

Independent Director Reputation Incentives: The Supply of Monitoring Services

Finance Working Paper N° 353/2013

August 2017

Ronald W. Masulis

University of New South Wales, FIRN, National
University of Singapore and ECGI

Shawn Mobbs

University of Alabama

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ECGI Working Paper Series in Finance

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Abstract

Extensive research finds that shareholder and CEO preferences affect demand for director services. We find a large body of evidence that independent director reputation incentives influence the supply of director services. These reputation incentives vary across firms and over time, significantly influencing important board decisions and firm outcomes. When more independent directors highly rank a directorship, firms experience fewer actions that hurt and more actions that enhance shareholder wealth and director reputation. These results are invariant to endogeneity adjustments. We conclude that director reputation affects board decisions and shareholder value by influencing director allocation of effort across their multiple directorships.

Keywords: independent director, reputations incentives, board decisions, director labor market, option grants, dividends, class-action lawsuits, covenant violations, stock repurchases, exchange delistings

JEL Classifications: G30, G32, G34

Ronald W. Masulis

AGSM Scholar, Scientia Professor, Macquarie Group Chair of Financial Services
University of New South Wales, School of Business
Gate 2 High Street, Kensington Campus UNSW
Sydney NSW 2052, Australia
phone: +61 293 855 860
e-mail: ron.masulis@unsw.edu.au

Shawn Mobbs*

Associate Professor, C.T. Fitzpatrick Endowed Chair of Value Investing
University of Alabama, Culverhouse College of Business
361 Stadium Drive
Tuscaloosa, AL 35487, United States
phone: +1 205 348 6097
e-mail: smobbs@cba.ua.edu

*Corresponding Author

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Ronald W. Masulis
Australian School of Business
University of New South Wales
Sydney, Australia

Shawn Mobbs*
Culverhouse College of Commerce and Business Administration
University of Alabama
Tuscaloosa, AL 35487

Draft: August 4, 2017

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R. Masulis: Australian School of Business Building, University of New South Wales, Sydney Australia, Tel. +61 2 9385 5860, Fax. +61 2 9385 6347 ron.masulis@unsw.edu.au
S. Mobbs: 200 Alston Hall Box 870224, 361 Stadium Drive, Tuscaloosa, AL 35487, Tel. (205) 348-6097 Fax. (205) 348-0590 smobbs@cba.ua.edu (corresponding author)

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Abstract

Extensive research finds that shareholder and CEO preferences affect demand for director services. We find a large body of evidence that independent director reputation incentives influence the supply of director services. These reputation incentives vary across firms and over time, significantly influencing important board decisions and firm outcomes. When more independent directors highly rank a directorship, firms experience fewer actions that hurt and more actions that enhance shareholder wealth and director reputation. These results are invariant to endogeneity adjustments. We conclude that director reputation affects board decisions and shareholder value by influencing director allocation of effort across their multiple directorships.

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1. Introduction

Fama and Jensen (1983) argue that individual reputation incentives play a significant role in director monitoring incentives. Consistent with this view, a 2012 survey of corporate directors reports that reputation is a director's top non-financial risk concern.¹ Since the early theoretical work on reputation and director incentives, numerous empirical studies have examined the demand for outside directors based on their reputation enhancing or detracting decisions. For example, when directors are associated with a decision or event that reduces shareholder wealth they are observed to lose directorships afterwards.² Directors associated with a cash dividend reduction (Kaplan and Reishus (1990), a shareholder class-action lawsuits (Fich and Shivdasani (2007) and Brochet and Srinivasan (2014)), or option backdating (Ertimur, Ferri and Maber (2012)) see a reduction in their directorships after these events. It is now well known that these and other decisions that lead to decreases in shareholder wealth or reflect weak monitoring can damage a director's reputation and reduce the demand for the director's services. However, it is not known whether directors with stronger reputation incentives work harder to avoid these negative outcomes so as to protect their reputation. We also do not know whether these directors supply greater effort in pursuing actions that benefit shareholders so as to further enhance their reputation capital? In other words, do reputation incentives affect the supply of director services in areas important to shareholders? We examine these important questions in this study.

We address this gap in the literature by testing the hypothesis that independent directors on multiple boards prioritize their expenditure of effort across their directorships based on the relative visibility of these firms so as to maximize their reputation benefits. A key prediction of our hypothesis is that the supply of director services a firm receives is affected by the relative reputation incentives a directorship offers to each individual director. We find that the varying quantity and quality of director services when aggregated to the board level is associated with significantly different likelihoods of an array of important board decisions and firm outcomes.

¹ The survey is conducted by EisnerAmper LLP, and accounting and consulting firm. The 2012 survey polled 193 directors by web-based survey with assistance from the National Association of Corporate Directors. The survey can be found at <http://www.eisneramper.com/IT-Risk-Management-0512.aspx>. The 2012 survey is also discussed in an article by CFO.com, which can be found at http://www3.cfo.com/article/2012/8/risk-compliance_reputational-risk-cfo-eisneramper-board-of-directors.

² These shareholder wealth effects can be significant. For example, previous studies find abnormal returns around lawsuit announcement dates range from -5% to -7% (Fich and Shivdasani (2007) and Karpoff, Lee and Martin (2008)) and stock returns around dividend reduction announcements are just below -5% (Kaplan and Reishus (1990)).

Masulis and Mobbs (2014) document that director reputation incentives significantly affect independent directors' board meeting attendance, their involvement on time intensive board committees and their likelihood of remaining on a firm's board during periods of poor firm performance. This evidence is consistent with reputation incentives significantly affecting an independent director's expenditures of effort on board duties. They also show that director reputation incentives are positively related to better firm performance and higher firm value. However, their analysis only investigates one channel to explain these firm performance results namely a board's decision to force CEO turnover due to poor performance. To better understand how individual director incentives influence firm value, we explore an array of major board decisions and firm outcomes, known to have significant consequences for firm operating performance, shareholder wealth and director reputation.

We argue that one important dimension of a board's absolute reputation is the firm's size, measured by equity capitalization, and that a director's board reputation incentives are relative to the prestige of the other boards that a director sits on.³ Our focus is on independent directors because their primary role is to monitor and discipline senior management. Using a director dataset of S&P 1500 firms in years 1997-2012, we sort directors into those with one versus multiple independent directorships. For each director with multiple directorships, we rank each directorship based on a firm's market capitalization.

Prior empirical studies of corporate directors explicitly recognize the importance of reputation incentives. Adams and Ferreira (2008) control for firm size in their study of board meeting attendance and Yermack (2004) controls for firm visibility (being a Fortune 500 firm) when examining additional board appointments. While both studies find that financial compensation paid to outside directors fails to create strong incentive effects, neither study analyzes how director reputation incentives affect key board decisions or firm actions.

