

PUTTIN' ON THE RITZ: PRE-IPO ENLISTMENT OF PRESTIGIOUS AFFILIATES AS DEADLINE-INDUCED REMEDIATION

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We describe two theoretical explanations for the amount, pace, and costs of the prestige enhancement a firm engages in during the year before its initial public offering. The “snowball model” captures well-known processes whereby prestige-rich organizations accumulate even more prestige. The “dressing-up model” builds upon deadline-induced remediation, a phenomenon not previously studied in a macro-organizational context. In 242 software IPOs, the snowball model substantially explains final-year prestigious hiring. But there is also strong evidence of a tandem dressing-up process. As the final year counts down, prestige-poor firms aggressively hire prestigious executives and directors and pay higher prices to do so.

Scholars have long been interested in the idea that organizations can signal their worthiness by having affiliations with prestigious parties (e.g., Benjamin & Podolny, 1999; D'Aveni, 1990; Fombrun & Shanley, 1990; Stuart, Hoang, & Hybels, 1999). The central premise is that, under conditions of uncertainty, potential exchange partners are reassured about—even impressed by—an organization's prospects if it has prestigious affiliates, defined as parties who are of high status, prominent, and socially central (D'Aveni, 1990; Lazarsfeld & Merton, 1954; Merton, 1968; Podolny, 1993); in turn, exchange partners will be more willing to do business, and on better terms, than if the organization were lacking such indicators of worthiness. For example, D'Aveni (1989, 1990) provided evidence that creditors are less likely to throw a financially troubled company into bankruptcy if it has executives with prestigious credentials. And young firms have greater legitimacy, and thus a greater chance of survival, if they affiliate with well-known organizations (Baum & Oliver, 1991; Wiewel & Hunter, 1985).

Recently, researchers have been drawn to initial public offerings (IPOs) as an arena where prestigious affiliates might matter greatly, because these

companies typically have limited track records and resources, and otherwise carry considerable uncertainty (e.g., Gulati & Higgins, 2003; Pollock, Porac, & Wade, 2004; Stuart et al., 1999). In this regard, studies have consistently shown that affiliations with prestigious actors tend to increase IPO valuations and overall IPO success (e.g., Carter, Dark, & Singh, 1998; Chemmanur & Paeglis, 2005; Gompers & Lerner, 2004; Gulati & Higgins, 2006; Stuart et al., 1999). These prestigious affiliates include top-tier underwriters (Carter & Manaster, 1990; Gulati & Higgins, 2003; Pollock, 2004; Stuart et al., 1999), well-established auditors (Beatty, 1989), leading venture capitalists (Brav & Gompers, 1997; Gompers & Lerner, 2004; Lee & Wahal, 2004; Sanders & Boivie, 2004), prominent alliance partners (Higgins & Gulati, 2003; Stuart, et al., 1999), and well-credentialed upper echelons members (Certo, 2003; Gulati & Higgins, 2003, 2006).

On average, then, a young firm derives a higher market valuation if it has prestigious affiliates, and valuation may even be a function of the number of such affiliates. Therefore, once the firm decides to go public—typically at least a year prior to the IPO event itself (Gutterman, 1991; Husick & Arrington, 1998)—it has an incentive to sign on new prestigious parties in an effort to signal its quality and maximize its appeal to investors. If we think of recruiting prestigious parties in the year prior to the IPO as “final-year enhancement,” an array of interesting questions arise, including two that we examine in this article: What determines the amount and

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pace of final-year enhancement that a firm engages in? And how costly is it?

In framing and conducting our inquiry, we describe two theoretical mechanisms that we believe work in tandem. The first mechanism, the “prestige snowball model,” represents our consolidated portrayal of some well-known processes—notably, “homophily,” social validation, and signaling—that cause those organizations that already have the most prestige to steadily accumulate even more (Lazersfeld & Merton, 1954; McPherson & Smith-Lovin, 1987; Merton, 1968; Podolny, 1993). Under this model, the passage of time leading up to an IPO, or the counting down of the final year, allows the most prestige-laden firms to become even more so, in a case of “the rich getting richer.”

Our second model, the “dressing-up model,” is built upon a phenomenon that, to our knowledge, has not been studied in the context of macro-organizational behavior: deadline-induced remediation. Under this logic, an important, looming deadline will cause behaviors that would not be predicted if there were no such deadline (Gersick, 1988, 1989). Specifically, if an entity has a prevailing or “natural” tendency or characteristic that causes it to be ill-prepared for a deadline, then we expect it to take urgent, intense action in an effort to remediate the problem as the deadline approaches. In the case of firms approaching their IPO registration dates, the dressing-up model allows us to predict that as urgency grows (i.e., as the final year counts down) those firms that are most lacking in prestigious affiliates will aggressively enlist new affiliates. Moreover, we argue that dressing up has implications for the cost of enlisting prestigious affiliates: The less prestige a firm possesses, the more it must pay a new prestigious affiliate; and the penalty paid because of prestige scarcity is exacerbated as urgency mounts (i.e., as the IPO registration date approaches).

We provide evidence for our two models—the snowball model and the dressing-up model—using a sample of 242 software IPOs to examine final-year hiring of prestigious executives and directors. We find considerable support for both theoretical mechanisms. Specifically, the snowball model substantially explains final-year prestigious hiring, but there is also strong evidence of a tandem dressing-up process. As their final years count down, those firms with a scarcity of prestige engage in aggressive hiring of prestigious affiliates and pay a relatively high price in doing so. We discuss the implications of our results for theory and practice, and we propose ideas for future research.

THEORY AND HYPOTHESES

Upper Echelons Prestige and Final-Year Enhancement in the IPO Market

Because IPOs typically have few tangible assets and limited track records, researchers have been drawn to the idea that the presence of prestigious affiliates will help reassure investors about an IPO’s reliability and worthiness (Carter & Manaster, 1990; Gulati & Higgins, 2006; Sanders & Boivie, 2004; Stuart et al., 1999). Among the types of prestigious affiliates examined, executives and outside directors have received considerable attention (e.g., Certo, 2003; Chemmanur & Paeglis, 2005; Lester, Certo, Dalton, Dalton, & Cannella, 2006). Because executives and outside directors are engaged in the actual functioning of young firms, any prestigious credentials they possess are thought to represent valuable expertise and connections (i.e., both “human capital” and “social capital”); moreover, prestigious affiliates are thought to be discerning in the quality of firms they will associate with, and thus their presence signals value to investors (Higgins & Gulati, 2003). Executives and directors can possess prestigious credentials of various types, most notably employment or directorship affiliations with blue-chip or other prominent companies, as well as elite educational backgrounds.¹ Studies have shown that the involvement of prestigious upper echelons members with these types of credentials enhances a firm’s market reception (e.g., Certo, 2003; Gulati & Higgins, 2006).²

¹ In this study we assume that the executive and director labor markets are not fully efficient, because potential positions and candidates are not in well-defined pools; viable candidates, especially, may be far-flung and outside the field of vision of hiring firms (Stross, 2000). The executive and director labor markets are made somewhat efficient by executive search firms, informal industry networks, and the reach of parties already associated with a firm, such as VC investors, founders, and other executives. We also assume that potential candidates who possess prestigious credentials are a small subset of all available executive and director candidates. As such, they are harder to locate in viable quantities, and they have quantitatively and qualitatively more options than those candidates who lack prestigious credentials.

² In a supplemental analysis not reported here, we confirmed this finding for final-year “hires” by predicting the natural logarithm of IPO firms’ initial market valuation using the number of prestigious executives and directors hired in the year prior to IPO. Our results showed that the numbers of prestigious executives and directors both have a positive, linear effect on initial market valuations. Results of this analysis are available from the authors upon request.

To explore the dynamics of prestige enhancement, we describe two theoretical mechanisms: the snowball and dressing-up models. Both models entail two predictive elements: (1) a firm's preexisting stock of prestige and (2) the passage of time.

At any given point, firms may vary widely in the quantity of prestigious affiliates they possess. In the context of software IPOs, three types of prestigious affiliates comprise the amount of overall preexisting prestige in place: prestigious executives, outside directors, and venture capital firms (e.g., Certo, 2003; Gulati & Higgins, 2003, 2006; Lee & Wahal, 2004).^{3, 4} Prestigious executives with lustrous credentials and experience may be more capable of leading a company through the IPO transition process (Fischer & Pollock, 2004; Martens, 2004) and better able to develop and execute superior strategies following the IPO (Finkelstein & Hambrick, 1996). Prestigious outside directors also help assure markets that the firm will receive outstanding advice and be more able to secure scarce resources (Lorsch & MacIver, 1989; Pfeffer, 1972); indeed, research has shown that directors in IPO firms tend to be more involved in company activities and resource acquisition than are directors in more established companies (Certo, 2003; Gompers & Lerner, 2004). Finally, prestigious venture capital firms can provide an array of benefits beyond infusions of capital, including access to their valuable social networks and expertise in strategic planning (Gompers & Lerner, 2004; Sahlman, 1990). All three prestigious parties have been shown to influence perceptions of firm worthiness, as reflected in enlistment of prestigious underwriters (Higgins & Gulati, 2003), higher IPO valuations (Chemmanur & Paeglis, 2005; Sanders & Boivie, 2004), and other beneficial outcomes (Gulati & Higgins, 2006; Jain & Kini, 2000). Accordingly, we anticipate that the presence (or absence) of these three forms of pres-

tige will affect the likelihood and cost of adding prestige during the final year.

The second predictive element is the passage of time. We limit our overall interest to the year leading up to IPO, but we are centrally interested in the countdown *within* that year, and thus we model all our phenomena on a monthly basis within the last year leading up to a firm's IPO registration date.⁵ As we shall now discuss, time works in very different ways, depending on the amount of prestige a firm already possesses.

