

# SUPERSTAR CEOs\*

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January 15, 2009

## 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 corporate governance. Our results suggest that the ex-post consequences of media-induced superstar status for shareholders are negative.

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\*We would like to thank Stefano DellaVigna, Mark Grinblatt, Dirk Hackbarth, Guido Imbens, Alan Krueger, David Laibson, Justin McCrary, Terry Odean, Jesse Rothstein, Andrei Shleifer, Betsey Stevenson, Justin Wolfers, David Yermack, Luigi Zingales, and participants in seminars at Berkeley, Drexel, Duke, LBS, LSE, Mannheim, Princeton, Stanford, UCLA, Wharton, Washington University, the 2004 Stanford Media, NBER Personnel Economics, and SITE Psychology & Economics and the 2005 NBER Summer Institute in Corporate Finance, AEA and “People and Money” conferences for helpful comments. Nicole Hammer, Jared Katseff, Camelia Kuhnen, and Catherine Leung provided excellent research assistance. We acknowledge financial support from the Russell Sage Foundation.

## I. 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 (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*).

From an ex-ante perspective, a superstar system can induce a higher surplus than a less skewed distribution of rewards (Lazear and Rosen 1981), and it may attract the best talent. However, whether large compensation packages reflect optimal incentive design 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 largely conducted by the media. As a result, the value consequences of superstar status are unclear. While 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 performance. 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, compared to a matched sample of non-winners with no ex ante differences in governance. Our findings suggest that the superstar system has negative ex-post value consequences for shareholders. The net effect of the superstar system, after accounting for ex-ante

incentives created by the tournament for status, is hard to assess. However, the ex post value destruction we measure is large and it appears to be avoidable. Firms with strong shareholder rights do not experience a decline in performance when their CEOs win awards, suggesting that it is optimal to increase monitoring after CEOs win awards.

The belief that prominent achievers subsequently underperform is widely-held in many 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). The popular belief in the curse of celebrity, however, could represent a failure to distinguish real declines in performance from 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 (Lazear 2004). In addition, winners may be unobservably different from 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 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 public information to assess CEO quality. 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

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<sup>1</sup>Samuelson, “Is There Life After Nobel Coronation?”, [nobelprize.org/economics/articles](http://nobelprize.org/economics/articles).

award winners and the control sample are indistinguishable along most observable dimensions, including firm and CEO characteristics not explicitly included in the match procedure.

We find that award-winning CEOs underperform over the three years following the award, both relative to expectations and to the matched control sample. 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.

Next, we explore one channel through which changes in the behavior of CEOs who become superstars may affect firm outcomes: increased activities outside their 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 and join external boards increases in the number of prior 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 manage their earnings. 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. 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 occurs mainly in firms with weak corporate governance. Moreover, award winners 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 to maintain expected “superstar performance” for as long as possible.

Our results suggest one channel through which superstar status diminishes performance: CEOs extract more rents and consume more perks. Awards may affect shareholder value through other channels as well. For example, awards may cultivate CEO ‘hubris’ (Roll 1986; Malmendier and Tate 2008). Moreover, we cannot distinguish supply and demand effects. Managers may have always had a preference for the trappings of celebrity, and awards make such perks more available (increased supply). Or, the preferences of winners may change toward living the “jet set life” and away from maximizing shareholder value (increased demand). In either case, the media plays a causal role in fostering a celebrity culture and enables the observed changes in behavior, with potentially negative consequences for shareholders.

An alternative interpretation of our results is that they reflect self promotion by award-winning CEOs. Self-promoting CEOs may be better at marketing lucky performance to award-granting institutions, who cannot distinguish them from true achievers. In this case, winners underperform more than their matches as the lucky performance unravels, without a causal impact of the awards. The real increases in compensation, distraction, and manipulation around CEO awards, however, suggest actual shifts in CEO status and cast doubt on this interpretation. We also test directly for differences between winners and their matches in self-promotion. First, self-promoters are likely to engage in earnings management to create the appearance of good performance, but we find no significant differences in earnings management prior to awards. Second, self-promoters are likely to exert effort courting the press, for example, via interviews. We find no significant differences in the number of TV interviews or in the number of mentions or interviews in the printed press over the three years prior to awards.

Our results provide new evidence on the relation between managerial power and 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 such CEOs are rarely fired by the board of directors, but are disproportionately the targets of hostile takeovers. Consistent with title-accumulating CEOs 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 prior studies by identifying clear shifts in CEO status (prominent media awards), ruling out alternative firm-level explanations. Our results also imply that explicit incentives and governance become more important as CEOs' status increases: strong shareholder rights limit the ability of powerful CEOs to destroy value. 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: shifts in CEO status.

Our results also contribute to the recent literature analyzing the value consequences of CEO perks. Firms which provide the CEO access to a corporate jet significantly underperform (Yermack 2006). Similarly, company performance deteriorates when the CEO acquires a large mansion, particularly if he liquidates company shares or options to finance the transaction (Liu and Yermack 2007). Rajan and Wulf (2006), on the other hand, argue that perks may create value in organizations, in part because they signal 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 also has a dark side for shareholders. By increasing CEO status, the media enables CEOs to take actions that destroy value.

The remainder of the paper is organized as follows. In Section II., we describe the different data sets. In Section III., we assess the stock and operating performance of award winners and measure changes in CEO compensation. In Section IV., we measure CEO distractions, focusing on writing books and sitting on outside board seats. In Section V., we ask whether winners increase earnings management. Section VI. discusses possible interpretations and concludes.

## II. 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 I presents a histogram of the CEO awards by sample year. The two predominant sources are *Business Week* and *Financial World*. We provide more details on the awards in the Appendix.

We match the CEO award data with additional data on CEO characteristics, firm characteristics and performance. From the Compustat Execucomp database, we obtain information on demographics and compensation of the CEOs and the four other highest-paid executives of S&P 500, MidCap 400 and SmallCap 600 firms since 1992. 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 same ratio for cash compensation. 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 IV. 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' 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 in the following publication categories: 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*, typically based on U.S. Golf Association Indexes. (Fewer than 10% of the observations are identified as self-reported handicaps.) Finally, we merge in quarterly earnings announcement data from I/B/E/S and media sources, as described in DellaVigna and Pollet (2004).<sup>2</sup>

Table I provides selected summary statistics of the data, split into CEO award winners and other sample CEOs. Broadly speaking, award winners differ from non-award winners along most dimensions. In the next section, we analyze these differences in more detail and describe our strategy to separate the impact of CEO awards on performance from selection effects.

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<sup>2</sup>We thank Stefano DellaVigna and Joshua Pollet for providing us with the data.



