

EXAMINING CEO SUCCESSION AND THE ROLE OF HEURISTICS IN EARLY-STAGE CEO EVALUATION

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This study develops and tests predictions regarding factors that influence early-stage CEO evaluation. We suggest that contextual elements of the CEO succession process will influence the heuristics that directors employ to aid in their early evaluation of a CEO because traditional performance metrics, such as firm performance, are less diagnostic of CEO quality in the first years of their tenure. Broad empirical support for our theoretical arguments is shown in a sample of Fortune 1000 firms. Copyright © 2012 John Wiley & Sons, Ltd.

INTRODUCTION

Given the pivotal and highly visible role of chief executive officers (CEOs), the ability to evaluate them for both compensation and retention purposes is critical. However, the assessment of a sitting CEO's quality, while difficult and fraught with uncertainty at all stages of a CEO's tenure (Holmstrom, 1982; Wade *et al.*, 2006), is especially difficult in the early stages of a CEO's appointment. In light of the uncertainty surrounding early-stage CEO evaluation, there is an incentive for boards and other interested stakeholders to try and identify those executive characteristics that are indicators of CEO ability. Indeed, for related practical and theoretical reasons, scholars have studied, but struggled to establish a link between CEO traits and/or demographic characteristics and subsequent firm performance at all stages of CEO tenure. For instance, studies have

examined the performance implications of CEO management style (Guest, 1962), the fit between CEO demographic characteristics and firm strategy (Miller, 1991) or industry conditions (Datta and Rajagopalan, 1998), CEO personality (Peterson *et al.*, 2003), and CEO charisma (Flynn and Staw, 2004). Recent reviews conclude that there are no straightforward recommendations for directors when hiring a CEO (Carpenter, Geletkanycz, and Sanders, 2004; Finkelstein, Hambrick, and Cannella, 2009: 164–226). Foreshadowing that same conclusion, Khurana notes that '... it is difficult, if not impossible, to know *ex ante* what characteristics in a CEO are needed to improve performance, [so] directors are left to guess about which criteria are likely to be associated with success' (2002: 102).

Further contributing to the uncertainty associated with assessments of how well CEOs are performing is that their ability to influence firm outcomes can vary based on a number of factors that are not totally under their control (Hambrick and Finkelstein, 1987; Finkelstein and Hambrick, 1990). Prior research has demonstrated that firm performance is often only loosely coupled with executive characteristics and decisions (e.g., Bok,

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1993). Indeed, strong performance may partially be driven by favorable industry or macro-environmental factors, while poor performance may be caused by a significant economic downturn (Holmstrom, 1982). These arguments suggest that assessing how well an executive is performing, even over longer periods, is a difficult and uncertain matter.

Assessing the quality of CEOs' performance may be even more difficult in the early stages of their tenure. While the chief indicator by which CEO quality is assessed is firm accounting or stock market performance (Finkelstein *et al.*, 2009; Kesner and Sebor, 1994), these metrics may not be diagnostic of CEOs' quality early in their tenure. For instance, during the early stage of CEOs' tenure, the performance of their firm is largely path dependent as it is influenced by the decisions and resource allocation choices of their predecessor (Hannan and Freeman, 1977; 1984). Indeed, firms' financial performance in the first year or two of CEOs' tenure may, at best, be a noisy indicator of CEOs' talent due to the fact that decisions and resource allocations they undertake in their first few months in office may not bear immediate fruit. Over the longer term, firm performance is the most often employed and the most reasonable proxy of CEO performance and/or CEO quality. However, given the inertial nature of firm performance and the lag between a CEO's strategic choices and the results of those choices, firm performance may not provide clear guidance regarding a CEO's performance or quality in the early stages of a CEO's tenure.

Indeed, with few exceptions (e.g., Shen and Cannella, 2002; Zhang, 2008), prior research on CEO evaluation has typically studied CEOs throughout their tenure and has relied on traditional metrics of CEO quality such as firm performance (Finkelstein *et al.*, 2009). The few studies that have examined this context have argued that new CEOs have low levels of power (Ocasio, 1994; Shen and Cannella, 2002) or have focused on how a lack of information regarding a CEO's quality due to that individual being hired from the outside will result in early dismissal (Zhang, 2008). Against this practically and theoretically important backdrop, we build on and extend prior research by examining whether directors will employ decision-making heuristics early in a CEO's tenure in an attempt to resolve the uncertainty associated with such assessments. Directors will be forced to rely on decision-making heuristics due to the presence of high levels of

evaluative uncertainty during the first years of a CEO's tenure. Evaluative uncertainty refers to the absence of clear and unambiguous indicators or benchmarks of performance (Graffin and Ward, 2010). Prior research suggests that individuals will employ cognitive shortcuts, or heuristics, in an attempt to make rational and reasonable inferences in an effort to solve a complex problem with limited information or in the presence of uncertainty (Fiske and Taylor, 2008; Moskowitz, 2005).

In such circumstances where uncertainty is high, 'context information will be a guide to interpretation only when there is something to be interpreted, that is, when the target stimulus is ambiguous rather than unambiguous' (Stapel and Winkielman, 1998: 635). Accordingly, directors may rely on contextual information such as observable characteristics of the outgoing CEO, the experience of the incoming CEO, and the stock market reaction to the appointment of a CEO to make inferences about the quality of a newly appointed CEO. Tversky and Kahneman (1974: 1124) note that, when observers are tasked with uncertain assessments, heuristics allow people to, '... rely on a limited number of heuristic principles which reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations.'

Through our examination of directors' use of heuristics in early-stage CEO evaluation, we attempt to make a number of theoretical contributions. First, this paper extends our understanding regarding how the board may make sense of a CEO's early-stage performance by developing arguments regarding a set of specific factors of the CEO succession process that may influence this evaluation. By highlighting the heuristics the board uses to inform the complex and uncertain judgment of early-stage CEO quality, this paper extends recent research by Wiersema and Zhang (2011) that shows boards also rely on investment analysts' assessments of CEO quality when making dismissal decisions. Second, our study contributes to the literature on CEO evaluation in general because our results suggest a nuanced pattern whereby certain characteristics may influence early-stage assessments of CEOs, while other, more traditional metrics (e.g., firm performance) may be more salient later in their tenure. The idea that certain characteristics may have tenure-specific implications in the assessments of CEOs has not previously been considered. Finally, this

paper contributes to the literature on CEO succession by developing predictions regarding the types of contextual cues that guide heuristics during early-stage CEO evaluation. A practical implication of our findings is that it may make directors aware of heuristics, and potential biases, they may employ in their early-stage CEO evaluation, and prior studies have found that making individuals aware of their own potential biases is an effective means by which they can overcome or discount the influences of such biases (e.g., Ross, Lepper, and Hubbard, 1975).

THEORY AND HYPOTHESES

Executive quality is commonly thought of in terms of the ability of a given CEO to positively influence firm performance. Despite the difficulties associated with linking executive quality to firm performance, the success or failure of a firm is most often attributed to its CEO (Finkelstein, *et al.*, 2009; Kesner and Sebor, 1994). This attribution, known as the ‘romance of leadership,’ refers to the fact that observers tend to give CEOs a disproportionate amount of credit for both successes and failures (Meindl, Ehrlich, and Dukerich, 1985). Meindl and colleagues suggest that observers prefer this simplified causal explanation of leadership efficacy so that they can generate causal attributions of organizational outcomes.

In the early stage of a CEO’s tenure, firm performance may be of little diagnostic value for a number of reasons. First, during this time, few objective indicators such as various measures of firm performance are available for boards of directors due to the fact that firm performance is highly path dependent (Hannan and Freeman, 1977; 1984). As a practical matter, in the first years of a CEO’s tenure, path dependence means organizational performance will be largely determined by decisions and resource allocations of the prior CEO. This path dependence flows not only from the investments in assets or technologies a prior CEO may or may not have made but also from the resulting capabilities that may, in turn, limit the choices a new CEO is able to pursue in light of these investments (Helfat and Raubitschek, 2000; Raubitschek, 1988). Accordingly, early in a CEO’s tenure, organizational performance and even the potential range of strategic choices are strongly influenced by decisions of the prior CEO.