The Prestige Snowball

Prior research suggests that there exist inner circles and a small world of corporate elites (D'Aveni & Kesner, 1993; Davis, Yoo, & Baker, 2003; Mills, 1956; Useem & Karabel, 1986). Prestigious actors share similar social networks and identities, and are therefore more likely to be attracted by, and willing to interact with, prestigious peers (Hogg, Terry, & White, 1995; McPherson & Smith-Lovin, 1987; Stryker & Burke, 2000). The social attraction, or matching, among prestigious actors is caused by the homophily mechanism: people prefer to associate with others who are similar to them, because similarity implies common interests, values, and beliefs, which in turn eases communication and trust building (Lazersfeld & Merton, 1954; McPherson & Smith-Lovin, 1987). Conversely, individuals are not drawn to dissimilar others, and mismatched associations are not likely to last (Wagner, Pfeffer, & O'Reilly, 1984).

In addition, prior research has shown that a focal actor's prestige, or status, is enhanced by associating with prestigious others (Haunschild, 1994; Podolny, 1993, 1994). Thus, firms with significant numbers of prestigious affiliates offer an additional social benefit to others contemplating an association. Prestigious individuals will view a young firm that already has an abundance of preexisting prestigious affiliates as providing great social value. In contrast, a firm lacking in prestige will be relatively unappealing to a well-credentialed individual.

Finally, since prestigious affiliates also signal the

³ Alliance partners are another prestigious party examined in prior studies, especially in the biotechnology industry, where alliances are widespread and critical to company survival and development (Higgins & Gulati, 2003; Powell, Koput, & Smith-Doerr, 1996; Stuart et al., 1999). In our research context, the software industry, strategic alliances do not play as critical a role as they do in biotechnology and are thus beyond our scope.

⁴ Prestigious underwriters are also very helpful in conveying reliability, but the actual dates on which underwriters are engaged are not publicly available, thus precluding their inclusion as an independent variable, or antecedent condition, in our examination. To control for any potential effects, we included underwriter prestige as a control in our analyses.

⁵ The registration date is when a firm submits all its formal regulatory filings, which include information about financials, investors, executives, and directors. Any material change beyond this date requires an expensive refile process. Accordingly, fewer than 5 percent of the firms in our sample added any executives or directors between their registration dates and their issue dates. Still, as a check, we reran all our analyses using the firms' issue dates, and the results were essentially unchanged.

quality of a firm itself (Certo, 2003; Gulati & Higgins, 2003, 2006; Stuart et al., 1999), preexisting prestige enhances not only a firm's social value, but also its perceived economic value, in the eyes of prestigious recruits. Just as investors must decide whether to purchase a firm's stock, potential hires are faced with great uncertainty in affiliating with a young firm. Thus, prestigious individuals—who are concerned about maintaining their prestige, advancing their careers, and obtaining an economic payoff—are likely to rely on the presence of prestigious affiliates as an important signal of a firm's potential. Accordingly, they will be more likely to join a firm already backed by prestigious others. This quality endorsement perspective further reinforces the snowball logic: a young firm with a significant quantity of preexisting prestige is relatively appealing, and final-year prestigious recruits will be more likely to accept offers from such a firm.

In sum, the snowball model represents our conceptual consolidation of three mechanisms that cause a clustering and accumulation of prestige: (1) homophily, or attraction to similar others; (2) social validation, or the desire for prestigious parties to be socially reaffirmed by their association with other prestigious parties; and (3) value signaling, in which prestigious recruits rely on the presence of other prestigious parties as an economical indicator that an enterprise is worthwhile and promising. The snowball model leads us to propose:

Hypothesis 1. The greater the quantity of preexisting prestige, the greater the number of prestigious executives and directors hired during the year leading up to an IPO.

Dressing Up: Deadline-Induced Remediation

The concept of time plays an important role in the organizational sciences. For example, life cycle models portray how product-markets and organizations evolve over time (Anderson & Zeithaml, 1984; Klepper, 1996); models of diffusion and imitation accord a major role to time (Fligstein, 1987); strategy researchers who examine competitive dynamics, or "hypercompetition" (D'Aveni, 1994), are centrally interested in the speed of moves and countermoves (Chen & MacMillan, 1992; D'Aveni, 1994; Ferrier, Smith, & Grimm, 1999); and small-group researchers have an interest in how group dynamics unfold over time (Gersick, 1988, 1989, 1994; Labianca, Moon, & Watt, 2005; Staudemayer, Tyre, & Perlow, 2002; Waller, Zellmer-Bruhn, & Giambatista, 2002).

Small-group researchers have led the way in ex-

ploring how deadlines affect perceptions and behaviors. Gersick (1988, 1989) was the first to demonstrate that when groups hit the midpoint on the way to a deadline they become acutely aware of the impending deadline, take stock of their work styles and progress, and make adjustments as needed. Subsequent research has confirmed this key finding in studies of temporal versus event-based pacing (Gersick, 1994; Staudemayer et al., 2002), stable versus changing deadlines (Waller et al., 2002), and traditional versus nontraditional work cycles (Labianca et al., 2005). Two meta-analyses of the negotiations literature (Druckman, 1994; Stuhlmacher, Gillespie, & Champaign, 1998) have also shown that time pressure associated with impending deadlines increases the likelihood of negotiators' reaching an agreement, engaging in more compromising behaviors, and making more concessions during the negotiation process.

Deadlines have also been recognized as motivators of organizational activities (Gersick, 1994; March & Simon, 1958). Labianca and colleagues (2005) noted that both individuals and groups develop cognitive schemata to help them interpret and evaluate incoming stimuli, including deadlines. Other scholars have found that time pressures can lead to changes in schemata that allow organizations to overcome inertia and begin to engage in change (Staudemayer et al., 2002). If social actors tend to reassess and modify their strategies as deadlines draw near, we anticipate that such corrections are especially pronounced for those who perceive themselves to be in a disadvantaged position. This is because holding a disadvantaged position at critical points in firms' developments can create "path dependencies" (Noda & Collis, 2001; Stinchcombe, 1965) that translate into unfavorable positions in the future. Poorly endowed organizations approaching deadlines may therefore be more aggressive in their orientations and efforts to change or acquire additional resources (Gersick, 1991; Tushman & Romanelli, 1985). Thus, in contrast to those organizations whose natural endowments or inclinations have allowed them to steadily prepare for deadlines and thus feel little time pressure, those who are least prepared will be inclined to engage in what we call deadline-induced remediation.

We apply the concept of deadline-induced remediation to theorize about how a firm's preexisting stock of resources will affect its behavior as it approaches an impending deadline; specifically, (1) the extent to which the firm will aggressively acquire more resources, and (2) the amount it will pay to get the additional resources. We argue that even though all firms are likely to feel some need to add

prestigious executives and directors as their IPO registration dates approach, less-endowed companies—which have not benefited from the snowball mechanism—will likely feel extraordinary pressure to enlist prestigious affiliates as the clock counts down. To convey some indications of worthiness, they must engage in deadline-induced remediation. We refer to these efforts as dressing up, and we develop hypotheses regarding the likelihood and cost of final-year prestigious hires.

Likelihood of hiring prestigious affiliates. Whereas the snowball mechanism involves a steady accumulation of prestigious affiliates (in a case of the rich getting steadily richer), the dressing-up mechanism involves a remedial effort that is activated by a *combination* of time urgency *and* a scarcity of preexisting prestige. As we shall now argue, these two ingredients by themselves do not lead to dressing-up behaviors; it is their combination, or interaction, that stimulates remediation efforts.

We can envision a month-by-month countdown in the final year prior to an IPO. To build a case that this countdown is salient, or connotes urgency, for IPO firms, we need to argue and demonstrate that firms behave differently at the end of the year than at the beginning. If firms add prestigious affiliates at random points during the final year, then evidence of the salience of the countdown would be lacking.

We expect that firms, in general, increase their aggressiveness in recruiting and signing up new prestigious affiliates as the final year counts down. Even those firms that already have an abundance of prestige will bear in mind that the market will view them more favorably as a function of how many prestigious affiliates they have. As the final year progresses, they will reap the benefits of the snowball's momentum; more and more prestigious recruits will be interested in these firms (and the gains to be made on stock options granted, once the company goes public), and the firms have incentives to sign on as many as they have room for and are qualified.

For those firms lacking in prestige, however, the countdown carries even more salience. Prestigious affiliates, so far, have not been drawn to these firms, and yet there are well-known benefits in having such parties on board by the IPO registration date. As time starts running out, these firms will search more aggressively for prestigious affiliates, in recognition of the stakes involved. We omit, for now, any consideration of the costs or compromises incurred by such firms in signing on prestigious affiliates—but such costs or compromises may be substantial.

In general, then, we expect that the countdown of the final year is salient for all firms approaching IPO, and that this salience is manifested in increased hiring of prestigious affiliates as the year progresses. This phenomenon is not limited to those firms lacking in preexisting prestige, but it is a necessary condition for arguing that dressing up occurs.

Hypothesis 2. As the final year prior to IPO progresses (as urgency increases), the greater the number of prestigious executives and directors hired.

Our second predictive element of interest—beyond the countdown of time—is the quantity of preexisting prestige in a firm. As Hypothesis 1 stated, it is most reasonable to expect that the main effect of preexisting prestige is in line with the snowball logic: the quantity of preexisting prestige in place at any given point in time is positively related to the amount of prestigious hiring in the next period. Correspondingly, those firms that have the greatest scarcity of preexisting prestige will add the fewest new prestigious affiliates.

