

The Impact of CEO Status Diffusion on the Economic Outcomes of Other Senior Managers

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In this paper we develop and test predictions regarding the impact of CEO status on the economic outcomes of top management team members. Using a unique data set incorporating *Financial World's* widely publicized CEO of the Year contest, we found that non-CEO top management team members received higher pay when they worked for a high-status CEO. However, star CEOs themselves retained most of the compensation benefits. We also show that there is a “burden of celebrity” in that the above relationships were contingent on how well a firm performs. Last, we found that, when compared with the subordinates of less-celebrated CEOs, members of top management teams who worked for star CEOs were more likely to become CEOs themselves through internal or external promotions.

Key words: CEO celebrity; status; top management team; compensation; status leakage

Introduction

Understanding how senior managers are compensated has become a central question in research on corporate governance. Most prior compensation research has examined how company directors evaluate a CEO in isolation of other members of the top management team (e.g., Bebchuk and Fried 2004). Much of this research has been motivated by agency theory (Berle and Means 1932, Jensen and Meckling 1976) and its emphasis on the alignment of incentives between CEOs and their company's shareholders. Yet governance scholars have recognized for some time that managerial performance is group based and that task interdependencies exist within top management teams that make it difficult to evaluate a CEO without also considering the contributions of other senior managers (e.g., Hambrick and Mason 1984, Holmstrom 1982). This interdependence complicates a purely agency perspective on top management compensation because it introduces evaluative uncertainty into the contracting process (Holmstrom 1979, 1982).

Agency theory offers two types of top management monitoring mechanisms: behavior-based and outcome-based contracts. Behavior-based contracts are effective when the appropriate behavior of agents performing a task can be specified *ex ante*. This is not the case in the context of monitoring top management teams because the duties of team members are open ended and not easily programmed. Agency theory also recognizes that it is difficult to write outcome-based contracts when there

are both joint production and uncertainty regarding the link between specific managerial behaviors and firm outcomes (Eisenhardt 1989). Nilakant and Rao (1994) suggested that under such conditions:

there is considerable ambiguity in the task that is delegated to the agent(s) and multiple criteria of performance may be used to monitor and reward the agent(s). Such conditions are not easily amenable to mathematical modeling, and, consequently, have been ignored by agency theory. (p. 657)

Holmstrom (1979) examined this issue and concluded that when the relative performance of an agent is difficult to assess, additional information, even if imperfect, can improve monitoring effectiveness. Economic sociologists have argued that one source of information about firms and managers is the opinion of informed third parties such as security analysts and the business press (Zuckerman 1999, Podolny 2005). Through their public endorsements or repudiations, expert third parties create an informational context in which the actions of firms and managers are often explained. Consistent with this argument, a number of scholars have recently shown that media coverage influences firm profitability (e.g., Deephouse 2000), the premiums paid for initial public stock offerings (Pollock and Rindova 2003), and abnormal stock returns (Johnson et al. 2005, Wade et al. 2006b). At the managerial level, positive media coverage of the CEO has been associated with increased CEO compensation (Malmendier and Tate 2005a, Wade et al.

2006b) as well as heightened pay-performance sensitivity (Milbourn 2003, Wade et al. 2006b).

These findings suggest that third parties such as the business press influence CEO-shareholder relationships by endowing firms and CEOs with greater or lesser status. Status can be considered “an actor’s position in a hierarchical order” (Podolny 2005, p. 13).¹ According to Podolny (2005), status becomes an important signal of quality when quality is imperfectly observable and the linkages between actor characteristics and outcomes are only loosely coupled. In Podolny’s words, “The greater market participants’ uncertainty about the underlying quality of a producer and a producer’s product, the more that the market participants will rely on the producer’s status to make inferences about the quality” (2005, p. 18). Podolny suggested that third-party endorsements and certifications are important determinants of economic outcomes because they create an explicit or implicit hierarchical ordering of the actors involved. This ordering then is used to infer actor or product quality.

An important conclusion from status research is that a given status position is not simply an atomistic attribute of an isolated actor but instead is “directly tied to the pattern of relations and affiliations in which the actor does and does not choose to engage” (Podolny 2005, p. 13). Podolny used the term “status leakage” to refer to the fact that status diffuses across market participants such that the status of one affects the status of others with whom they are affiliated. This diffusion of status has been documented at the organizational level to positively influence organizational survival (e.g., Baum and Oliver 1991), product pricing (e.g., Benjamin and Podolny 1999), and the valuations of initial public stock offerings (e.g., Stuart et al. 1999). Recently, Hsu (2004) took these findings even further by showing that entrepreneurs in his sample understood the importance of high-status affiliations and actually declined offers from higher-paying investors to align themselves with more prestigious venture capitalists who invested in the company at a discounted rate. Hsu’s results suggest that there is a “market for affiliation” in which low-status actors will actively bid for affiliations with actors of higher status.

In this paper we extend the notion of status diffusion to the governance literature by exploring the dynamics of status within top management teams. Prior research has shown that executive pay is heavily influenced by the size of a firm and moderately influenced by other variables such as firm performance (for reviews see Bebchuk and Fried 2004, Devers et al. 2007, Gerhart and Rynes 2003), but recent studies have suggested that public endorsements of a CEO by the business press encourage boards to pay a compensation premium for high-status CEOs (Malmendier and Tate 2005a, Wade et al. 2006b). To the extent that status diffusion occurs within a top

management team, one might expect that executives who work for a publicly endorsed CEO will receive benefits from this association in the form of higher pay as well as favorable career outcomes such as an increased likelihood of becoming a CEO themselves.

To explore these possibilities, we use the results from *Financial World’s* widely publicized CEO of the Year contest to measure the status of CEOs in our sample. Every year between 1975 and 1997 *Financial World* surveyed a large group of peer CEOs and business analysts to identify exemplary CEOs based upon a variety of financial and non-financial criteria.² Existing research on CEO status considers this award a “certification contest” in which winners are endorsed by reputable third parties (i.e., expert industry analysts and CEO peers) via the business press (Malmendier and Tate 2005a, Wade et al. 2006b). A certification contest is a public event in which actors in a given domain are ranked based upon criteria that are accepted by key stakeholders as being credible and legitimate. We use the *Financial World* contest results to examine whether the high status that is achieved by a CEO award winner diffuses to members of his or her top management team. Overall, we find support for the idea that status diffusion does occur within the executive suite and that it influences both the structure of top executive pay as well as the likelihood of a manager’s subsequent promotion to CEO.

Theory and Hypotheses

At least since Hambrick and Mason’s (1984) influential statement of the “upper echelon” perspective, it has been assumed in the management literature that CEOs work within a group of executives and that the top management team is a useful unit of analysis for studying governance processes. Indeed, much research has demonstrated the important role that top management group characteristics play in the governance of firms (for literature reviews see Finklestein and Hambrick 1996 and Carpenter et al. 2004). This research raises important questions about how members of top management teams are rewarded for their interdependent activities. The distribution of rewards across job levels within organizations has been a longstanding issue in the organizational sciences (e.g., Simon 1957), and a small but growing number of scholars has turned its attention to the distribution of economic outcomes among senior executives as well (e.g., Gerhart and Rynes 2003 for a review).

Two quite different arguments about the causes and consequences of economic differences between executive ranks have appeared in the literature. On the one hand, tournament theorists (e.g., Lazear and Rosen 1981, Rosen 1986) have suggested that movement through the ranks of senior management is a sequential elimination contest pitting managers against each other for the ultimate prize of the top job in the organization. Large economic differences across managerial ranks, particu-

larly between the CEO and the next-lower rank of executives, motivate otherwise risk-averse and difficult-to-monitor managers to work hard and compete in a contest that has only one eventual winner. Indeed, some have even characterized the attainment of top executive positions as an extreme “winner-take-all” competition (Frank and Cook 1995). Other scholars, however, have argued from an equity theory perspective that large economic differences between executive ranks are deleterious to the organization because they create overzealous and possibly destructive competition among executives (e.g., Dye 1984), undermine executive teamwork (e.g., Carpenter and Sanders 2004, Main et al. 1993, Siegel and Hambrick 2005), encourage executive turnover (e.g., Bloom and Michel 2002), and signal status differences among senior managers that have detrimental effects on the quality of executive decisions (e.g., Hayward and Hambrick 1997). Extending this reasoning, some have further suggested that the delegation of CEO duties to lower-ranking executives, uniform company-specific reward practices, and norms of fairness ascribed to by executives encourage the convergence of senior management pay levels over time (e.g., Carpenter and Sanders 2002, Wade et al. 2006a).

The relative weight of existing empirical evidence does not favor one or the other of these two lines of argument (e.g., Gerhart and Rynes 2003). In light of the mixed results, some scholars have attempted to integrate the two arguments by suggesting that various organizational contingencies determine their relative applicability in actual practice. For example, Lazear (1989) argued that large economic differences among managers might be most efficacious when the level of task interdependence in the management team is low. Low interdependence would permit competition to flourish without interfering with managerial cooperation and communication. Unfortunately, this argument has also received only mixed empirical support (e.g., Siegel and Hambrick 2005, Main et al. 1993, Eriksson 1999).