Second, as the job of CEO differs significantly from any other job within the organization (Kesner and Sebor, 1994), boards of directors will undoubtedly have to allow for a learning period as new CEOs familiarize themselves with this new position regardless of whether they were promoted internally or hired from the outside (Finkelstein *et al.*, 2009). Indeed, numerous scholars suggest that new CEOs spend a large amount of their early tenure developing networks, understanding executives’ capabilities, and just trying to understand the most pressing issues facing the company (Gabarro, 1987; Mintzberg, 1973; Vancil, 1987) in order to gain enough power to make significant contributions (Shen and Cannella, 2002). Consequently, this adjustment period may substantively delay a CEO’s impact on firm-level outcomes.

Third, the board of directors, which is primarily populated with outsiders, has little day-to-day interaction with this newly appointed individual, and therefore is limited in its ability to directly observe the CEO’s process of making and implementing firm decisions (Baysinger and Hoskisson, 1990). Typically, when decision makers cannot observe behavior directly, they rely on outcome-based measures to evaluate performance (Eisenhardt, 1989). However, the limited diagnostic quality of performance indicators means that directors will have very little objective criteria on which to base their early-stage evaluation of the CEO.

Research suggests that individuals will employ decision-making heuristics such as using observable characteristics as indicators of underlying quality to help resolve such evaluative uncertainty (Festinger, 1954; Fiske and Taylor, 1991, 2008; Tversky and Kahneman, 1974). Fiske and Taylor (1991: 381) note that, ‘the social perceiver often must make complex judgments under conditions that may not be best suited to accuracy or thoroughness.’ Heuristics are shortcuts employed by decision makers that reduce complex and uncertain problem solving to a more simple judgment (Tversky and Kahneman, 1974) and such heuristics are thought to be particularly influential in situations where the actions under consideration are ambiguous (Fiske and Taylor, 2008). Ambiguity about the CEO’s performance is highest during the early stages of the CEO’s tenure, and consequently, the use of heuristics by the board will be most likely during this period. However, as a CEO remains in office, the importance of such heuristics will decline as the uncertainty associated with a given

CEO's quality is reduced over time. In this regard Fiske and Taylor (1991: 136) note that, 'people actually do respond to the data... people are no fools.' In other words, people tend to draw conclusions based upon heuristics and continue to rely on these conclusions until more or better data are available (Fiske and Taylor, 1991).

Consequently, the arguments and findings presented in this paper are limited to the early stages (specifically the first two years) of CEO tenure. We argue that, in the early stages of a CEO's tenure, board members will employ heuristics to assess the quality of the CEO. We note that these heuristics will likely only be employed until reliable performance metrics such as firm performance become available later in the CEO's tenure.

Boards and its role in compensation and dismissal

In examining the use of heuristics in the early-stage evaluation of CEOs, we begin by considering two factors. First, the mechanisms boards use to reward and/or punish CEOs and; second, the process boards use to make evaluation decisions. First, the primary mechanisms that boards use as outcomes of the CEO evaluation processes are: (1) the level and structure of the CEO's compensation, and (2) whether the CEO continues his or her tenure with the firm (Fama and Jensen, 1983). When a board evaluates a CEO it can reward him or her with greater levels of pay, or it can change the structure of the compensation package. Such compensation may also be used as a tool to motivate the CEO. Additionally, the primary tool a board has to punish a CEO is either to lower the CEO's compensation or fire him or her. Consequently, when examining how CEOs are evaluated early in their tenure, it is important to consider both outcomes. Specifically, we look at four contextual factors that directors may use as the basis for the heuristics they apply to the evaluation of a newly appointed CEO: (1) following a star CEO, (2) replacing a founder CEO, (3) considering the prior CEO experience of a CEO, and (4) weighing the initial stock market reaction to a CEO's appointment.

Regarding the process of CEO evaluations, we recognize that boards are generally composed of eight to 12 members (Dalton *et al.*, 1999). Consequently, when considering the heuristics board members may use to make decisions, we must

acknowledge that this involves a group decision process. However, most compensation decisions are delegated to the board's compensation committee, which usually comprises of 3 or 4 directors. Groups, like individuals, often have strong heuristics or biases when performing information search (Schulz-Hardt *et al.*, 2000), and studies suggest that groups also tend to use heuristics when making decisions in situations of uncertainty (Kerr, MacCoun, and Kramer, 1996). In particular, when there are not clearly correct answers, groups often are just as (or more) likely as (than) individuals to rely on heuristics (Argote, Seabright, and Dyer, 1986; Tindale, 1993). So, for the purpose of our study, we assume that the board (and/or its subcommittees) is likely to rely on the contextual factors described below as a basis for decision-making heuristics during its early-stage assessment of a CEO.

Following a star

There is a growing literature that suggests certain CEOs are singled out for their managerial acumen, where CEO acumen is treated as the primary causal agent of a firm's excellent performance, and therefore exalted by the media as 'star CEOs' (Hayward, Rindova, and Pollock, 2004; Wade *et al.*, 2006). A necessary condition of becoming a star CEO is leading a firm to high levels of performance over an extended period of time (Hayward *et al.*, 2004), after which, such an individual is then singled out by the media as the chief causal agent behind his or her company's performance (Hayward *et al.*, 2004; Wade *et al.*, 2006). Such public recognition of a CEO's performance is thought to cut through the ambiguity typically associated with the causes of firm performance and provide a clear interpretation for stakeholders, with the result being that the star CEO receives an increasingly larger portion of the credit for his or her firm's success (Meindl *et al.*, 1985). Consistent with this idea, studies have found that star CEOs receive compensatory rewards in-excess of other, less-lauded CEOs for comparable levels of performance (Malmendier and Tate, 2009; Wade *et al.*, 2006).

Following a star CEO is likely to trigger the contrast heuristic for directors who are evaluating the new CEO. The contrast heuristic asserts that observers' early evaluations of an individual can be influenced by a relevant referent other

(Fiske and Taylor, 2008). Specifically, Moskowitz (2005: 418) notes that when an applicable referent other exists, 'contrast occurs through a process of comparing stimuli (people) against accessible constructs, such as traits and exemplars—producing a perceived difference between the two.' Three conditions facilitate the likelihood that the contrast effect will occur: the extremeness of the referent other, the specificity of the prime, and the ambiguity of the evaluation (Moskowitz, 2005).

First, for the contrast effect to occur, the referent other must be considered extreme along a relevant dimension. As noted above, CEOs are labeled stars when their firms have enjoyed sustained levels of high performance. Consequently, the extreme nature of the departing star CEO's performance is likely to trigger the contrast heuristic for directors who are evaluating the newly appointed CEO. As Biernat (2005: 9 italics in original, 10) explains, 'when primes are extreme, contrast effects on subsequent judgment are more likely to occur. . . The general consensus regarding why these effects occur is that extreme primes operate as standards against which the target is compared; because the target is not as extreme as the prime, contrast occurs.' Specifically, prior studies have found that individuals are judged to be less competent in the context of a competent person (Morse and Gergen, 1970). In the case of following a star CEO, the extreme nature of his or her performance will likely engender a contrast whereby the managerial acumen of the newly appointed CEO may be considered low relative to this revered individual.

Second, the more specific the referent, such as a specific individual or trait, the more likely a contrast effect will occur (Moskowitz, 2005). In support of this idea, Stapel, Kooman, and van de Pligt (1996) found that if a prime is less abstract, it is more likely to lead to a contrast effect. In our case, the prime is the specific star CEO a newly appointed CEO is succeeding. As such, we theorize that succeeding a star CEO will negatively impact the evaluation of the new CEO as a result of this specific individual against whom the new CEO is compared.

A third condition necessary for the contrast effect to occur is that the evaluation under consideration must be ambiguous (Biernat, 2005). As we noted earlier, the path-dependent nature of firm performance means that it will be difficult to delineate the relative contributions of decisions made

in early periods by the departed star CEO and the newly appointed CEO. Indeed, the idea that the recently departed star CEO was the chief causal agent behind the firm's performance may cause board members to discount the contribution of a CEO who follows this admired individual early in his or her tenure.

The contrast heuristic is consistent with Merton's (1968) discussion of the difficulty of sorting out credit when multiple actors contribute to the success of a project. Specifically, he suggests that the more renowned individual will receive the majority of the credit while a lesser known individual's contributions will be discounted. Accordingly, even after the star CEO steps down, he or she will likely receive much of the credit for positive outcomes that occur early in the tenure of the newly appointed CEO. Thus, as a result of the comparison between the known competence of the star CEO and the unknown competence of the early-stage CEO, the contrast heuristic suggests that observers will likely continue to see the star CEO, and not the incumbent CEO, as the primary cause of positive performance.