However, when there is a *combination* of a shortage of time *and* a scarcity of prestige, dressing up will occur. Deadline-induced remediation is an aggressive effort to overcome a perceived deficiency in the face of a fast-approaching threshold. The greater the urgency, the more likely an organization is to try to take aggressive action to remediate its deficiencies. For firms approaching IPO, this means that an interesting inversion occurs. When urgency is not great (in the early months of the final year), those firms with the least preexisting prestige will hire the fewest new prestigious executives and directors; but as the final year counts down and urgency increases, these prestige-poor firms greatly increase their prestigious hiring at an even steeper rate than occurs in prestige-laden firms. As time progresses, prestige-laden firms enjoy a gradual accumulation of their prestige snowballs; but these prestige-poor firms—which previously exhibited minimal prestige hiring—now engage in very aggressive signing on of new prestigious affiliates in a final push to add to their perceived legitimacy and market appeal. Thus, we propose:

Hypothesis 3. The combination (or interaction) of increased urgency and scarcity of preexisting prestige is positively associated with the number of prestigious executives and directors hired during the year leading up to an IPO.

Cost of final-year dressing up. We turn now to a consideration of the cost of hiring prestigious affiliates. Ideally, we would like to consider the cost of hiring executives *and* outside directors. However,

all outside directors are generally paid the same fees for their participation on a board. In addition, most IPO firms do not disclose the exercise price of stock options granted to outside directors, a major component of their compensation. Because of this data limitation, our hypotheses about the cost of hiring prestigious affiliates refer only to executives.

The baseline expectation, not warranting a formal hypothesis, is that the cost of hiring a prestigious executive will be greater than the cost of hiring a nonprestigious executive. Prestigious individuals are usually in short supply. Moreover, prestigious executives will seek to be compensated for the earlier investments and sacrifices they made to obtain their prestigious credentials. Therefore, it is relatively expensive to sign on parties with the desired attributes (Benjamin & Podolny, 1999; Hsu, 2004; Nelson, 1970, 1974; Spence, 1974). For example, Hsu noted, "Affiliation is an ordinary economic good for which actors seeking association will face a price-reputation trade-off" (2004: 1834). In this vein, we expect that young firms wishing to hire prestigious executives will need to pay more than they would for nonprestigious hires.

Our dressing-up model leads us to predict that a young firm lacking in preexisting prestige will be aggressive in recruiting prestigious executives as the IPO registration date draws closer. But such a firm may face great difficulty convincing prestigious executives to join. Although risks of failure may be lower than in the firm's earlier days, substantial uncertainty still exists about the firm's prospects (Fischer & Pollock, 2004; Jain & Kini, 2000). And of course there are no social attractions for a well-credentialed person, because there is a lack of similar others. In contrast, for a firm that already has an abundance of prestigious actors in place, the challenge of attracting prestigious executives will be less serious due to the effects of social attraction, social validation, and signaling we discussed previously (D'Aveni, 1990; Stuart et al., 1999).

Faced with these greater challenges, a firm lacking in preexisting prestige must compensate its prestigious hires with higher pay. This is consistent with the argument that potential prestigious hires will perceive a prestige-poor firm as a much riskier company to join, and will therefore require pay premiums. In sum, even though prestigious hires are expensive, a scarcity of preexisting prestige further increases the amount a firm must pay to obtain them. Therefore, we propose:

Hypothesis 4. Scarcity of preexisting prestige increases the premium that prestigious executives are paid.

In its extreme form, dressing up is a response to both scarcity of prestige *and* shortage of time. Firms without stores of prestige that are fast approaching their IPO registration dates will feel an acute need to engage in deadline-induced remediation. It might be an overstatement to call such firms desperate, but they are certainly under extraordinary pressure to hire individuals with lustrous credentials. This extreme pressure puts such firms at a distinct disadvantage in negotiating with prestigious potential hires. Running low on time, these firms are not able to generate significant pools of prestigious candidates whom they can court and engage in extended or careful negotiations. Indeed, these pressured firms may feel the need to bid relatively liberally for prestigious executives' services, given that they are at a general disadvantage in negotiating with such individuals because of the lack of time to start another search if turned down (Stuhlmacher et al., 1998). All the while, of course, the prestigious executive knows that he or she has a great deal of leverage, as his or her credentials are in short supply and are urgently needed by such firms. Therefore, beyond the extra amount that must be paid by a firm that lacks preexisting prestige (as set forth in Hypothesis 4), if such a firm is also running out of time, it will have to pay an even greater premium to hire a prestigious executive. Therefore, we propose:

Hypothesis 5. Increased urgency further enhances the effects of scarcity of preexisting prestige on the premium that prestigious executives are paid.

DATA AND METHODS

Sample and Data Source

Our sample included all U.S. IPOs issued from 1994 to 1996 in three sectors of the computer software industry: computer programming services (SIC 7371), computer software (SIC 7372), and computer integrated systems design (SIC 7373). We selected these three sectors because they had a large number of IPOs during our sample period. Focusing on a single industry allowed us to control for a variety of factors that might influence the hiring of prestigious upper echelons members and the costs entailed. We chose 1994–96 as our sample period because it was a time of significant IPO activity, but before the "internet bubble" of the late 1990s (Ritter & Welch, 2002).

IPO firms were drawn from the Securities Data Corporation (SDC) Global New Issues database. Following prior research (Pollock & Rindova, 2003; Ritter, 1991), we excluded any IPOs that were spin-offs or equity carve-outs from established corporations to ensure that we were examining only inde-

pendent entrepreneurial firms. Our final sample consisted of 242 IPO firms. Pre-IPO financial data, firm characteristics, and upper echelons biographical and compensation data were drawn from IPO prospectuses. To construct the variables for hypotheses testing, we also used several other sources, as discussed below.

Measurement Time Frame

A company that plans to go public starts preparing for this event at least one year before the offering actually occurs (Guterman, 1991; Husick & Arrington, 1998).⁶ These preparations include developing systems for reporting detailed financial results, refining the company's business plan, and restructuring the company and key management positions to make it look like a public firm (Kleeburg, 2002). Therefore, we defined the "final year" as 12 months prior to the IPO registration date. As will be described below, we identified the number of prestigious hires *in each month* of that last year to measure monthly prestige enhancement, and we used a time-varying cumulative measure of prestigious affiliates at the end of each prior month to measure preexisting prestige. Such a measurement time frame—using the month as our primary time spell—allowed us to identify the exact hiring activities of firms in a fine-grained way.

Dependent Variables

Number of prestigious executives and prestigious directors hired each month. We created separate counts of the number of prestigious executives and outside directors hired by each firm in each month during the last year prior to IPO registration, based on the month and year they joined the firm, as reported in the offering prospectus.⁷ Executives included all members of the top management team listed in the

IPO prospectus (Lester et al., 2006; Pollock, 2004); outside directors included directors who were not current or prior executives of the company (or their family members), or representatives of venture capitalists (VCs) invested in the IPO firm. An executive or outside director was considered prestigious if he or she possessed one or more of the following credentials: experience at prominent firms in the focal industry (intraindustry prestige), experience at firms generally recognized as prestigious (blue-chip prestige), and/or degrees from elite educational institutions (educational prestige).

An individual had intraindustry or blue-chip prestige if he or she was currently or previously employed at a prestigious firm at the level of vice president or higher, and/or sat on a prestigious firm's board. We considered a company to be "blue chip" if it was a member of the S&P 100 index during 1993–95. The S&P 100 is a subset of the S&P 500, which includes the largest, most reliably profitable, and most liquidly traded companies in America.

To identify prominent firms in the software industry, we applied the same method used by Standard & Poor's to generate the S&P 500. We first identified all the publicly listed companies in the 7371, 7372, and 7373 SIC classifications from 1993 to 1995 (a total of 713 companies) and collected data on the same characteristics used by S&P: (1) size, measured as the market capitalization at the end of each year; (2) financial viability, measured as the percentage of quarters during the three-year period in which the firm was profitable; (3) liquidity, the ratio of annual dollar value traded to market capitalization; and (4) free float, the percentage of each company's shares that are available for trading in the market. We standardized these four variables by transforming them into Z-scores and combined them into a single index. Using this index, we identified the 20 most prominent companies in each year in the software industry, obtaining a final list of 23 firms from 1993 to 1995.⁸

We also identified prominent firms in the computer hardware sector because there is considerable "prestige permeability" between hardware (e.g., HP) and software (e.g., Microsoft) companies, and because some firms (e.g., IBM, Sun Microsystems, Apple) have a significant presence in both sectors.

⁶ One year is usually the least amount of time a private firm needs in its preparation for the IPO process. However, we did not know the exact date on which a company decided to start its preparation. Data availability thus prohibits a direct comparison of the dressing-up process in our study with the "punctuated equilibrium" process (Gersick, 1988, 1989) found in prior small-group research.

⁷ The exact month an individual joined his or her firm was not reported for 42 of the 907 executives and directors in our sample. For these individuals, we assumed that they joined six months prior to the registration date. We ran other regressions excluding these 42 upper echelons members, and the results were similar to what we report here.

⁸ We chose to use the top 20 firms in each industry because this cutoff provided a generally stable set of firms over time. For example, if the top 30 firms each year were used, the number of firms counted as prestigious would have almost doubled for both software and hardware, suggesting there is substantial "churn" among the firms below the top 20 from year to year. We also experimented using just the top 15 firms. The results were substantially the same as reported here.

We used the same method described above to generate an additional list of the 20 most prominent computer hardware companies in each year (for a total of 29 firms over 1993–95), using SIC classifications 3571, 3575, 5045, and 7377.

A person was coded as possessing a prestigious educational credential if he or she had a degree (undergraduate or graduate) from an institution on the list of elite educational institutions provided in Finkelstein (1992)—a total of 29 institutions.

In sum, we treated an individual as prestigious if he or she possessed any of our indicators of prestige, regardless of how many. We also experimented with the number of *prestigious credentials* (i.e., an executive with an MBA from Harvard who was a former officer at IBM would be given a score of 2 instead of 1), rather than the total number of *prestigious individuals* a firm hired. The results were very similar to those we report here.