Another possibility, however, is to conceptualize economic competition and equity, not as two competing explanations for the distribution of rewards across senior managers, but as two nonmutually exclusive social logics that are available to boards of directors and CEOs when allocating managerial rewards. Good justifications exist for both allocation logics. While there may be circumstances that seem to favor one or the other, interesting theoretical questions can be raised about how boards and managers balance competition and equity in the allocation of rewards in response to events and conditions in senior management ranks. It seems likely that both of these concerns are salient in most organizations, and also that the distribution of economic outcomes among senior managers occurs with both concerns in mind.

CEO Status and Senior Executive Compensation

We build on this idea in the present research by examining how the pay and promotion possibilities of senior executives in large U.S. corporations are influenced by the status of the CEO for whom they work. Khurana (2002) argued that boards of directors are susceptible to social cues regarding managerial abilities. Strong endorsements and status rankings by third parties are external validations that the board has made a good decision in hiring a particular CEO, as well as a signal to other senior executives, the business community, and the public at large that the company is being competently managed. This “signaling” effect of high status seems to confer certain advantages to board members, the firm, and its managers—what Podolny (2005) has labeled “returns to quality.” For example, Fombrun (1996) argued that retaining a high-status CEO can enhance the firm’s ability to attract higher-quality employees, increase its leverage over suppliers, and gain better access to needed capital. Because of these advantages, however, high CEO status is not simply a passive signal of imperfectly observable quality but also a bargaining chip that can be used by star CEOs to garner increased political clout within their firms. Hayward et al. (2004) argued that favorable business press coverage of particular CEOs reinforces attributions of CEO responsibility for firm performance and that these attributions then lead stakeholders to actually grant high-status CEOs greater control over their firms.

Both the signaling and the power effects of high CEO status have been supported in recent research. Malmendier and Tate (2005a) studied the relationship between CEO “superstar” status, as measured by winning media-based CEO of the Year contests, and CEO compensation in a matched sample of firms with and without winning CEOs. They found that winning CEOs had higher equity-based compensation (i.e., options granted) than nonwinning CEOs, as well as higher total compensation relative to the next-highest paid executive on their top management team. Malmendier and Tate concluded that these results suggest that “CEO awards increase the bargaining power of the CEO within the organization” (p. 22) such that CEOs were able to extract compensation above and beyond the compensation of nonwinning CEOs in other firms with comparable performance. This power-based argument is consistent with the view that boards will acquiesce to high-status CEOs by granting them greater power and discretion within the organization (Hayward et al. 2004). Supporting this view is Malmendier and Tate’s additional finding that firms with award-winning CEOs were more likely to report quarterly earnings that match their quarterly earnings forecast. Following previous research (e.g., DeGeorge et al. 1999), Malmendier and Tate suggest that precise matches between actual and forecasted earnings often result from earnings manipulation.

Considered alone, the Malmendier and Tate study might be interpreted as implying that status acts in a self-reinforcing manner with no clear upper bound on how much a star CEO claimant can extract from a firm. However, a paper by Milbourn (2003) provides evidence that fame and high status in the executive suite may actually be somewhat self-regulating by tightening the linkage between executive pay and firm performance. Basing his arguments primarily on the idea of status as a signal of CEO ability, Milbourn argued that positive media coverage of a CEO increases investor (and presumably board) expectations that the CEO will continue in his or her leadership role in the company. Because the firm's stock price presumably reflects investor expectations of the CEO's continued presence, the stock price itself becomes a more informative basis for compensating the CEO over the long term. Milbourn found support for this argument in observing that the sensitivity of a CEO's pay to stock performance (as measured by dollars paid to the CEO per \$1,000 of shareholder return) was more than twice as high for CEOs with large amounts of positive press coverage than it was for CEOs with low amounts of positive press coverage. Milbourn concluded, "Pay sensitivities offered to CEOs in practice are strictly increasing in CEO reputation" (2003, p. 258). An interesting implication of Milbourn's signaling model of pay-performance sensitivities is that high-status CEOs should be paid more than less-celebrated CEOs if their firms subsequently perform well, but they should also be paid less if their firms subsequently perform poorly. This prediction is consistent with Fombrun's (1996) suggestion that high status brings with it heightened performance expectations for the future, what Fombrun referred to as the "burden of celebrity." The possibility exists that these expectations might act as a natural "brake" on the unfettered accumulation of CEO power, prestige, and compensation.

Wade et al. (2006b) explored this possibility in a sample of firms from the S&P 500 and suggested that both power and signaling processes act in concert to generate additional rewards for high-status CEOs but also increased expectations for future firm performance. Operationalizing CEO star status as winning a medal in *Financial World's* CEO of the Year contest, Wade et al. found that firms that employed a medal-winning CEO enjoyed positive abnormal stock returns during the trading days immediately following the announcement of the contest winners. Apparently, the medal signaled to investors that the firm was being managed by a capable CEO. This signaling effect quickly translated to increased compensation for the star CEO in the year during which a medal was won. This finding supports the contention of Malmendier and Tate (2005a) that positive assessments by third parties provide increased negotiating power for star CEOs. At the same time,

however, Wade et al. reported that the immediate positive abnormal returns eventually reversed to negative for the remainder of the year following the award announcement, despite no significant change in company profitability as measured by accounting returns. They argued that this reversal reflected heightened investor expectations for the performance of firms with medal-winning CEOs. Consistent with Milbourn (2003), Wade et al. (2006b) also observed that these heightened expectations led to a tighter coupling of CEO pay with firm performance in the years following the award. Medal-winning CEOs were paid more than nonmedal winners when firm profitability in subsequent years was positive, but they were paid less than nonmedal winners when the firm lost money in subsequent years. Wade et al. concluded that a CEO burden of celebrity did indeed exist in their sample and that it was produced by both the signaling and power consequences of celebrity status operating jointly over time.

The general question addressed in the present research is whether the status of star CEOs transfers to other members of the top management team and influences the use of tournament and/or equity logics for the distribution of economic outcomes among senior managers. Star CEOs inject into organizations a potentially volatile mix of status, power, prestige, and hubris. All top managers are residual claimants vying for a portion of their firm's profits, and boards can only allocate a certain proportion of these profits without triggering the scrutiny of shareholder watchdogs. On the one hand, a high-status CEO is a powerful and central actor, and research suggests that a star CEO garners pay that is commensurate with his or her powerful bargaining position (Malmendier and Tate 2005a, Wade et al. 2006b). On the other hand, the governance of a firm is an interdependent activity system and other members of the top management team at least partly contribute to a CEO's success. Research suggests that the pay structure of the entire team is a significant determinant of firm performance (e.g., Main et al. 1993, Carpenter and Sanders 2002, Siegel and Hambrick 2005) and that wide disparities of pay between the CEO and other senior executives are associated with lower levels of productivity and executive cooperation as well as increased managerial turnover (Bloom and Michele 2002, Finkelstein 1996, Pfeffer and Langton 1993, Wade et al. 2006a). These latter considerations suggest that neither a high-status CEO nor board members can be completely CEO-centric in their attributions about past firm performance and that equity in the distribution of rewards across senior executives should be one important criterion in the design of senior executive compensation structures (e.g., Carpenter and Sanders 2004, Wade et al. 2006a). How, then, are these two allocation logics integrated in situations where a top management team has a star CEO in its midst?

Unlike prior research, we suggest that these two allocation logics are not mutually exclusive and that both can simultaneously influence board decisions about the compensation structure within top management teams. The bargaining and signaling power that accrues to high-status CEOs certainly puts them in a stronger position, relative to nonstar CEOs, to capture a greater percentage of the residual profits of a firm than any of their immediate subordinates. Consistent with Malmendier and Tate's (2005a) results, we expect that the gap between the compensation of star CEOs and their subordinates is larger than the gap between subordinates and less-celebrated CEOs. At the same time, a high-status CEO is in the position to leverage his or her star status to expand a firm's compensation pool and request additional compensation for subordinates as well. Because of their desire to maintain cooperative relationships with their senior managers and the wish to retain senior managers who might themselves become more attractive in the external labor market, high-status CEOs are likely to be motivated to make such requests. Boards are likely to respond positively to these requests and can actually use the CEO's star status to justify expanding the salary pool for the entire top management team in the face of possible shareholder scrutiny. This salary expansion then provides boards with greater freedom to use the pay of star CEOs as a referent for the pay of other managers to adjust the latter's compensation to meet internal equity considerations. We would thus expect that senior managers who work for star CEOs would have higher compensation than those who work for nonstar CEOs, all else being equal. In short, rather than being a "winner-take-all" contest among senior managers, we propose that top management team compensation is a "winner-take-most" contest in which the star CEO extracts more residual profits from his or her firm but allocates a little of this to subordinates as well. This winner-take-most argument suggests the following two hypotheses:

HYPOTHESIS 1 (H1). *The star status of a CEO will be positively associated with the difference in compensation between the CEO and other members of the top management team.*

HYPOTHESIS 2 (H2). *The star status of a CEO will be positively associated with the average compensation of other members of the top management team.*

Hypotheses 1 and 2 together imply that the status diffusion that occurs between high-status CEOs and their immediate subordinates is a beneficial "win-win" that stems from a "glow of success." Others on the top management team financially benefit from the attributions of quality that a CEO's high status encourages, although H1 suggests that the CEO benefits the most. Yet prior research also suggests that these same attributions lead to expectations about the firm's continued successful performance in the future (e.g., Wade et al.

