decrease value for 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 are likely to be concentrated in firms with weaker shareholder protection and more entrenched management.

We use the governance index (GIM) of Gompers, Ishii, and Metrick (2003) to measure the strength of corporate governance. The GIM index counts the number of charter provisions that insulate management from takeover pressure, such as staggered boards and poison pills. The firms with the highest 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 into three subgroups.<sup>16</sup> We then redo the analysis of Sections 3.2-3.4, 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)

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<sup>15</sup>The three-year differences between winners and non-winners in the compensation ratio are significant in most specifications using the weighting- and control-function estimators.

<sup>16</sup>The split does not result in equal numbers of award winners in each subsample since there are discrete masses of observations at the cutpoints. Our results are robust to minor changes in the cutpoints.

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.

Table 5 presents the results for firms with good governance ( $GIM \leq 7$ ) in Columns 1 and 2; for firms with intermediate governance in Columns 3 and 4; and for firms with bad governance ( $GIM > 9$ ) in Column 5 and 6. For brevity, we focus on the significant differences in performance and compensation from the prior sections. For operating performance and compensation, we also report bias-adjusted differences including the lagged outcome as an additional match variable (Columns 2, 4, and 6).

In rows 1 to 3, we present differences in stock performance over the one, two, and three years following an award month. We find that the underperformance of award winners relative to Predicted Winners is only present among poorly governed firms. Moreover, relative 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 three-year decline in ROA is significantly larger for winners than Predicted Winners in the bad-governance sample (though it becomes insignificant controlling for the lag of ROA). Among good governance firms, instead, ROA improves (insignificantly) for winners relative to Predicted Winners. Again, the difference declines monotonically across the subsamples. Finally, we examine the compensation effects. The one-year change in total compensation is significantly larger for winners than Predicted Winners 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. We find no significant differences between winners and Predicted Winners in any subsample.

As in prior sections, we find similar results using the propensity score weighting or control function approaches on the governance subsamples. The lone notable deviation is in the difference between winners and non-winners in cumulative abnormal stock returns. Here, we do not replicate the modest, but insignificant improvement in performance among good governance firms for winners relative to non winners. Instead, the point estimates of the differences are typically negative.<sup>17</sup>

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<sup>17</sup>The difference is marginally significant using control functions over the three-year horizon. Among

Overall, we find that the long-run underperformance of award winners and the immediate increases in their equity-based compensation 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. 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.

## 4 Distractions

The results of the previous section suggest that increased rent extraction partially explains the underperformance of award winners. In this section, we explore a second potential mechanism generating underperformance. We test whether award-winning CEOs increase the frequency with which they engage in activities outside the firm which may distract attention from maximizing firm value. We focus on two such activities: writing memoirs and other books and sitting on outside boards. We also provide some suggestive evidence on leisure activity (golf handicaps).

Methodologically, the low frequency of books and board changes does not allow us to replicate the estimation procedure we use to measure changes in performance and compensation. Matching CEOs on the frequency with which they engage in outside activities prior to each award month would require sufficiently long pre-award and post-award windows, e.g., in order to match on the average number of books per year over the three years prior to the award month and to measure subsequent changes in behavior. The limited samples of CEO books (85) and board seats (only since 1994) restrict the pool of potential matches and prevent such an estimation. An additional complication is that authoring books or assuming board seats occur at different times relative to the award month for each individual (unlike, e.g., stock performance), making it more difficult to control for confounding predictors of the outcome in the matching specification.

Instead of the matching methodology, we rely on ordinary least squares and fixed effects regres-

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intermediate-governance firms, the differences are typically insignificantly positive.

sions. As a result, the control group 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 firm size, performance, and CEO characteristics. Finally, we examine the interactions of the award effects with corporate governance. If outside tasks distract CEOs from firm business, then we should expect more outside involvement in firms with weaker governance.

In our data, we observe two main types of books: memoirs and strategy books. Such books can serve as a marketing tool and thereby increase firm value. Most CEO-authored books, however, focus more on the virtues of the CEO than the company. Thus, it appears reasonable to equate authoring such books more with perk consumption than with maximizing shareholder value. 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. 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.<sup>18</sup> The firm fixed effects capture variation in the type of firm in which managers write books. For example, 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

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<sup>18</sup>We exclude the CEO gender control since only one female CEO in our sample, Lillian Vernon of Lillian Vernon Corp, authors a book.