Cost of hiring an executive. The cost of hiring an executive was measured as the total compensation paid to each executive hired during the year prior to IPO. An executive's total compensation equaled the sum of annual salary, bonus, all other compensation (insurance premiums, retirement contributions, etc.), and the value of stock options granted. This measure was transformed into its natural logarithm. The calculation of stock option value, as mandated by the Securities and Exchange Commission (SEC), was based on the assumption that a firm's stock price would appreciate at a compounded rate of 10 percent annually, until the option expiration (Certo, Daily, Cannella, & Dalton, 2003).⁹

Independent Variables

Scarcity of preexisting prestige. We measured the preexisting stock of prestige by separately counting, and then aggregating, the number of prestigious executives, prestigious outside directors, and prestigious VCs in place at the end of each prior month. The month and year that VCs initially invested in a focal firm were collected from the SDC VentureXpert database.

We applied the same criteria described above to determine whether a preexisting executive or direc-

tor was prestigious or not.¹⁰ To identify whether a VC was prestigious, we identified, for each year between 1990 and 1994, the top ten VC firms in the *Venture Capital Journal's* annual rankings of the size of new funds raised by VCs that year. We used a five-year period because not all VC firms necessarily raise new funds each year; however, almost all firms raised at least one new fund within a five-year period (Gompers & Lerner, 2004; Sahlman, 1990). We then identified the top ten VCs that raised the largest funds during each year from 1990 through 1994, obtaining a final list of 46 prestigious venture capital firms.

We standardized the three types of preexisting prestige (executives, directors, and VCs) by transforming them into *Z*-scores, and then we combined them into a single *preexisting prestige index*. Such an index captures the total preexisting stock of prestige a firm possessed at the end of each prior month. The Cronbach alpha for the three indicators was .71, and factor analysis confirmed that all items loaded on a single factor with an eigenvalue greater than one, suggesting that the three items could be reliably combined into a single index. Using such an index is theoretically consistent with our arguments and is also empirically parsimonious.¹¹

Finally, we inverse-coded the preexisting prestige index to generate our measure of the *scarcity of preexisting prestige*. Thus, a higher score on this measure indicates that a firm had a relative lack of preexisting prestige. (Converting this into a measure of scarcity was consistent with the wording of the dressing-up hypotheses, and it was especially helpful for interpreting our interaction results.)

Urgency. This was measured as the inverse of the number of months remaining until the IPO registration date. For each month, we calculated the number of months remaining until IPO registration (month *t*), and then subtracted this value from 12

⁹ We could not determine the exact compensation of 54 executives (about 11% of our sample) hired at the last minute because their total compensation was below \$100,000, the threshold for compulsory disclosure set by the SEC. We replaced these missing values with \$90,000 in our empirical analyses. We ran other regressions using \$80,000, and excluding these 54 executives, with largely similar results.

¹⁰ Although each prospectus listed all management team members and directors at the time of filing with the SEC, there might have been prestigious upper echelons members who left prior to the filing. It was not possible to identify such individuals. Therefore, our data might undercount the number of preexisting prestigious people, which would add to our error variance and create a more stringent test of our hypotheses.

¹¹ In analyses not reported here, we also explored whether the individual indicators of prestige all had significant effects. Although the effects of the three indicators varied somewhat in strength, the results for the three separate measures were generally significant and highly consistent with those reported here.

(i.e., urgency = $12 - t$). Thus, higher values indicate greater urgency.

Personal prestige. This measure was a dummy variable (coded 1 if a hired executive was prestigious, and 0 otherwise). This measure was used to test our compensation hypotheses.¹²

Control Variables

Firm characteristics. We included several firm characteristics suggested by prior research to control for the scale, resources, and risk embedded in each firm. All were measured for the year prior to IPO registration. We included the following variables: *sales* (natural logarithm of annual sales), *net income* (profits/losses before taxes and extraordinary items), *sales growth*, *firm age*, *founder presence* (a dummy variable, coded 1 if one or more founders were still involved in an executive capacity, and 0 otherwise), *the number of risk factors* (indicated in the offering prospectus), and *R&D intensity* (the ratio between R&D expenditures and sales).¹³

Segment and year dummies. To control for the effects of belonging to a particular industry segment, we included two dummy variables coded 1 if firms had primary SIC codes of 7371 or 7372 (7373 was the omitted segment). Because our sample included IPOs covering a three-year period, we also created two dummy variables coded 1 if companies went public in 1995 or 1996 (1994 was the omitted year).

Education information dummy. Companies are not required by the SEC to provide information about the educational backgrounds of their executives and directors; thus, these data were not reported for all companies in our sample. Since this information was used to identify prestigious upper echelons members, it is possible we undercounted prestigious individuals for firms that did not report educational backgrounds; we therefore included a dummy variable coded 1 if a company provided information on educational backgrounds, and 0 otherwise.

Number of preexisting executives, outside directors, and VCs. We controlled for the total number (prestigious and nonprestigious) of preexisting executives, outside directors, and VCs because

larger groups have the potential to contain more prestigious actors, and firms with larger upper echelons might have less need to recruit additional members. These variables were measured as the total number of executives, outside directors, and VCs, respectively, present at the end of each prior month.

Number of nonprestigious executives and outside directors hired each month. We also controlled for the number of *nonprestigious* executives and outside directors hired in each month, to rule out the possibility that our results were due to a firm's hiring of upper echelons members in general, not just prestigious members. We used the same criteria discussed above to code whether an executive or director hired in each month was prestigious or not.

Number of prestigious underwriters. We counted the total number of prestigious lead and comanaging underwriters, using the well-known nine-point Carter and Manaster (C-M) rating system (Carter et al., 1998; Carter & Manaster, 1990). An underwriter was coded as prestigious if it received a C-M score of 8.75 or higher. The 18 banks that met this criterion correspond highly with the top banks identified in other listings (Carter et al., 1998; Pollock, 2004), and they were the most active underwriters in our sample.¹⁴

Individual characteristics. When predicting executive compensation, we controlled for individual characteristics of executives. These characteristics were *functional background* (seven dummies, coded 1 if the officer's background was general management, finance, sales/marketing, operations, technology, business development, or corporate counsel, respectively; all other functions comprised the excluded category), *positional ranking* (three dummies, coded 1 if the officer was the CEO, executive vice president, or senior vice president, respectively; all other positions comprised the omitted category),¹⁵ *personal stake* (the natural logarithm of the IPO offering price times the number of shares held by the executive), and *executive age*.

Peers' compensation. Since the compensation of an executive is also affected by the general pay levels of colleagues in the same company (Wade, O'Reilly, & Pollock, 2006), we included the compensation of the executive's peers as another con-

¹² In analyses not reported here, we substituted the number of prestigious credentials as the personal prestige indicator. The results were substantively the same as those reported here.

¹³ We also used the log-transformed R&D expenditures to measure R&D intensity. The results were the same.

¹⁴ The lists of prestigious underwriters, VCs, software firms, and hardware firms are available upon request.

¹⁵ If an executive's title was prefaced by "chief" (e.g., chief financial or chief technology officer) and no other rank was identified, he or she was coded as an executive vice president.

trol when predicting executive compensation. This measure equaled the average compensation (including salary, bonus, other compensation, and the value of stock options granted) of his or her colleagues within the firm. This measure was transformed into its natural logarithm.

Estimation Methods

The dependent variables used to test for the number of prestigious executives and directors hired each month were integer counts that were not normally distributed and had restricted ranges (Cohen, Cohen, West, & Aiken, 2003); thus, ordinary least squares (OLS) regression would yield inefficient and biased estimates (Sanders & Carpenter, 1998; Wade, Porac, & Pollock, 1997). Poisson distributions are generally better estimates of these measures, but are inappropriate if the measure's variance exceeds its mean, in which case negative binomial regressions are more appropriate (Fleming, 2001; Ramaswamy, Anderson, & DeSarbo, 1994). We found that negative binomial regressions were appropriate for our data.

Because we investigated each firm's monthly prestigious hires, each firm in our sample contributed 12 observations; thus, the total number of firm-month observations was 2,904 (242 firms \times 12 months). Since the multiple observations in each firm were not independent, we used Stata's "cluster" and "robust" options to adjust the standard errors for intragroup correlations.

For Hypotheses 4 and 5, our dependent variable was each newly hired executive's compensation. Among our 242 sample firms, 48 did not hire any executives during the final year, and thus were excluded from the analysis of compensation. The remaining 194 firms hired 494 executives during the final year, which formed the sample for this analysis. Since we had multiple hires for some firms, we used random-effects regressions with robust standard errors.

We used the "coldiag" command in Stata 9.0 to examine potential multicollinearity in all our models. None of the condition statistics were high enough to cause concern (all were well under a condition index of 30, the cutoff suggested by Belsley, Kuh, and Welsch [1980]).

RESULTS

Tables 1 and 2 contain the descriptive statistics and correlations for each of the subsamples used to test our hypotheses. Table 1 presents the data for our firm-level sample used in testing Hypotheses 1–3; Table 2 is based on the sample of executives

hired in the final year, used to test Hypotheses 4 and 5 regarding compensation.

Likelihood of Prestigious Hiring

Table 3 presents the results of the regressions predicting the number of prestigious executives hired in each month of the final year prior to IPO. Model 1 includes the control variables. Model 2 adds scarcity of preexisting prestige and urgency. The effect of scarcity of preexisting prestige is negative and significant ($\beta = -0.29$, $p < .01$), indicating that a greater scarcity of preexisting prestige leads to fewer prestigious executives hired in each month of the last year. Conversely, the greater the preexisting prestige, the greater the number of prestigious executives hired. This result supports the logic of the snowball model, as expressed in our Hypothesis 1.