2006b). These expectations form the basis for a tighter coupling of future pay and performance. This idea is supported in social psychological research by Lee and Tiedens (2001), showing that it is more difficult for high-status than low-status actors to deflect blame for negative events because observers believe that high-status actors have more power to influence how events unfold. Extrapolating to the governance domain, Lee and Tiedens' data suggest that internal attributions for a firm's performance will work to the advantage of star CEOs when their firms continue to perform well, but they leave star CEOs more culpable when subsequent firm performance is poor. We suggest that this tighter coupling also diffuses to others on the top management team. Hence:

HYPOTHESIS 3 (H3). *The star status of a CEO will be positively associated with the average compensation of other members of the top management team when subsequent firm performance is high, and negatively associated with such compensation when subsequent firm performance is poor.*

In testing whether high-status attainment on the part of CEOs tightens the coupling of senior manager pay with performance, we also examine via more detailed analyses whether the benefits and burdens of celebrity are shared equally by CEOs and other members of their top management team. Drawing from the same reasoning underlying H1 and H2, we expect that when a firm continues to perform well, the entire top management team will benefit, although high-status CEOs will benefit more. The gap between the pay of star CEOs and subordinates is thus likely to widen relative to the pay gap within top management teams lead by less-celebrated CEOs. Drawing from the same reasoning underlying H3, however, the attributional dynamics of high status become a burden on star CEOs when their firms subsequently perform poorly. Star CEOs should thus absorb more blame for poor firm performance than their subordinates. With low performance, the gap between star CEOs and their senior managers should thus become narrower relative to the gap within teams lead by CEOs of lesser status. The following hypothesis is thus suggested:

HYPOTHESIS 4 (H4). *The star status of a CEO will be positively associated with the difference in compensation between the CEO and other members of the top management team when subsequent firm performance is high, and negatively associated with that difference when subsequent firm performance is poor.*

CEO Certification and Executive Promotions

A second economic outcome for top management team members that may be influenced by CEO status diffusion is the likelihood of being promoted to CEO themselves. Under organizational norms of rationality, an individual is presumably selected for a CEO position because board members expect that his or her personal qualities will lead to successful job and organizational performance.

Prior academic research on the relationship between personal characteristics and CEO success is longstanding, and a number of characteristics ostensibly associated with CEO performance have been studied. These characteristics include CEO management style (Guest 1962), the fit between CEO characteristics and industry conditions (Datta and Rajagopalan 1998), CEO personality (Peterson et al. 2003), and CEO charisma (Flynn and Staw 2004). Overall, such studies provide no straightforward recommendations for directors searching for the appropriate CEO to hire (Finkelstein and Hambrick 1996). Khurana (2002) highlighted this problem in noting that because "...it is difficult, if not impossible, to know ex ante what characteristics in a CEO are needed to improve performance, directors are left to guess about which criteria are likely to be associated with success" (Khurana 2002, p. 102).

In the absence of clear quality metrics that unambiguously reveal an executive's potential as a CEO, prior theory and research suggests that the CEO selection process is subject to a variety of sociopolitical influences (e.g., Pfeffer 1981, Boeker 1992, Zajac and Westphal 1996, Cannella and Lubatkin 1993). Consistent with evidence and arguments in the status literature, one such influence may be the status of the CEO for whom a senior executive has worked during an earlier stage of his or her career. Directors may rely on a CEO candidate's prior status affiliations as a signal of his or her potential as a top manager. In this research, we examine whether CEO status influences the likelihood of senior managers becoming CEOs themselves.

One possibility is that a senior manager is promoted to the CEO position in his or her current firm. Vancil (1987) argued that CEOs are concerned with their legacy and seek to groom their successor from the ranks of their subordinates. One might expect that this concern with legacy would be amplified in the case of star CEOs who have been lauded for their managerial prowess. Malmendier and Tate (2005a), for example, observed that award-winning CEOs were more likely to publish books about their career experiences and managerial philosophies. Celebrity CEOs may leverage their high status to ease their subordinates' path into a future CEO position within the company as a way of ensuring the continuity of these philosophies. Hayward et al. (2004) posited that as CEOs accumulate status and notoriety through the business press, they are in a strong position to consolidate control of the corporation, and, at the same time, the board is more likely to acquiesce to their judgment. It is also likely that the success that led to a CEO's elevated status will be at least partially attributed to the talents of the top management team as a whole. This would seem to privilege members of the top management team in the search for the star CEO's successor. These ideas suggest that executives who work with high-status CEOs are more

likely to be promoted to their company's top position once the star CEO steps down.

Another possibility is that a member of the top management team is promoted to the CEO position at a different company. Associating with high-status actors has been shown to be an important external signal of quality that is valued by markets (e.g., Baum and Oliver 1991, Benjamin and Podolny 1999). Quality signals may be particularly relevant in the governance context because of the uncertain nature of assessing the effectiveness of a firm's governance practices (Johnson et al. 2005, Sanders and Boivie 2004). This idea aligns with Khurana's (2002) study of the CEO succession process. Khurana found that perceived executive legitimacy is one of the key features of the CEO labor market, and that unless outsiders such as financial analysts and the business press accept a new CEO as legitimate, the CEO's tenure may be threatened before it even begins. Selecting an individual as CEO who has previously worked for a high-status CEO may be a means by which directors can signal the new recruit's managerial abilities to outside observers.

Taken as a whole, both the power and signaling implications of a CEO's star status suggest that a star CEO's subordinates will be more likely than managers who have not worked for a star CEO to be promoted to CEO themselves, either of their current or another company. We therefore hypothesize:

HYPOTHESIS 5 (H5). *The star status of a CEO will be positively associated with the likelihood that a member of his or her top management team is promoted to CEO in the future.*

Method

Sample

Our sample was selected from companies that were members of the Standard & Poor (S&P) 500 at the end of 1992. The original sample included the 366 companies that had fiscal years ending on December 31. We selected companies with fiscal years ending on December 31 to avoid any sampling problems that might arise from different fiscal years, such as significant changes in the market environment in the nonoverlapping periods. Missing data reduced our sample to 264 companies. T-tests revealed no significant differences between our sample and the S&P 500 as a whole along such dimensions as size, performance, and industry representation. Firms in our sample varied considerably in size, ranging from \$181 million to \$272 billion in total assets. To test our hypotheses we gathered panel data for the five years 1992–1996.

Dependent Variables

Executive Compensation. We used the EXECUCOMP database to obtain compensation data for the executives

in our sample. EXECUCOMP lists various compensation amounts for the five highest paid executives in a given firm. Our measure of executive compensation was EXECUCOMP's total direct compensation 1 (TDC1). This variable includes all forms of compensation paid to an executive in a given year including salary, bonus, other annual compensation, the total value of restricted stock grants, the total value of stock options granted (using Black-Scholes), long-term incentive payouts, and all other miscellaneous forms of compensation. Compensation values were transformed into their natural logarithms so that extreme values would not unduly bias our analyses. For our primary measure of top management team compensation, we logged the average TDC1 amounts of the four other executives listed for a focal firm. These logged TDC1 values were also used at the individual level as a control variable in regression models predicting the likelihood of promotion to CEO (H5).

CEO-Top Management Pay Gap. Following previous studies (Carpenter and Sanders 2004), we computed the gap between CEO and non-CEO pay in a firm by logging the difference between the CEO's TDC1 compensation and the average TDC1 of the four other executives listed for the same firm in EXECUCOMP.³ In a few firms, this difference was actually negative. Because we logged our measure of pay gap, we set the value of these negative differences to 1. This transformation had no effect on the signs or significance of any values in our analyses, and our results were unchanged when we recalculated our models after dropping these firms from our sample.

Executive Promotion to CEO. We constructed a dummy variable that took the value of "1" when a non-CEO member of a top management team was promoted to CEO of either his or her current firm or another firm within five years after his or her last appearance as a top management team member in our sample. This variable took the value of "0" otherwise. We also constructed a similar dummy variable for inside promotion to denote cases when the executive became CEO of his or her current firm, and another variable for outside promotion to denote cases when the executive became CEO of a different firm. To construct all three variables, we listed unique non-CEO executives from the firms in our sample for each year covered in our study. We kept only the last year during which an executive appeared in our sample to eliminate redundant data on the same executive. Once we collated this list, we denoted whether an executive became CEO in the subsequent five years, and, if so, whether it was an inside or outside promotion. For example, if the final year an executive appeared in our sample was 1995, we determined whether this individual became a CEO anytime during the period 1996–2000. This procedure resulted in a starting sample of 1,799

unique executives, which was reduced to 1,660 because of missing data.