To measure director reputation incentives at the board level, we rely on alternative pairs of board reputation incentive measures that separately aggregate the strong versus weak reputation incentives of all the firm's independent directors. First, we calculate for each firm-year the fraction of independent directors who view this as one of their highest (lowest) ranked directorships (i.e. at least 10% larger (smaller) than their lowest (highest) ranked directorship),

³ Several prior studies find evidence that relative firm size is a useful measure of a director's reputation incentives. For example, see Fahlenbrach, Low and Stulz (2010) and Knyazeva, Knyazeva and Masulis (2013) for evidence that independent directors prefer to serve on boards of larger firms.

and label this fraction ID-High (ID-Low). Second, we create an indicator variable defined as one if a majority of independent directors on this board rank it as relatively high (low) and is zero otherwise, and label this indicator variable as Maj-ID-High (Maj-ID-Low).

These two high reputation incentive measures capture three important director characteristics embedded in board composition. First, they reflect the proportion of independent directors who rank this firm's directorship more highly, which raises their incentives to exert effort and to be viewed as careful monitors and valuable board advisors. Second, they capture the proportion of directors with multiple directorships, which reflects a higher demand for their services, generally signaling greater talent and ability. Third, they measure representation by directors likely to be more experienced, based on the arguments in Gabaix and Landier (2008).⁴ Thus, our overall analysis is based on the premise that boards with greater representation of talented and experienced independent directors with stronger reputation incentives at their more visible boards, should more carefully monitor and discipline CEOs to prevent adverse firm outcomes, and to promote better board decision-making and shareholder beneficial firm actions.

We expect directors with stronger reputation concerns to expend greater efforts to avoid reputation damaging events. In the EisnerAmper survey discussed earlier, directors identify liability, integrity, fraud and ethics as important elements associated with reputation risk. However, the infrequent nature of the negative events that we examine makes difference-in-differences analysis difficult. Thus, in examining each individual firm outcome, we rely on the Hermalin and Weisbach (2003) observation that "when examining particular tasks of directors, it is less likely that the endogeneity of board composition will affect the results" (p. 14). In other words, it is unlikely that factors influencing the supply of independent director monitoring services are also directly affecting specific board decisions or firm actions. Furthermore, since directors with multiple board seats have different reputation incentives for each board they sit on, we can effectively control for most director specific effects, including time varying ones.

When we individually examine a set of negative outcomes known to adversely affect director reputation, we find strong evidence supporting the power of director reputation incentives. Specifically, we find that boards with greater director reputation incentives are

⁴ While we separately examine the fraction of independent directors without other directorships, our primary measures of director incentives exclude them given the limited demand for their services in the external director labor market, which suggests that they are not as highly valued as directors. Nevertheless, these directors may have strong incentives to retain their positions, so we also control for their importance on the board in our analysis.

associated with a lower likelihood of exchange delisting, debt covenant violations, option backdating (Ertimur, Ferri and Maber (2012)), shareholder class-action lawsuits (Fich and Shivdasani (2007) and Brochet and Srinivasan (2014)) and cash dividend reductions (Kaplan and Reishsus (1990)). The economic impact is meaningful as well. When an independent director changes his or her view of a board's prestige relative to other boards, this changes a director's effort, which significantly impacts these firm outcomes. This ranges from a 0.57 percentage point reduction in the likelihood of a CEO option grant being backdated to a 1.43 percentage point reduction in the likelihood of a covenant violation. Conversely, a decrease in reputation incentives for an independent director is associated with an increase in the likelihood of adverse outcomes ranging from a 0.143 percentage point increase in the likelihood of the firm experiencing an exchange delisting to a 1.43 percentage point increase in the likelihood of a large dividend reduction.

To address any remaining endogeneity concerns, we create an aggregate negative outcome variable that takes a value of one if any one or more of these binary firm outcomes occur. We then study the effect of exogenous shocks to independent director board rankings on the frequency of negative outcomes using a difference-in-differences framework. We find that an exogenous rise in director reputation incentives leads to a significant drop in the likelihood of these negative outcomes. This represents further evidence against an endogenous relation driving our primary results. Our evidence is also consistent with Holmstrom (1999)'s argument that reputation concerns create incentives for directors to avoid risky actions that can have negative consequences for their future as directors. Furthermore, we document evidence that the labor market punishment for being associated with negative firm outcomes is significantly stronger when the outcome occurs in a director's relatively more visible directorships, which is consistent with the director labor market recognizing the varying incentives directors face.

A desire to protect and enhance an individual director's reputation not only creates incentives to avoid adverse firm outcomes, but also to support shareholder friendly actions. Consistent with this idea, we find evidence that greater representation by directors with strong reputation incentives is associated with a higher frequency of positive firm outcomes such as stock repurchases, dividend increases and stock splits. Treating these positive decisions as equally important, and aggregating them, we find that their frequency rises after an exogenous increase to an independent director's reputation incentives. In summary, our findings support the

prediction that differences in independent director reputation incentives lead to clear differences in board behavior.

One possible concern with our primary findings is that firm size is correlated with both our board reputation measures and the firm outcomes studied. To address this concern, we undertake several experiments to rule out firm size as the main cause for the observed associations between director reputation incentives and major board and firm actions. First, we include controls for firm size and its squared value in all our regression models. Second, we censor our analysis by annually excluding the boards of the top and bottom 5% of firms based on equity market capitalization, while continuing to use these same firms to rank individual director incentives. Next, we reexamine the results of each test using a matched sample based on firm size and industry, which also mitigates firm size and selection concerns. Specifically, we match firms having strong independent director reputation incentives to similar sized firms with the same proportion of independent directors, but having weak director reputation incentives.

Finally, we control for the firm size component in our reputation variables by adding a variable that captures only a firm's relative size. For this purpose, we use a randomization process to create pseudo-ranking variables for individual directors that are independent of actual director reputation incentives, but are still dependent on the firm's relative size. We aggregate these to the board level and include these randomized variables in our regression analysis to control for a relative firm size effect. Thus, any remaining variation captured by our primary reputation measures should reflect variation in directors' actual reputation incentives due to the relative rankings of their actual multiple directorships. A large majority of our tests are robust to each of these alternative approaches. Thus, a wide range of evidence indicates that the reputation incentives of independent directors are an important board characteristic distinct from firm size.

In undocumented analysis, we address a potential reverse causality concern that in some firms with the negative outcomes we investigate, directors with strong reputations have greater incentives to avoid troubled firms by either resigning from the board or declining to join the board. For this analysis, we lag our key board measures by one or two years and then re-estimate the likelihoods of each of these firm actions. A large majority of our results continue to hold, giving further support to our primary hypothesis that director reputation incentives have a strong influence on major board decisions and firm actions.