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 3.5. In firms with strong corporate governance ( $GIM \leq 7$ ), we find that neither the marginal nor the cumulative effect of awards is significant. For firms with intermediate values of the governance index, the marginal effect of a second award is significantly positive, but the effect of winning at least 3 awards is not significant. Among firms with weak governance ( $GIM > 9$ ), however, the marginal and cumulative effects of winning at least 3 awards are significantly positive (the  $p$ -value for the cumulative effect is  $< 0.001$ ). Thus, the likelihood of CEOs becoming serial authors—like Andrew Grove—increases as the number of awards increases, but primarily when the quality of governance is also poor.

We perform a parallel analysis of the number of external board seats 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 prepare for and travel to board meetings and communicate outside the meetings with the CEO and other board members. 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.<sup>19</sup> 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 five 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 five 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 one to three.

In Column 5 to 8 of Table 6, we measure the effects in a regression framework. As before, we include firm size, firm performance, CEO age, CEO tenure, and firm and year fixed effects as

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<sup>19</sup>Five or more board seats negatively affect corporate governance measures such as the *Corporate Governance Quotient* of ISS.

controls. Here, the firm effects capture differences in demand for a CEO as an outside director depending on the firm he manages, 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 five 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, though the economic magnitude of the effect is small. (Decreasing book-to-market by one standard deviation increases the likelihood of sitting on at least five boards by roughly 0.005.) Most importantly, the estimates confirm the pattern from Figure 3: only the first award has a (marginally) significant positive effect on the likelihood of assuming at least five board seats. And, as shown in Columns 6 to 8, the positive impact comes entirely from the weak governance subsample ( $GIM > 9$ ).

We perform several robustness checks on the books and board-seats evidence. Both results are qualitatively similar if we include CEO fixed effects: CEOs who win awards are more likely to write books or to sit on a large number of external boards after they win awards, particularly when governance is weak. However, the results are generally not robust to clustering the standard errors at the firm level. The relative rarity of the outcomes makes it challenging to identify an award effect on books or board seats. Thus, we must interpret these results with some caution.

As a final measure of CEOs’ propensity to engage in activities that distract attention from firm business, we look at 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. 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;  $7 < GIM \leq 9$ : difference = -0.774,  $p$  = 0.540;  $GIM \leq 7$ : 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

If award-winning CEOs use their status to extract rents or to devote time to distractive perks, they may find it increasingly difficult to meet or exceed market and analyst expectations. Our return results show not only that award winners underperform but also that the market does not seem to anticipate the subsequent underperformance. Hence, in order to avoid repeatedly missing analyst forecasts, award-winning CEOs may engage in active earnings management. We test this hypothesis using two measures of earnings management from DeGeorge, Patel, and Zeckhauser (1999). One measure is the incidence of exactly meeting analyst earnings forecasts, i.e., of zero earnings surprises. A second measure is the left-skewness of the earnings surprise distribution. “Extra mass” in the earnings surprise distribution at 0 or 1¢ and more mass ‘just to the right’ of 0 than ‘just to the left’ are interpreted as signs of management fine-tuning the earnings numbers (or exerting pressure on analysts).

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. Consistent with our hypothesis, we find that award winners are more likely to just meet or barely exceed expectations than they should be under a symmetric distribution of earnings realizations. 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. We adapt our empirical specification from Section 4, with controls for firm size, firm performance (book-to-market ratio), CEO age and CEO tenure. Following DellaVigna and Pollet (2004), we allow for a non-linear size effect by including 10 indicator variables for deciles of market capitalization at the time of the

earnings announcement.<sup>20</sup> Since the data is quarterly, we include month effects in addition to the year 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.<sup>21</sup> Finally, we include CEO fixed effects to separate the impact of winning awards from a (potentially) higher baseline propensity to manage earnings among award-winning CEOs. We also verify that the results are robust to including the number of analysts covering a firm as an additional control (untabulated).

The full-sample results are in Column 1. Among the controls, we find that firms with lower book-to-market ratios are more likely to report 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 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, but a large and significant positive effect of the fourth award. 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 the regression 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 firms with poor corporate governance, the effect of one award is strong and statistically significant. The effect reverses and becomes negative for CEOs winning two awards, but the cumulative effect of at least four awards remains positive and economically large (roughly 15 percentage points), though marginally insignificant ( $p$ -value = 0.137). Overall, the evidence suggests that award-winning CEOs increase their frequency of earnings management, particularly when corporate governance is weak.

Finally, we find that CEOs are not able to follow this strategy indefinitely. In untabulated

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<sup>20</sup>The coefficients of the award dummies are largely unaffected if we use instead a continuous size control.