Once we assembled a list of all non-CEO executives in our sample, we tracked each individual executive's career for the following five years. As tracking non-CEO executive careers is difficult, multiple sources were employed. First, we searched the EXECUCOMP database. Using EXECUCOMP, we were able to track the careers of 364 top managers. If a manager did not appear in EXECUCOMP, we next searched a website called Zoominfo (www.zoominfo.com). According to the website, ZoomInfo—

is the premier *summarization search engine*, [it] delivers fresh, comprehensive information on over 33 million business professionals and 2 million companies across virtually every industry. . . . ZoomInfo finds, understands, and extracts information from millions of online sources such as Web sites, press releases, electronic news services and SEC filings and summarizes the information into a comprehensive format.

Using Zoominfo's search engine we were able to track an additional 573 executives. If an executive was not found in either EXECUCOMP or ZoomInfo, a search of Lexis/Nexus was performed using the executive's name and last-known employer. This resulted in data for an additional 499 executives. If an executive was not found in any of these sources, he or she was coded as not becoming a CEO, as it is unlikely anyone who was previously one of the top executives in a large public firm could become CEO of another firm and not turn up in one of our data sources. We were not able to find data for 224 executives, and thus they were coded as not becoming CEOs.

Independent and Control Variables

CEO Status. We assessed CEO status using data obtained from *Financial World's* annual CEO of the Year competition. *Financial World* began this annual contest in 1975 and each year surveyed a large group of business analysts and CEOs who rated CEOs on four criteria (*Financial World* 1975, p. 16):

- (i) During the preceding year, this corporate chief so managed his company's affairs that it was among the leaders in standard analytic measurement tools of performance. Given the limitation of the economy in general and his industry in particular, his company was able to effect a high rate of return on investment capital, a big increase in net income, best management of debt, etc.
- (ii) The executive so managed his company that it increased its position in the field significantly or maintained its position in spite of general adversity.
- (iii) This chief executive has assembled an effective working team to surround him so that corporate affairs are run smoothly with creativity, innovation, and dynamism. Morale in his company is high in response to his leadership.

(iv) This chief executive has not only been responsible for input into his company but has contributed significantly to his industry and/or community and the nation at large.

CEOs of companies with more than \$100 million in assets or sales were eligible for the award, and between 2,000 and 3,000 CEOs were considered for this award in a given year. In each industry, analysts and peer CEOs selected bronze medal winners on the basis of the above criteria. The bronze medalists were then grouped within general business categories. Silver medal award winners for each category were selected by research directors at Wall Street's largest investment houses. Finally, the editors of *Financial World* chose the single gold medal award winner from the silver medalists.

Financial World was founded in 1902 and enjoyed a circulation of between 500,000 and 560,000 during the period of this study. As a point of comparison, the circulations of other prominent business publications during the time of this study were: *Business Week*—970,000, *Worth*—500,000, and *Forbes*—900,000. Although other business periodicals like *Business Week*, *Worth*, and *Industry Week* have, at one time or another, sponsored CEO of the Year awards, to our knowledge *Financial World*'s contest was the first and most systematic during the period in which the magazine was published. Because all CEOs of major U.S. companies were considered in the process of selecting finalists, the *Financial World* awards created an implied managerial status ordering, with medal-winning CEOs being singled out from others for their accomplishments and capabilities. Moreover, because the contest used the same systematic procedures from year to year, a given CEO could win multiple awards across time, thus accumulating a more favorable status position vis-à-vis peers with each award. Interviews conducted by the authors with executives suggest that, when a sitting CEO wins a *Financial World* award, members of the board of directors as well as the public relations department receive mailings from *Financial World* informing them that their CEO was selected as a winner. Further, we found that firms often issued press releases to announce when its CEOs had won the award.

We used the *Financial World* contest to construct two nonoverlapping measures of CEO star status. We first computed a variable (Med) indicating whether a CEO won a medal in the current year ($1 = \text{yes}$, $0 = \text{no}$ at time t). *Financial World* medals were announced during the first quarter of every year, and many compensation decisions regarding the CEO and other senior executives are typically made subsequent to the first quarter of the fiscal year. Winning a medal should be particularly important for compensation decisions that are made later the same year. However, because status accumulates over time with continued success (e.g., Podolny 2005), we

also constructed a measure of status that was a count variable (Medpast) summing the number of medals a CEO had won over the five years prior to a current year (i.e., $t - 1$, $t - 2$, $t - 3$, $t - 4$, and $t - 5$). We used both Med and Medpast when testing H1 and H2 to examine the differential effects of accumulated and immediate CEO status attainment. We used the firm's performance in the prior year as a control variable in our tests of H1 and H2. These tests, then, are essentially determining the effects of accumulated and immediate CEO status attainment over and above any effects of the firm's performance in the prior year.

In testing H3 and H4, we interacted medals won in the past (Medpast) with firm accounting and stock performance. Both hypotheses predict that the effects of CEO status will be moderated by a firm's subsequent performance, so it was necessary to have a measure of status attained prior to the performance variable used in our models. Thus, our Medpast variable seems most appropriate for testing H3 and H4. Following a similar logic, we used Medpast to test H5 as well.

Company Size. This variable was defined as the log of a company's total assets and was obtained from the COMPUSTAT database. As company size has been shown to be an important variable in numerous studies of both CEO and top management pay, it was included as a control variable. This variable was lagged in all of our analyses.

Institutional Ownership. The amount of a company's outstanding stock held by institutional investors is often considered in the governance literature to be an index of the power and sophistication of the company's shareholders. We defined the extent of institutional ownership simply as the percentage of outstanding stock held by institutional investors. This variable was lagged one year in all of our analyses. We accessed this information through the Thompson Financial database. The primary source for these data was the 13f form that investment companies and professional money managers are required to file with the Securities and Exchange Commission on a quarterly basis.

Industry Return. We defined a firm's industry as all other public companies in the COMPUSTAT database that had the same two-digit standard industry classification (SIC) code. Although SIC codes can range from one to seven digits, past research has found that the two-digit level captures most of the systematic industry variation in stock prices (Alford 1992, Clarke 1989). Moreover, past research suggests that corporate boards make performance comparisons at the two-digit level (e.g., Gibbons and Murphy 1990, Porac et al. 1999). A company's total assets for the current year were used to weight the current year's performance.⁴ Industry performance was calculated each year using the formula

$\sum_{ij}(\text{Total Assets}_{ij} * \text{Total Return}_{ij}) / (\sum_{ij} \text{Total Assets}_{ij})$, where i indicates each company in industry j for a given year. This variable was included as a control because boards of directors may use the relative stock market return to assess the quality of the contribution of both the CEO and other executives. This variable was obtained from COMPUSTAT and was lagged in all analyses.

Firm Performance. We used both an accounting and a market return measure to assess firm performance for each year from 1992 through 1996. We obtained a measure of compounded market returns that consisted of the total yearly stock return of the company, assuming reinvestment of dividends $((\text{Price}_{\text{beg}} - \text{Price}_{\text{end}} + \text{Dividends}) / \text{Price}_{\text{beg}})$. We also obtained annual return on equity (ROE), which is a measure of how well a company is using the equity provided by stockholders (Teitleman 1996) and is often used as a basis for awarding incentive pay. Both variables represent important metrics that are commonly used to assess the quality of the contribution of the CEO and the top management team. Both measures were obtained from COMPUSTAT, and both were lagged one year in all analyses.

CEO Tenure. How long a CEO has been on the job can influence whether observers attribute a firm's past performance to that CEO's ability. To control for these effects, CEO tenure was calculated as the number of years the CEO had been in his or her present position. These data were obtained from company proxy statements, from *Who's Who in Finance and Industry*, and from *Forbes'* annual survey of executive compensation.

Top Management Group Tenure. As with CEOs, the tenure of other top management group members is likely to influence how they are evaluated. Controlling for how long, on average, executives have been employed at their current firm controls for the amount of time that the board and CEO have had to ascertain executive abilities and skills. These data were obtained from EXECUCOMP, from the *Reference Book of Corporate Managements: America's Corporate Leaders*, from firm proxy statements, and from *Who's Who in Finance and Industry*. For our test of H5, we included individual executive tenure in our regression models, as this analysis is performed at the individual level.

Outside CEO. When CEOs are appointed from outside the firm, they may be more visible and may also receive higher compensation than internally promoted CEOs. To control for these effects, an outsider dummy variable was constructed and coded "1" if the difference between the CEO's organizational tenure and positional tenure was less than or equal to three, and "0" otherwise. We chose the three-year difference, as outside successors are frequently brought into a company at a rank below that of CEO and groomed for one or more years before becoming CEO.

New CEO. If an individual is promoted from a lower-level position to CEO during the course of a year, his or her pay will be prorated based on the amount of time spent in each position during that year. Thus, CEOs appointed in the current year may have lower levels of compensation because they spent part of the year in a lower position. To control for the effects of midyear promotions on compensation, a dummy control variable was created and coded "1" if promotion to CEO had occurred sometime during the current year, and "0" otherwise.

Year Dummies. Dummy variables for the years 1992–1996 were also included in the models to control for any period effects in our panel data. For instance, year dummies will control for changes in general economic conditions from year to year. Because of our fixed-effects analyses (see below), firm dummies were also included in calculations but not listed in the tables.