In sum, these ideas suggest that the contrast heuristic will result in a less favorable evaluation for whoever follows a star CEO. This idea is consistent with a recent study by Graffin and colleagues (2008) that found that the top management team (TMT) members who work with a star CEO also experienced heightened pay-for-performance sensitivities. Similarly, we expect that boards of directors that have witnessed the success of the firm under the star CEO (Hayward *et al.*, 2004) will contrast their evaluation of the newly appointed CEO with that of the renowned individual who recently stepped down. Together, these ideas suggest that this contrast will result in a discounting of the new CEO's contribution to the firm and we thus hypothesize:

Hypothesis 1a: Succeeding a star CEO is negatively related to changes in the newly appointed CEO's compensation in the year following the CEO succession.

Hypothesis 1b: Succeeding a star CEO is positively related to the likelihood of a CEO being dismissed early in his or her tenure (within two years).

Replacing the founder

For many of the same reasons that following a star CEO will result in the contrast heuristic being applied, we suggest that the CEO who succeeds the founder of a firm may also result in having the board apply the contrast heuristic. Indeed, when a founder steps down, board members will also have an extreme, specific referent other in an ambiguous situation. The founder of the firm will have had a large influence of shaping the firm and be revered by the board of directors (Zaleznik and Ket de Vries, 1975). Further, the founder may possess unique skills such as an intimate knowledge of the firm and the ability to command the loyalty of the rest of the TMT (Carroll, 1984). Carroll (1984: 97) argues that founders, relative to other CEOs, 'have higher levels of commitment, enhanced entrepreneurial and technical skills, and stronger personal ties with employees. These factors should make them harder to replace.' Because founders are uniquely skilled, they represent an extreme prime and the CEO who replaces this individual is likely to be seen as quite different and, consequently, will trigger the contrast heuristic in board members when they are evaluating the new CEO.

Further, naming the first professional CEO will introduce the separation of ownership and control and its related issues to the firm. Berle and Means (1932) long ago recognized that firms will incur agency costs when ownership is separated from control. Indeed, in contrast to the founder, the succeeding CEO's decisions may be more carefully scrutinized relative to the founder as a result of these agency conditions. Similar to following a star CEO, we expect that whoever follows the founder of an organization will, at least initially, be viewed by the board as paling in comparison to this revered individual (Zaleznik and Kets de Vries, 1975) due to the contrast heuristic. Therefore we hypothesize:

Hypothesis 2a: Succeeding the founder of a company as CEO is negatively related to changes in the newly appointed CEO's compensation in the year following the CEO succession.

Hypothesis 2b: Succeeding the founder of a company as CEO is positively related to the likelihood of a CEO being dismissed early in his or her tenure (within two years).

Prior experience as CEO

On the other hand, research suggests that in some instances, a prime or cue may cause observers to assume that the target they are evaluating is more similar to a comparison group (Moskowitz, 2005). As we discuss above, specific and extreme cues are likely to generate a contrast whereby the target being evaluated is viewed less favorably because of the unfavorable comparison with a referent other. However, more general cues are thought to serve as interpretive frames that are integrated into the assessment of the target (Bier-nat, 2005; Moskowitz, 2005). Prior studies have found that when individuals are exposed to broad primes, such as a job type or prior experience, they were likely to assimilate that information into the evaluation of a target rather than use it as a point of contrast (Dijksterhuis, Spears, and Lepinasses, 2001; Haddock, Macrae, and Fleck, 2002).

A key general characteristic that may prime the early evaluation of a CEO is whether or not he or she has previously served as a CEO. As the CEO position differs significantly from all others (Kesner and Sebor, 1994), having previously held this position may be an important cue that signals this individual has prior applicable experience, which influences the interpretive frame through which the newly appointed CEO is evaluated. This prime may, in turn, cause directors to interpret ambiguous organization outcomes in a more favorable manner. As we previously discussed, objective performance metrics are not readily available early in a CEO's tenure. In such an ambiguous environment, directors will be forced to make subjective judgments of CEO quality; it is exactly this type of judgment that can be influenced by such cues and primes (Fiske and Taylor, 2008).

Further, a recent study by Stapel and Marx (2006) found that such assimilation effects are more pronounced when the evaluator is similar to the target and when the evaluator is cognitively busy. As many outside directors are themselves sitting CEOs (Ferris, Jagannathan, and Pritchard, 2003; Lorsch and MacIver, 1989), if a newly appointed individual had previously served as a CEO, this increases the similarity between board members and the CEO, which will cause the assimilation effects to be amplified (Stapel and Marx, 2006). Moreover, these authors also found that the similarity effects are more pronounced when the evaluator is cognitively busy. Directors are often

quite busy given that most have full-time jobs in addition to their board service, as well as other board appointments (Ferris *et al.*, 2003; Harris and Shimizu, 2004), which should increase their likelihood of adopting an assimilation heuristic.

On the other hand, if the appointee had not previously served as a CEO, directors may have more uncertainty regarding his or her potential as a CEO and this cue may also create a frame through which the appointee's subsequent actions are interpreted. The lack of prior evidence of the quality of this executive as a CEO, combined with the relatively loose coupling between executive decisions and firm-level outcomes, may serve to reduce the likelihood that managerial competence will be inferred early in a CEO's tenure if he or she has not previously served as a CEO. Indeed, without prior experience as a CEO, the board may view the individual as being more dissimilar to other CEOs, and consequently less likely to produce successful results.

Together, these ideas suggest that newly appointed CEOs with prior CEO experience may simply be given the benefit of the doubt until objective performance metrics are available to the board. Thus, we hypothesize:

Hypothesis 3a: Prior CEO experience is positively related to changes in the newly appointed CEO's compensation in the year following the CEO succession.

Hypothesis 3b: Prior CEO experience is negatively related to the likelihood of a CEO being dismissed early in his or her tenure (within two years).

Stock market reaction

The stock market reaction to the appointment of a CEO is an objective piece of evidence regarding the degree to which shareholders endorse or repudiate a given CEO's appointment (Finkelstein *et al.*, 2009; Kesner and Sebor, 1994; Zhang and Wiersema, 2009). However, even if the board of directors fulfills its fiduciary duty to select the individual it believes will best lead the firm, there is no guarantee that the stock market will endorse any particular CEO. Indeed, the results of studies that attempt to predict stock market reaction to CEO appointments are decidedly mixed

(Finkelstein *et al.*, 2009). For instance, some studies suggest that the market responds positively to appointments of executives hired from outside the firm (Worrell, Davidson, and Glascock, 1993), while other studies have found positive reactions to inside promotions (Furtado and Rozeff, 1987; Worrell and Davidson, 1987), as well as relay successions where the sitting CEO appoints and promotes an heir apparent (Shen and Cannella, 2003). On the other hand, Warner, Watts, and Wruck (1988) found that the market reacts negatively to outside appointments. In sum, there is no consensus regarding which CEO characteristics will lead to a positive stock market reaction.

Despite the lack of consensus regarding how the stock market will react, the degree to which this reaction is positive or negative may serve as an important cue for the board as it may serve to anchor its judgment when making evaluations of the newly appointed CEO. Fiske and Taylor (1991: 389) note that, 'When making judgments under uncertainty, people will sometimes reduce ambiguity by starting with a beginning reference point or anchor and then adjust it to reach a final conclusion'. Once this initial value is suggested, 'adjustments are typically insufficient. That is, different starting points yield different estimates, which are biased toward the initial values' (Tversky and Kahneman, 1974: 1128).

Even expert decision makers (Northcraft and Neale, 1987) and groups (Whyte and Sebenius, 1997) are subject to the anchoring heuristic. Hastie and Dawes (2001: 107), in discussing the Northcraft and Neale study say the following: 'What is important though is that it [the anchoring process] appears in a consequential financial judgment, it occurs for professionals who have made the judgment many times, and it occurs in a nonlaboratory setting in which the experts are provided with as much valid information (actually, more than) they would normally have to make these appraisals—and the anchor effects are still present and still large.'

Further, anchoring and adjustment can also severely affect our retrospective personal memory. Although such memory is introspectively a process of dredging up what actually happened, it is to large extent anchored by our current beliefs and feelings. 'This principle has been well established in both the psychological laboratory and in surveys' (Hastie and Dawes, 2001: 108). This bias shapes the memory of our past experiences into

patterns that are influenced by our current beliefs (Hastie and Dawes, 2001; Markus, 1986). For all of these reasons, directors are likely to use the stock market reaction at the time of the CEO's appointment as an anchor when evaluating the new CEO's performance and/or quality.