<sup>21</sup>The results are qualitatively unchanged if we instead cluster at the firm level to correct for autocorrelation of earnings surprises.

estimations, we measure the frequency with which CEOs report negative earnings. Overall, negative earnings reports are a rare event, occurring less than 10% of the time, and there are few significant differences between award-winning and non-winning CEOs. However, once five 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 increases in CEO status on corporate performance and other corporate outcomes. Our main findings are that (1) firms with award-winning CEOs suffer declining performance, (2) award-winning CEOs extract higher compensation, largely in the form of stock and options, (3) increases in CEO compensation following awards are not shared by other top executives in the firm, (4) award-winning CEOs indulge in tasks which provide private benefits but little (if any) firm value (writing books, sitting on outside boards, playing golf), and (5) award-winning CEOs increase earnings management and are significantly more likely to report negative earnings five years after their last award. All of these effects are concentrated in the subsample of poorly governed firms.

Hence, the drastic increase in the quantity and prominence of CEO awards over the past two decades and, more generally, the celebrity culture permeating the business world has clear consequences for shareholders: increased status distorts CEO behavior and affects 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.

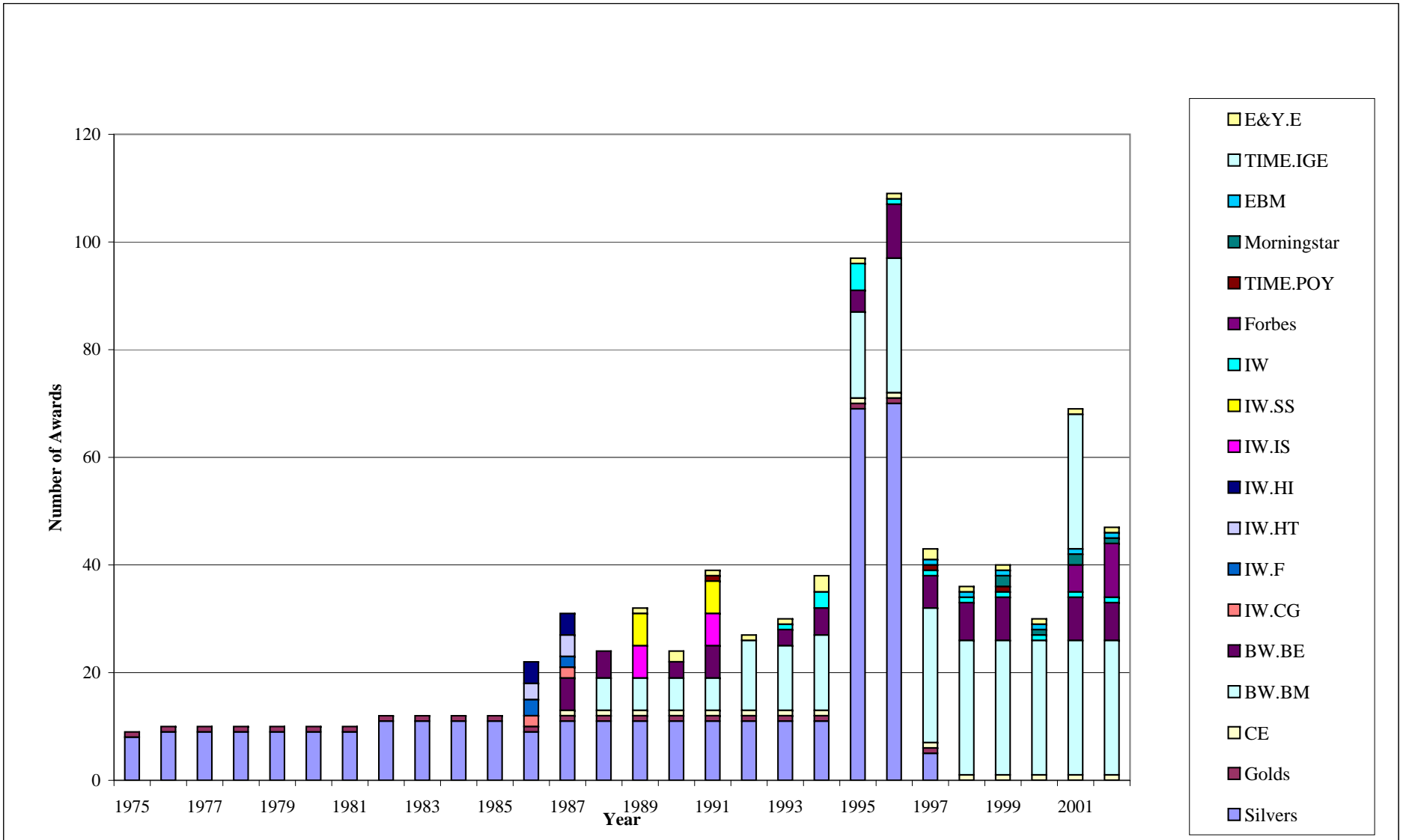
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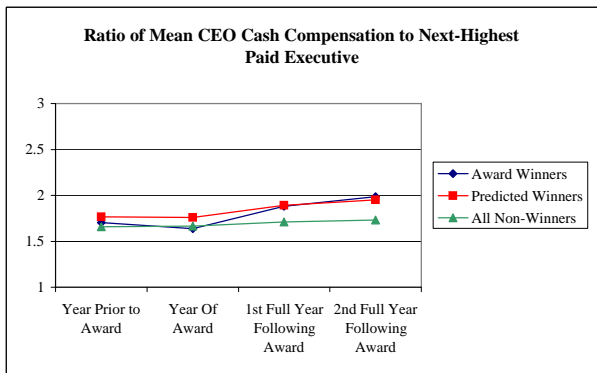
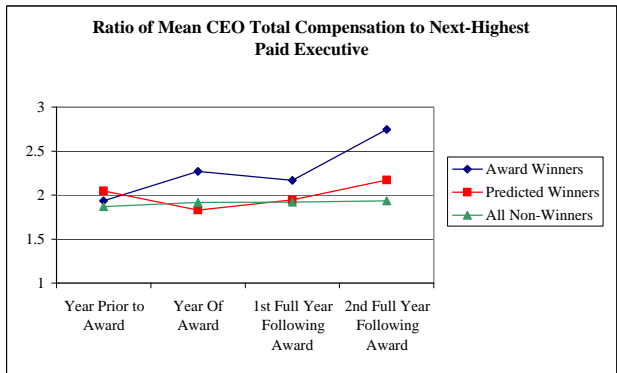
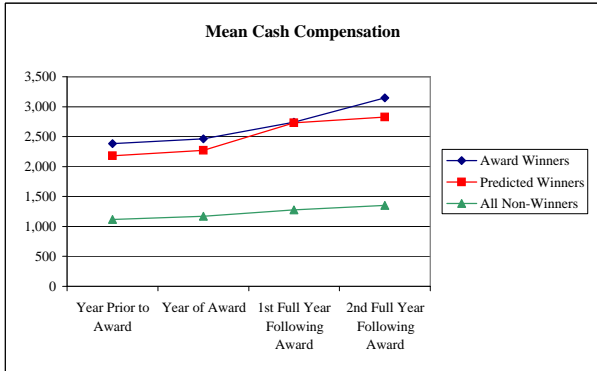
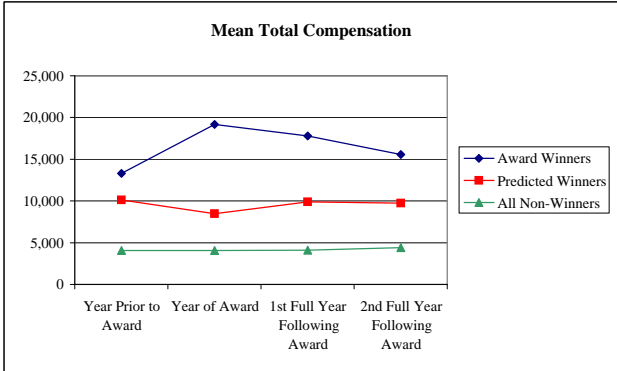
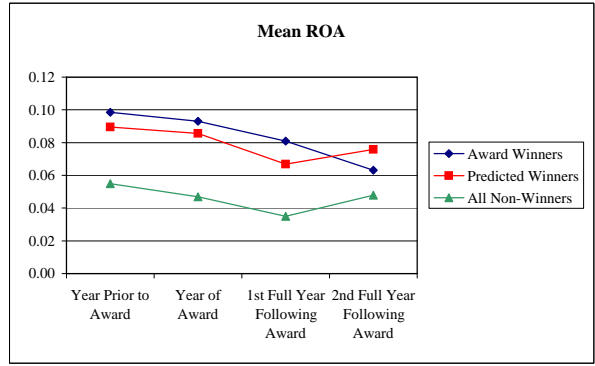
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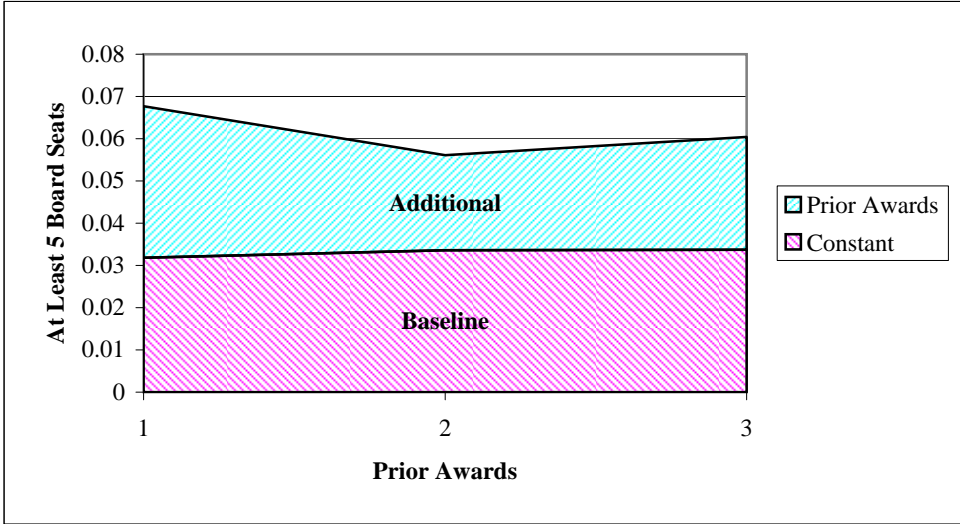
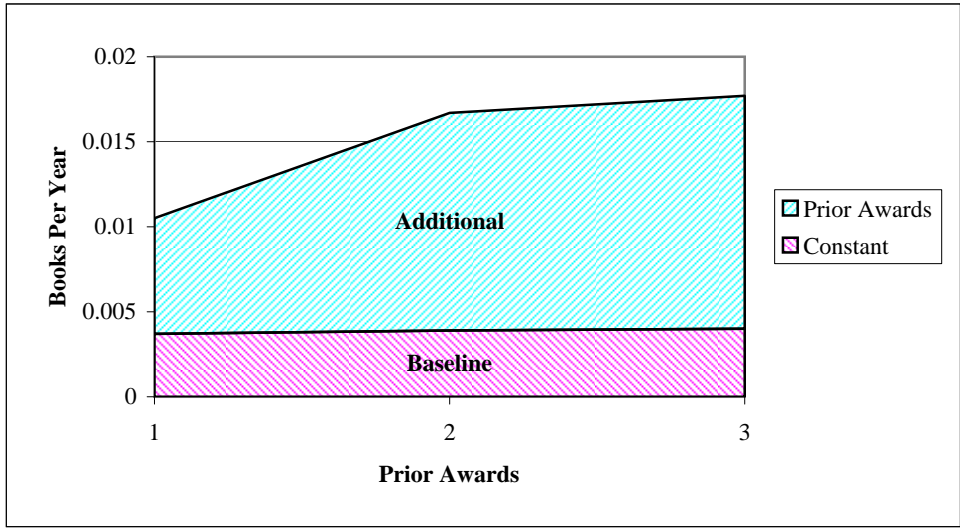