### III. 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.

#### III.A. *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 I, 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 compensation (both cash and total) are significantly higher among award winners (at the 1% level). Firms in the Consumer Durables and Business Equipment industry groups are also significantly over-represented among the winners.<sup>3</sup> 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

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<sup>3</sup>These differences are significant at the 1% level. Utilities (5%), Manufacturing (10%), Telecommunications (10%), and Other (10%) are over-represented at lower significance levels.

selection effects. Our main strategy is to construct a nearest-neighbor matching estimator, following Rosenbaum and Rubin (1983) and Abadie and Imbens (2007).<sup>4</sup> While we do not observe the criteria used to select award winners or the set of runners-up, the matching procedure reconstructs this information using observable characteristics. Remaining 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 winners and their matches along many observable dimensions, including firm and CEO characteristics not included in the match variables (Table I; 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 includes firm observations from each month in which a sample award is granted (e.g., January of each year for the *Business Week* awards). 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 I, 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 six 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. We also include dummies for years, award types, and the 48 Fama and French industries<sup>5</sup>. The award-type dummies control for variation in the number of winners across awards, which shifts the baseline probability of winning. For example, the *Business Week* dummy is equal to 1 in each *Business Week* award month (January of every sample year) and 0 in all other award months. Finally, we include controls for CEO age, tenure and gender.

Table II presents the results of this logit regression. The coefficient estimates, shown as odds ratios, confirm the patterns from Table I. CEOs of larger firms 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.

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<sup>4</sup>See Abadie et al. (2001) on the implementation of this estimator.

<sup>5</sup>Definitions on French’s website [mba.tuck.dartmouth.edu/pages/faculty/ken.french/data\\_library.html](http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html).

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.<sup>6</sup> 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 a 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. 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. The procedure estimates an auxiliary OLS regression of the effect of the match variables on the outcome variable (in the control sample) and uses the estimates to adjust for differences in the match variables between the treatment and control samples.<sup>7</sup> This correction ensures, for example, that an outlier winner with a propensity score too high to closely match does not drive our results. 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.<sup>8</sup>

Table I 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 estimation, seven are significantly different at the 1% level between award winners and non-winners, but none are between winners and predicted winners. Only returns from months 13 to 36 prior to the award are significantly different at 5% across winners and predicted winners, and CEO tenure at 10%. In both cases, the medians are not significantly different, suggesting that a small number of outliers drive the differences in means. There are also no remaining

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<sup>6</sup>We verify that the results are similar using the two, three, or four nearest neighbors as predicted winners.

<sup>7</sup>This approach has been implemented in recent studies including Colak and Whited (2007).

<sup>8</sup>Consistent with Abadie and Imbens (2007), we find that the bias adjustment has a negligible impact on our estimate of the treatment effect when we match on propensity scores, but matters when we match on covariates.

significant differences in the distribution across the Fama-French 12 industry groups.

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>9</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. We report 16 such variables in Table I. 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 et al. (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. We confirm the similarity of the samples along several other dimensions. Notably, we compare sales growth, investment rates, R&D to sales, advertising to sales and asset tangibility across the samples to test whether the winner sample is skewed towards “high-tech” or “fast growth” companies in a way the match does not capture. We find only one significant difference between winners and predicted winners (sales growth of 0.165 versus 0.116;  $-0.038$  for the overall sample).<sup>10</sup> 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>11</sup> Finally, we supplement the propensity score with additional controls when operating performance or compensation, rather than stock returns,

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<sup>9</sup>The significant interactions are size\*returns-months-13-36 ( $p = 0.056$ ), book-to-market\*returns-months-13-36 ( $p = 0.071$ ), returns-4-6\*tenure ( $p = 0.029$ ), returns-13-36\*age ( $p = 0.033$ ), and returns-months-13-36\*tenure ( $p = 0.026$ ).

<sup>10</sup>Details are in the Online Appendix. We verify that our main results are unaffected by including sales growth as a match variable in addition to the propensity score or by including it in the propensity score estimation.

<sup>11</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.

are the dependent variable. Our match variables contain standard predictors of stock returns, including lagged performance.<sup>12</sup> Though the match appears to correct for differences between treated and control observations along most dimensions, we include lags of dependent variables other than returns to control for any residual ex ante differences.

The Online Appendix provides several additional robustness checks. First, we re-do our analysis on various subsets of the awards data. For example, we show that our results are robust to excluding less prominent awards (Ernst & Young and *Electronic Business Magazine*) and, alternatively, to including only the *Business Week* and *Financial World* awards. Second, we estimate the average treatment effect using two alternative methodologies which do not rely on nearest-neighbor matching. We report the propensity score weighting estimator, developed by DiNardo, Fortin, and Lemieux (1996) and Hirano, Imbens, and Ridder (2003), which uses 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. We also report the control function estimator, developed by Heckman and Navarro-Lozano (2004), which uses control functions to correct for differences in the probability of treatment across observations in a full sample OLS regression of the outcome variable on the treatment indicator. 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. In our application, the match appears to provide a more conservative set of results.

### **III.B. *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 with the CRSP value-weighted index as the proxy for market returns. We estimate  $\alpha$  and  $\beta$  for

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<sup>12</sup>See, e.g., Brennan, Chordia, and Subrahmanyam [1998] and Gompers, Ishii, and Metrick [2003]).

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). We choose 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. 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 III contains the results. The left two columns show the average CARs in the samples of award winners (W) 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, 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.<sup>13</sup> 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 III.A.. The results are similar both in magnitude and significance. At the three-year horizon, the propensity-score weighting estimate is  $-0.223$  ( $p$ -value = .001) and the control function estimate is  $-0.155$  ( $p$ -value = .026). We also redo the analysis taking a portfolio approach that compares the average performance of winners and predicted winners controlling for known patterns in returns. We construct a zero-investment portfolio 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>14</sup> The zero-investment strategy does not incorporate any

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<sup>13</sup>In untabulated estimations, we have considered alternative windows, such as  $[-7, 0]$ , to account for the true announcement date being prior to the cover date. There is still no significant short-run reaction to the awards.

<sup>14</sup>The results are qualitatively similar ignoring CEO exit and, if anything, weaker, suggesting that the under-

backward-looking measure of expected returns. However, 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 (mktrf) – and the momentum factor (Carhart, 1997). The portfolio has an alpha of roughly 50 basis points per month over one, two, and three years following the award month (Panel II, Table III). 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 I, this finding does not reflect differences at the time of the award in short-horizon past returns.

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 test for changes in ROA and other corporate outcomes following CEO awards.

### **III.C. *Operating Performance***

We measure changes in ROA around CEO awards from the end of the fiscal year prior to an award month until three years later. The top panel of Figure II 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 actual 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 the actual winners.

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performance is tied to the award-winning CEO.