Model 2 also reveals that urgency is positively and significantly related to hiring prestigious executives ($\beta = 0.14$, $p < .01$); thus, as urgency increases (as the IPO gets closer), so does the number of prestigious executives who will be hired. This result, which supports Hypothesis 2, indicates that the countdown within the final year is salient for all IPO firms, regardless of their preexisting stores of prestige, which is a basic condition for the dressing-up model.

Model 3 tests Hypothesis 3 by adding the interaction of scarcity of preexisting prestige and urgency. Results show that the main effects of scarcity of preexisting prestige and urgency remain significant (as reported in model 2), and that the interaction is positive and significant ($\beta = 0.02$, $p < .05$), suggesting that the effect of urgency on hiring prestigious executives is felt even more acutely by firms lacking in preexisting prestige. Therefore, the dressing-up model, as expressed in Hypothesis 3, is supported.

Figure 1 illustrates the interaction effect of scarcity of preexisting prestige and urgency on the number of prestigious executives hired. The dashed line represents the effect of urgency when scarcity of preexisting prestige is one standard deviation below the mean (i.e., when a firm has abundant preexisting prestige), and the solid line represents the effect of urgency when scarcity of preexisting prestige is one standard deviation above the mean (i.e., when a firm lacks preexisting prestige). Both lines have positive slopes, suggesting that, as the IPO registration date draws closer, a greater number of prestigious executives are hired. The dashed line is consistently above the solid line, indicating that firms with abundant preexisting prestige tend to hire more prestigious executives

TABLE 1
Descriptive Statistics and Correlations for Firm-Level Variables for Analyses of the Likelihood of Prestigious Hires^a

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1. Pre-IPO sales ^b	2.32	1.18																					
2. Pre-IPO income	-0.21	6.05	.25																				
3. Pre-IPO sales growth	0.82	1.06	-.16	-.06																			
4. Firm age	9.43	5.65	.41	.12	-.30																		
5. Education information	0.47	0.50	-.13	-.01	.02	.04																	
6. Issue 1995	0.37	0.48	.11	-.01	.02	-.07	-.03																
7. Issue 1996	0.47	0.50	-.08	.00	-.05	-.02	.07	-.72															
8. SIC 7371	0.12	0.33	.19	-.13	-.01	.02	-.08	.00	.05														
9. SIC 7372	0.69	0.46	-.17	.03	-.03	-.14	.07	-.03	-.57	-.03													
10. Number of prestigious underwriters	1.00	1.05	.18	-.03	.27	-.09	.04	.02	.09	-.01	.12												
11. Number of risk factors	19.78	4.73	-.43	-.15	-.02	-.29	.12	-.07	.30	-.09	.06	-.10											
12. R&D intensity	0.26	0.27	-.35	-.29	.16	-.16	.04	-.05	.10	-.11	.13	.23	.08										
13. Number of preexisting executives	5.34	2.13	.35	-.09	-.01	.20	-.08	.06	-.03	-.03	.07	.30	-.23	.14									
14. Number of preexisting directors	2.71	1.83	.14	-.02	.15	-.13	.01	.11	-.03	-.08	.01	.21	-.10	.22	.21								
15. Number of preexisting VCs	1.93	2.86	.16	-.02	.11	-.02	.08	-.01	.01	-.04	.09	.29	-.14	.17	.20	.37							
16. Number of nonprestigious executives hired in current month	0.11	0.36	-.04	-.02	.04	-.04	-.04	.02	-.01	-.04	.01	.04	.00	.04	-.05	.03	.00						
17. Number of nonprestigious directors hired in current month	0.06	0.31	-.01	-.01	.00	-.01	-.04	-.02	.02	-.02	-.01	.01	.01	.01	-.01	-.06	-.05	.11					
18. Urgency	6.50	3.45	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.22	.16	.05	.08	.09				
19. Scarcity of prestige	-0.12	2.38	-.09	.08	-.19	.08	-.45	.00	-.06	.03	-.14	-.41	.06	-.23	-.30	-.37	-.31	.02	.07	-.09			
20. Number of prestigious executives hired in current month	0.04	0.20	.03	.00	.04	-.04	.09	-.01	.02	.03	-.01	.10	.01	.03	-.01	.03	.05	.04	-.02	.04	-.12		
21. Number of prestigious directors hired in current month	0.03	0.21	-.03	-.01	.04	-.03	.07	.01	.03	-.01	.04	.06	.05	.04	.02	-.06	.01	.04	.15	.06	-.07	.05	

^a Analyses are for each month in the year just prior to IPO; $n = 2,904$ firm-month observations. Correlations above .04 are significant at the .05 level.

^b Log-transformed.

TABLE 2
Descriptive Statistics and Correlations for Firm-Level and Individual-Level Variables for Analyses of the Cost of Hiring Executives^a

Variable	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	25	26	27	28		
1. General management	0.09	0.28																														
2. Finance	0.25	0.43	-.18																													
3. Sales and marketing	0.26	0.44	-.19	-.34																												
4. Operation	0.11	0.33	-.11	-.20	-.21																											
5. Technology	0.09	0.29	-.10	-.18	-.19	-.11																										
6. Business development	0.03	0.17	-.06	-.10	-.11	-.06	-.06																									
7. Counsel	0.03	0.18	-.06	-.11	-.11	-.07	-.06	-.03																								
8. Position ranking 1	0.05	0.22	.75	-.13	-.14	-.08	-.07	-.04	-.04																							
9. Position ranking 2	0.35	0.48	.02	.23	-.13	.07	-.01	-.01	-.09	-.17																						
10. Position ranking 3	0.42	0.49	-.25	.06	.15	-.02	.03	-.01	-.03	-.20	-.63																					
11. Executive age	42.48	6.89	.09	.01	-.02	.07	-.03	-.03	.00	.06	.03	.01																				
12. Founder presence	0.65	0.40	.24	-.07	-.08	.01	.07	-.02	-.02	.26	.04	-.11	-.16																			
13. Personal stake ^b	0.92	3.48	.51	-.10	-.09	-.04	-.03	.04	-.05	.66	-.08	-.13	.04	.25																		
14. Education information	0.47	0.50	-.01	.01	.08	-.07	.05	.05	-.02	.05	-.04	-.12	.02	.01	.09																	
15. Pre-IPO sales ^b	2.28	1.23	-.07	.00	-.03	.05	-.03	.08	.02	-.09	-.08	.05	.11	-.16	-.02	.00																
16. Pre-IPO income	-0.17	4.82	-.07	.02	-.08	.05	.00	.03	.04	-.02	-.11	.05	.07	-.01	-.03	-.06	.52															
17. Pre-IPO sales growth	1.18	2.78	-.03	.00	.04	-.02	.02	-.01	-.03	-.01	-.01	-.04	-.03	-.01	-.02	-.04	-.10	-.05														
18. Firm age	8.41	5.86	-.01	.05	-.01	-.04	-.02	-.01	-.06	-.03	-.02	.01	.13	-.15	-.02	.07	.42	.11	-.14													
19. Number of risk factors	19.78	4.02	-.01	.03	-.04	-.04	.09	-.02	.04	.01	.06	-.01	-.08	-.15	-.01	.06	-.44	-.12	-.05	-.20												
20. R&D intensity	0.30	0.31	.04	-.05	.03	-.01	.04	-.05	-.07	.05	-.02	-.03	.02	.02	.04	.12	-.48	.12	-.10	-.10												
21. Issue 1995	0.40	0.49	-.01	-.03	-.02	.11	-.06	-.05	-.04	-.01	-.02	-.06	-.03	-.01	-.04	-.06	.21	.13	-.04	.00	-.17	-.17										
22. Issue 1996	0.47	0.50	.00	-.01	.02	-.07	.02	.04	.09	-.02	.07	.03	.05	.01	.06	.10	-.19	-.07	-.09	-.02	.34	.17	-.78									
23. SIC 7371	0.11	0.31	.00	.04	-.04	-.02	-.02	.16	-.04	-.03	.11	-.03	.02	-.05	.29	.01	.18	-.02	-.03	.09	-.10	-.13	-.04	.08								
24. SIC 7372	0.70	0.46	-.01	-.01	.07	.00	-.01	-.09	-.05	.00	-.04	.05	-.05	.01	-.18	.18	-.19	-.04	-.02	.00	.06	.16	-.02	-.54								
25. Peers ^b compensation ^b	11.90	0.50	.00	.06	-.01	-.07	-.06	.06	.01	-.03	.08	-.07	.08	-.13	-.12	-.08	.28	.04	-.05	.23	-.21	.01	-.19	.24	-.46	-.26						
26. Urgency	5.99	4.91	-.06	.10	-.02	-.02	.02	.00	.00	-.09	.02	.06	-.02	.01	-.17	.02	-.10	.01	.02	-.12	.09	-.08	-.05	.05	-.04	-.04	-.04					
27. Scarcity of preexisting prestige	-0.08	2.27	.12	.04	-.07	-.01	.01	-.03	.03	.08	-.03	.06	-.06	.11	.00	-.46	-.05	.17	-.06	-.11	.07	-.26	.10	-.13	-.04	-.09	-.07	.06				
28. Personal prestige	0.23	0.42	.01	.05	-.05	-.01	.03	.01	-.05	.06	.00	.08	.00	.01	.08	.36	.08	.02	.02	-.02	.01	.00	-.03	.05	.14	-.05	.01	.05	-.21			
29. Cost of hiring an executive during the last year ^b	11.8	0.77	.27	-.01	-.01	-.03	-.03	.03	-.07	.22	.18	-.16	.14	-.06	.25	.06	.10	-.02	-.07	.09	-.06	.06	-.13	.19	.25	-.12	.49	-.09	-.06	.21		

^a Analyses are for each month in the year just prior to IPO; $n = 496$. Correlations above .09 are significant at the .05 level.