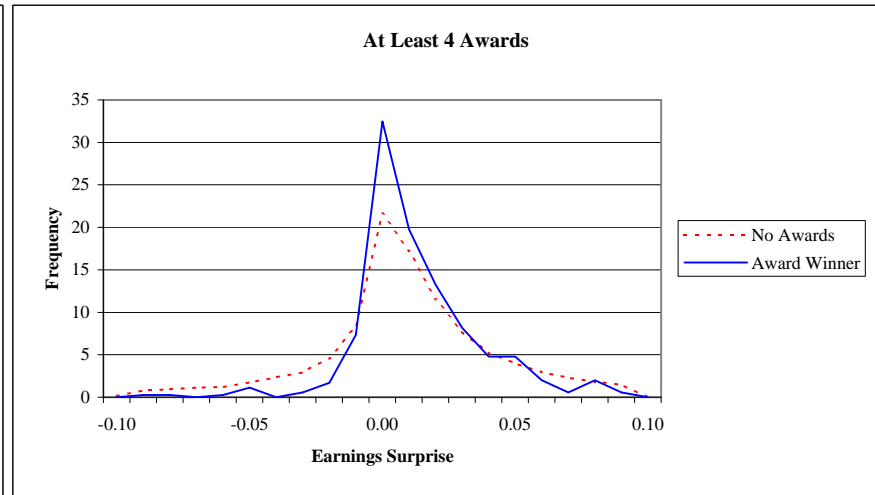
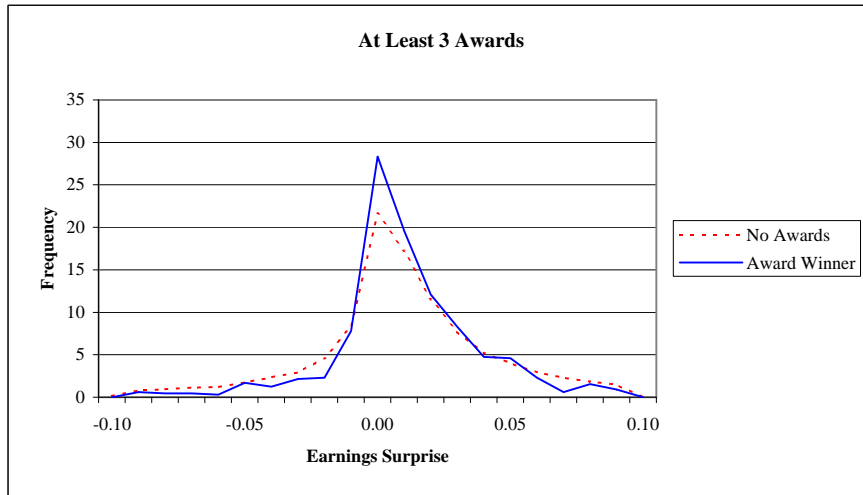
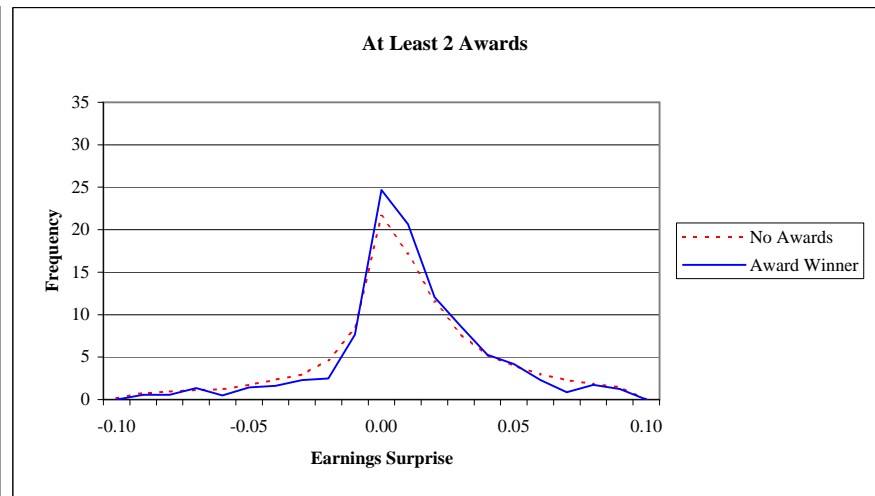
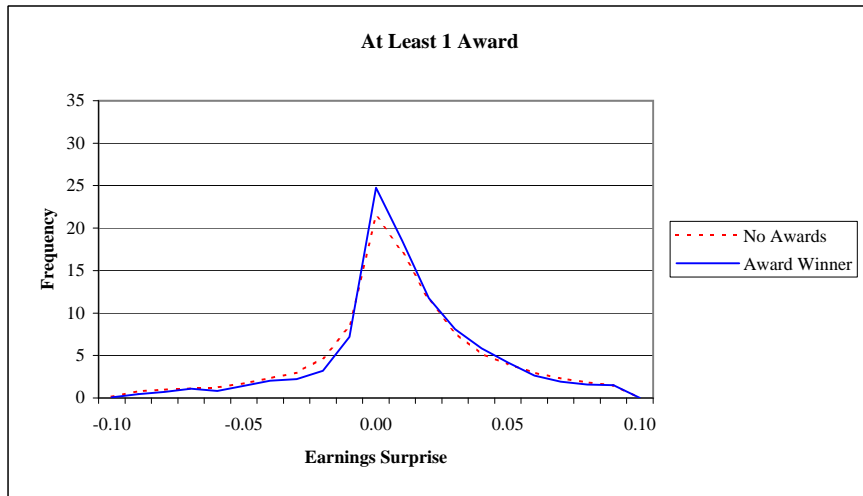
**Figure 1. CEO Awards by Year.** E&Y.E are Ernst & Young Entrepreneurs of the Year. TIME.IGE are *Time/CNN* Most Influential Global Executives. EBM are *Electronic Business Magazine* CEOs of the year. Morningstar are *Morningstar.com* CEOs of the year. TIME.POY are winners of the *Time* Person of the 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 Fama-French 48 industry-, year-, and award-fixed effects. Matching is done in each month in which an award is conferred, with replacement. Year of Award is 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 Management.** 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 measured two months prior to the award month and is in log form. Book-to-Market Ratio is book equity over market capitalization. Returns<sub>x\_y</sub> are the total compound returns from the y<sup>th</sup> to the x<sup>th</sup> 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 liabilities 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 Compensation, 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 assets), 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 (W)				All Non-Award Winners (A)				Predicted Winners (P)				Differences in Means	
	Obs.	Mean	Median	Std. Dev.	Obs.	Mean	Median	Std. Dev.	Obs.	Mean	Median	Std. Dev.	p(W - A)	p(W - P)
<i>Match Variables:</i>														
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*
<i>Other Firm Variables:</i>														
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	264	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
<i>Other CEO Variables:</i>														
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
<i>Fama French 12 Industries:</i>														
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 measured 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<sub>x\_y</sub> are the total compound returns from the y<sup>th</sup> to the x<sup>th</sup> 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 <sup>2</sup>	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 (P) in Columns 2-4 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. The bias-adjustment (Column 4) accounts for differences between the propensity scores of award winners and their nearest match. Column 5 matches on the characteristics directly, also bias-adjusted for differences in characteristics across winners and their matches. Each sample contains 264 observations. Windows are 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].