For the purposes of robustness, we conduct a difference-in-difference analysis conditioned on an exogenous fall in an independent director's ranking of a firm's board so as to assess whether this evidence is consistent with our earlier tests based on exogenous increases in director rankings. We uncover strong evidence that an exogenous fall in directorship ranking due to the growth of another firm on which they sit as independent directors has the effect of increasing the likelihood of the firm experiencing an array of negative outcomes that we study. This evidence is consistent with independent directors paying less attention to their board duties at firms where there is an exogenous fall in reputation ranking.

These findings make several important contributions to the literature. First, they extend the earlier reputation findings of Masulis and Mobbs (2014) by documenting a variety of channels through which directors with greater reputation incentives can affect firm performance and value. Specifically, our findings about the frequency of specific shareholder friendly (detrimental) firm actions are consistent with evidence of greater (lesser) director level involvement in firms where their reputation incentives are greater (weaker).

Second, these findings extend the literature on inside directors. Masulis and Mobbs (2011) and Mobbs (2013) find that when inside directors hold independent directorships, this raises their reputation capital as directors, and this is associated with their boards making better decisions and more closely monitoring CEOs. Again, our findings underscore the importance of determining the relative reputation value a director assigns to each directorship, rather than simply treating each directorship as equally important. It also suggests that this independent director effect should be stronger as the relative prestige of this other firm rises relative to the firm where the director is also an executive officer. Third, our findings reinforce the importance of taking into account varying reputation incentives of independent directors when pursuing corporate governance research. This issue is especially relevant for evaluating board incentives in the post-Sarbanes-Oxley era when firms typically have a majority of independent directors, but based on our evidence, have varying reputation incentives across boards.

2. Sample data and descriptive statistics

We draw our U.S. boards of director data from the RiskMetrics database for the years 1997-2012. RiskMetrics contains individual director information for each S&P 1500 firm. Using the "classification" variable in RiskMetrics to obtain independent directors, we exclude directors

who are either firm employees, former employees or are otherwise affiliated with the firm or its management through family, financial or charitable ties.⁵ This yields 158,182 independent outside directors and 24,179 firm-years. Table 1 panel A reports the distribution of independent directors and their directorships. Almost 40% of independent directors have at least one other outside directorship in a second firm tracked by RiskMetrics, which means that a significant portion of independent directors can have varying reputation incentives across their multiple board seats, so that directors on the same board can have very different reputation incentives.⁶

We draw firm financial and accounting data from Standard and Poor's Compustat, and stock returns and delisting data from the Center for Research and Security Prices (CRSP) monthly stock database. Data on covenant violations are taken from Amir Sufi's database and are based on Nini, Smith and Sufi (2012)⁷ and data on class action lawsuits are from the Stanford University's corporate litigation database. Finally, we classify industries based on Fama-French 49 industry definitions. All variable definitions are in the Appendix.

While our primary measures of director reputation incentives are based on relative size rankings of firms, the largest firms in our sample are naturally more likely to have a large proportion of independent directors who rank this firm relatively high. Likewise, the smallest firms in our sample are likely to have a large proportion of independent directors who rank the firm relatively low. To reduce the effect of this pure size effect in our primary tests, we censor our sample on an annual basis by excluding the largest and smallest 5% of firms by market capitalization. This yields our primary sample of 21,746 firm-years. We include total assets as a separate control in all our regressions to further minimize any pure firm size effects.

In our primary analysis, we exclude finance and utility firms and have 17,159 firm-year observations for the sample.⁸ Table 1 panel B presents firm level descriptive statistics. The average firm controls \$3.64 billion in total assets. Mean equity market capitalization for the sample is \$3.7 billion. In approximately 88% of firm-years, independent directors represent a majority of the board. This is more common in the post-SOX portion of the sample period.

⁵ RiskMetrics treats a director as affiliated when they are a former employee; active executive of the firm or of a service provider, supplier, customer; a charity receiving corporate gifts; an interlocking director; or family member of the firm's senior executive team.

⁶ See Masulis and Mobbs (2014) for further director level descriptive statistics

⁷ These data are available through fiscal year 2007. <http://faculty.chicagobooth.edu/amir.sufi/data.html>

⁸ We do not make this exclusion and use the full sample in the CEO option backdating analysis.

Following Masulis and Mobbs (2014), we measure the relative importance of a director's reputation incentives at a specific firm by examining the relative size of a firm's equity market capitalization relative to the other firms in the full RiskMetrics sample where the same director sits on the board as an independent director. To capture the relative reputation benefits of directors with two or more independent directorships, we create an indicator variable HIGH (LOW), denoting a directorship in a firm that is at least 10% larger (smaller) than the firm representing their least (most) prestigious directorship. Among our sample of independent directorships, 20.7% (20.6%) are viewed as HIGH (Low). Only 5.2% of directorships are viewed as both HIGH and LOW, whereas 63.9% of directorships are viewed as neither HIGH nor LOW. Independent directors can also hold only a single directorship, which we also take into account since retaining a sole directorship may also create strong director incentives to retain the position. As shown in Table 1 Panel A, 61% of independent director-years have only one directorship in a firm in the RiskMetrics sample. However, directors can hold directorships in other firms outside of the RiskMetrics sample. Thus, we define a sole directorship as a director who holds no other directorship in another RiskMetric firm and when the reported RiskMetrics variable *outside_public_boards* equals zero. Sole directorships represent 43.2% of all independent directorships in the sample.

Since a firm having a board with a larger fraction of strongly (weakly) motivated directors is expected to improve board decision making, we aggregate individual director reputation rankings to the board level annually and calculate the percentage of independent directors who rank this directorship HIGH and LOW denoted by ID-HIGH and ID-LOW respectively. To further capture the strength of these aggregate independent director incentives, we create indicator variables for firm-years where a majority of a firm's independent directors rank this directorship HIGH or LOW, denoted by Maj-ID-HIGH and Maj-ID-LOW respectively.

Across the boards in our sample, the mean ID-LOW is 15.99%. Examining the frequency of firms where a majority of independent directors rank the board low, Maj-ID-LOW, we find that this represents 13% of the firm-year sample. In comparison, the mean ID-HIGH is 12.03% and the frequency of Maj-ID-HIGH, firms-year where the board has a majority of independent directors who rank the board high is 9%. The average board has just over 29% independent directors for whom this is their sole directorship, while 40% of sample firm-years have boards where the majority of independent directors have no additional directorships. So, approximately

80% of firm-years have boards without either a majority of independent directors who have strong or weak reputation incentives, i.e. Maj-ID-LOW or Maj-ID-HIGH, while just over 40% do not have a majority of independent directors with ID-HIGH, ID-LOW or sole directorship.