In Panel A of Table IV, 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 III.E. that the lack of significance is partially due to averaging the effect over good- and bad-governance firms.

### **III.D. *CEO Compensation***

Award-winning CEOs underperform after attaining increased status, beyond the effects of mean reversion. Next, we ask what award winners do differently compared to what they did before and compared to matched non-winners. First, we consider whether award winners are able to use their increased power to extract more rents from the company. 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.

We consider the interval beginning at the end of the last fiscal year to end at least six months prior to an award month and ending three years later. In the second row of panels in Figure II, we graph mean CEO total compensation and cash compensation for award winners, predicted winners, and all non-winning CEOs. As with ROA, both award winners and predicted winners



have significantly higher total and cash compensation than non-winners prior to the award, but no significant differences to each other. In the year of the award,<sup>15</sup> there is an immediate and striking increase of 44% in award winners' total compensation. 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 IV, 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 in compensation changes. Recall that our match already controls for differences in determinants of compensation such as firm size, performance, age, and tenure. 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 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 formal hypothesis tests confirm that there is a significant three-year increase in cash compensation both for winners and predicted winners but no significant difference between the two groups over any horizon (using any methodology).

As in Section III.B., we verify that the result is not driven by the residual differences between winners and matches in past performance (returns from months 13 to 36 preceding the award). The result is robust to re-estimating the Column 5 specification including the characteristics directly and adjusting for bias. The results are also similar using the propensity score weighting

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<sup>15</sup>Note that most firms end the fiscal year in December and that 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.

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 = .002; control function estimate = 6,202.24,  $p$ -value < .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 = .191). Using the control function estimator, the differences are significant at all horizons.

Summing up, award winners experience abnormal and significant increases in total compensation, but not in cash compensation.<sup>16</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. Another interpretation is that award winners use their increased power to extract greater rents. 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 II show the results. For award winners, the ratio increases over the interval. Thus, their gain in total compensation is not shared by the next-highest paid executives. For predicted winners and for non-winners, 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-

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<sup>16</sup>Using weighting or control function estimators, the difference between winners and non-winners in cash compensation is significant over the three-year horizon. Here, the control samples look similar to the unadjusted, full non-winner sample from Figure 2, suggesting that the nearest-neighbor match better controls for selection.

year horizon.<sup>17</sup> The increase in the total compensation ratio among award winners is not itself 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-winners receive increased compensation following strong performance, not other CEOs with equally strong performance and not other executives in the award winners' firms.

### **III.E. *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 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. A higher value of the index implies weaker shareholder rights (or more entrenched management). We measure the index at the time of the (predicted) award. We use the 33rd and 66th percentile of the distribution of the index among award winners – 8 and 10, respectively – to split the sample into three subgroups.<sup>18</sup> We then redo the analysis of Sections III.B.-III.D., separately on each subsample. By re-matching within each governance category, we ensure that good (poor) governance firms can only match to other good (poor) governance firms. Thus, the resulting differences in outcomes across the treated and control sample can be interpreted as the effect of the award within firms of that governance type and are distinct from any direct effect of governance on the outcome in question. Since changes in the index following awards might confound this interpretation, we verify that winning an award does not predict significant changes in the governance regime in the three year window following the award

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<sup>17</sup>Using weighting- or control-function estimators, the three-year differences are typically significant.

<sup>18</sup>The distribution of the index in the overall sample is similar: 8 and 10 are the 33rd and 64th percentile among all firms. Our results are robust to minor changes in the cutpoints and to considering only two subsamples, split at the median value of the index.

(untabulated).<sup>19</sup>

Table V 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 Columns 5 and 6.<sup>20</sup> 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. Relative performance seems to deteriorate monotonically as we move from the good to the bad governance subsample. The pattern is similar for operating performance. 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. The difference declines monotonically across the subsamples. Finally, 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. We also test the significance of the differences between the estimated treatment effects in the good and bad governance subsamples. Despite the high standard errors of the estimates in the good governance subsample, particularly over long horizons, we still find that the 1- and 2-year CAR estimates are significantly different in the two groups, at 5% and 10% respectively. The remaining differences are not significant.

As in prior sections, we find similar results using propensity score weighting or control functions. The lone notable deviation is that we do not replicate the modest, but insignificant improvement in cumulative abnormal stock returns among good governance firms for winners relative to non-winners. Instead, the point estimates of the differences are typically negative.

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<sup>19</sup>Movements between the three governance regimes are rare even in the overall sample (5.5% of firm-years).

<sup>20</sup>The split results in unequal subsample sizes since there are discrete masses of observations at the cutpoints.

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 CEO status captured by major media awards lead to rent extraction and worse job performance. They also provide a silver lining: award-winners in firms with strong corporate governance display modest, though insignificant, improvements in performance relative to matched non-winning CEOs.

## IV. 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, increased participation in activities outside the firm, which distracts attention from maximizing firm value. We focus on two such activities: writing books and sitting on outside boards. We also provide some suggestive evidence on leisure activity (golf handicaps).

Methodologically, the timing and 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. CEOs author books and assume board seats at different times relative to the award month, making it more difficult to control for confounding predictors of the outcome in the matching specification. Moreover, matching CEOs on the frequency with which they engage in outside activities prior to each award month would require long pre- and post-award windows, e.g., to match on the number of books 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.

Instead of the matching methodology, we rely on ordinary least squares and fixed effects regressions. As a result, the control group is either all non-winning CEOs or the pre-award behavior of the winners themselves. We also exploit 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, authoring such books seems more like perk consumption than shareholder value maximization. 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 III, 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 VI, 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. The award dummies are time-varying for each CEO, and we include awards won in other companies. 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>21</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 (marginal) coefficients on the award dummies mirrors Figure III. 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 = .0064).

In Columns 2 to 4, we re-estimate the regression separately for firms in each of the three

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<sup>21</sup>We exclude the CEO gender control since only one female CEO in our sample, Lillian Vernon of Lillian Vernon Corp, authors a book.

corporate governance regimes defined in Section III.E.. Here, we measure the GIM index and re-partition the sample in each firm-year. Thus, it is possible, though uncommon, for a firm to appear in different governance subsamples in different firm-years. In firms with strong corporate governance ( $GIM \leq 7$ ), neither the marginal nor the cumulative effect of awards is significant. In firms with intermediate governance quality, the marginal effect of a second award is significantly positive, but the effect of at least 3 awards is not significant. In 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  $< .001$ ). The cumulative effect of at least 3 awards is significantly different (at 5%) between the good and bad governance samples. Thus, the likelihood of CEOs becoming serial authors—like Andrew Grove—increases in the number of awards, but primarily if the quality of governance is 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. Thus, we use an indicator for sitting on five or more external boards as a distraction measure.<sup>22</sup>

In the lower panel of Figure III, 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 Columns 5 to 8 of Table VI, we measure the effects in a regression framework, including the same controls as before. 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

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<sup>22</sup>Five or more board seats negatively affect corporate governance measures such as the *Corporate Governance Quotient* of ISS. However, our results do not depend on the choice of five boards as the cutoff and are qualitatively similar using three or four instead.

and tenure significantly increase the likelihood of serving on at least five boards. We also find that CEOs in ‘growth 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 III: only the first award has a (marginally) significant positive effect on the likelihood of assuming at least five board seats. As shown in Columns 6 to 8, the positive impact comes entirely from the weak governance subsample ( $GIM > 9$ ). The difference between the good and bad governance samples is significant at the 5% level.