	<i>Award</i>	<i>Predicted</i>	<i>Difference</i>	<i>Bias-</i>	<i>Characteristic-</i>
	<i>Winners (W)</i>	<i>Winners (P)</i>	<i>(W - P)</i>	<i>Adjusted</i>	<i>Matched, Bias-</i>
				<i>Difference</i>	<i>Adjusted</i>
					<i>Difference</i>
Event Window [-5,+5]	-0.002 (0.35)	-0.006 (1.37)	0.005 (0.65)	0.005 (0.61)	0.003 (0.57)
Event Window [+6,+255]	-0.183 (7.03)***	-0.101 (4.48)***	-0.082 (2.38)**	-0.082 (2.44)**	0.024 (0.94)
Event Window [+6,+510]	-0.404 (9.43)***	-0.235 (5.68)***	-0.169 (2.84)***	-0.168 (2.77)***	-0.077 (1.97)**
Event Window [+6,+765]	-0.607 (10.42)***	-0.349 (6.14)***	-0.257 (3.16)***	-0.256 (3.09)***	-0.147 (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 (1.23)	0.055 (0.68)	0.052 (0.75)
smb	-0.209 (2.01)**	-0.110 (1.34)	-0.079 (1.11)
hml	-0.173 (1.35)	-0.178 (1.75)*	-0.096 (1.10)
umd	0.274 (3.86)***	0.229 (4.06)***	0.162 (3.35)***
alpha	-0.005 (1.16)	-0.005 (1.52)	-0.005 (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.