Table 1 panel C reports the percentage of independent directors on the board and ID-LOW and ID-HIGH for each firm size decile, based on market capitalization, where we first break the firm-years into pre-2005 and 2005 and beyond. The passage of Sarbanes-Oxley Act of 2002 and the subsequent new exchange listing requirements together represent an exogenous shock forcing many firms to increase independent director representation on their boards. We split our sample period at 2005 to allow for many firms to become compliant to these new board requirements. We find across all firm size deciles that the percentage of independent directors is substantially greater after 2004. Despite these differences across time, we still observe similar patterns in both periods across the size deciles. The percentage of independent directors increases with firm size rising from 60.88% in the pre-2005 period (74.13% post-2004) in the smallest decile to just over 66.5% (79.9% post-2004) in the largest decile. The mean ID-LOW exhibits little variation across firm size deciles in both sample periods. However, a more striking change is visible in the distribution of ID-HIGH. In the smallest firms, where many independent directors have either no other directorships or if they have other directorships, then they are generally at larger firms; so it is quite unlikely that this directorship is ranked HIGH. Thus, for the smallest firm decile, the average ID-HIGH is under 2% in both sample periods. This measure steadily rises with firm size decile to 29.8% in the pre-2005 period (28.7% in the post-2004 period) in the largest decile.

We see a similar pattern in Table 1 Panel D for our indicator measures. In panel D, we also include an indicator for majority independent directors holding no other directorships. In both sample periods, the fraction of firms with a board dominated by directors with no other directorship decreases with firm size. For example, in the pre-2005 sample period, in the lowest firm size decile, 50% of the firms (61% in the post-2004 period) have boards with a majority of sole directorship independent directors, whereas in the largest firm size decile, only 18% (15% in the post-2004 period) have such a board. This is consistent with larger firms having a greater demand for and being able to attract more talented directors.

Table 1 panel E reports descriptive statistics for the three sub-samples of boards that have a majority of independent directors for whom this directorship is ranked high, low or is their only

directorship. Firms with a majority of independent directors who have no other independent directorships tend to be smaller. Thus, in the ensuing analysis we employ a wide range of methods to control for firm size effects, which could otherwise cause selection biases.

3. Firm actions with reputation consequences

We begin by examining the likelihoods of a series of major negative firm outcomes, many of which are known to have significant reputation consequences for directors. We then examine several positive firm outcomes known to benefit shareholders. As the independent director's reputation incentives increase, we expect better firm performance. More specifically, we expect that as the fraction of independent directors who view this board seat as more prestigious rises, the likelihood of these negative firm outcomes will fall and just the opposite when the fraction of independent directors who view this board seat as less prestigious rises.

3.1. Option Back Dating

Since options are generally granted at-the-money, one way of raising CEO compensation is to time option grants, possibly retroactively, to coincide with the date of the lowest stock price in the surrounding period so as to minimize the option strike price. However, this practice can be costly for director reputation. Ertimur, Ferri and Maber (2012) find that directors involved in option backdating scandals in 2006-2007 suffered higher turnover rates following the scandal and received a greater number of withheld proxy votes in director reelections. These findings indicate that if directors reward their CEO's egregiously by manipulating option grant dates to raise the option's market value, they place their own directorship at risk. Therefore, directors with greater reputation incentives for a particular board should be less likely to put their reputation and directorship at risk by allowing CEO option backdating.

While many firms have undergone investigations for such practices, option awards timing patterns of numerous other firms suggest that many additional firms have either engaged in option backdating or else have extremely "lucky" CEOs who just happened to receive option grants when their firm's stock price was near its minimum value in the grant period. Bebchuk, Grinstein and Peyer (2010) define a lucky CEO option grant as one in which the effective grant date coincides with the day of the month of the lowest stock price. We also employ this measure to see whether independent directors with greater reputation incentives are associated with a lower likelihood that their CEO received lucky option grants.

In Table 2, we use probit regression models with year fixed effects to analyze the determinants of lucky CEO grants for a sample of firms with prior CEO option grants. For these tests, we use the full uncensored sample of firms, although in subsequent analysis we account for firm size using several different methods. Following Bebchuk, Grinstein and Peyer (2010), we obtain option grant data from Thomson Financial's Insider Trading database. We find 32,957 CEO option grants for our sample CEOs and of these grants, 2,831 are categorized as lucky. In models 1 and 2, the dependent variable is one if the CEO received at least one lucky option grant during the year and zero otherwise. In this, and in the subsequent firm-level analysis, standard errors are robust and clustered by firm. In model 1, ID-HIGH exhibits a significant negative association with lucky option grants, while ID-LOW is insignificant. The control variables indicate that as more grants are issued and the larger is a firm's relative size, the greater is the likelihood of one or more lucky grant.

Model 2 employs indicator variables for majorities of independent directors with strong or weak reputation incentives, Maj-ID-HIGH and Maj-ID-LOW respectively. Consistent with model 1, the results indicate that when Maj-ID-HIGH equals one, the board is less likely to approve a lucky CEO option grant, although the estimate is not significant. There is also no evidence that boards with a majority of independent directors for whom this is their sole directorship are either more or less likely to engage in option backdating.

Models 3 and 4 repeat the analysis using the sample of firms with one or more CEO option grant observations as in Bebchuk et al. (2010). In model 3 the coefficient for ID-HIGH is negative and significant. The control variables have the expected signs reported in Bebchuk et al. (2010). There is no evidence that busy boards are more likely to award lucky grants. Model 4 use a linear probability model with industry fixed effects to avoid concerns over the incidental parameters problem (Angrist and Pischke (2009)).⁹ The results are similar to models 1 and 3. In summary, the results in Table 2 indicate that independent directors with greater reputation

⁹ To estimate the marginal effects for the linear probability models, we observe that the median board size is 9 and the median percentage of independent directors is 72.7, indicating that a typical board has about 7 independent directors. If one independent director revises their ranking of this board upward, this is equivalent to a $1/7 = .1429 = 14.29$ percentage point rise in our main independent variable (we use this magnitude in subsequent assessments of an independent director's economic impact). The coefficient estimate in model 4 thus implies a 0.0057 ($14.29 \times (-0.0004)$) or a 0.57 percentage point reduction in the likelihood of an option grant being "lucky." The predicted unconditional probability of a CEO option grant being "lucky" is .0826. Thus, this described increase in director motivation on a board is associated with a 6.9% ($0.0057/0.0826$) decrease in the likelihood of the board issuing a "lucky" CEO option grant.

incentives are less likely to engage in backdating options to benefit their CEOs. Thus, we conclude that stronger director reputation incentives enhance the deterrent effect of the legal penalties and reputation damage associated with option backdating scandals, making board approval of “lucky” CEO option awards less likely.