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 external boards after they win awards, particularly when governance is weak.<sup>23</sup> 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 does not allow us to systematically identify changes in handicaps among award-winners. We do find, however, that award-winning CEOs have lower handicaps on average than their peers (14.29 vs. 15.46; difference  $p$ -value = .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,  $p = .092$ ;  $7 < GIM \leq 9$ : difference = -0.774,  $p = .540$ ;  $GIM \leq 7$ : difference = -0.075,  $p = .958$ ). 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.

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<sup>23</sup>The results with CEO effects are tabulated in the Online Appendix.



## V. 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, 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 IV, we plot the mean deviation between quarterly earnings announcements and the consensus analyst forecast, separately for CEOs who have never won an award, CEOs who have won 1, 2, or 3 awards, and CEOs who have won 4 or more awards. The classification is time-varying: CEOs can move among groups as they win (additional) awards. Following DellaVigna and Pollet (2004), 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. Consistent with our hypothesis, we find that 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 is less symmetric among winners than among non-winners and the deviation increases with the number of awards. Among CEOs with 1, 2, or 3 awards, the increase in the frequency of zero earnings surprises relative to non-winners is roughly 2.5 percentage points; among CEOs with at least four awards, it is more than 10.

In Panel I of Table VII, we test the pattern in a regression framework, focusing on the probability that a firm experiences a zero earnings surprise. We adapt our empirical specification from Section IV., using time-varying indicators for having won at least  $x$  awards in the past, with  $x$  ranging from 1 to 4. (We separate “at least 3” and “at least 4” awards since the raw data suggest a significant increase moving from 3 awards to 4.) As before, the award dummies include awards won in other companies. We control 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>24</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. Standard errors are clustered by earnings announcement date.<sup>25</sup> 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 restrict attention to firm-quarters in which at least five analysts made an earnings forecast to increase the information content of the median forecast, and we include the number of analysts covering the firm as a control. In untabulated estimations, we verify the robustness of the results to adding additional performance measures (ROA and earnings per share) as controls.

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 IV. 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 at the 5% level. In Columns 2 - 4, we re-estimate the regression on the three corporate-governance subsamples ( $GIM \leq 7$ ,  $7 < GIM \leq 9$ , and  $GIM > 9$ ).<sup>26</sup> In firms with strong governance, we find no significant impact of CEO awards. 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 16 percentage points, though it is marginally insignificant. Among firms with poor 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 4 awards remains positive and economically large (roughly 11 percentage points), though marginally insignificant. The

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<sup>24</sup>The coefficients of the award dummies are largely unaffected if we use a continuous size control.

<sup>25</sup>The results are qualitatively unchanged if we cluster at the firm level.

<sup>26</sup>As in Section IV., we measure governance and partition the sample in each firm-year, allowing firms to move among the governance subsamples as their GIM values change.

cross-group differences are not significant.

We also measure the impact of winning an award on earnings management using the matching framework from Section III.. For each sample firm, we measure the frequency of zero earnings surprises in the four quarters prior to and the four, eight, and twelve quarters following each award month. We then compute the change in the frequency of zero surprises over each of the three intervals. We match award winners to predicted winners using two variables: the propensity score (Table II) and the average number of analysts making a quarterly forecast for the four quarters prior to the award month. The latter variable controls for cross-sectional differences in analyst coverage. We restrict the sample to firms with at least five analyst forecasts on average over the four quarters preceding the event month. In Panel II of Table VII, we present bias-adjusted estimates of the impact of awards on earnings management, in the full sample and for the three governance subsamples. We find larger increases in earnings management among award winners than predicted winners over all three intervals, significantly so at the 10%-level for the two longer horizons. The results are statistically strongest in the bad governance sample, though the coefficient estimates are also positive (and similar in magnitude) among firms with good governance. The cross-group differences are not significant; however the differences between the bad and middle governance samples are significant at the 5% level for all three horizons. Overall, the evidence suggests that award-winning CEOs increase earnings management, particularly following their first award and when corporate governance is weak.

Finally, we find that CEOs are not able to follow this strategy indefinitely. We measure the frequency with which CEOs report negative earnings. Negative earnings reports are rare, occurring less than 10% of the time, and with similar frequency between winning and non-winning CEOs. However, five years after winning CEOs' last awards, the frequency of negative earnings announcements is significantly higher than among non-winning CEOs, particularly in firms with weak shareholder rights. (Online Appendix, Table OA9.)

## VI. Discussion and Conclusion

We provide novel evidence that increases in CEO power in large corporations can exacerbate agency problems, destroying value for the firms' claimholders. We use shifts in CEO status due

to major awards in the national media to identify the impact of CEO power on performance and other corporate outcomes. Because these shifts are not exogenous, we use bias-adjusted matching estimators to separate the real impact of shifts in CEO status from selection effects.

We find that firm performance declines following CEO awards. At the same time, winning CEOs extract higher compensation, largely in the form of stock and options. The increases in CEO compensation following awards are not shared by other top executives in the firm. Award-winners also indulge in tasks which provide private benefits but little firm value (writing books, sitting on outside boards, playing golf), and they increasingly engage in earnings management. All of these effects are concentrated in the subsample of poorly governed firms.