^b Log-transformed.

TABLE 3
Results of Negative Binomial Regression Analysis for the Number of Prestigious Executives Hired in Each Month of the Year Just Prior to IPO^a

Variables	Model 1		Model 2		Model 3	
Pre-IPO sales ^b	0.21	(0.14)	0.30 [†]	(0.16)	0.30 [†]	(0.16)
Pre-IPO income	0.01	(0.01)	0.01	(0.01)	0.01	(0.02)
Pre-IPO sales growth	0.07	(0.12)	-0.00	(0.11)	-0.01	(0.11)
Firm age	-0.02	(0.03)	-0.01	(0.02)	-0.01	(0.02)
Education information	1.15**	(0.28)	0.60*	(0.26)	0.60*	(0.26)
Issue 1995	-0.17	(0.33)	-0.22	(0.29)	-0.22	(0.29)
Issue 1996	-0.08	(0.30)	-0.18	(0.29)	-0.18	(0.29)
SIC 7371	0.19	(0.44)	0.15	(0.36)	0.16	(0.36)
SIC 7372	-0.17	(0.31)	-0.16	(0.29)	-0.17	(0.29)
Number of prestigious underwriters	0.36**	(0.14)	0.31**	(0.11)	0.31**	(0.11)
Number of risk factors	0.04	(0.03)	0.05	(0.03)	0.05	(0.03)
R&D intensity	0.05 [†]	(0.03)	0.06*	(0.02)	0.06*	(0.02)
Number of preexisting executives	-0.07	(0.06)	-0.24**	(0.08)	-0.24**	(0.08)
Number of preexisting directors	0.06	(0.06)	-0.08	(0.08)	-0.09	(0.08)
Number of preexisting VCs	-0.06	(0.06)	-0.25**	(0.09)	-0.26**	(0.09)
Number of nonprestigious executives hired in current month	0.04	(0.08)	0.10	(0.07)	0.10	(0.07)
Scarcity of preexisting prestige			-0.29**	(0.08)	-0.31**	(0.08)
Urgency			0.14**	(0.03)	0.16**	(0.03)
Scarcity of preexisting prestige × urgency					0.02*	(0.01)
Constant	-5.48**	(0.89)	-5.18**	(0.92)	-5.32**	(0.92)
Log pseudo-likelihood	-415.26		-393.82		-392.59	
Wald chi-square	70.65**		157.00**		157.54**	

^a Robust standard errors are in parentheses; $n = 2,904$.

^b Log-transformed.

[†] $p < .10$

* $p < .05$

** $p < .01$

each month—a demonstration of the snowball effect. But, in support of the dressing-up model, the solid line is steeper, and the gap between the two lines narrows as urgency increases. Thus, although firms with preexisting prestige have a greater propensity to hire prestigious executives in the early months of the final year, this difference is almost completely eliminated as the deadline draws closer.

Table 4 presents the results of the regressions predicting the number of prestigious outside directors hired in each month of the last year prior to IPO. The results mirror those for the hiring of prestigious executives in supporting Hypotheses 1–3. Scarcity of preexisting prestige is negatively and significantly related to the hiring of prestigious executives ($\beta = -0.16$, $p < .01$), suggesting that greater scarcity of prestige is related to fewer prestigious directors hired; the effect of urgency is positive and significant ($\beta = 0.15$, $p < .01$), indicating that, as the IPO registration date draws closer, more prestigious directors will be hired; and the interaction term of the two variables is positive and significant ($\beta = 0.02$, $p < .05$), indicating that firms lacking in preexisting prestige feel time urgency more acutely and

greatly increase their hiring of prestigious directors (as with executives) as the deadline draws near.

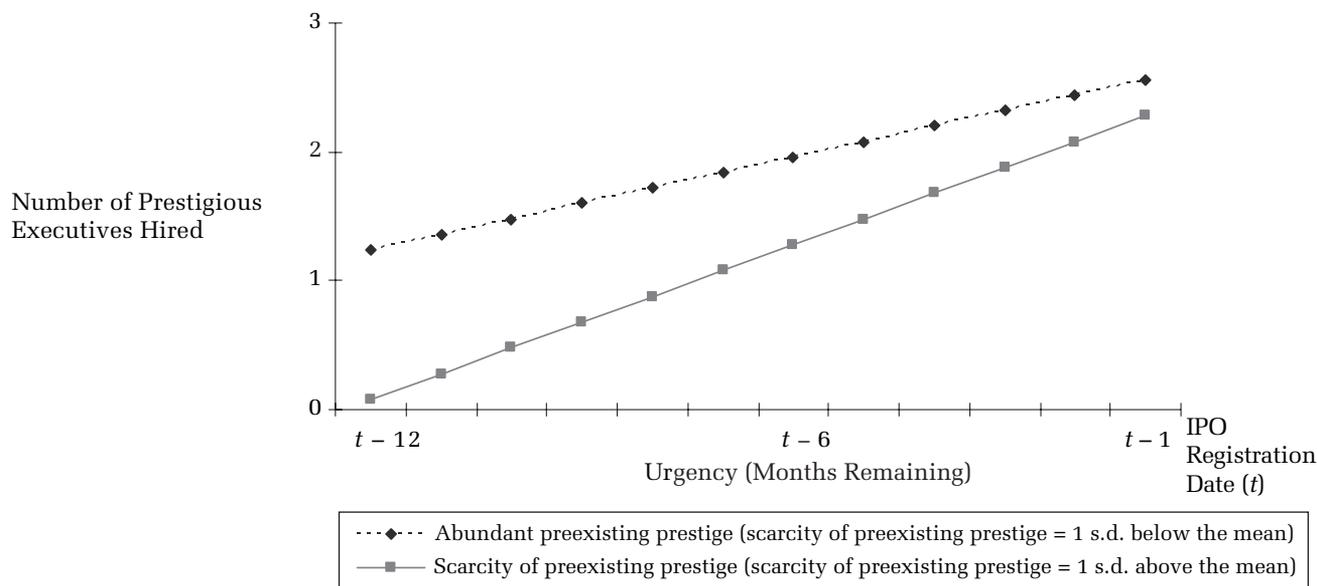
Figure 2 graphs the interaction effect of scarcity of preexisting prestige and urgency on the number of prestigious outside directors hired, using the same approach as in Figure 1. Again, both lines have positive slopes; the dashed line is consistently above the solid line; and the gap between the two lines becomes smaller as urgency increases.

Cost of Hiring Prestigious Executives

Table 5 presents regressions predicting the compensation of executives hired in the final year. Model 1 includes the main effects of all the predictor variables; model 2 adds the interaction between scarcity of preexisting prestige and personal prestige, testing Hypothesis 4; and model 3 adds the remaining two-way interactions, as well as the three-way interaction between personal prestige, urgency, and scarcity of preexisting prestige, to test Hypothesis 5.

As expected, model 1 indicates that prestigious executives receive a compensation premium. This

FIGURE 1
Effect of the Interaction of Urgency and Scarcity of Preexisting Prestige on the Number of Prestigious Executives Hired



effect remains positive and significant in all models. Additionally, in support of Hypothesis 4, the positive and significant interaction between personal prestige and scarcity of preexisting prestige ($\beta = 0.08$, $p < .05$) in model 2 indicates that firms with a scarcity of preexisting prestige pay an even greater premium for prestigious executives. This effect remains robust in the fully specified model.¹⁶

Finally, Hypothesis 5 predicts that the premium paid for prestigious executives by firms with scarce preexisting prestige will be even greater as urgency increases. Model 3 shows that the three-way interaction among urgency, scarcity of preexisting prestige, and personal prestige is positive and significant ($\beta = 0.01$, $p < .05$). This result, in support of Hypothesis 5, indicates that a firm must pay particularly high compensation if the executive is prestigious, *and* the firm lacks preexisting prestige, *and* the IPO registration date is drawing near.

Figure 3 graphs the interaction effect of urgency and scarcity of preexisting prestige on executive compensation in cases where the hired executive is prestigious.¹⁷ As in our earlier figures, the dashed

line and solid line represent cases where a firm has a scarcity of preexisting prestige one standard deviation below (i.e., an abundance of prestige) and above (i.e., a lack of prestige) the mean, respectively. Both lines have positive slopes, suggesting that a firm, in general, must pay a new prestigious executive more as the registration date draws closer. However, the solid line is consistently above the dashed line, indicating that a firm lacking preexisting prestige (i.e., with a greater scarcity of prestige) has to pay more to hire a prestigious executive, compared to firms that already have abundant prestige. Finally, the solid line is steeper than the dashed line, suggesting that time urgency has a greater effect on executive compensation for those firms lacking preexisting prestige. In sum, these compensation results clearly support the dressing-up model by indicating that deadline-induced remediation is possible—but relatively costly.

DISCUSSION

Prior research has devoted considerable attention to studying the effects of prestigious affiliates on organizational outcomes (Benjamin & Podolny, 1999; Carter & Manaster, 1990; Certo, 2003; D'Aveni, 1990; D'Aveni & Kesner, 1993; Hambrick & D'Aveni, 1992; Haunschild, 1994; Podolny, 1994; Pollock et al., 2004; Sanders & Boivie, 2004; Stuart et al., 1999). Far less attention has been devoted to the dynamic processes, or the costs involved, in

¹⁶ We do not graph this interaction, since the variable being moderated (i.e., personal prestige) is a dummy variable; thus, there is no effect of the measure when its value equals zero.

¹⁷ We cannot produce a meaningful graph for cases where the hired executive is not prestigious, because personal prestige equals zero in such cases, and all coefficients for interactions therefore also become zero.