Analysis

To control for unobserved differences between firms, we estimated fixed-effects regression models to test H1, H2, H3, and H4. Estimating a fixed-effects model is equivalent to adding a dummy variable for each firm (Greene 1993). This controls for constant unmeasured differences across firms that may explain differences in the dependent variables. For instance, some firms may pay particularly well across all positions. The inclusion of firm dummies via fixed-effects regression controls for these systematic differences. Fixed-effects models can be considered conservative because only changes in independent variables *within* a firm can produce significant effects. Thus, a positive coefficient in these models can be interpreted as signifying that a positive change in an independent variable within a firm is associated with a positive change in the dependent variable within the same firm. Industry dummies are not included in these models, as firm effects control for variance due to industry membership, given that a firm's industry membership is relatively constant during the time period studied.

H5 was tested using logistic regression because all three relevant dependent variables are dichotomous (e.g., 1 = became CEO, 0 = did not become CEO). Dichotomous dependent variables have S-shaped associations with their predictors (Liao 1994), and these violate the assumption of linearity in many regression models. Also, because the error terms for individuals within a firm may not be independent, we clustered error terms for top management team members within a firm in our regression models testing H5.

Results

Table 1 reports descriptive statistics for each of the variables that were used to test H1–H4, as well as their bivariate correlations. Table 2 reports the results of regression analyses that test H1 and H4. Model 1 in

Table 1 Descriptive Statistics for Data Used to Test Hypotheses

Variable	Descriptive statistics for data used to test H1–H4																							
	Var	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17				
Medal winner this year	1	0.14	0.35	1.00																				
Medals won in prior 5 years	2	0.56	1.09	0.34	1.00																			
Log of average top manager TDC1	3	6.97	0.70	0.19	0.22	1.00																		
Log of the pay gap	4	7.03	1.50	0.14	0.13	0.35	1.00																	
Log of total assets	5	8.76	1.44	0.16	0.23	0.50	0.25	1.00																
Company market performance	6	20.56	35.97	0.08	-0.05	0.15	0.11	0.03	1.00															
ROE	7	9.19	48.17	0.05	0.05	0.12	0.07	0.06	-0.02	1.00														
Industry market performance	8	15.51	16.09	0.05	0.04	0.06	0.07	0.05	0.42	-0.02	1.00													
CEO hired from outside	9	0.22	0.41	0.04	-0.02	0.06	0.06	-0.04	0.08	-0.05	0.03	1.00												
CEO tenure	10	6.47	6.64	0.06	0.30	-0.02	0.13	-0.04	-0.01	-0.02	-0.03	0.00	1.00											
Average top manager tenure	11	17.52	7.78	0.08	0.14	0.04	0.17	0.21	-0.10	0.07	-0.05	-0.24	-0.05	1.00										
Institutional ownership	12	0.55	0.15	0.03	0.04	0.21	0.05	-0.05	0.13	-0.01	0.09	-0.02	-0.01	-0.06	1.00									
New CEO	13	0.09	0.28	-0.12	-0.15	0.00	-0.04	0.00	0.00	0.00	-0.02	-0.04	-0.30	0.05	-0.01	1.00								
1993 dummy	14	0.20	0.40	0.01	0.03	-0.09	-0.10	-0.02	-0.04	0.00	-0.13	-0.02	0.03	0.01	0.05	-0.01	1.00							
1994 dummy	15	0.20	0.40	-0.03	0.01	0.03	0.03	-0.01	-0.08	0.02	0.11	0.01	0.02	0.00	-0.11	0.03	-0.26	1.00						
1995 dummy	16	0.19	0.40	-0.03	0.00	0.07	0.08	0.03	-0.30	0.06	-0.41	0.02	-0.03	0.02	0.02	0.03	-0.25	-0.25	1.00					
1996 dummy	17	0.19	0.40	-0.03	-0.05	0.17	0.14	0.05	0.19	0.00	0.20	0.03	-0.04	-0.02	0.10	-0.03	-0.25	-0.25	-0.24	1.00				

Variable	Descriptive statistics for data used to test H5																								
	Var	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				
Medals won in prior 5 years	1	0.58	0.94	1.00																					
Promoted to CEO	2	0.18	0.39	0.09	1.00																				
Outside promotion	3	0.13	0.34	0.05	0.81	1.00																			
Inside promotion	4	0.05	0.23	0.07	0.50	-0.10	1.00																		
Company market performance	5	18.02	29.24	0.06	0.01	0.00	0.01	1.00																	
ROE	6	14.05	25.81	0.09	0.03	0.02	0.02	0.12	1.00																
Log of total assets	7	8.85	1.41	0.24	-0.02	-0.02	0.00	0.10	0.04	1.00															
Industry market performance	8	15.02	10.87	0.00	-0.04	-0.04	-0.01	0.39	-0.01	0.05	1.00														
CEO hired from outside	9	0.25	0.44	0.01	0.02	0.04	-0.02	0.13	-0.03	-0.07	0.03	1.00													
CEO tenure	10	5.85	6.05	0.18	0.05	0.02	0.05	0.02	0.00	0.01	0.04	-0.04	1.00												
Institutional ownership	11	0.57	0.15	0.01	0.06	0.05	0.02	0.19	0.14	-0.10	0.11	0.00	0.00	1.00											
New CEO	12	0.09	0.29	-0.06	-0.02	-0.02	-0.02	0.03	-0.07	0.01	0.00	-0.04	-0.30	0.04	1.00										
Individual top manager tenure	13	18.00	12.89	0.04	-0.16	-0.18	-0.01	0.00	0.05	0.14	0.04	-0.15	-0.03	-0.07	0.04	1.00									
Log of top manager TDC1	14	7.71	0.84	0.05	0.03	0.02	0.03	0.02	0.00	0.05	0.01	0.00	-0.02	0.00	0.02	0.01	1.00								
1993 dummy	15	0.11	0.32	0.01	0.03	-0.01	0.07	-0.09	-0.10	-0.07	0.07	0.02	0.02	-0.19	0.05	0.04	-0.01	1.00							
1994 dummy	16	0.12	0.33	0.05	0.04	0.05	0.00	-0.26	0.05	-0.01	-0.45	-0.02	0.00	0.03	-0.01	-0.02	0.03	-0.16	10.00						
1995 dummy	17	0.12	0.32	0.01	0.01	0.02	-0.02	0.22	-0.07	-0.04	0.28	0.03	0.02	0.07	0.06	0.07	0.00	-0.15	-0.16	1.00					
1996 dummy	18	0.64	0.48	-0.05	-0.08	-0.05	-0.07	0.11	0.08	0.09	0.09	-0.01	-0.03	0.06	-0.06	-0.06	-0.01	-0.47	-0.48	-0.46	1.00				

Table 2 CEO-Top Manager Pay Gap

Variable	Model 1	Model 2	Model 3	Model 4
ROE (lagged)	0.004 [†] (0.002)	0.004 [†] (0.002)	0.003 (0.002)	0.004 [†] (0.002)
Market return (lagged)	0.002 (0.001)	0.002 (0.001)	0.001 (0.001)	0.000 (0.001)
Ln total assets (lagged)	-0.152 (0.197)	-0.151 (0.197)	-0.116 (0.120)	-0.132 (0.197)
Industry return (lagged)	0.001 (0.003)	0.001 (0.003)	0.001 (0.003)	0.000 (0.003)
CEO tenure	-0.003 (0.011)	-0.004 (0.011)	-0.005 (0.011)	-0.003 (0.011)
Average top manager tenure	-0.011 (0.012)	-0.011 (0.012)	-0.012 (0.012)	-0.012 (0.012)
Institutional ownership (lagged)	0.000 (0.007)	0.000 (0.007)	0.000 (0.007)	0.002 (0.007)
CEO from outside	0.111 (0.183)	0.103 (0.183)	0.098 (0.183)	0.110 (0.183)
New CEO	-0.121 (0.146)	-0.091 (0.148)	-0.090 (0.148)	-0.092 (0.148)
1993 dummy	0.160 (0.111)	0.165 (0.111)	0.156 (0.111)	0.191 [†] (0.112)
1994 dummy	0.485** (0.108)	0.493** (0.108)	0.484** (0.108)	0.514** (0.108)
1995 dummy	0.672** (0.132)	0.679** (0.132)	0.661** (0.132)	0.691** (0.131)
1996 dummy	0.775*** (0.123)	0.789** (0.123)	0.763** (0.124)	0.798** (0.123)
Medal winner in current year (Med)		0.159 [†] (0.122)	0.157 [†] (0.121)	0.133 (0.122)
Medals won in prior 5 years (Medpast)		0.016 (0.067)	-0.096 (0.086)	-0.034 (0.070)
Medpast × ROE			0.008* (0.004)	
Medpast × market return				0.003** (0.001)
Constant	8.117** (1.751)	8.072** (1.752)	7.791** (1.754)	8.018** (1.747)
Observations	1,271	1,271	1,271	1,271
R ²	0.528	0.529	0.531	0.531
Adj. R ²	0.388	0.388	0.390	0.391

[†] = $p < 0.10$; * = $p < 0.05$; ** = $p < 0.01$.