As a final step, we explore the extent to which CEO “self-promotion” explains the deterioration of performance following awards. Self-promoting CEOs may exaggerate their own successes. Thus, for any given level of perceived performance – as reflected in their firms’ stock prices – self-promoters are more likely to experience subsequent underperformance, regardless of whether they win awards. To separate this effect from shifts in CEO status, we compare award winners and predicted winners in terms of several ex-ante measures of self-promotion. First, we analyze earnings management in the year prior to CEO awards using three common measures: net operating assets, accruals and the frequency of zero earnings surprises. We find no significant differences between award winners and their matches (Table I). Second, we collect additional data on CEOs’ media appearances. For the three years prior to award dates, up to the beginning of the month prior to the award, we collect the number of TV interviews CEOs give as well as the number of articles (1) mentioning and (2) interviewing them in the *New York Times*, *Business Week*, *Financial Times*, *The Economist*, and *Wall Street Journal*. (Details are in the Online Appendix, Table OA11.) We find that the average number of TV interviews is 1.7 for award winners and 1.3 for predicted winners (difference  $p$ -value = .17). The average number of articles mentioning the CEO is lower for award winners (81.7 vs. 100.5; difference  $p$ -value = .31), but the number of articles interviewing CEOs is higher (25.6 vs. 23.3; difference  $p$ -value = .43). We also consider the difference in the mean ratios of interviews to mentions. This ratio is undefined for CEOs with no print media mentions, creating unbalanced samples. We address this problem by dropping winners if they do not match to a predicted winner with a non-missing ratio and vice versa. We, again, find no significant difference between winners and predicted winners (0.447 vs. 0.413; difference  $p$ -value = .11). Overall, this evidence

supports our interpretation of awards as shifts in CEO status over the self-promoter hypothesis. However, it would be interesting to consider alternative measures of self-promotion, like public relations expenditures, if data becomes available.

Our results suggest that the celebrity culture permeating the business world has clear consequences for shareholders: increased status distorts CEO behavior and decreases subsequent firm performance. Given the increase in the quantity and prominence of CEO awards over the past two decades (Figure I), this is a growing cause for concern. Yet, the overall value implications of CEO awards are difficult to assess. The prospect of winning prestigious media awards may strengthen the incentive for CEOs to maximize value. Firms may allow CEOs to reap (value-reducing) private benefits after winning awards in exchange for increased effort *ex ante*. Two of our results, however, are difficult to reconcile with this interpretation. First, the *ex post* value-destruction is concentrated in firms with weak shareholder rights, suggesting that explicit governance mechanisms can and do substitute for the external incentives provided by the media-run tournament for status. Second, the economic magnitude of the *ex post* value-destruction is large: award-winning CEOs underperform their matches by 15 – 26% over the three years following the award.

One avenue for future research might be to identify the *ex ante* value created by the tournament for media attention or, more broadly, status increases. The econometric identification will be challenging, even restricting attention to media awards. In our application, only a subsample of CEOs receive treatment (an award), but all CEOs participate in the tournament *ex ante*. Thus, it is difficult to proxy for the counterfactual – how firms would have performed in the absence of the tournament incentives. Another interesting avenue for additional research is to study in more detail the internal channels through which increases in CEO power destroy value. In ongoing research, we find preliminary evidence that the market reacts more negatively to merger bids subsequent to CEO awards. A deeper understanding of all the channels through which increases in CEO power affect value might improve our understanding of the contracting problem between shareholders and the CEO.

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## APPENDIX. CEO AWARDS DATA

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

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Table I  
Summary Statistics

	<i>CEO Award Winners (W)</i>				<i>All Non-Award Winners (A)</i>				<i>Predicted Winners (P)</i>				<i>Differences in Means</i>	
	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	0.107	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	246	0.10	0.09	0.06	53,970	0.05	0.07	0.14	251	0.09	0.08	0.07	0.000***	0.114
ROE	264	0.20	0.18	0.43	60,251	0.09	0.11	4.92	264	0.17	0.16	0.23	0.731	0.441
Q	264	3.68	1.94	6.16	60,261	2.01	1.42	1.94	264	3.15	1.99	4.02	0.000***	0.243
Net Operating Assets	263	0.590	0.616	0.324	60,308	0.650	0.663	0.321	263	0.605	0.593	0.268	0.003***	0.560
Accruals	207	-0.044	-0.044	0.082	52,219	-0.039	-0.043	0.087	217	0.004	-0.044	0.063	0.418	0.550
Frequency of Zero Earnings Surprise	260	0.147	0	0.229	53,322	0.156	0	0.246	261	0.167	0	0.233	0.545	0.320
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.	2%			
Consumer Durables	7%	Utilities	4%	C. Dur	3%	Utilities	7%	C. Dur	5%	Utilities	5%			
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.	4%	Money	14%			
Business Equipment	27%	Other	22%	Bus. Eq.	16%	Other	26%	Bus. Eq.	28%	Other	22%			

*Notes.* The sample includes all firms in all months in which a CEO award is conferred. 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 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. Frequency of Zero Earnings Surprise counts the number of quarters with zero surprises relative to the median analyst forecast during the year prior to the award and scales by the number of earnings announcements. 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, 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. Absolute value of t statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Table II  
Determinants of Award Winners

	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

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

Table III  
Stock Performance of Award Winners vs. Predicted Winners

*I. Cumulative Abnormal Returns Around Awards and Predicted Awards*

	Award Winners (W)	Predicted Winners (P)	Difference (W - P)	Bias-Adjusted Difference	Characteristic- Matched, Bias- Adjusted Difference
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)***

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

*II. Long Run Returns to Difference Portfolio*

	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

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

Table IV  
Operating Performance and Compensation Around CEO Awards

	<i>N</i>	Award Winners (W)	Predicted Winners (P)	Difference (W - P)	Bias- Adjusted Difference	Bias-Adjusted Difference with Lag
<i>Panel A. Performance</i>						
$\Delta$ ROA [-1, 0]	247	-0.005 (1.58)	-0.004 (1.25)	-0.001 (0.16)	-0.002 (0.57)	0.000 (0.09)
$\Delta$ ROA [-1, +1]	241	-0.019 (3.15)***	-0.023 (2.29)**	0.004 (0.37)	0.001 (0.08)	0.000 (0.01)
$\Delta$ ROA [-1, +2]	206	-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>						
$\Delta$ Total Compensation [-1, +0]	233	7,816.21 (2.16)**	-829.75 (0.57)	8,645.96 (2.21)**	8,577.07 (2.21)**	8,017.35 (2.39)**
$\Delta$ Total Compensation [-1, +1]	198	6,399.23 (1.59)	711.86 (0.44)	5,687.37 (1.33)	4,161.52 (0.95)	6,546.25 (1.65)*
$\Delta$ Total Compensation [-1, +2]	141	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)**
$\Delta$ Cash Compensation [-1, 0]	238	197.27 (1.53)	202.74 (1.45)	-5.465 (0.03)	-30.30 (0.17)	14.81 (0.09)
$\Delta$ Cash Compensation [-1, +1]	204	454.01 (1.63)	660.10 (6.15)***	-206.09 (0.70)	-135.03 (0.45)	14.60 (0.05)
$\Delta$ Cash Compensation [-1, +2]	147	1,236.09 (3.45)***	960.51 (6.15)***	275.58 (0.72)	288.91 (0.70)	187.59 (0.48)

*Notes.*  $\Delta$  indicates a change, measured over the horizon in years relative to the award shown in brackets. 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. Absolute value of t statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Table V  
Performance and Compensation by Corporate Governance