As directors are fiduciaries charged with competently monitoring the firm's assets on behalf of shareholders, they are likely to be aware of and to take this signal of shareholder sentiment seriously. For example, in the days following John Walter being named CEO, AT&T's market valuation dropped by \$4 billion. This stock market-based repudiation was then used as evidence that the board had made a mistake in promoting Mr. Walter (Khurana, 2002). Directors we interviewed echoed the idea that this initial stock market reaction is a salient piece of information. For instance, one director noted that,

'If the stock tanks after our announcement then I think 'oh @#\$\$%' (expletive deleted), what did we miss? Can't help to have buyer's remorse and that really dampens the energy buoying an incoming CEO.'¹

In fact, recent research suggests that boards are so wary of a potentially negative stock market reaction to a new CEO announcement that they may try to manage that reaction through the simultaneous release of other significant firm information (Graffin, Carpenter, and Boivie, 2011). As such, we suggest that the negative stock market reaction to a CEO's succession announcement will negatively anchor a board's early-stage assessment of the CEO's quality.

On the other hand, if the stock market reaction is positive, directors will perceive this as an endorsement of the new CEO and it may provide them assurance that they have made a wise choice. Indeed, prior studies suggest that such third-party assessments impact the perceived quality of executives and, in turn, influence their compensation (Graffin *et al.*, 2008; Wade *et al.*, 2006; Wiersema and Zhang, 2011). Consistent with this idea, Zhang and Wiersema (2009) found that the stock market reaction to financial statement certification was

positively associated with the perceived credibility of a CEO by shareholders. As directors likely nominated an individual they believed was the right person to lead the firm going forward, this opinion will be reinforced by a positive stock market reaction.

Thus, given the lack of diagnostic performance metrics early in a CEO's tenure, we suggest that the short-term stock market reaction to a CEO's appointment will anchor their early-stage assessment and provide a filter through which subsequent judgments are made. We thus hypothesize:

Hypothesis 4a: The stock market reaction to the appointment of a CEO is positively related to changes in the newly appointed CEO's compensation in the year following the CEO succession.

Similarly, an endorsement or repudiation by the stock market may influence the likelihood a CEO will hold onto the job during the early years of his or her tenure. Once again, the absence of any objective performance metric means that the stock market reaction to a CEO's appointment may be one of the few ways in which directors may come to know shareholder attitudes regarding this appointment. Thus, the stock market reaction will serve as a cue to anchor how a CEO's subsequent successes or failures are interpreted. Consistent with this idea, Khurana (2002: 91) noted that the strong market repudiation to the appointment of John Walter as CEO at AT&T immediately hurt his credibility in the eyes of the board of directors which, in turn, led to what he called a 'self-fulfilling prophecy' whereby directors sought out information to confirm this repudiation. Khurana (2002) contends this strong negative market reaction caused directors to reevaluate their choice of the new CEO and ultimately led to his dismissal within nine months of his appointment. Such logic is consistent with the anchoring heuristics where an initial assessment represents the starting point from which subsequent evaluations are made. Based on these ideas, we hypothesize:

Hypothesis 4b: The stock market reaction to the appointment of a CEO is negatively related to the likelihood of a CEO being dismissed early in his or her tenure (within two years).

¹ We conducted a number of informational interviews with directors as background for this study. The quote used is presented as an illustration of the arguments presented, and not as direct evidence.

METHODS

Sample and data collection

Our sample consists of all CEO successions for *Fortune* 1000 firms over the period 1999–2004. We found the dates CEOs were named by searching firm press releases using PR Newswire and LexisNexis. During the period, 593 non-interim successions took place (we exclude interim CEOs as the evaluation of such individuals is outside of the scope of this study), but missing archival data initially reduced the sample to 559 firms. We code a CEO succession as interim when the press release announcing the succession expressly notes that the newly appointed CEO will serve on an interim basis. Further, Eventus, the Web site we use to capture the abnormal stock returns, did not cover 105 of the firms in our sample, which reduced the sample to 454. The final sample was 432 firms, with the exclusion of 22 firms that experienced exogenous confounding events. We compared the means of a number of key variables to determine if this missing data introduced bias into our final sample. We found that our initial sample did not differ from our final sample in terms of total assets ($t = 0.70$; $p > 0.50$), return on assets (ROA) ($t = 0.01$; $p > 0.85$), or stock market performance ($t = 1.61$; $p > 0.10$).

Data on firm size, firm performance, and industry performance came from Compustat. Data on director characteristics were collected from RiskMetrics (formerly IIRC), and proxy statements filed with the Securities and Exchange Commission. We obtained data on executive characteristics, pay, and managerial discretion from Compustat, Zoominfo.com, and *Forbes'* annual survey of executive compensation. Data on wins in CEO-of-the-year contests were manually collected from the magazines that named each winner (discussed below).

Change in CEO compensation: We measured CEO compensation using Execucomp's total direct compensation as our compensation measure. This measure includes a CEO's total direct compensation including salary, bonus, long-term incentive payouts that year, restricted stock grants, options granted during the year (valued by the Black-Scholes method), and all other types of cash compensation paid in that year. As in other studies, this variable was transformed into its natural logarithm so that extreme values would not unduly

bias the analysis. To assess the change in compensation between a CEO's first and second year, we included a CEO's compensation in his or her first year as a control variable in the equation that predicts CEO compensation in year two, which is equivalent to testing for a change in compensation (Johnson and DiNardo, 1997; Westphal and Fredrickson, 2001).

Early CEO dismissal: We coded a CEO dismissal as an early CEO dismissal if it occurred within 730 days of his or her tenure. In every instance in which a CEO turned within 730 days, we assigned two coders to read the press release announcing the dismissal, as well as all media reports within one week of the CEO succession. When the two coders agreed the CEO was involuntarily dismissed from the firm, we coded it as a dismissal. As robustness check, we also applied the criteria developed by Shen and Cannella (2002), which suggests a CEO dismissal occurred when the outgoing CEO was less than 65 years old and did not retain a seat on the board. Every succession that was coded by our raters also met Shen and Cannella's criteria for a dismissal. Further as a robustness check, we also reran all analyses using dismissals within the first 365 days of a CEO's tenure and our results and conclusions are substantively unchanged. Table 2 includes both sets of analyses.

Prior CEO was a star CEO: Consistent with prior studies (e.g., Graffin *et al.*, 2008; Malmendier and Tate, 2009; Wade *et al.*, 2006) we measure the degree to which the prior CEO was a star CEO using wins in CEO-of-the-year contests. We include wins in CEO-of-the-year contests from the following magazines: *Business Week*, *Chief Executive Magazine*, *Financial World*, *Industry Week*, and *Worth*. Also consistent with prior studies (e.g., Graffin *et al.*, 2008; Wade *et al.*, 2006), we count the total number of wins in CEO-of-the-year contests during the final five years of the prior CEO's tenure in office as a gauge of his or her cumulative standing as a star CEO. However, when we dichotomize the measure (1=any wins in prior five years; 0=no wins), our results and conclusions are substantively unchanged.

Founder: We created a dummy variable that takes on a value of 1 is the prior CEO founded the company and 0 otherwise. To measure this variable we first read the press release announcing the new CEO appointment. Typically, a detailed biography of the CEO who is stepping down is offered. When

a biography was not included, following Graffin and colleagues (2008) who also tracked executive work histories, we searched Zoominfo.com for executive work histories. According to its Web site, Zoominfo.com provides: 'comprehensive information on over 33 million business professionals and 2 million companies across virtually every industry.' If no information was found indicating that the prior CEO was the founder of the company, we coded the individual as 0.

Previous CEO experience: We constructed a dummy variable that takes a value of 1 if the newly appointed CEO had previously served as a CEO and 0 otherwise. Similar to the founder variable, we first read the press release announcing the CEO appointment. Most press releases included detailed biographies for the newly appointed CEOs. When a biography was not included we searched the Execucomp database for executive work histories. Lastly, if the first two sources were not successful, we searched Zoominfo.com. If no information was found indicating this individual had previously served as CEO, we coded the individual as 0.

Stock market reaction to CEO appointment: To assess the stock market reaction to a CEO appointment, we performed an event study. Event studies have been commonly used by finance researchers since the early 1980s (MacKinlay, 1997) and have more recently been employed by management researchers (e.g., Wade *et al.*, 2006). In event studies, one must first identify the timing of the event of interest. This was a simple matter, in that we capture the date of the first press release that announces the appointment of a new CEO.