3.2. Covenant violations

Gilson (1990) documents directors of firms that file for bankruptcy undercut their reputations as careful monitors and are punished with fewer directorships in the future. Thus, the market for directorships provides strong incentives for directors to avoid a firm going into bankruptcy. Precursors to bankruptcy are covenant violations. Such covenant violations are an early signal to the labor market that the independent directors in this firm have poor monitoring ability. Thus, we expect that firms that have boards of directors with stronger reputation incentives and better supervisory skills should exhibit better performance and a lower likelihood of covenant violations.

Table 3 provides evidence on the likelihood of covenant violations in a multivariate framework. The primary dependent variable is one if the firm violates a covenant during the fiscal year. Each probit regression includes year fixed effects to control for time trends. In model 1, ID-HIGH has a significant negative relation to the likelihood of a covenant violation (or continued violation), whereas ID-LOW has a positive relation to the likelihood of a covenant violation (or continued violation). The dependent variable in model 2 equals one if the firm commits a new covenant violation during the fiscal year. The results are similar in that a greater portion of independent directors with stronger reputation incentives is associated with a significantly lower incidence of a new covenant violation. Model 3 examines the likelihood of a covenant violation using the indicator measures Maj-ID-HIGH and Maj-ID-LOW and the representation by directors with only one directorship. Firms with Maj-ID-HIGH equal to one have a significantly lower likelihood of covenant violations. Again, firms with Maj-ID-LOW equal to one have a significantly higher incidence of covenant violations. In model 4 we estimate a linear probability model with industry fixed effects.¹⁰ We find results consistent with our primary probit models.

¹⁰ Multiplying the coefficient estimate for ID-HIGH in model 4 by the percentage increase for one independent director in the mean firm who increase their ranking of the board to High yields $(14.29 \times (-.001)) = -0.0143$. Since the predicted unconditional probability of a covenant violation is .0638, this increase in representation by more

Turning to the other controls, we find directors with only one directorship show no significant relation to covenant violations. In contrast, founding family-directors who have both larger ownership stakes and more operating knowledge of the firm appear to place effective pressure on management to run a “tighter ship” and avoid bond covenant violations. Surprisingly, more anti-takeover provisions are associated with a lower probability of covenant violations. One possible explanation for this association is that CEOs concerned about loss of control to creditors are also concerned about a loss of control to hostile bidders. Perhaps managers experiencing less pressure from the market for corporate control are less likely to use leverage as a takeover defense, which reduces the likelihood of a covenant violation. The other controls are generally statistically significant and consistent with prior findings.

3.3. Delisting

A more severe negative firm outcome arises when a firm fails to meet stock exchange listing rules and experiences an exchange-initiated delisting as reported in the CRSP database. Specifically, we focus on the delistings coded as “dropped” in CRSP. During our sample period, the most frequent reasons listed for these delistings are due to the stock price falling below an acceptable minimum level, insufficient capital, surplus and/or equity, and not meeting the exchange’s financial guidelines. Table 4 reports on delistings due to stock exchange listing rule violations. Such negative news, which can often precede Chapter 11 bankruptcy filings, can result in serious reputation damage to the firm’s outside directors. Moreover, if firms are guided by talented directors with a strong motivation to avoid damaging their reputation capital, then the greater is the proportion of these independent directors on a firm’s board, the less likely is an exchange delisting. To examine the likelihood of a delisting due to a listing rule violation, we estimate a probit regression model.

In Table 4, model 1 the propensity of a firm to be delisted is significantly negatively associated (at the 1% level) with ID-HIGH. In contrast, ID-LOW is positively and significantly associated with delisting. Other control variables reveal that greater board monitoring due to board independence and better firm performance measured by a higher Tobin’s Q or ROA are also associated with a lower likelihood of delisting. However, CEO-Chair duality, greater leverage and return volatility are positively associated with the likelihood of delisting.

motivated directors is associated with a predicted likelihood of 0.0495 (.0638 - .0143) of a covenant violation, representing a 22.41% drop in the likelihood of a violation (-0.0143/.0638).

Model 2 uses the indicator variables Maj-ID-HIGH and Maj-ID-LOW to measure independent director reputation incentives. The results are similar to model 1, although they are not as strong statistically. When a majority of independent directors have stronger reputational incentives, delisting is significantly less likely (p -value=.04). There is no evidence that firms with a majority of independent directors without other outside board seats are associated with a significantly higher or lower likelihood of being delisted. Thus, although such directors have strong reputation incentives as this is their only directorship, their concern about being re-nominated or their limited experience as outside directors may undercut their incentives to perform a strong disciplining role. In model 3, we estimate a linear probability model with industry and year fixed effects. The coefficient estimates are consistent with our primary findings that ID-HIGH (ID-LOW) is associated with a significantly lower (greater) likelihood of an exchange delisting.¹¹

3.4. Dividend reduction

Dividend cuts are another well-known firm action with negative reputation repercussions for corporate directors. Kaplan and Reishus (1990) find that executives whose firms reduce dividends from the previous year are punished in the external market for directorships with fewer subsequent directorships. Table 5 examines this measure of poor firm performance to see whether stronger director reputation incentives are associated with a lower likelihood of dividend reductions of 10% or more for our sample of dividend paying firms. All models include year fixed effects.

Model 1 of Table 5 reveals distinctly different relations for the likelihood of dividend cuts based on whether more independent directors have high or low reputation incentives. ID-HIGH is associated with a significantly lower likelihood of a dividend cut, while ID-LOW is associated with a significantly higher likelihood of a dividend cut. Model 2 uses separate indicator variables for a majority of the independent directors having high or low reputation incentives and we find similar results. Again, firms with a majority of independent directors who have only a single directorship exhibit an insignificant relationship with dividend cuts.

¹¹ Based on the coefficient estimates from model 3 for ID-HIGH and ID-LOW, an increase of one independent director (14.29%) who views this board relatively high (low) is associated with a 0.00286 (14.29×-0.0002) decrease (0.00143 (14.29×0.0001) increase) in the likelihood of the firm being delisted. While the unconditional likelihood of a firm experiencing an exchange delisting is small (0.00593), these estimates indicate the increases or decreases in board reputation incentives are economically meaningful. A rise in board representation by ID-HIGH (ID-LOW) is associated with a decrease (increase) in the likelihood of an exchange delisting by 48% (24%).

Following Kaplan and Reishus, we use an indicator for a large dividend reduction of 25% or more, and report these results in model 3. Again, ID-HIGH (ID-LOW) is negatively (positively) and significantly related to the likelihood of a dividend reduction. Model 4 estimates a linear probability model with industry fixed effects. The coefficient estimates for the two measures of board reputation incentives are consistent with the earlier probit models.¹² These findings provide further insight into the Kaplan and Reishus findings by showing that directors with multiple directorships view dividend reductions differently depending on their relative rankings of these directorships. Thus, the market for directorships becomes a more effective mechanism for motivating director monitoring when the directorship is more important to a director. Finally, poorly performing firms and firms with greater leverage are more likely to reduce their dividends; whereas a dividend cut is less likely in firms listed on the NYSE and at firms with larger boards. The coefficient estimate for board independence is insignificant. The fact that board independence per se is not associated with dividend reductions highlights the importance of distinguishing independent directors by their reputation incentives.