	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
ΔROA [-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
ΔTotal 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
ΔCash 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

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

Table VI  
Distractions

	<i>I. Books</i>				<i>II. At Least 5 Board Seats</i>			
	Full Sample	Good	7<GIM≤9	Bad	Full Sample	Good	7<GIM≤9	Bad
		Governance (GIM≤7)		Governance (GIM>9)		Governance (GIM≤7)		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)
<i>Cumulative awards effect</i>	0.0198 (2.73)***	0.0049 (0.26)	0.0073 (0.55)	0.0488 (4.17)***	0.0080 (0.39)	-0.0564 (1.24)	0.0854 (1.67)*	-0.1045 (2.51)**
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

Notes. OLS regressions. 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 is log(price \* shares outstanding) at the end of the prior fiscal year. 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 in each year the number of awards the CEO has won in prior years, inclusive of awards won in other companies. The reported coefficients of "At least x awards" are marginal. GIM is the governance index of Gompers, Ishii, and Metrick (2003). Absolute value of t statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.



Table VII  
Earnings Management

I. OLS Regression

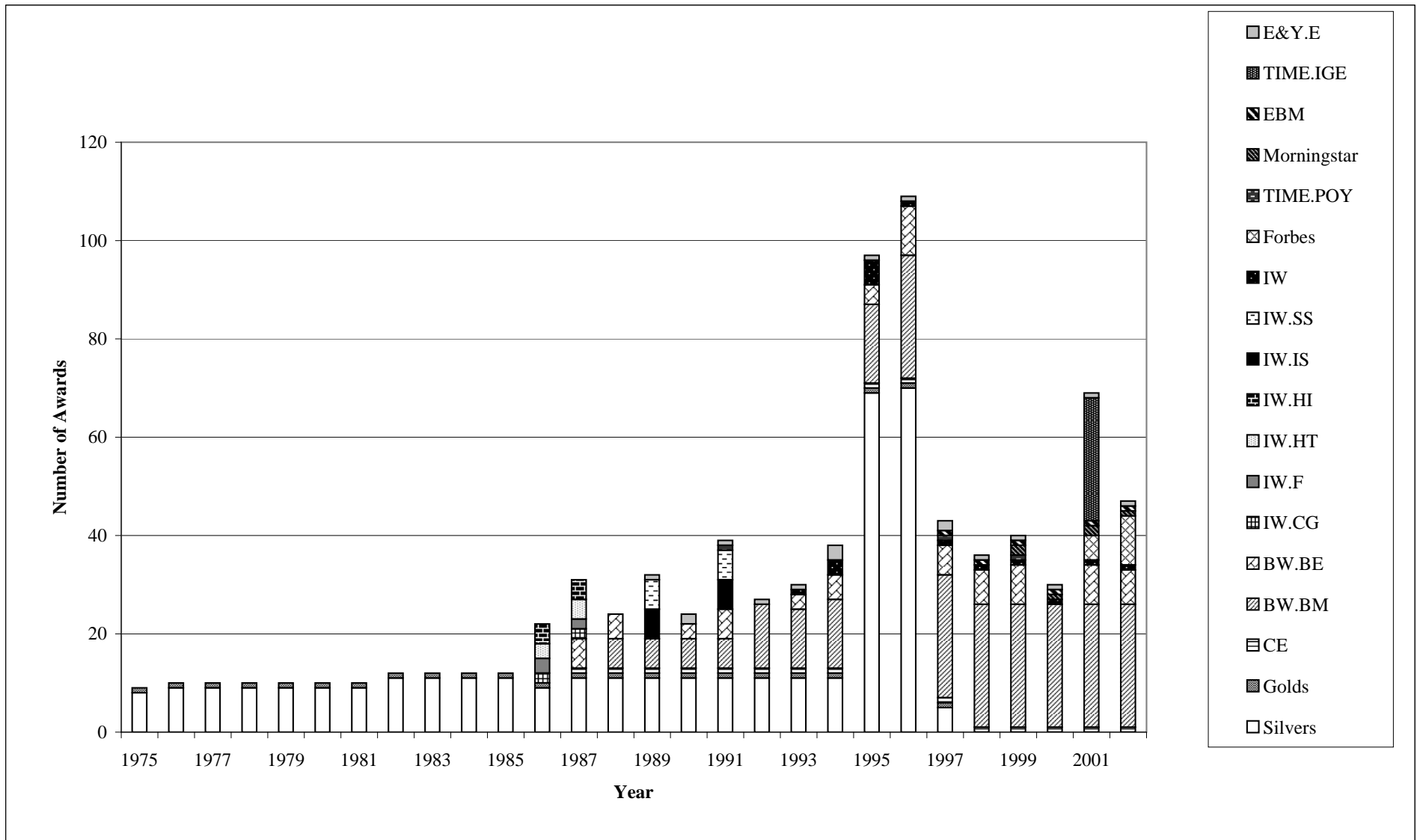
	Full Sample	Good Governance (GIM≤7)	7<GIM≤9	Bad Governance (GIM>9)
Award Dummies				
At least 1 award	0.0401 (2.75)***	0.023 (0.73)	0.0279 (0.82)	0.0649 (2.19)**
At least 2 awards	-0.017 (0.60)	-0.0479 (0.86)	0.0344 (0.62)	-0.1139 (1.96)*
At least 3 awards	-0.0196 (0.57)	-0.0495 (0.76)	0.0004 (0.01)	0.0255 (0.33)
At least 4 awards	0.1029 (2.19)**	0.0795 (1.00)	0.1007 (1.25)	0.1309 (1.66)*
Cumulative awards effect	0.1063 (2.21)**	0.0050 (0.06)	0.1633 (1.57)	0.1073 (1.06)
Book-to-Market Ratio	-0.021 (1.99)**	-0.0057 (0.31)	-0.0205 (0.87)	-0.0095 -0.85
CEO Age	0.0083 (1.08)	-0.0051 (0.18)	-0.026 (0.81)	0.0053 (0.51)
CEO Tenure	0.0001 (0.03)	0.0122 (1.26)	0.0029 (0.19)	-0.0049 (0.67)
Number of Forecasts	0.003 (2.83)***	0.005 (2.56)**	0.004 (1.90)*	0.002 (1.46)
Observations	28,880	6,211	5,978	12,452
Number of CEOs	2,811	794	783	1,211
R <sup>2</sup>	0.22	0.29	0.28	0.21