TABLE 4
Results of Negative Binomial Regression Analysis for the Number of Prestigious Outside Directors Hired in Each Month of the Year Just Prior to IPO^a

Variables	Model 1		Model 2		Model 3	
Pre-IPO sales ^b	0.01	(0.14)	0.01	(0.14)	0.00	(0.14)
Pre-IPO income	0.01	(0.03)	0.01	(0.04)	0.01	(0.04)
Pre-IPO sales growth	0.16	(0.10)	0.18 [†]	(0.10)	0.18 [†]	(0.10)
Firm age	-0.02	(0.03)	-0.01	(0.03)	-0.01	(0.03)
Education information	0.62**	(0.21)	0.37	(0.23)	0.36	(0.23)
Issue 1995	0.62	(0.44)	0.71	(0.44)	0.72	(0.44)
Issue 1996	0.71 [†]	(0.43)	0.74 [†]	(0.43)	0.75 [†]	(0.43)
SIC 7371	0.33	(0.49)	0.31	(0.46)	0.30	(0.46)
SIC 7372	0.55	(0.36)	0.51	(0.35)	0.49	(0.35)
Number of prestigious underwriters	0.29**	(0.10)	0.28*	(0.11)	0.27*	(0.11)
Number of risk factors	0.04 [†]	(0.02)	0.04 [†]	(0.02)	0.04 [†]	(0.02)
R&D intensity	0.02	(0.04)	0.03	(0.05)	0.03	(0.05)
Number of preexisting executives	0.11 [†]	(0.06)	-0.01	(0.07)	-0.02	(0.07)
Number of preexisting directors	-0.43**	(0.07)	-0.56**	(0.10)	-0.55**	(0.10)
Number of preexisting VCs	-0.04	(0.08)	-0.11	(0.09)	-0.11	(0.09)
Number of nonprestigious directors hired in current month	-0.24*	(0.10)	-0.19 [†]	(0.10)	-0.19 [†]	(0.10)
Scarcity of preexisting prestige			-0.16**	(0.06)	-0.20**	(0.06)
Urgency			0.15**	(0.04)	0.16**	(0.04)
Scarcity of preexisting prestige × urgency					0.02*	(0.01)
Constant	-5.31**	(0.76)	-5.63**	(0.82)	-5.67**	(0.84)
Log pseudo-likelihood	-403.10		-389.99		-389.03	
Wald chi-square	98.74**		110.53**		114.83**	

^a Robust standard errors are in parentheses; $n = 2,904$.

^b Log-transformed.

[†] $p < .10$

* $p < .05$

** $p < .01$

obtaining prestigious affiliates (Higgins & Gulati, 2003; Hsu, 2004). Our study addresses these issues. Using month-by-month data on companies preparing to go public, we developed and tested the broad contours of two models for explaining the hiring of prestigious executives and directors: the snowball model and the dressing-up model. Based on our results, both models appear to be very apt for explaining companies' efforts to build up their stores of prestige prior to IPO.

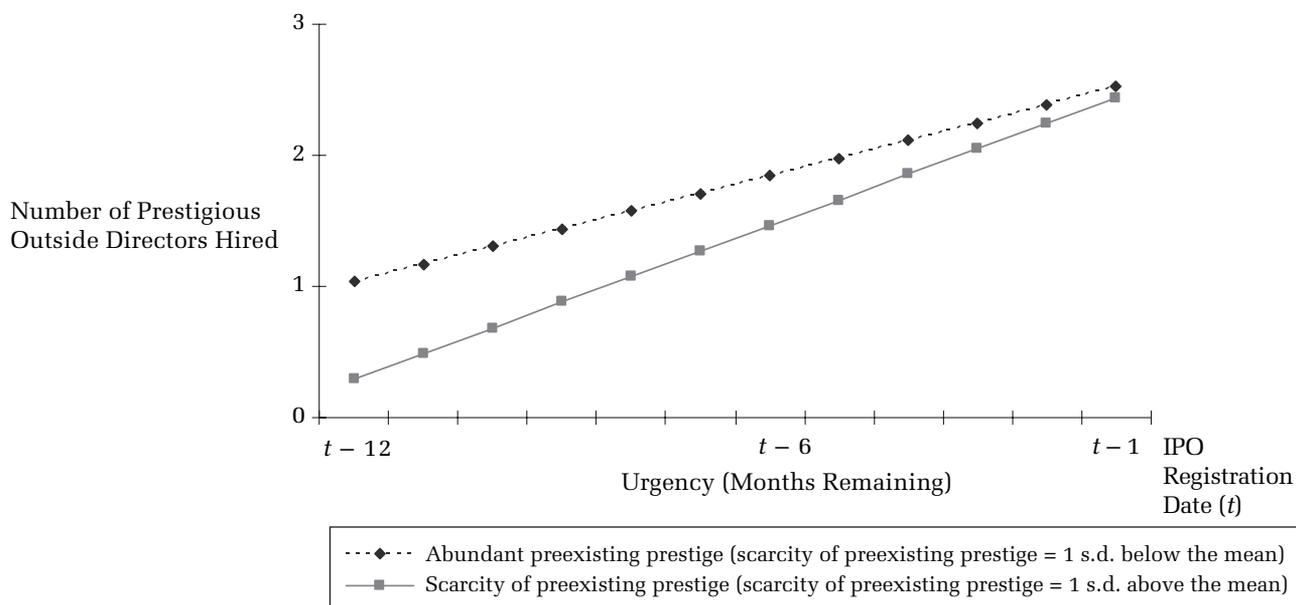
Support for Two Complementary Models

The snowball model represents our consolidation of prior explanations of how prestigious parties are drawn to each other—through mechanisms of homophily, social validation, and signaling (D'Aveni & Kesner, 1993; Haunschild, 1994; McPherson & Smith-Lovin, 1987; Merton, 1968; Podolny, 1993; Stuart et al., 1999). Of our two models, the snowball model might be thought of as describing “natural tendencies,” akin to social momentum. In the context of IPOs, this social momentum translates into the rich getting richer. Specifi-

cally, we found strong evidence that those companies that already possessed a great deal of prestige tended to hire the greatest number of new, prestigious executives and directors in the next period.

We can illustrate the strength of the snowball phenomenon with some simple comparisons. We identified two subgroups of firms in our sample. The first group consisted of 22 highly credentialed firms that, 12 months prior to IPO, were in the top quartile in terms of their quantities of preexisting prestigious executives, directors, and VCs. The second group was comprised of the 76 uncredentialed firms that, again 12 months prior to IPO, had zero units of preexisting prestige of any of the three types. We found that 68 percent of the highly credentialed firms recruited one or more prestigious executives during the final year (prior to IPO), compared to just 18 percent of the uncredentialed firms; in recruiting prestigious directors, the corresponding figures were 50 percent and 22 percent, respectively. This analysis is coarser than our month-by-month examination, but it clearly illus-

FIGURE 2
Effect of the Interaction of Urgency and Scarcity of Preexisting Prestige on the Number of Prestigious Outside Directors Hired



trates the prevailing tendency for preexisting prestige to attract additional prestige.

We also found substantial support for the dressing-up model, which operates concurrently with the snowball model. If the snowball model describes “natural phenomena,” the dressing-up model portrays phenomena that are “unnatural” or artificially stimulated. Specifically, as their IPO registration dates approach, those companies that are most lacking in prestige dramatically increase their hiring of prestigious executives and directors, and at a steeper rate than companies that have abundant preexisting prestige. Pre-IPO dressing up, then, is an instance of the broader phenomenon of deadline-induced remediation, in which entities are stimulated to strive aggressively to overcome their shortcomings in the face of a momentous threshold event.

As part of our efforts to validate and enrich the dressing-up model, we also examined the cost of hiring prestigious executives to a firm in a disadvantageous position—that is, when preexisting prestige is scarce and time is running out. Our logic was that prestigious executives would require extra pay to join a company that is lacking prestige, because of its greater perceived riskiness and the absence of social validation and social appeal. Moreover, we expected that this required pay premium would increase as the IPO deadline draws closer. As the clock progresses, we argued, the company is under mounting pressure to sign on prestigious executives, and such executives almost certainly

are aware of their own increased leverage. Our results strongly supported this line of thought.

It is instructive to convert our statistical results for executive pay into dollar values. If we use the median compensation paid (\$102,000) to all executives hired in the final year as the baseline and apply the coefficients in model 3 of Table 5,¹⁸ we can gauge the economic cost of dressing up. First, we need to note that urgency, or closeness to the IPO registration date, tends to push up executive pay in general, even for companies with an abundance of prestige. For example, companies with abundant prestige (i.e., scarcity of prestige one standard deviation below the mean) that hired prestigious executives 12 months prior to IPO registration paid \$129,000 per executive, on average, whereas 1 month prior to IPO registration those companies paid \$180,000 per prestigious executive. This result is consistent with prior research demonstrating that deadlines influence behavior (Gersick, 1988, 1994; Staudenmayer et al., 2002) and that when one party in a negotiation faces a deadline that the other does not, it gives the less constrained party some bargaining leverage (Stuhlmacher et al., 1998).

For companies lacking preexisting prestige, new

¹⁸ The median total compensation for prestigious executives hired during the last year was \$150,000; for nonprestigious executives the median compensation was \$84,000.