In event studies, each firm's expected return is subtracted from its actual return. These differences are known as abnormal returns and reflect the extent to which the event provided new information that influences the value of the firm (Brown and Warner, 1985). To test for abnormal returns, we used the market model, which uses regression analysis and relates a firm's return to that of the market portfolio (we used the S&P 500). Using daily returns we estimated a regression equation over the estimation period (ending 46 days before the event and extending back to 255² days prior to the event) which predicted each firm's returns. We

then used the resulting regression coefficients and the firm's actual daily returns to compute abnormal returns for each firm over a three-day window (−1 day before the announcement to +1 after the announcement) to capture the abnormal returns associated with the appointment of the new CEO (Brown and Warner, 1985; MacKinlay, 1997).

Control variables

We controlled for a number of firm-level factors. First, we controlled for the percentage of outside directors on the board. This variable was lagged in all analyses. We also controlled for whether the CEO succession was a relay succession. Relay successions occur when a sitting CEO works with and presumably grooms an 'heir apparent,' and passes the baton of leadership to this heir in an orderly manner (Cannella and Lubatkin, 1993; Vancil, 1987). CEO successions were coded as relay successions when the individual promoted held the title of president and/or chief operating officer prior to being named CEO.

Next, we created a variable coded as 1 when the incoming CEO was hired from outside the firm and 0 when he or she was promoted internally, as Zhang (2008) found that outside CEOs were dismissed at a higher rate than those promoted internally. Outside successions are defined as those in which the incoming CEO was hired from outside the firm or had been employed for two years or less (as some CEOs receive some on-the-job training before promotion) (Cannella and Lubatkin, 1993; Harris and Helfat, 1997). New CEO age was measured at the time the individual was announced as the new CEO. We obtained this information from Execucomp. For missing values, we searched the press release announcing the CEO succession and performed Internet searches.

We also controlled for whether or not the previous CEO was involuntarily dismissed, as prior studies suggest that dismissal of the prior CEO positively impact the likelihood the current CEO will be dismissed (Zhang, 2008). We employ the same coding methodology we used to determine early CEO dismissals where we assigned two coders to read the press release announcing the prior CEO's departure as well as all press releases within one week of this announcement. When both coders agree a dismissal occurred, this variable takes on a value of 1.

² Typically event studies employ an estimation period of either 255 or 360 days prior to the event. We tested an alternative model that employed the 360 estimation period and our results were substantively unchanged.

We controlled for firms' change in annual accounting and market returns from year one to year two of a CEO's tenure. We used a change variable to control for the fact that some CEOs enter highly performing firms, while others enter low performing firms, and that a change in performance will more likely influence the early evaluation of a CEO than the absolute level of performance. However, our results and conclusions are unchanged when we simply enter the annual accounting and market performance of a firm. To capture accounting performance we employ annual ROA. We used a measure of compounded market returns that consists of a firm's yearly stock returns, assuming reinvestment of dividends ($(\text{Price}_{\text{beg}} - \text{Price}_{\text{end}} + \text{Dividends})/\text{Price}_{\text{beg}}$). Stock market performance, more directly than accounting performance, captures assessments that inform how risky or uncertain a CEO succession may be in the minds of directors. We also measured firms' total assets (logged) to control for firm size. These measures were lagged one year in all analyses.

In light of a recent study by Graffin and colleagues (2011), we also control for whether a firm released information regarding an additional significant organizational occurrence that was under the firm's control during the event window. Graffin and colleagues (2011) refer to such releases as strategic noise that represent a firm's intent to influence the stock market's reaction to a new CEO appointment (see Graffin *et al.*, 2011 for a detailed discussion of this measure).

Similar to firm performance, we capture industry-level change in performance for both accounting and market returns from year one to year two of a CEO's tenure. Once again, our results and conclusions are unchanged when we simply enter annual industry-level accounting and market returns. Industry market performance was calculated using the formula $\sum_{ij} (\text{Total Assets}_{ij} \times \text{Total Return}_{ij}) / (\sum_{ij} \text{Total Assets}_{ij})$, where i indicates each company in industry j for a given year (industry ROA is calculated in an analogous manner). Investors may use the relative stock market and accounting returns to assess the quality of the contribution of both the CEO and the board members. These variables were lagged in all analyses.

We also include a variable to capture firm-level managerial discretion to control for the relative impact of a CEO. To do so, we measured five indicators that have been used in other studies to measure a CEO's firm-level discretion (e.g., Hambrick

and Abrahamson, 1995; Finkelstein and Boyd, 1998) over the five years preceding a firm's CEO succession (i.e., if a CEO succession occurred in 2004, we captured managerial discretion over the years 1999–2003).³ We measured market growth as the average annual percentage change in firm sales, and demand instability as the standard deviation of the annual change in firm sales. Researchers consider managerial discretion to be higher in growing businesses where demand varies yearly.

To capture the degree to which a firm followed a differentiation strategy, we measured average annual research and development intensity (R&D/sales) and average annual advertising intensity (advertising/sales). The final indicator was average annual capital intensity, which we measured by dividing the net value of property, plant, and equipment by the number of employees and then multiplying this product by -1 so that lower scores are associated with less discretion. Capital-intensive businesses are likely to constrain managerial choices, given that a required investment in fixed assets commits the firm to a course of action. Standardization and summation of these five measures provided an overall measure of firm discretion. Finally, dummy variables for the years 1999–2003, with 2004 as the omitted value, were included to control for any period effects in our panel data.

Analyses

The main challenge in performing this analysis is to create appropriate models given the issue of endogeneity of the stock market reaction to the appointment of the new CEO. There are many factors that influence the size and valence of the stock market's reaction to the CEO announcement, which would also likely affect the variables of interest in this study. In all of our analyses we run two-stage equations. The first equation predicts the stock market reaction to the new CEO appointment. This equation included the following variables, which were all lagged one year, to predict the stock market reaction: the ROA, the stock market performance, the previous CEO was

³ Two of the indicators of managerial discretion (demand instability and R&D intensity) are used as indicators of firm-level uncertainty in accounting research (e.g., Kren, 2002). In supplementary analyses (not shown here) we replaced our discretion measure with a measure that comprises these two indicators and our results and conclusions are substantively unchanged.

dismissed, the previous CEO was the founder, the percent of outside directors on the board, the new CEO age, the year dummies, the announcement was confounded, the change in industry ROA, and the change in industry market performance to predict the stock market reaction to the CEO succession. The second equation contains an instrumental variable produced in the first equation to control for the endogeneity of the stock market reaction. Lastly, consistent with prior studies that examine the abnormal stock market returns to an event of interest (e.g., Godfrey, Merrill, and Hansen, 2009), we ran diagnostics to look for outliers and removed seven observations that substantially skewed our regression results.

RESULTS

Descriptive statistics and bivariate correlations are displayed in Table 1. Table 2 provides the results that test all of our hypotheses. Models 1 and 2 provide the two-stage models that test Hypotheses 1a, 2a, 3a, and 4a. Model 1 is the control model. Model 2 is the full model that includes all independent variables. Hypothesis 1a, which predicts that succeeding a star CEO is negatively associated with changes in CEO pay from his or her first to second full year, received support, as the coefficient for the previous CEO being a star CEO is negative and statistically significant ($p < 0.01$). Hypothesis 2a, which posits that succeeding the founder of a company is negatively associated with a new CEO's change in pay, received support as the coefficient for the founder variable is negative and statistically significant ($p < 0.05$). Hypothesis 3a, which theorizes that prior CEO experience is positively related to changes in the newly appointed CEO's compensation, is not supported as previous CEO experience is actually negatively associated with changes in a CEO's pay in a statistically significant manner ($p < 0.05$). Hypothesis 4a, which suggests that the initial stock market reaction to a new CEO's appointment is positively associated with early changes in pay, is supported as the coefficient of the stock market reaction is positive and statistically significant ($p < 0.05$).

Models 3–6 provide the results of the two-stage probit models that test Hypotheses 1b, 2b, 3b, and 4b. Model 3 is the control model for a one-year window of dismissal, while Model 5 presents the control model for a two-year window. Model

4 is the full model that includes all independent variables for the one-year window, while Model 6 presents the analogous model for the two-year window. Hypothesis 1b, which predicts that succeeding a star CEO is positively associated with the likelihood of a CEO being dismissed early in his or her tenure, received support, as the coefficient for the previous CEO being a star CEO is positive and statistically significant in Model 4 ($p < 0.05$) and Model 6 ($p < 0.01$). The practical impact of this finding is that when the previous CEO had won one CEO-of-the-year contest in the previous five years, the likelihood that the newly appointed CEO is fired in his or her first two years of tenure increases by 27 percent (from 9.1% to 11.5%), while if the CEO won five contests, this likelihood increases by 203 percent (from 9.1% to 27.5%).