Notes. The sample includes all quarterly earnings announcements for firms with at least 5 analyst forecasts in the 30 calendar days prior to the announcement. 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. Number of Forecasts is the number of analyst forecasts in the 30 calendar days prior to the announcement. All regressions include dummies for market capitalization deciles, where the market capitalization deciles are constructed from the natural log of market capitalization at the time of the earnings announcement. All regressions include month, year, and CEO fixed effects. The Award Dummies measure in each year the number of awards the CEO has won in prior years, inclusive of awards won in other companies. The reported coefficients of "At least x awards" are marginal. GIM is the governance index of Gompers, Ishii, and Metrick (2003). All standard errors are clustered by earnings announcement date. Absolute value of t statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

II. Propensity Score Matching

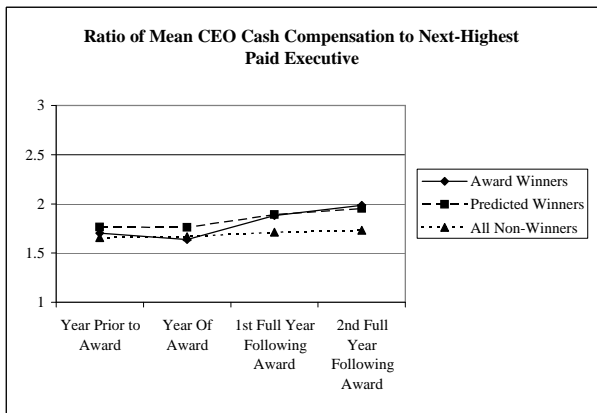
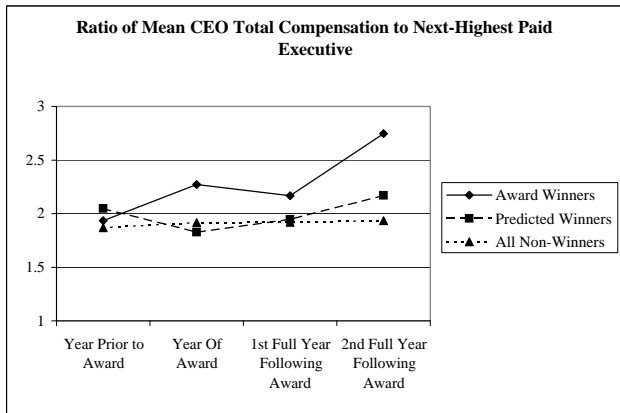
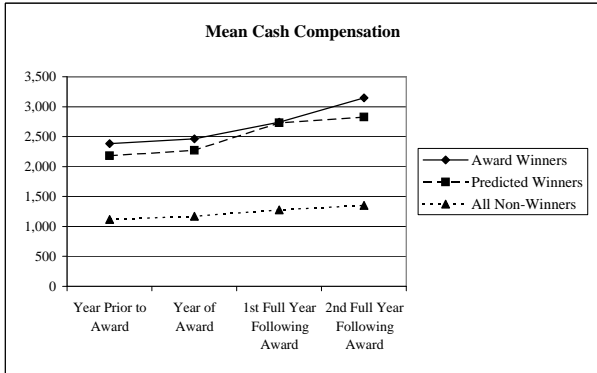
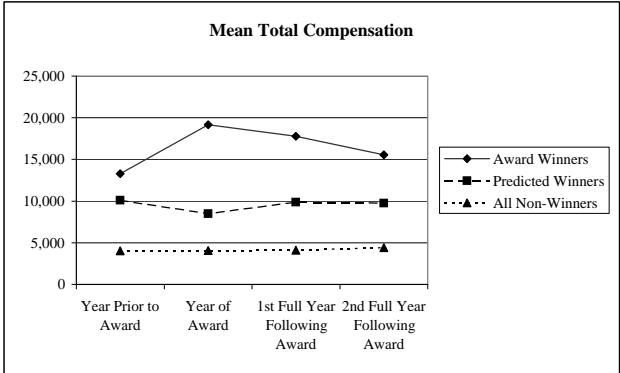
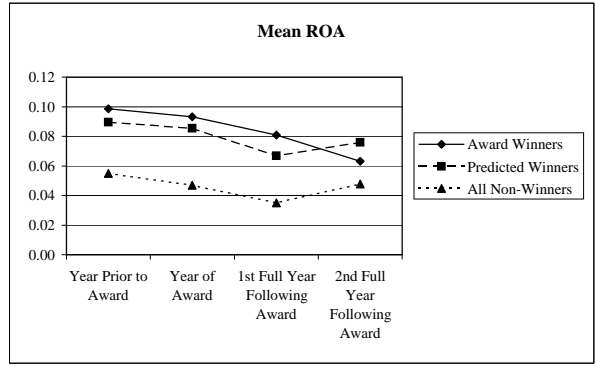
	Full Sample	Good Governance (GIM≤7)	7<GIM≤9	Bad Governance (GIM>9)
ΔFrequency of Zero Surprise [-4,+4]	0.032 (1.39)	0.072 (1.44)	-0.042 (1.05)	0.079 (1.97)**
ΔFrequency of Zero Surprise [-4,+8]	0.036 (1.67)*	0.072 (1.54)	-0.046 (1.20)	0.093 (2.41)**
ΔFrequency of Zero Surprise [-4,+12]	0.040 (1.78)*	0.067 (1.43)	-0.042 (1.07)	0.085 (2.25)**
N	234	59	79	94

Notes. The sample includes firms which have at least 5 forecasts (on average) in the four quarters preceding the (predicted) award date. Frequency of zero surprise counts the number of zero surprises over the interval in question and scales by the number of earnings announcements. ΔFrequency of Zero Surprise [-x,+y] measures the difference between the frequency of zero surprises over the x quarters following the award quarter (excluding the award quarter itself) and the y quarters preceding the award quarter. When there are missing quarterly announcements, we restrict the measurement of the frequency of zero surprises to quarterly announcements falling within the x/4 or y/4 calendar years preceding or following the award quarter, respectively. 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 number of analyst forecasts over the 30 days preceding the earnings announcement is included as an additional match variable. Matching is done in each month in which an award is conferred, with replacement. We use a bias-adjustment to correct for differences between the propensity scores and number of forecasts of award winners and their nearest match. Absolute value of t statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.