TABLE 5
Results of Random-Effects Analysis for the Cost of Hiring Executives in the Year Just Prior to IPO^a

Variables	Model 1	Model 2	Model 3
General management	0.58** (0.22)	0.59** (0.22)	0.60** (0.22)
Finance	0.06 (0.09)	0.05 (0.09)	0.05 (0.09)
Sales and marketing	0.20** (0.08)	0.18* (0.08)	0.20** (0.08)
Operation	0.17* (0.10)	0.17* (0.10)	0.18* (0.10)
Technology	0.17 (0.11)	0.16 (0.11)	0.15 (0.11)
Business development	0.18 (0.13)	0.18 (0.14)	0.19 (0.14)
Counsel	-0.04 (0.14)	-0.05 (0.14)	-0.05 (0.14)
Position ranking 1	0.37 (0.28)	0.34 (0.28)	0.37 (0.28)
Position ranking 2	0.29** (0.08)	0.29** (0.08)	0.28** (0.08)
Position ranking 3	0.06 (0.06)	0.07 (0.06)	0.07 (0.06)
Executive age	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Founder presence	-0.58* (0.33)	-0.58* (0.33)	-0.65* (0.34)
Personal stake ^b	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Education information	0.03 (0.06)	0.02 (0.06)	0.05 (0.06)
Pre-IPO sales ^b	-0.02 (0.03)	-0.02 (0.03)	-0.02 (0.03)
Pre-IPO income	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Pre-IPO sales growth	-0.01* (0.00)	-0.01** (0.00)	-0.01* (0.00)
Firm age	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Number of risk factors	0.01 (0.01)	0.00 (0.01)	0.01 (0.01)
R&D intensity	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Peers' compensation ^b	0.71** (0.11)	0.72** (0.11)	0.70** (0.11)
Urgency	-0.01 (0.01)	-0.01 (0.01)	0.00 (0.01)
Scarcity of preexisting prestige	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)
Personal prestige	0.36** (0.09)	0.40** (0.09)	0.36** (0.08)
Scarcity of preexisting prestige × personal prestige		0.08* (0.04)	0.07* (0.04)
Urgency × personal prestige			0.05** (0.01)
Urgency × scarcity of preexisting prestige			0.00 (0.00)
Urgency × scarcity of preexisting prestige × personal prestige			0.01* (0.01)
Constant	2.67* (1.33)	2.59* (1.32)	2.78* (1.31)
Number of IPO firms	194	194	194
Wald chi-square	325.84**	329.61**	360.02**

^a Robust standard errors are in parentheses. We do not report the results of segment and year dummies (SIC 7371, SIC 7372, issue 1995, and issue 1996) to save space. None of them are significant. $n = 494$.

^b Log-transformed.

* $p < .05$

** $p < .01$

prestigious hires cost much more, and urgency further adds to the toll. For prestige-poor companies (those with prestige scarcity one standard deviation above mean), a prestigious executive hired 12 months prior to IPO registration costs \$178,000, while one hired the month prior to IPO registration costs more than twice that, \$385,000—more than twice the amount that prestige-laden firms pay at the same point in time.

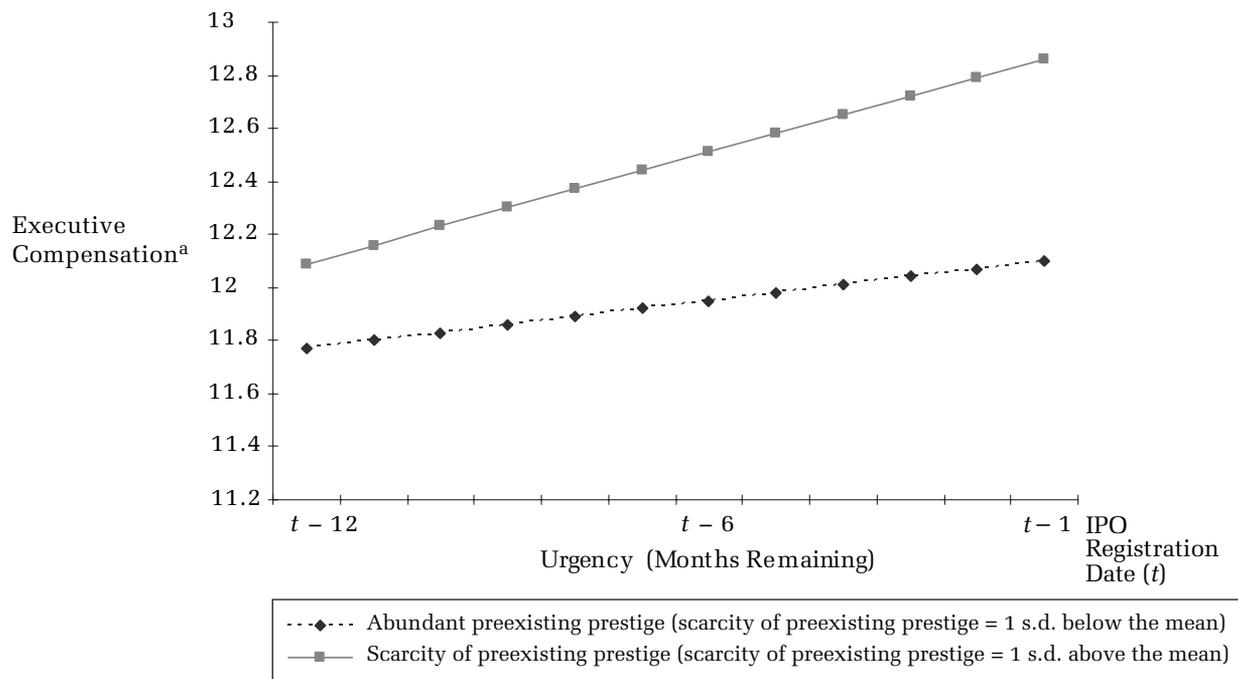
Deadline-Induced Remediation: A New Construct for the Organizational Sciences

Drawing on a substantial body of research demonstrating that group behaviors change in conjunction with shifting perceptions of time (Gersick, 1988; Labianca et al., 2005; Waller et al., 2002), we introduced the concept of deadline-

induced remediation as a way to formally conceptualize an organization's efforts to correct its insufficient preparation for a fast-approaching threshold. The concept of deadline-induced remediation has implications for a wide array of phenomena beyond IPOs. Organizations often confront momentous, widely announced, difficult-to-change deadlines, including dates for finalizing acquisitions, spin-offs, emerging from bankruptcy, and launching major new products. Organizational members occasionally face their own critical thresholds, including up-or-out dates in professional service organizations, end-of-tour dates for foreign postings, and expiration of large amounts of stock options, to name a few.

At the organizational level, the concept of deadline-induced remediation allows the framing of

FIGURE 3
Effects of the Interaction of Urgency and Scarcity of
Preexisting Prestige on the Compensation of
Prestigious Executives Hired



some important questions. If momentous deadlines often prompt behaviors that are hurried or performed under duress, are such behaviors often flawed or ill-conceived? Are they often cosmetic or superficial, lacking durability? How do stakeholders or exchange partners view “11th-hour” remediation efforts? Do such efforts warrant special monitoring and evaluation? And perhaps the most intriguing question: For those organizations that “successfully” meet deadlines through feverish activity just prior to the deadline, how do they behave and perform after the deadline? In short, the concept of deadline-induced remediation has substantial relevance for understanding a host of organizational phenomena.

Limitations and Future Research

Like all studies, ours has limitations that create opportunities for future research. One set of limitations stems from our use of IPO prospectuses to identify when upper echelons members joined companies. With this approach, we did not have data on any individuals who were previously with a firm but left prior to IPO. Relatedly, we lacked data on the complete employment histories of executives and directors, as well as data on the compensation of newly hired executives at their prior

employers. With more complete histories, researchers could explore the factors that provide the initial force and momentum behind the prestige snowball.

A second limitation is that we only investigated prestige enhancement via the hiring of executives and directors. A young firm can affiliate with various types of other prestigious parties, including venture capitalists and strategic alliance partners (Higgins & Gulati, 2003; Stuart et al., 1999). Although some research has examined the costs of attracting prestigious VCs (Hsu, 2004), little research has considered the factors that might mitigate these costs, or what it costs to attract other types of prestigious actors. Future research can continue to study these important issues.

A third limitation relates to the role played by underwriters in the prestige-enhancement process. It is likely that prestigious upper echelons members help to attract prestigious underwriters, and vice versa. Unfortunately, data on when an underwriter is enlisted are not publicly disclosed; therefore, we adopted the conservative position of including underwriter prestige as a control in all our analyses, rather than including it as part of our theorized process. Although the relationship between the number of prestigious underwriters and the hiring of prestigious executives and directors was positive and significant, it was impossible for us to infer the

causal direction of this relationship. In the future, researchers might be able to obtain proprietary data on enlistment dates for underwriters, which might allow substantial elaboration of the snowball and dressing-up models.

A fourth limitation is that we could not identify the exact date that a company decided to go public and began to prepare for its IPO. Thus, we could not locate the midpoint between the starting time and the deadline to evaluate whether deadline-induced remediation in IPO firms is similar to the models of punctuated equilibrium found in small-group research (Gersick, 1988, 1989). Nevertheless, the descriptive monthly data in our sample suggest that the prestigious executives and directors were added in a general, linear fashion throughout the final year.

A fourth limitation, posing a major opportunity for further inquiry, is that we do not examine the stability, or permanence, of final-year prestigious hires. The dressing-up model, in particular, suggests that prestigious affiliates are sometimes hired out of desperation into companies that otherwise lack much luster, and that these late arrivals may quickly leave because of a misfit with the organizations (Wagner et al., 1984). Of even greater consequence is the possibility that organizations engaging in deadline-induced remediation—including those that aggressively sign on prestigious executives and directors just prior to IPO—do so in a hurried, careless fashion; if so, then post-IPO performance might suffer, both because of departures and because deficient individuals stay. Future research should continue to explore these issues.

Finally, although our analyses demonstrate that prestige-poor firms can overcome their inherent weaknesses in prestige accumulation by paying higher compensation, especially as urgency increases, it is possible that other mechanisms, including weak-tie social networks or other conduits, might also be employed. Future research should explore how firms could leverage other resources, beyond monetary inducements, to attract prestigious executives and directors, in their efforts to “put on the ritz” for their IPOs.

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