Hypothesis 2b, which posits that succeeding the founder of a company is positively associated with early CEO dismissal, did not receive support as the founder variable is not statistically significant in Model 4 or Model 6. Hypothesis 3b, which theorizes that prior CEO experience is negatively related to the likelihood of a CEO's early dismissal, is supported as previous CEO experience negatively associated with early CEO dismissal statistically significant manner in Model 4 ($p < 0.01$) and Model 6 ($p < 0.05$). The practical impact of this finding is that when the newly appointed CEO had previously served as a CEO, the likelihood that he or she is fired in the first two years of tenure decreases by 70 percent (from 9.1% to 2.8%). Hypothesis 4b, which suggests the stock market reaction to the appointment of a CEO is negatively related to the likelihood of a CEO being dismissed early in his or her tenure, is not supported as this variable is not statistically significant in Model 4 or Model 6.

We also performed *post hoc* analyses (not shown) to test if the influence of our independent variables fade over time and whether or not performance metrics become more influential in terms of CEO evaluation.⁴ This pattern of results would be consistent with directors employing heuristics, because decision making shortcuts should only be influential until better performance information becomes available (Fiske and Taylor, 1991). We performed these analyses by examining the

⁴ We thank a reviewer for this suggestion.

Table 1. Correlations and descriptive statistics

Variable	Var	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Stock market reaction to CEO appointment Early CEO dismissal (2 years) CEO pay in second year (\$000s, logged) Change in firm market performance Change in firm ROA Total assets (\$ millions, logged) CEO pay in first year (\$000s, logged) Prior CEO a star CEO Previous CEO experience Incoming CEO hired from outside Prior relay succession Prior CEO dismissed Prior CEO founder Percent of outside directors on board 1999 dummy 2000 dummy 2001 dummy 2002 dummy 2003 dummy Incoming CEO age CEO announcement confounded Change in industry market performance Change in industry ROA Managerial discretion	1	0.01	0.07	1.00																							
	2	0.05	0.22	0.08	1.00																						
	3	8.44	0.94	0.00	-0.03	1.00																					
	4	2.15	79.88	0.08	-0.10	0.01	1.00																				
	5	-1.10	16.60	-0.01	-0.01	0.02	-0.12	1.00																			
	6	8.69	1.460	0.02	-0.04	0.51	-0.05	-0.03	1.00																		
	7	8.41	0.99	0.02	0.02	0.75	-0.09	0.01	0.51	1.00																	
	8	0.31	0.83	-0.03	0.08	0.15	-0.02	0.00	0.29	0.24	1.00																
	9	0.14	0.35	0.22	-0.06	-0.03	0.12	-0.03	0.06	0.08	0.06	1.00															
	10	0.22	0.42	0.22	-0.04	0.03	0.10	-0.03	-0.07	0.04	-0.02	0.38	1.00														
	11	0.56	0.50	-0.13	0.07	0.04	-0.12	0.03	-0.05	-0.01	0.00	-0.26	-0.40	1.00													
	12	0.07	0.26	0.05	0.10	-0.07	0.09	-0.15	0.01	0.03	0.03	0.09	0.09	-0.21	1.00												
	13	0.06	0.24	0.02	0.03	-0.03	-0.02	-0.02	0.00	0.08	0.20	0.11	0.02	0.03	-0.07	1.00											
	14	0.80	0.11	-0.09	-0.07	0.05	0.04	-0.04	0.18	0.02	-0.03	0.03	0.12	-0.12	0.09	-0.14	1.00										
	15	0.20	0.40	0.01	0.15	0.03	-0.01	0.02	-0.05	0.01	0.14	-0.10	-0.03	0.10	-0.03	0.01	-0.05	1.00									
	16	0.18	0.38	0.08	-0.05	0.08	0.01	0.00	0.06	0.10	0.01	0.05	0.07	-0.02	0.10	0.05	-0.08	-0.23	1.00								
	17	0.18	0.38	-0.07	0.01	-0.17	-0.12	-0.09	-0.07	-0.11	-0.03	0.01	0.00	-0.02	0.01	-0.02	-0.01	-0.23	-0.21	1.00							
	18	0.14	0.35	-0.03	-0.03	0.04	0.37	-0.09	0.03	0.04	-0.01	-0.01	-0.07	0.03	0.01	0.08	-0.01	-0.21	-0.19	-0.19	1.00						
	19	0.15	0.36	0.08	-0.04	-0.03	-0.18	0.09	0.04	-0.02	-0.09	0.03	0.03	-0.03	0.03	-0.09	0.06	-0.22	-0.20	-0.20	-0.17	1.00					
	20	51.48	6.04	0.14	0.11	0.01	0.05	0.03	0.09	0.04	0.00	0.21	0.03	-0.10	0.04	0.02	0.06	-0.10	0.01	0.02	-0.03	0.04	1.00				
	21	0.24	0.43	-0.06	0.08	-0.03	0.02	-0.02	-0.02	0.04	0.01	-0.03	-0.09	0.08	-0.03	0.07	-0.06	0.04	-0.01	0.01	0.02	-0.02	0.04	1.00			
	22	15.18	72.04	0.00	0.00	0.00	0.03	0.02	0.10	0.01	0.08	0.00	0.01	-0.01	-0.05	0.01	0.13	-0.05	-0.01	0.00	0.00	0.12	-0.08	0.02	0.00	1.00	
	23	-0.06	4.49	0.02	-0.06	0.05	0.23	-0.33	0.03	0.00	0.02	0.10	0.08	0.03	-0.02	0.03	0.10	0.03	0.32	0.16	0.23	0.05	0.00	-0.04	0.14	1.00	
	24	0.00	0.46	-0.03	-0.02	0.35	-0.07	-0.08	0.28	0.38	0.37	0.04	0.03	0.01	0.05	0.00	-0.03	0.07	0.06	-0.01	-0.07	-0.05	0.01	-0.02	0.00	-0.04	1.00

Table 2. Results of hypothesis tests†

Variable	Pay of CEO in 2 nd year of tenure		Likelihood of a CEO being dismissed early in his/her tenure			
	Model 1	Model 2	Model 3 (Year 1)	Model 4 (Year 1)	Model 5 (Years 1 or 2)	Model 6 (Years 1 or 2)
Change in firm market performance	0.001** (0.000)	0.001 (0.001)	0.000 (0.002)	−0.001 (0.002)	−0.004** (0.002)	0.004* (0.002)
Change in firm ROA	0.002*** (0.001)	0.001 (0.001)	−0.016* (0.008)	−0.013 (0.014)	0.003 (0.003)	0.002 (0.004)
Change in industry market performance	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Change in industry ROA	0.000 (0.000)	0.000 (0.001)	−0.012 (0.039)	0.011 (0.021)	−0.030 (0.023)	−0.030 (0.026)
Total assets (\$ millions, logged)	0.079*** (0.026)	0.072** (0.033)	0.092 (0.099)	0.049 (0.119)	−0.069 (0.087)	−0.101 (0.086)
CEO pay in first year (\$000s, logged)	0.666*** (0.061)	0.680*** (0.056)	−0.311** (0.139)	−0.274 (0.174)	0.041 (0.150)	0.023 (0.151)
CEO hired from outside	−0.130 (0.083)	−0.166 (0.104)	0.091 (0.307)	−0.039 (0.642)	−0.072 (0.331)	0.011 (0.639)
Relay succession	0.066 (0.07)	0.096 (0.086)	−0.471* (0.283)	−0.417 (0.478)	0.519* (0.304)	0.510 (0.368)
Prior CEO dismissed	−0.352*** (0.123)	−0.372** (0.178)	0.165 (0.427)	0.177 (0.409)	1.183*** (0.353)	1.115 (0.741)
Percent of outside directors on board	0.197 (0.255)	0.506 (0.396)	−0.173 (1.050)	0.717 (1.623)	−1.734* (0.854)	−0.412 (2.087)
Incoming CEO age	−0.007 (0.006)	−0.013 (0.009)	0.040* (0.021)	0.030 (0.050)	0.071 (0.017)	0.064 (0.071)
CEO announcement confounded	−0.091 (0.059)	−0.008 (0.091)	0.327 (0.278)	0.288 (0.269)	0.228 (0.231)	0.267 (0.233)
Managerial discretion	0.106 (0.074)	0.158* (0.083)	−0.126 (0.324)	−0.148 (0.307)	−0.344 (0.347)	−0.440 (0.505)
1999 dummy	−0.155 (0.099)	−0.189 (0.127)	0.225 (0.386)	−0.131 (0.473)	0.912* (0.487)	0.286 (0.768)
2000 dummy	−0.063 (0.088)	−0.160 (0.113)	−0.560 (0.542)	−0.763 (0.357)	−0.359 (0.485)	−0.686* (0.424)
2001 dummy	−0.239*** (0.091)	−0.181 (0.119)	−0.328 (0.433)	−0.311 (0.410)	0.288 (0.518)	0.064 (0.480)
2002 dummy	−0.163 (0.105)	−0.172 (0.123)	−0.136 (0.498)	−0.201 (0.367)	0.455 (0.509)	0.302 (0.603)
2003 dummy	−0.144 (0.095)	−0.262** (0.126)	−0.157 (0.422)	−0.371 (0.435)	−0.131 (0.536)	−0.462 (0.541)
Prior CEO a star CEO		−0.098*** (0.042)		0.196** (0.115)		0.267*** (0.113)
Prior CEO founder		−0.237** (0.137)		−0.027 (0.318)		0.065 (0.337)
Previous CEO experience		−0.354** (0.174)		−0.780*** (0.319)		−1.262** (0.576)
Stock market reaction to CEO appointment		5.640** (3.280)		8.349 (14.522)		11.358 (12.033)
Constant	2.505*** (0.607)	2.566*** (0.643)	−1.802 (1.718)	−1.493 (2.451)	4.759** (2.105)	4.527 (4.664)
Observations	381	381	431	431	431	431
R ²	0.562	0.654				
Chi ² (degrees of freedom)			23.33 (17)	65.93 (22)	68.59 (17)	113.88 (22)

* = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$; z statistics are one-tailed for hypothesized effects, two-tailed for control variables.

†Standard errors are in parentheses.

effects of the variables in our models on the outcomes predicted in subsequent years (years three and four of a CEO's tenure). When we predicted CEO compensation, we found that the only independent variable from our models that remained significant in years three and four was succeeding a star CEO ($p < 0.05$, year three; $p < 0.10$, year four). However, in years three and four, the measures of accounting and market performance are significant in three out of four cases in predicting changes in CEO compensation. Specifically, the change in compensation in year three for a CEO is positively affected by his or her firm's ROA ($p < 0.01$) and CEO change in pay in year four is positively associated with both firm ROA ($p < 0.05$) and stock market return ($p < 0.01$).

We performed analogous tests for CEO dismissal in years three and four. We found that none of our independent variables predicted CEO dismissal in years three and four and that changes in firm ROA ($p < 0.01$) and industry performance metrics ($p < 0.05$) were the strongest predictors of CEO dismissal. Overall this pattern of results is consistent with the idea that board members employ heuristics early in a CEO's tenure when assessing the CEO, but that the influence of these heuristics fade over time as more objective outcome measures (e.g., the performance of the firm) become more diagnostic of the quality of the CEO.

DISCUSSION

We aimed to achieve two objectives in this study. First, we drew upon theory and research regarding the use of decision-making heuristics to test predictions regarding early-stage CEO evaluation. As we noted, during the early stages of a CEO's tenure, CEO evaluative uncertainty is heightened because traditional performance indicators are less diagnostic of CEO quality and consequently, directors will rely on contextual cues when assessing CEOs. The second objective was to empirically test the predictive validity of our arguments regarding directors' use of heuristics in the context of CEO succession. Based upon these arguments, and the consistent pattern of empirical results supporting our predictions, we believe that our two overarching research objectives were largely achieved.

Specifically, we studied how CEOs are evaluated early in their tenure when uncertainty about their quality and performance is highest. During

this time, firm performance is largely determined by decisions and resource allocations of the previous CEO and his or her administration, and may therefore not be completely diagnostic of the quality of the sitting CEO. We argued that, in light of the extreme evaluative uncertainty associated with CEOs' assessments early in their tenure, elements of the CEO succession context would serve as heuristic cues in the board's decision-making process. Broadly, we found consistent support for the idea that contextual elements of the CEO succession influence early changes in a CEO's compensation by serving as heuristics for the board. Surprisingly, we found less consistent support that such elements influenced the likelihood a CEO would be dismissed early in his or her tenure. Thus, there appears to be a possible decoupling between factors influencing CEO pay and those influencing their retention, even though we expected these factors to have comparable effects on both.

A number of findings in our study are noteworthy. First, we found that when a newly appointed CEO succeeds an organizationally significant individual, such as a star CEO or the founder of the organization, the boards use of the contrast heuristic results in this individual receiving a less favorable evaluation early in his or her tenure than individuals who do not follow this type of individual. Specifically, if a CEO succeeds a star CEO his or her pay in the second year, controlling for pay in the first year, is nine percent lower, while the pay of individuals who follow the founder of an organization is 21 percent lower. Our results also suggest that individuals who succeed star CEOs are significantly more likely to be dismissed as CEO within their first two years of tenure than individuals who do not succeed such renowned individuals. Specifically, if the previous CEO had won two CEO-of-the-year contests, which was the mean number of wins for those CEOs who had won contests, the likelihood that his or her successor would be fired early in his or her tenure increases by 60 percent (from 9.1% to 14.6%).

Together these findings suggest that the contrast heuristic results in a significant 'burden of celebrity' for the succeeding CEO who follows a CEO who has been lauded by the popular press. Indeed, prior studies found that star CEOs face a higher expectational burden and that as such CEOs become more and more well known, the board of directors, as well as shareholders, expected higher and higher levels of performance (Fombrun, 1996;

Wade *et al.*, 2006). The findings of this study tell a similar story in a different context. Our findings suggest that because of the contrast between the new CEO and the exiting stars or founders, the succeeding CEO will also likely share a similar burden of high expectations. As our results demonstrate, CEOs who replace stars or founders receive smaller subsequent pay increases than CEOs who do not replace such prominent individuals. Consequently, if CEOs who replace stars or founders wish to receive commensurate pay increases, they likely need to produce higher levels of organizational performance to make up for this evaluative discount associated with following an organizationally significant individual.

We also found that having previous experience as a CEO results in directors applying the assimilation heuristic that produces an *evaluative buffer* for new CEOs early in their tenure. Specifically, we found that if a newly appointed CEO has previous experience as a CEO, he or she is 70 percent less likely to be dismissed within the first two years of his or her tenure. This finding suggests that individuals with such experience may be seen as similar to other successful CEOs and consequently given the benefit of the doubt early in their tenure due to a more developed track record of performance in the job of CEO. This finding is especially interesting given the fact that on average, CEOs are given less leeway than in the past. CEO dismissals have become much more likely than in the past, so having prior experience as a CEO may be extremely valuable in order to buffer this tendency of boards to fire CEOs at the first sign of trouble.

Surprisingly, however, we found that these same individuals actually receive a smaller increase in pay from their first to second year of serving as CEO than individuals who had never previously served as CEO. We investigated this unexpected finding and found that even though such individuals received a significantly smaller increase in pay, the starting pay for CEOs with prior CEO experience was significantly higher than for those without this key experience. Specifically, we found that if a newly appointed CEO has previous experience as a CEO, his or her starting pay is \$2.25 million higher than CEOs without this prior experience. Thus, it seems that this experience positively impacts a CEO's starting wage, but may actually dampen increases in the near term. What may be occurring is that because new CEOs who

have prior CEO experience receive such significant pay premiums initially, the board expects higher subsequent performance in order to justify future pay increases. Future research should examine whether prior CEO experience moderates compensation decisions during the early stages of a new CEO's tenure.

Lastly, we found that the initial stock market reaction to a CEO's appointment serves as an evaluative anchor for the board and positively impacts early changes in the new CEO's pay. Virtually all of the literature regarding CEO successions focuses on predicting the size and direction of the stock market's reaction to a CEO succession announcement. We are not aware of any studies that examine the subsequent effects of that reaction on the evaluation of a CEO. This finding suggests that the initial stock market reaction may anchor the board's evaluation of the subsequent successes or failures of the CEO in such a way as to amplify positive outcomes and reduce the impact of negative outcomes.