Table 2 is the control model, Model 2 tests H1, and Models 3 and 4 test H4. H1 predicts a positive relationship between CEO status and the size of the pay gap between the CEO and other senior members of his or her management team. Our results suggest that this gap is larger when the CEO wins a medal during the year compensation decisions were made. That is, a CEO's immediate status attainment is associated with a larger pay gap ($p < 0.10$). This is not the case, however, for CEO status accumulated over the prior five years. Model 2 shows that our Medpast variable is not significantly associated with pay gap size. Thus, H1 receives marginal support in the case of immediate but not accumulated CEO status.

Tests for H4, however, reveal that the pay gap is significantly moderated by subsequent firm performance.

H4 predicts that the pay gap would grow at firms with star CEOs if subsequent firm performance is strong and would shrink if subsequent firm performance is poor. Models 3 and 4 test this hypothesis by interacting medals won in the prior five years with firm accounting (Model 3) and market (Model 4) returns. The coefficients for the interaction terms in Models 3 and 4 are each positive and significant, providing robust support for H4.

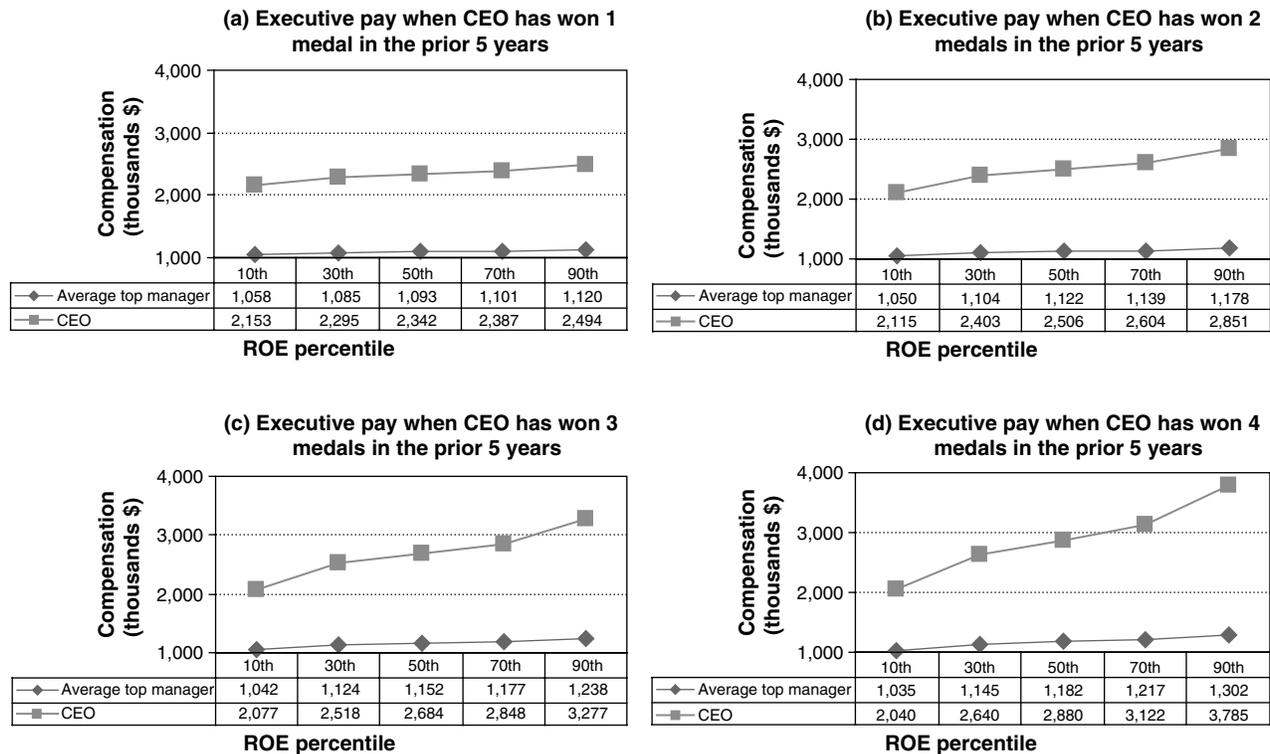
Table 3 presents models that test whether top managers who work for a high-status CEO receive, on average, higher compensation than managers of firms who work for CEOs of lower status. The first model in Table 3 reports the results for our control variables.

Table 3 Average Top Management Team Member Pay

Variable	Model 1	Model 2	Model 3	Model 4
ROE (lagged)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Market return (lagged)	0.001** (0.000)	0.001** (0.000)	0.001** (0.000)	0.001** (0.000)
Ln total assets (lagged)	0.166** (0.055)	0.164** (0.055)	0.173** (0.055)	0.165** (0.055)
Industry return (lagged)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
CEO tenure	0.003 (0.003)	0.002 (0.003)	0.001 (0.003)	0.002 (0.003)
Average top manager tenure	-0.007* (0.003)	-0.007 [†] (0.003)	-0.007* (0.003)	-0.007 [†] (0.003)
Institutional ownership (lagged)	0.005* (0.002)	0.005* (0.002)	0.005* (0.002)	0.005* (0.002)
CEO from outside	0.101* (0.051)	0.098 [†] (0.051)	0.097 [†] (0.051)	0.098 [†] (0.051)
New CEO	0.060 (0.041)	0.077 [†] (0.0411)	0.077 [†] (0.041)	0.077 [†] (0.041)
1993 dummy	0.091** (0.031)	0.092** (0.031)	0.090** (0.031)	0.093** (0.031)
1994 dummy	0.278** (0.030)	0.281** (0.030)	0.279** (0.030)	0.282** (0.030)
1995 dummy	0.297** (0.037)	0.300** (0.037)	0.295** (0.037)	0.300** (0.037)
1996 dummy	0.415** (0.034)	0.422** (0.035)	0.415** (0.035)	0.423** (0.035)
Medal winner in current year (Med)		0.068* (0.034)	0.068* (0.034)	0.067* (0.034)
Medals won in prior 5 years (Medpast)		0.034* (0.019)	0.006 (0.024)	0.032* (0.020)
Medpast × ROE			0.002* (0.001)	
Medpast × market return				0.000 (0.000)
Constant	5.093** (0.493)	5.076** (0.491)	5.005** (0.491)	5.075** (0.491)
Observations	1,271	1,271	1,271	1,271
R ²	0.831	0.832	0.833	0.832
Adj. R ²	0.781	0.782	0.783	0.782

[†] = $p < 0.10$; * = $p < 0.05$; ** = $p < 0.01$.

Figure 1 Relative Pay Sensitivity of Star CEOs and Their Top Managers



Model 2 tests H2. H2 predicts that managers who work with a star CEO will receive higher average pay than those who do not work with a star CEO. Model 2 shows that both a CEO's immediate status attainment (Med) as well as his or her accumulated status (Medpast) have independent positive effects on the average compensation of senior managers. H2 thus receives strong support from these results.

H3 predicts that the positive impact of CEO status on the pay of other top management team members will be moderated by subsequent firm performance. Models 3 and 4 test this hypothesis by interacting medals won in the prior five years with a firm's accounting (Model 3) and market (Model 4) returns. The coefficient for the interaction term in Model 3 was positive and significant, but the interaction coefficient in Model 4 was not. Thus, medals won in the prior five years interact with a firm's subsequent accounting—but not market—performance to influence the average compensation of top managers.⁵

In addition to testing whether high-status attainment on the part of CEOs tightens the coupling of average top management team pay with performance, we also examined whether the burden of celebrity is shared equally by CEOs and other members of their top management team. To do this, we estimated separate equations for CEO and average top management team compensation.⁶ The results of these analyses suggest that the increased pay sensitivity associated with the “burden of celebrity” does

indeed diffuse to the immediate subordinates of high-status CEOs. However, the resulting pay sensitivities are less severe for subordinate managers than for their high-status CEOs. These results are graphed in summary form in Figure 1. Each graph in Figure 1 compares the average compensation of CEOs and senior managers at different levels of company relative performance (i.e., percentile rank in our sample) for a given level of CEO status attainment (i.e., number of medals won in the past). For example, CEOs who won two medals in the prior four years and whose firms performed at the median of our sample (in terms of accounting returns) received a 40% increase in pay over the course of four years and their immediate subordinates received a 33% increase in pay over the same time period.⁷ In contrast, CEOs who won two medals in the prior four years and whose firms performed at the 90th percentile of our sample received an 86% pay increase over that period, while their subordinates received a 49% increase. These results show that the pay of star CEOs is much more sensitive to firm performance than the pay of their immediate subordinates. In dollar terms, in fact, this sensitivity is almost four times greater for the CEO.