3.5. Shareholder Class Action Lawsuits

As one last example of a negative firm outcome with serious director reputation implications, we examine shareholder class action lawsuits. While these lawsuits can stem from one of the prior negative firm outcomes that we study, shareholders can also sue the firm for other reasons. Fich and Shivdasani (2007) find that directors in firms targeted by shareholder class action lawsuits subsequently receive fewer directorships. Fahlenbrach, Lo and Stulz (2013) find directors have incentive to avoid being associated with such lawsuits as indicated by a greater likelihood of an outside director leaving the board just prior to the firm being subject to a shareholder class action lawsuit. Brochet and Srinivasan (2014) find that directors named in a class action suit, especially those on the audit committee, are more likely to receive negative recommendation for subsequent nominations and are more likely to leave the board. These empirical observations are consistent with such lawsuits leading to a large reduction in director

¹² The coefficient estimates in model 4 reveal that an increase in representation by independent directors with ID-HIGH (ID-LOW) reputation incentives of 14.29% is associated with a decrease (increase) of 0.00715 (0.01429) in the likelihood of the firm having a dividend reduction of 10% or more. The unconditional likelihood of experiencing such a dividend reduction is 0.0969. Thus, this level of increase in board reputation incentives is associated with a 7.38% (0.00715/0.0969) decrease in the likelihood of a large dividend reduction, whereas the same level of decrease in board reputation incentives is associated with a 14.75% (0.01429/0.0969) increase in the likelihood of a large dividend reduction.

reputation capital. Thus, in firms where independent directors have stronger reputation incentives, we predict that boards will take more concerted actions to avoid shareholder lawsuits.

Table 6 examines the occurrence of shareholder class action lawsuits for our sample firms. Unless otherwise noted, the models in Table 6 are probit models with year fixed effects. In model 1, ID-HIGH has a significant negative association with the probability of the firm being subject to a class action lawsuit. In contrast, ID-LOW has no statistical association with the occurrence of a class action lawsuit. Model 2 uses our indicator variables for the reputation incentives of a majority of the independent directors and yields similar results. Since disclosure concerns can lead to subsequent lawsuits and since Brochet and Srinivasan (2014) find the negative reputation impact is especially harsh for audit committee members, in model 3, we focus on the reputation incentives of a majority of the independent directors on the audit committee and we find stronger results, both economically and statistically.

Model 4 reports estimates from a linear probability model with year and industry fixed effects. ID-HIGH continues to have a significantly negative association with the likelihood of a shareholder lawsuit in a given year.¹³ Turning to the control variables, we find that greater CEO tenure and board size are associated with a lower firm likelihood of a shareholder class action lawsuit, while firms with greater growth opportunities and higher growth rates of assets have a higher likelihood of such a lawsuit. Each model also controls for industry litigation activity. As expected, this industry-wide control has a positive and significant coefficient.

3.6. Difference-in-Differences analysis of negative firm outcomes

To eliminate any interdependence across the firms experiencing several of these negative firm outcomes, we construct an aggregate negative firm outcome variable that equals one if the firm experiences a lucky CEO option grant, a covenant violation, a shareholder class action lawsuit, a dividend reduction, or is exchange delisted and equals zero otherwise. We also obtain a much greater frequency of firm outcomes than if we study each of these individual rare events in isolation. Given this larger sample size, we are able to employ a difference-in-differences analysis around an exogenous positive shock to a firm's director's ranking of a firm. We identify an exogenous board ranking rise as one in which a director's ranking of this directorship rises

¹³ The coefficient estimate for ID-HIGH in model 4 imply if one director increases his or her ranking to ID-HIGH (14.29%) for the mean board, the likelihood of a the firm being the target of a class action lawsuit falls by 0.00429 (14.29 x -0.0003)). The unconditional probability of class action lawsuit is 0.0256. Thus, this rise in board reputation incentives is associated with a 16.7% (0.00429/0.0256) decrease in the likelihood of this negative firm outcome.

due to the reduction in the equity market capitalization at one of the director's other directorships. We require the firm in which the director experiences a rise in ranking to have no financial connection to the subject firm and to not itself rise substantially in equity market value (any rise must be less than 10%) to ensure the board ranking increase is exogenous to the firm in question. We also require the director experiencing the exogenous ranking increase to not gain or lose a directorship during the year to ensure that changes in the number of directorships, which can reflect director performance, do not cause the ranking increase. These restrictions serve to rule out various forms of endogenous relations between director skill and firm outcomes. Treatment firms are those with at least one director experiencing an exogenous ranking increase. This provides a strong experimental design for addressing endogeneity concerns between director reputation incentives and negative firm outcomes.

Table 7 presents results based on this aggregate negative firm outcomes variable. Model 1 reports the results of a probit model predicting these negative firm outcomes and includes our primary reputation variables using the full sample firm-year observations. The controls are the same as in the previous models, but are not reported for brevity. Consistent with our previous findings, firms with independent directors who have greater reputation incentives are significantly less likely to experience negative outcomes, whereas firms with independent directors who have weaker reputation incentives are significantly more likely to experience negative outcomes. Models 2-4 present results of a difference-in-differences analysis between negative firm outcomes for the penultimate year prior to a positive exogenous shock and the three years thereafter. In each model, the key coefficient estimate is the interaction term between the treated firm and the post-treatment (positive shock to an independent director's reputation incentives) period indicators.

Model 2 presents results of a probit model which includes only the key variables and their interaction (the difference-in-differences estimate). The coefficient estimate for the treatment firm indicator is positive, but insignificant, which suggests that prior to the exogenous director ranking shock, these firms are no more likely to experience a negative outcome relative to matched control firms. The coefficient estimate for the post-shock indicator reveals a positive, but insignificant, time trend. More importantly, the coefficient on the interaction term is negative and significant, indicating that when a board has at least one director who experiences an exogenous rise in their relative ranking of the directorship, the firm is significantly less likely to

experience a negative firm outcome than is a similar control firm. This evidence is consistent with our prior findings when examining each of these firm outcomes individually, and is free of obvious endogeneity concerns associated with changes in board composition, which could otherwise drive our results.