The more consistent support for our findings associated with early changes in CEO pay and our less robust findings for early CEO dismissal suggest that elements of the context of the CEO succession are not as influential in regard to a CEO's early-stage dismissal. This is one possible explanation for the decoupling between pay effects and retention effects identified in our study. Indeed, the more fine-grained assessments that lead to changes in pay for newly appointed CEOs may be more susceptible to influence from cues such as the stock market reaction to their appointment than the decision to dismiss that same CEO early in his or her tenure. In addition, we only examined the likelihood of a CEO being fired within two years.

Another potential explanation for the weakness of the findings regarding CEO dismissal is that very early-stage CEO dismissals are relatively rare. Although the CEO dismissal rate is increasing (Wiersema, 2002), dismissals are still relatively rare in the first year or two of a CEO's tenure. In our sample, early dismissals only occurred in five percent of the cases. Consequently, the small number of CEO dismissals may limit our ability to find consistent results. In addition, the small number of CEO turnovers may also result in findings that are sample specific. Thus, our results regarding early-stage CEO dismissal should be interpreted with caution. Future research could examine the

question of early-stage CEO dismissal using longer time windows in order to generate a larger sample.

Our results also suggest that the contributions of CEOs who follow well-known or revered CEOs seem to be discounted because of the contrast heuristic. Whether a newly appointed CEO follows a star CEO or the founder of a firm, he or she receives smaller increases in pay than those who do not follow such renowned individuals. Prior research has found that being aware of decision-making heuristics may reduce the degree to which such heuristics bias decision making (e.g., Ross *et al.*, 1975). As such, to the extent that the results of our study increase directors' awareness regarding their use of heuristics, they may be less likely to be biased during subsequent evaluations.

Limitations and new research directions

Like all research, our study has limitations, and these limitations, in turn, point to new research directions. The primary limitation of this research is that we did not directly measure CEO evaluative uncertainty, but instead inferred it from our research context. While we suggest that the early-stage of a CEO's tenure is a strong setting for evaluative uncertainty and the subsequent reliance of the board on decision-making heuristics, and our pattern of results provide support for these arguments, it will be nonetheless valuable to directly measure the decision-making process employed by the board in this context. In the same way that researchers have used lab settings and simulations to study perceived environmental uncertainty (Gerloff, Muir, and Bodensteiner, 1991) or perceived managerial discretion (Carpenter and Golden, 1997), so too could such a setting be employed to investigate the factors boards rely on to guide their decision making when there is evaluative uncertainty surrounding a CEO.

One research direction suggested by our study relates to the role of the board in the CEO succession process and public statements made by the board surrounding CEO succession announcements. Indeed, because our results suggest that the initial stock market reaction to a CEO's appointment may have longer-term organizational consequences (at least for how the CEO is evaluated); this implies that boards have a vested interest in attempting to influence the initial stock market reaction. This incentive to attempt to actively engage in activities that influence the stock market

reaction is amplified by the fact that boards may be held responsible for hiring a CEO who was repudiated by shareholders. While Graffin and colleagues (2011) found that firm leadership may engage in anticipatory impression management to attempt to obscure a potentially negative stock market reaction, futures studies may wish to consider whether boards employ other impression management techniques in order to influence stock market reactions.

Future research could also explore other ways in which the succession context could affect the new CEO and/or other firm outcomes. For instance, researchers could explore whether following an organizationally significant individual, such as a star CEO or founder, affects the range of strategic options available to the new CEO. Following a star CEO may limit the discretion of the newly appointed CEO to make changes to the organization's strategy or result in higher levels of scrutiny and/or harsher evaluations for such changes. In addition, such evaluative burdens and interdependencies may be amplified if this organizationally significant individual retains a seat on the board of directors after they step down. Future research should pursue such lines of inquiry that build off our initial results.

Another area of future research is to consider factors that may moderate the relationships studied here. Indeed, our results broadly suggest that having previously served as a CEO may buffer an individual's initial evaluation as CEO. However, future research could examine factors that may moderate this relationship. For instance, prior experience as a CEO may be a particularly important heuristic cue for directors when the new CEO has been hired in the wake of the previous CEO being dismissed, or when the organization has been performing poorly. On the other hand, prior experience as a CEO may be a less important heuristic cue in an industry with low levels of managerial discretion. By studying the variables that may moderate these relationships, future studies can build on our and Zhang's (2008) first steps in understanding how the quality of CEOs is assessed early in their tenure.

One of the major implications of our overall pattern of results is that early-stage CEO evaluation differs significantly from CEO evaluation later in their tenure. Our findings suggest that a CEO's early-stage evaluation is influenced by the contextual elements surrounding the succession. Furthermore, *post hoc* tests revealed that the influence of these contextual elements wanes and

traditional firm performance metrics, such as stock return or ROA, become increasingly influential as a CEO accumulates more years in office. The idea that certain characteristics may have tenure-specific implications in the assessments of CEOs has not previously been considered. This suggests a potentially rich area for future research. In this paper, we consider one set of contextual factors that have an effect on early-stage CEO evaluation. Future research may wish to examine how the influence of other contextual factors may change over the course of a CEO's tenure.

This need for research into the tenure-specific influence of contextual factors on CEO assessment and dismissal is highlighted by the occurrence of several recent high-profile dismissals of CEOs with relatively short tenures. While it is important to realize that the conclusions generated in this study are based upon central tendencies and may not fully explain any particular example, what these recent examples illustrate is that any particular CEO evaluation or dismissal is heavily influenced by a number of contextual factors, and the impact of those contextual factors may change over time. Indeed, future research into other contextual factors that affect early-stage CEO evaluation, especially dismissal, may require a perspective that is more nuanced.

For instance, Hewlett-Packard (HP) recently hired Meg Whitman as its new CEO after firing the previous CEO, who was only in office for 10 months. This case is illustrative of the need for future research in this area given that there are so many contextual factors that are likely at play both in the dismissal of the prior CEO and in the hiring of Ms. Whitman. For instance, Ms. Whitman's hire follows a series of CEOs, some of whom were quite well known (for both good and bad reasons) and who had prior CEO experience before taking the HP position. In terms of Ms. Whitman's evaluation in the near term, our findings suggest that while her prior experience as CEO may act as an important heuristic cue for directors when making evaluation decisions, the negative stock market reaction following her appointment may also serve as a negative signal. However, this particular situation is further complicated by the fact that HP's board of directors may not be completely functional. In another recent example, Yahoo dismissed its CEO, Carol Bartz, after less than three years in office. Again, in line with the results discussed here, Ms. Bartz had prior experience as a CEO and

received a large initial compensation package to compensate for the loss of benefits from her prior employer. However, also in line with our findings is the fact that, while her prior experience may have helped prevent dismissal within two years, it did not prevent dismissal in the third year (especially in the face of poor performance). What both of these examples suggest is that it would be fruitful for future research to examine the degree to which other important contextual variables (such as extreme performance swings, dismissal of the prior CEO, the particular industry the firm is in, and/or the structure of the board) may also affect early-stage CEO evaluation.

Recent high-profile dismissals of CEOs early in their tenure also suggest that one important contextual variable that may be particularly important for early-stage CEO evaluation is the level and tone of media coverage for newly appointed CEOs. Numerous studies have shown that media coverage of CEOs influences their evaluation in terms of the level and type of pay a CEO receives (e.g., Malmendier and Tate, 2009; Wade *et al.*, 2006). Third-party assessments, such as media coverage or certification contests, should be particularly influential in the early stage of a CEO's tenure due to increased uncertainty associated with a newly appointed CEO's quality. Specifically, it may be the case that positive or negative media coverage may serve to amplify or attenuate the relationships we observed. Further, such studies may also wish to examine whether the influence of the level and tone of media coverage changes throughout the tenure of a CEO.

CONCLUSION

Evaluating CEOs is a difficult process, which is even more difficult early in a CEO's tenure when there are fewer objective performance metrics. What we argued and found was that in these situations, when evaluative uncertainty is high, boards are likely to rely on heuristics informed by the succession context when making performance evaluations. Combined, this tendency to rely on heuristics and our findings regarding the positive impact of prior CEO experience and the stock market reaction to the appointment of the CEO suggest that firm leadership is likely to hire 'safer' choices as CEOs in terms of hiring individuals. The incentive for 'safer choices' may

also offer a partial explanation for the relative homogeneity evident in new CEO appointments. Furthermore, our study suggests that investors should also realize that the stock market reaction to CEO succession announcements may have longer-term implications for the firm. It is our hope that our study will help directors, researchers, and other key organizational stakeholders better understand these complex facets of organization action and change.

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