Table 1 also presents descriptive statistics for the variables that were used to test H5, as well as their bivariate correlations. H5 predicts that senior managers who work for a high-status CEO are more likely to become CEOs themselves than senior managers who do not work for a high-status CEO. Table 4 presents the results of logistic

Table 4 Executive Promotion to CEO

Variable	Model 1	Model 2	Model 3	Model 4
		Overall promo.	Inside promo.	Outside promo.
ROE	0.005 (0.004)	0.004 (0.004)	0.005 (0.005)	0.004 (0.004)
Market return	0.002 (0.003)	0.001 (0.003)	0.004 (0.004)	0.000 (0.003)
Ln total assets	0.026 (0.047)	-0.011 (0.049)	0.002 (0.078)	-0.005 (0.060)
Industry return	-0.013 [†] (0.007)	-0.012 [†] (0.007)	-0.008 (0.011)	-0.014 (0.009)
CEO tenure	0.019 [†] (0.011)	0.013 (0.012)	0.026 [†] (0.015)	0.004 (0.013)
Tenure of individual top manager	-0.035** (0.005)	-0.036** (0.005)	-0.006 (0.007)	-0.047** (0.007)
Institutional ownership	0.011* (0.005)	0.010* (0.005)	0.009 (0.009)	0.010 (0.006)
Current CEO from outside	-0.002 (0.151)	0.021 (0.152)	-0.199 (0.271)	0.085 (0.181)
New CEO	-0.064 (0.243)	-0.052 (0.237)	-0.064 (0.418)	-0.038 (0.268)
1993 dummy	-1.492** (0.533)	-1.546** (0.519)	2.021** (0.753)	0.157 (0.910)
1994 dummy	-1.791* (0.545)	-1.860** (0.531)	-2.919** (0.792)	0.154 (0.922)
1995 dummy	-1.646* (0.553)	-1.698* (0.540)	-2.982** (0.785)	0.438 (0.916)
1996 dummy	-2.064** (0.516)	-2.087** (0.501)	-3.028** (0.727)	-0.059 (0.889)
Individual top manager pay (logged)	0.121 (0.075)	0.109 (0.075)	0.141 (0.138)	0.094 (0.081)
Medals won in prior 5 years (Medpast)		0.212** (0.069)	0.226* (0.098)	0.153* (0.076)
Constant	-0.837 (0.945)	-0.446 (0.957)	-1.967 (1.558)	-2.460 [†] (1.272)
Observations	1,660	1,660	1,660	1,660
Log likelihood	-763.070	-757.83	-335.319	-613.897
Chi ²	82.16	86.62	47.05	68.17

[†] = $p < 0.10$; * = $p < 0.05$; ** = $p < 0.01$.

regression analyses testing this prediction. Model 1 in Table 4 is the control model, and Models 2, 3, and 4 are analyses that assess the merits of H5. Model 2 shows that senior managers who worked for a high-status CEO were more likely to be promoted to CEO themselves ($p < 0.01$) than managers who did not work for a high-status CEO. Models 3 and 4 unpack this aggregate effect by distinguishing between inside and outside managerial promotions. The results for Models 3 and 4 show that CEO status has a positive and significant effect on the likelihood of both inside ($p < 0.05$) and outside ($p < 0.05$) promotions to CEO. Breaking this effect down into likelihood differences, when medals won by a CEO increased from 0 to 1, the probability that one of the CEO's four highest paid immediate subordinates became CEO of the same firm increased by 25% (from 16% to

20%), and when medals won by the CEO increased from 0 to 2, this probability increased by 50% (from 16% to 24%). Further, when medals won by a CEO increased from 0 to 1, the probability that one of the CEO's four highest paid subordinates became CEO of a different firm increased by 14% (from 64% to 72%), and when medals won by the CEO increased from 0 to 2, this probability increased by 29% (from 64% to 80%). These results provide strong support for H5.

Discussion

Our objective in this research was to test the argument that status, as measured by external recognition via the business press, diffuses through association from CEOs to their immediate subordinates, influencing the latter's economic outcomes in the process. Our results are generally supportive of this argument. We found that managers who worked for high-status CEOs received higher average compensation than counterparts who had not worked for high-status CEOs. At the same time, we found that star CEO status brought with it a "burden of celebrity" in the form of a higher sensitivity of managerial pay on firm performance, and that this burden was heaviest for the CEO. When a firm continued to do well under the stewardship of a high-status CEO, both the CEO and other senior managers were paid more than managers in comparably performing firms without a star CEO at the helm. However, high-status CEOs benefited most from this contingency.

Conversely, when a firm's subsequent performance was poor, both star CEOs and their subordinates were paid less than managers in comparably performing firms without a star CEO, and star CEOs suffered a larger compensation penalty than their subordinates when this occurred. Despite these compensation burdens, however, subordinates benefited from their association with star CEOs in other aspects of their career as well. When compared with the subordinates of less celebrated CEOs, the members of top management teams headed up by star CEOs were more likely to become CEOs themselves through inside or outside promotions.

Most previous status research has measured status diffusion across organizational boundaries and has emphasized the signaling aspects of high-status affiliations and endorsements in market contexts (e.g., Podolny 2005). Together with the results of Malmendier and Tate (2005a), Milbourn (2003), and Wade et al. (2006b), our study demonstrates the influence of high status within organizations as well. There are no doubt strong status signals operating in the governance of firms. A visible endorsement of a CEO (and, by association, his or her senior managers) by industry peers and other experts sends a strong quality signal to board members that the level of executive talent in the firm is high. At the same time, we have found it difficult to account for our results

on signaling grounds alone, and status dynamics within organizations particularly call attention to the close relationship between status and political power.

This relationship is probably pervasive in most contexts. In markets, for example, the ability of high-status producers to charge higher prices for their goods than low-status producers (e.g., Benjamin and Podolny 1999) is likely a result of their greater “added value” (e.g., Brandenburger and Stuart 1996) vis-à-vis competitors, and thus greater bargaining power vis-à-vis customers. It does seem, however, that corporate governance is a context in which status signals and bargaining power are particularly intertwined. A firm’s CEO and other senior managers are claimants vying for a portion of the firm’s residual profits, and it is the responsibility of the board to allocate these residuals judiciously and in the best interests of shareholders. A strong positive status signal validating a CEO’s managerial ability also seems to validate, by association, the board’s skill in personnel selection and the ongoing governance of the firm. Our results suggest that high-status CEOs leverage this effect not only for their own benefit but also for the benefit of other managers on their senior executive team.

Enough empirical evidence on CEO status effects has now accumulated to contribute significantly to our understanding of top management behavior, assessment, and compensation. Certainly the existing evidence suggests that there is a competitive aspect to top management compensation in that star CEOs capture more wealth for themselves than lower-status CEOs over and above what their firms’ performance might warrant. However, we find the term “winner-take-most” more descriptive of these dynamics than “winner-take-all.” First, there appear to be significant compensation “trickle-down” effects from star CEOs to their senior managers. These side benefits appear to indicate that competitive allocation logics are being supplemented with alternative logics that lead to a broader distribution of the spoils garnered from star status. Just as importantly, star status appears to bring with it heightened performance expectations for the future and tighter pay-performance sensitivities. These would seem to act as endogenous brakes to unfettered status-fueled wealth accumulation. High status is thus a double-edged sword for star CEO’s and the senior managers who work for them. It is important to note, however, that the inflection point for the interaction between our status and performance variables was only an ROE of zero, which constituted the 11th percentile of performance in our sample of firms. In short, a firm needed only to show a positive ROE for high-status CEOs and their subordinates to continue to accumulate economic benefits from their star status. So the burden of celebrity on senior managers in our study was not particularly heavy from the standpoint of firm profitability expectations. Additional research is needed to explicate the implications of this double edge

in more detail. These “negative returns to quality” are counterintuitive and potentially theoretically important, given that the existing literature on the effects of status in and around organizations has tended to emphasize the positive returns to quality that accrue to high-status actors (e.g., Merton 1968, Podolny 2005). Our study is generally consistent with this positive bias, but our results also suggest that individual economic returns to status are not always positive.

Over and above its influence on a senior manager’s compensation, our results indicate that working for a star CEO makes it more likely that a subordinate will become a CEO as well, either for his or her current or a different company. This finding is consistent with both the signaling and power effects of status, although it does seem reasonable that the relative impact of these two mediating processes differs for inside versus outside promotions. One would expect on a priori grounds that inside promotions are particularly influenced by powerful high-status CEOs. Compared with outside executives, boards should have greater information about the capabilities of the current members of a top management team, making them less dependent on external status signals of quality in the CEO labor market. Even more important, however, is that a star CEO’s increased bargaining power in relation to company directors should allow him or her to exercise greater control over the internal succession process (e.g., Cannella and Shen 2001). Vancil (1987) suggested that CEOs are quite concerned with their managerial legacy. One way of ensuring this legacy is for star CEOs to use their greater leverage vis-à-vis their boards to enhance the promotion prospects of one or more subordinates who may be competing in a succession tournament. Of course, Cannella and Shen (2001) found that as CEOs become more powerful they are less likely to step down from the CEO position and that, as a consequence, their hand-picked successor often leaves the company. Our data are not inconsistent with this finding but further suggest that when powerful star CEOs eventually do step down, one of their subordinates is more likely to succeed them.