In model 3, we introduce control variables and find similar results. Finally, model 4 employs a linear probability model with year and industry fixed effects. We again find a significantly negative coefficient estimate for the interaction of the treatment firm and the post-shock indicator variables.¹⁴ In sum, these difference-in-differences results following a positive board reputation shock provide strong support for our primary analysis that reputation incentives of the independent directors have an important bearing on the board's monitoring effectiveness.

3.7. Stock repurchases, dividend increases and stock splits

Given the prior evidence that independent directors with greater reputation concerns take actions that reduce the likelihood of dividend cuts, an obvious follow up question is do these actions raise the likelihood of cash payouts to shareholders? To answer this question, we explore the frequency that boards distribute cash to their shareholders in the form of stock repurchases or higher dividends. We employ the same controls used for dividend reductions as reported in Table 5. We include year fixed effects to capture the growing popularity of stock repurchases over our sample period.

The dependent variable in Table 8, models 1-4 is yearly stock repurchases as the percentage of end-of-year equity market capitalization, following the definition used by Grullon and Michaely (2002). Models 1-3 include industry fixed effects to capture industry trends and business cycles and model 4 includes firm fixed effects. Models 1 and 2 are based on the full sample, rather than just dividend paying firms, since firms not paying dividends can still engage in stock repurchases in any given year. In model 1, the coefficient estimate on ID-HIGH is positive and significant. In model 2, we find a positive coefficient estimate for Maj-ID-HIGH and a negative coefficient estimate for Maj-ID-LOW, although neither is significant. In model 3, we restrict the sample to dividend paying firms and find stronger results, similar to model 1. Model 4 incorporates firm fixed effects and finds results consistent with the prior models,

¹⁴ In unreported results, we further restrict the sample in models 3 and 4 by excluding firms that experience a rise in board independence and continue to find a significant negative coefficient for the interaction term in both models.

indicating that stock repurchases are more likely as the fraction of independent directors with stronger reputation incentives rises.

We find no evidence across any of the models that the fraction of directors with weaker reputation incentives has a significant association with stock repurchases. The other control variables yield some evidence that greater institutional holdings and founding family directors are associated with greater stock repurchases. We also find that busy boards are associated with less frequent stock repurchases. Finally, NYSE listed firms and firms with greater cash flow from operations are associated with greater stock repurchases in some models.

In Table 8, models 5-7, we explore the relation of independent director reputation incentives and the likelihood of a cash dividend increase among dividend paying firms. As a cash flow to shareholders, a rise in dividends is also indicative of greater board alignment of interests with shareholders and of stronger monitoring by independent directors. In model 5, the dependent variable is an indicator variable that equals one if a firm raises its dividend per share based on prior year-end shares outstanding by 5% or more.¹⁵ The coefficient estimate for ID-HIGH is positive and significant, whereas the coefficient estimate Maj-ID-LOW is negative and significant. In model 6, we find a negative and significant coefficient estimate for Maj-ID-LOW. In model 7, we estimate a linear probability model and include industry fixed effects and find similar results. Thus, greater representation by independent directors with strong reputation incentives is associated with a larger likelihood of a dividend increase. Conversely, greater representation by independent directors with weak reputation incentives is associated with a lower likelihood of a dividend increase. These results suggest that as independent directors place more weight on their reputations, the likelihood of firms retaining earnings, potentially for empire building or perquisite consumption, is reduced.

One other closely related firm action is a stock split. Grinblatt, Titman and Masulis (1984) find that while stock splits often precede cash dividend increases, these events have longer term signaling benefits, which could involve better corporate governance. Thus, in Table 8, models 8-10, we examine stock splits as another shareholder wealth enhancing action. For this analysis, we create a stock split indicator variable that equals one if the firm experiences a stock split of 5 for 4 or greater in the current year. We include non-dividend paying firms in the analysis. Model 8 reports probit model estimates using our percentage measures of independent

¹⁵ We find similar results when we consider any dividend increase.

director reputation incentives. We find strong evidence that ID-HIGH is associated with a significantly higher likelihood of a stock split. Conversely, ID-LOW is associated with a significantly lower likelihood of a stock split. In model 9, we use the majority of independent director High and Low reputation incentive indicators and in model 10 we estimate a linear probability model with industry fixed effects. In both cases, we continue to find similar results. These findings are consistent with directors being more concerned with shareholder interests in firms that have greater effects on their reputation as independent directors.

Finally, in Table 8, models 11-13, we conduct a difference-in-differences analysis of the prior three positive firm outcomes following an exogenous rise in independent director reputation incentives as explained in section 3.6. Similar to the difference-in-differences analysis reported in Table 7 for the set of negative firm outcomes, we create a positive firm outcome variable that equals one if the firm undertakes a dividend increase, a share repurchase or a stock split during the fiscal year and zero otherwise. Treatment and control firm definitions are the same as in Table 7. Model 11 presents results for a probit model including only indicators for treated firms and the post-treatment period and their interaction term. The positive coefficient estimate on the interaction term indicates a significant rise in the likelihood of treated firms experiencing one of these positive firm outcomes relative to control firms after an exogenous rise in director reputation incentives. In model 12, we include all the other controls, including year fixed effects. In model 13, we estimate a linear probability model with year and industry fixed effects. In both models 12-13, we find similar results. Thus, our difference-in-differences analysis provides further evidence that improved director incentives are associated with positive firm outcomes which benefit shareholders and also reduces any concerns that endogenous relations drive our primary findings.

3.8 Affiliated or Linked Directors

In the analysis thus far, we have focused on independent outside directors as recent evidence by Nguyen and Nielsen (2010), Knyazeva, Knyazeva and Masulis (2013) and Guo and Masulis (2015) shows that they are the directors primarily responsible for monitoring senior managers to ensure that negative outcomes, such as the ones we study, do not occur. However, it is possible that the reputation incentives of other non-independent outside directors are also related to the firm outcomes we study. In this section, we repeat our primary analysis for

affiliated outside directors. We expect to find much weaker director reputation effects given the influence of financial or familial ties on these directors.

The results for affiliated outside directors are in Table 9. The control variables are the same as in each of the primary regressions, but are suppressed for brevity. We find no significant relation for either highly or weakly motivated affiliated director representation on boards for six of the eight outcomes we study. We do find limited evidence that highly motivated affiliated directors are less likely to be associated with a covenant violation and more likely to be associated with a stock-split. The only evidence of any significant relationship to representation by weakly motivated affiliated directors is they are less likely to be associated with a stock-split.

The much weaker results that we find for an affiliated director's reputation incentive effects underscores the important role of independent outside directors in monitoring managers. In our context, it also provides evidence that our results are not simply capturing the effects of firm size. We explore this question further in the next section, but if firm size was the cause of empirical relations we observe, then we would expect a similar pattern to emerge for affiliated outside directors since firm size affects all directors on a board equally.