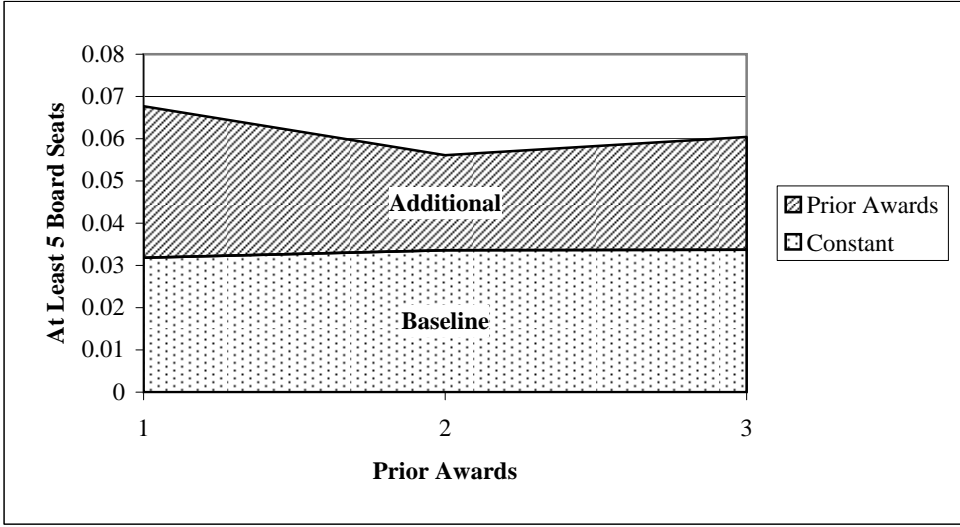
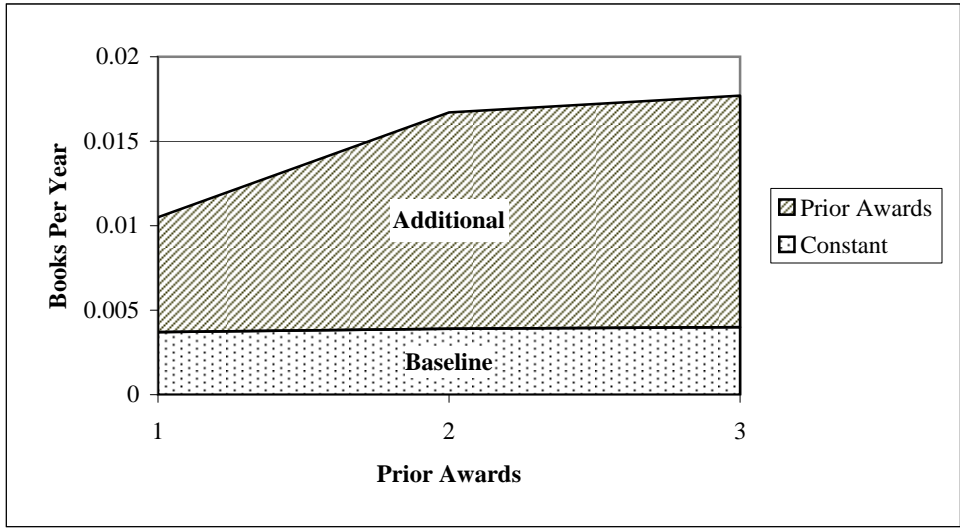
**Figure I**  
CEO Awards by Year

Notes: 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.



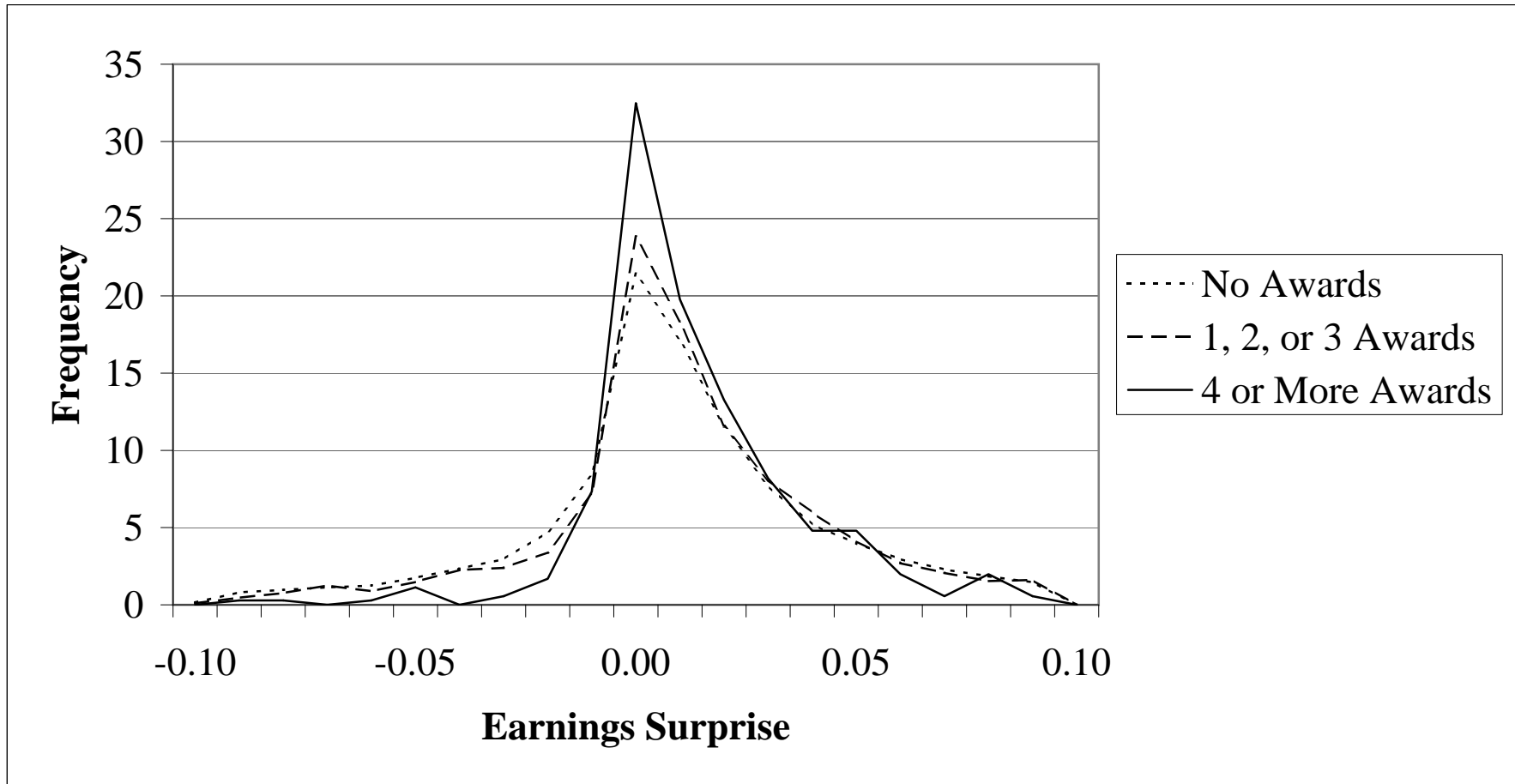
**Figure II**  
**Operating Performance and Compensation of Award Winners**

*Notes:* 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 (tc) 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 III**  
**CEO Awards and Distractions**

*Notes:* 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 IV**  
**CEO Awards and Earnings Management**

*Notes:* 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.