In contrast to inside promotions, executive mobility across firms would seem to be more subject to the quality signals that are generated when a CEO receives the endorsement of reputable third parties such as analysts and CEO peers. Podolny (2005), in particular, has made a strong case for the influential role of status signals in markets where uncertainty about underlying quality is high, as is the case with external executive labor markets (e.g., Khurana 2002). Finkelstein and Hambrick (1996) pointed out that the vast majority of CEO successions draw from the executive ranks of the same company. This suggests that boards may have a tendency to hire successors with whom they are familiar rather than to rely on the more uncertain external labor market for CEOs. Nevertheless, there are a variety of reasons that

firms might wish to replace a CEO with an outsider (e.g., Finkelstein and Hambrick 1996), and our results suggest that subordinates who have worked on the top management team of a star CEO are more likely to be selected in such instances than executives who have not worked for a high-status CEO. In the small world of elite CEOs, we cannot rule out the possibility that a star CEO could try to exert political influence on the CEO selection process of another company by lobbying for a subordinate to be hired. However, it seems more reasonable to argue that the star's subordinates have a better chance of being hired because of the quality signals that are associated with working for a CEO who has been publicly recognized for his or her managerial capabilities. Boards of hiring companies may assume, rightly or wrongly, that these past experiences and associations imply that subordinates of high-status CEOs are themselves more likely to be capable managers. Moreover, by pointing to the excellent reputation of the new CEO's former employer, boards of directors can more easily justify their choice of such subordinates to shareholders as well as protect themselves against future criticism if the chosen manager is not successful (Khurana 2002).

This reasoning begs the question of whether subordinates of star CEOs are actually more capable managers than their nonstar counterparts. It could be argued that the positive association we observed between the status of a CEO and the promotion prospects of his or her subordinates is a mere consequence of a more basic managerial selection process in which boards seek out the best managers to fill CEO positions and the best managers work for talented CEOs who happen to get recognized eventually for their managerial ability. That is, boards might know a good manager when they see one, and they also might know that good managers are attracted to, and learn from, star CEOs with extraordinary managerial talent. This "talent begets talent" process might make any status-signaling effect epiphenomenal to the CEO selection process and thus stands as a plausible alternative interpretation of our results.

However, status-signal arguments are based on the assumption that unequivocal measures of underlying ability (or quality) are often difficult to construct in market contexts. It is precisely because of this difficulty that external indicators of ability such as third-party endorsements and certifications become important quality signals that influence, perhaps even too strongly, decisions about what to purchase or whom to hire. We cannot rule out the "talent-begets-talent" interpretation of our data because we did not incorporate an independent measure of managerial ability into our study, so we cannot determine whether the top management teams led by star CEOs were more talented than the teams led by less-celebrated executives. However, if talent differences do exist between star and nonstar executive teams, one would expect these differences to be manifested in the

continued success of firms subsequent to the certification of their CEOs. Yet evidence from prior research on CEO certification (e.g., Malmendier and Tate 2005a, Wade et al. 2006b) shows that the relationship between third-party endorsements of a CEO's prior performance and a CEO's subsequent performance is complicated at best. Winning a CEO of the Year award seems more a recognition of past company excellence than a strong positive predictor of future profitability or stock market returns. If anything, these studies suggest that CEO certifications and future firm performance might even be inversely related.

Other research on executive mobility is even more directly relevant in this regard. Groysberg et al. (2006) tracked the performance of 20 executives who worked for Jack Welch at General Electric (GE) and who subsequently were hired by other firms as CEO between 1989 and 2001. These authors focused on GE "because of the organization's distinctive reputation as a prime source of talent" (p. 2). It is interesting to note that Jack Welch is in our sample of CEOs who were recognized with several *Financial World* medals during his tenure with GE. Groysberg et al. measured the abnormal stock returns of the companies that hired these 20 GE alumni for the 3 years immediately following their appointment as CEOs. In 9 of the 20 cases, the hiring company had positive annual abnormal stock returns during this period, but the companies who hired the other 11 suffered negative abnormal returns. In short, there was about an even chance that hiring a former subordinate of Jack Welch as CEO lead to positive or negative abnormal stock returns for the hiring company. Groysberg et al. (2006) suggested ex post that the key factor in determining which of these performance outcomes occurred was the "fit" of the executive's skill with the needs of the hiring company. But an ex post reconstruction of a manager's fit with an organization in light of his or her performance is not the same as an ex ante assessment of the skills needed to succeed in a particular company at a particular time. According to Khurana (2002), it is exactly this ex ante assessment that is so difficult to construct and also the reason that boards of directors are so susceptible to external status cues in their hiring decisions.

Although the results of this study are generally supportive of the idea of status diffusion in the executive suite, some additional limitations of the study provide good opportunities for future research. First, our sample is based on data from 1992 to 1996. This time period may be unique because the importance of media attention and CEO star status may have waned during the post-Enron era. Future research could examine how the relationships found in this study may change over time as corporate events and media coverage of CEOs evolve. Second, the sample employed in this study was based entirely on companies headquartered in the United States, raising the question of whether our results are

idiosyncratic to particular cultural and market contexts. A cursory search of Internet sources suggests that media attention and competitions such as CEO of the Year contests occur throughout the world. Indeed, in his recent book *The Economy of Prestige*, English (2005) documented the prevalence of a worldwide “awards” mentality that stems from the need to commoditize cultural and human qualities to make them compatible with market logics. Studying awards in other contexts would seem to represent a fertile ground for future research on status effects in corporate governance. For example, the relative efficiency of financial markets may moderate the importance of media recognition. In a context of relatively inefficient financial markets, these awards may theoretically take on either more or less importance. On one hand, financial market inefficiencies may diminish the importance of CEO status, as the market may discount any information provided because of lack of information transparency and trust. On the other hand, in an inefficient financial market, well-known rankings may be more influential, as market uncertainty increases the importance of status as a quality signal (Podolny 2005).

These limitations aside, however, when combined with other research in the corporate governance literature, our results add to what is becoming an increasingly complex web of interdependencies between CEO status and the economic outcomes of firms and their executives. The pattern begins when some CEOs are singled out in the business press for their accomplishments, either in articles written about them or in certification contests that create status orderings from particular performance metrics (e.g., Hayward et al. 2004). These external endorsements increase the bargaining power of celebrity CEOs vis-à-vis their boards and lead to higher CEO compensation (e.g., Malmendier and Tate 2005a, Wade et al. 2006b). Our study suggests that CEO endorsements lead to higher compensation for other senior executives in the company as well, although not as high as the increases awarded to star CEOs. But this higher pay comes with a price. Star CEOs are held more accountable for the profitability of their firms, and their compensation is more closely tied to subsequent performance than it is for less-celebrated CEOs (e.g., Milbourn 2003, Wade et al. 2006b). Our data suggest that the immediate subordinates of star CEOs are held more accountable as well.

At the same time, shareholders raise their performance expectations and bid down the stock price of a celebrity CEO's firm over and above any change in the company's profitability (e.g., Wade et al. 2006b). Perhaps to meet these rising expectations, star CEOs make riskier choices by, for example, paying more for their firm's acquisitions (e.g., Hayward and Hambrick 1997), investing their firm's free cash flow in risky projects (e.g., Malmendier and Tate 2005b), and manipulating their firm's financial results to minimize quarterly surprises (e.g., Malmendier

and Tate 2005a). In extreme cases, star CEOs may go so far as to engage in questionable practices that significantly damage their firms. When this happens, their celebrity status turns against them in the form of disrepute and stigmatization (e.g., Weisenfeld et al. 2008). Indeed, several of the CEO stars in our sample have subsequently been indicted for one or more corporate illegalities. In more benign cases, however, star CEOs leave their firms gracefully, perhaps writing a book about their managerial accomplishments (e.g., Malmendier and Tate 2005a). Our results suggest that their legacy is probably secured because they are more likely to be replaced by one of their immediate subordinates than CEOs of lesser status. Moreover, their subordinates are more likely to become CEOs of other firms as well, thus transferring the legacy of the star CEO across organizational boundaries.

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Endnotes

¹Our conception of status being distinct from reputation is consistent with a recent paper by Washington and Zajac (2005). In distinguishing these two constructs, they wrote, “. . . status is fundamentally a sociological concept that captures differences in social rank . . . while reputation is fundamentally any economic concept that captures differences in perceived or actual quality or merit that generate earned, performance-based rewards” (Washington and Zajac 2005, p. 283). Thus, status implies an ordering of actors with some better or worse than others, where reputation is noncomparative.

²A more detailed discussion of the visibility of these awards is offered in the Methods section.

³We also calculated a variable that represented the difference between the CEO and the second-highest paid member of the TMT, and our results remained substantively the same.

⁴We also calculated a measure using a company's total assets for the previous year, and the results of our analysis were substantively unchanged. This result was hardly surprising, as the correlation between assets in year $(t - 1)$ and assets in the current year (t) is 0.99.

⁵Our total compensation variable included both cash and non-cash (e.g., stock options granted). When we analyzed the cash and noncash components separately for each hypothesis, the result of each analysis was substantively similar to our overall analysis, so, for simplicity, we only report the total compensation analysis.

⁶The values in Figure 1 were derived from combining the models in Table 2 and Table 3. Average top management team pay was calculated using the Model 3 in Table 3, and CEO pay was calculated by adding the change in pay gap (using the Model 3 in Table 2) and adding those values to the average top management team pay.

⁷This change in pay takes into account the immediate direct effects of winning medals, the effects of medals won in the

past, and the interaction effect of medals and accounting performance on pay in subsequent periods.

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