	<i>Award Winners (W)</i>	<i>Predicted Winners (P)</i>	<i>Difference (W - P)</i>	<i>Bias- Adjusted Difference</i>	<i>Bias-Adjusted Difference with Lag</i>
<i>Panel A. Performance</i>					
ROA [-1, 0]	-0.005 (1.58)	-0.004 (1.25)	-0.001 (0.16)	-0.002 (0.57)	0.000 (0.09)
ROA [-1, +1]	-0.019 (3.15)***	-0.023 (2.29)**	0.004 (0.37)	0.001 (0.08)	0.000 (0.01)
ROA [-1, +2]	-0.040 (2.76)***	-0.017 (2.52)**	-0.023 (1.43)	-0.016 (0.95)	-0.020 (1.25)
<i>Panel B. CEO Compensation</i>					
Total Compensation [-1, +0]	7,816.21 (2.16)**	-829.75 (0.57)	8,645.96 (2.21)**	8,577.07 (2.21)**	8,017.35 (2.39)**
Total Compensation [-1, +1]	6,399.23 (1.59)	711.86 (0.44)	5,687.37 (1.33)	4,161.52 (0.95)	6,546.25 (1.65)*
Total Compensation [-1, +2]	7,332.71 (2.96)***	2,329.09 (1.53)	5,003.62 (1.74)*	3,992.49 (1.24)	5,856.76 (2.39)**
Cash Compensation [-1, 0]	197.27 (1.53)	202.74 (1.45)	-5.465 (0.03)	-30.30 (0.17)	14.81 (0.09)
Cash Compensation [-1, +1]	454.01 (1.63)	660.10 (6.15)***	-206.09 (0.70)	-135.03 (0.45)	14.60 (0.05)
Cash Compensation [-1, +2]	1,236.09 (3.45)***	960.51 (6.15)***	275.58 (0.72)	288.91 (0.70)	187.59 (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		Bias-Adjusted Difference	
	baseline	with lag	baseline	with lag	baseline	with lag
CAR [6, 255]	0.110 (1.01) N=68	n/a	0.004 (0.08) N=81	n/a	-0.127 (2.77)*** N=103	n/a
CAR [6, 510]	0.137 (0.78) N=68	n/a	-0.026 (0.31) N=81	n/a	-0.221 (2.93)*** N=103	n/a
CAR [6, 765]	0.066 (0.28) N=68	n/a	-0.041 (0.38) N=81	n/a	-0.229 (2.17)** N=103	n/a
ROA [-1, +2]	0.036 (1.07) N=53	0.004 (0.11) N=53	0.017 (0.68) N=56	0.014 (0.99) N=56	-0.020 (1.98)** N=87	-0.011 (1.16) N=87
Total Compensation [-1, 0]	-831.18 (0.12) N=63	357.39 (0.08) N=63	5,483.33 (0.58) N=70	7,140.69 (0.79) N=70	9,412.38 (2.16)** N=91	8,741.06 (2.15)** N=91
Cash Compensation [-1, 0]	-247.20 (0.85) N=64	-191.67 (0.67) N=64	326.08 (0.79) N=71	213.53 (0.59) N=71	-100.69 (0.62) N=94	-266.51 (1.43) 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 five 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 CEO 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 (0.64)	0.0059 (0.56)	0.0060 (0.91)	-0.0025 (0.50)	0.0193 (1.95)*	-0.0033 (0.14)	-0.0126 (0.54)	0.0471 (2.65)***
At least 2 awards	0.0083 (1.10)	-0.0019 (0.09)	0.0255 (2.42)**	0.0017 (0.11)	-0.0206 (0.99)	-0.0513 (1.15)	0.0074 (0.20)	-0.0719 (1.44)
At least 3 awards	0.0093 (1.03)	0.0009 (0.04)	-0.0242 (1.61)	0.0496 (2.92)***	0.0093 (0.37)	-0.0017 (0.03)	0.0906 (1.58)	-0.0797 (1.37)
Book-to-Market Ratio	-0.0005 (0.51)	-0.0014 (0.48)	-0.0011 (0.44)	-0.0009 (0.44)	-0.0067 (2.53)**	-0.0064 (0.95)	-0.0285 (3.53)***	-0.009 (1.23)
Market Capitalization	-0.0001 (0.15)	-0.0021 (0.74)	-0.0013 (0.67)	0.0005 (0.26)	0.0003 (0.13)	0.0033 (0.51)	-0.0097 (1.41)	-0.0072 (1.07)
CEO Age	0.0001 (1.06)	0.0005 (1.26)	0.0000 (0.07)	0.0003 (1.21)	0.0012 (3.19)***	-0.0002 (0.20)	0.0041 (4.07)***	0.0022 (2.75)***
CEO Tenure	-0.0001 (1.05)	-0.0008 (1.86)*	-0.0001 (0.38)	0.0000 (0.15)	0.0016 (4.14)***	0.002 (2.22)**	0.0020 (2.06)**	0.0014 (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 <sup>2</sup>	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 (2.84)***	0.0284 (1.07)	0.0215 (0.74)	0.0752 (2.93)***
At least 2 awards	-0.0187 (0.69)	-0.0537 (1.03)	0.0293 (0.50)	-0.1022 (1.95)*
At least 3 awards	-0.0151 (0.46)	-0.0431 (0.72)	0.0098 (0.19)	0.0554 (0.77)
At least 4 awards	0.1001 (2.18)**	0.0683 (0.94)	0.1139 (1.45)	0.1196 (1.46)
Book-to-Market Ratio	-0.0273 (5.27)***	-0.0173 (1.97)*	-0.0241 (1.34)	-0.0193 (2.20)**
CEO Age	0.0007 (0.11)	-0.0229 (1.87)*	-0.033 (1.43)	0.0029 (0.32)
CEO Tenure	0.0021 (0.88)	0.0057 (0.81)	0.0131 (0.95)	-0.0031 (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 <sup>2</sup>	0.17	0.22	0.22	0.18

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