4. Robustness

Alongside each of our primary results that are based on probit models, we also present results using a linear probability model to address concerns associated with the non-linear nature of the relationships and potential incidental parameter issues. These parallel tests provide us with greater confidence that the particular model specifications we employ are not driving our primary findings. In this section, we address potential concerns about reverse causality, endogeneity due to missing variables and selection biases as well as possible correlations of our director reputation incentive measures with firm size.

4.1. Reverse causality

One possible alternative explanation for our earlier findings is a variant of the reverse causality hypothesis of Hermalin and Weisbach (2003) that boards of firms with poorly performing CEOs, and thus, with a greater likelihood of experiencing negative firm outcomes of the type we examine, may recruit to the board more independent directors from larger firms who have more skill and experience in an effort to improve the firm's performance. This board selection process would lead firms with negative outcomes to be positively associated with

boards exhibiting greater representation by independent directors for whom this is a relatively less prestigious directorship. At the same time, boards with a well performing and potentially powerful CEOs may hire independent directors who are serving at smaller firms since they are more easily recruited by larger firms due to their greater visibility and positive performance. Moreover, the CEO is likely to find these directors to be less threatening. This board behavior pattern could create a positive correlation between firms with good outcomes and boards having greater representation by directors who view this as a relatively more prestigious directorship.

We address the above endogeneity issue by reexamining our primary tests using one and two year lags of our director reputation measures. If this scenario were driving our results, then lagged measures of board reputation incentives should reduce any such reverse causality effect. In unreported results, we find the use of lagged measures of director reputation incentives yield qualitatively similar results for most of the firm outcomes we analyze. For covenant violations and lucky CEO option grants, the coefficient of the lagged ID-HIGH is significantly negative using either one or two year lags. For dividend reductions, the coefficient estimate for the one year lagged ID-HIGH is also significantly negative. For firm stock repurchases, the coefficients for one and two year lags of ID-HIGH are significantly positive. Also, the coefficients of the one and two year lags of ID-LOW is significantly positive for an exchange initiated delisting and is significantly negative for dividend increases and stock splits. Thus, our evidence is inconsistent with this reverse causality explanation.

Yet, another endogeneity story is that in firms experiencing poor outcomes or where directors anticipate poor outcomes, more talented directors are more likely to leave the board when this is one of their relatively less prestigious directorships. This behavior pattern is suggested by the findings of Masulis and Mobbs (2014) and Fahlenbrach Low and Stulz (2010). In this scenario, we should find that the remaining directors in a troubled firm, rank this as one of their relatively more prestigious directorships. Then as further negative outcomes occur (which is highly likely if performance is serially correlated), we would subsequently expect to observe a positive association between negative firm outcomes and greater representation by directors who view this as a more prestigious directorship. While plausible, this scenario is rejected by the data since just the opposite pattern is observed empirically. However, to the extent that such director behavior does occur, it can downward bias and thus, weaken the results we document.

4.2. Firm size adjustment factor

By design, our measures of board representation by independent directors with high and low reputation incentives are a function of both an individual director's specific multiple directorships and the size of each firm relative to our overall sample of firms. While actual firm size can be a partial proxy for director incentives, our focus is on each director's relative ranking of their directorships. In other words, a director's reputation incentives are affected by the relative size of the firm in question compared to that of the other firms where the same director also holds board seats and not simply by the firm's size alone. Moreover, the reputation incentives we analyze are specific to an individual director sitting on the board (and their other directorships), whereas the firm size effect embedded in our reputation measure is based solely on a firm's size relative to that of other firms in the population and thus, it affects all directors on the board equally, regardless of their other directorships. Thus, we ideally want to filter out of our reputation measures the direct effect of firm size, so that we can more cleanly analyze the relative reputation incentives that a director experiences.

Since the simple firm size effect is the same for all directors on the board, if we randomly assign a firm's directors to other boards, then the firm size effect should remain. However, because these pseudo board assignments are randomly selected, the calculation of a board's pseudo ranking measure should be devoid of relative director reputation incentives caused by the specific set of multiple directorships they hold. Therefore, when we add this control for firm size in each of our previous tests, any remaining variation captured by our director reputation measures should reflect director specific board seats and their relative reputation incentives to differentially allocate their scarce time and energy across these boards.

We estimate this pseudo board ranking measure in the following way. For each year in our sample period, we randomly reassign each independent director to a sample firm (or firms for those with multiple directorships). Board size and independent director representation are held fixed. We then compute each director's pseudo-ranking measure in each firm-year for the sample based on these randomized director assignments and the resulting pseudo-board ranking measures. We repeat the process 100 times and average across the 100 pseudo-board ranking measures to derive the adjustment factors for each High and Low board prestige measure.¹⁶

Table 10 reports results for the primary models in the prior tables. For brevity, only the key explanatory variables are shown. Controls in each regression are the same as in Table 2-6 for

¹⁶ We thank Juhani Linnainmaa for this helpful suggestion.

the negative outcomes and Table 8 for the positive outcomes. We also report results for the non-censored full sample, which have results similar to the censored sample that excludes the top and bottom 5% of firms. After controlling for the expected firm size adjustment in our primary director incentive measures, we find that in seven out of eight tests, at least one of the two primary director reputation measures remains significant and has the predicted sign.¹⁷ Despite the significant firm size effect captured by our director reputation measures, a director's relative reputation incentives remain a significant determinant of a large majority of board actions and firm outcomes that we examine, above and beyond the effect of firm size per se.

4.3. Matched sample

To further address endogenous relations arising from firm size, we repeat our analysis using the differences from a matched sample of firms of similar size and the same industry. We restrict firms in this sample to have a majority of independent directors and we match firms where a majority of the independent directors rank the directorship highly to up to four similar size firms where a majority of the independent directors rank the directorship as low. We also require matches to be drawn from the same Fama-French 49 industry-year and without replacement and firms with low director incentives to be within seventy-five percent of the market capitalization of the firm with high director incentives. The firm size and same industry requirements reduce the size of the matched sample, which makes finding significance more difficult for these infrequent firm outcomes, but it ensures that the matched firms are very similar on two commonly controlled for major dimensions, while having distinctly different board reputation incentives.¹⁸ With this matching procedure, we obtain a sharper picture of how differences in board reputation incentives affect the likelihoods of major firm outcomes by minimizing the possibility that these differences are due to firm size or industry selection effects.

The results of this matching procedure are reported in Table 11 and for brevity we only report coefficient estimates for key board reputation metrics. Using our primary reputation measures, we observe that firms with a higher percentage of independent directors who rank the directorship highly are less likely to face a shareholder lawsuit, approve a lucky CEO option grant and they are more likely to repurchase stock, increase cash dividends and split the stock.

¹⁷ Only covenant violations are insignificant for both reputation measures.

¹⁸ The restrictions we chose allow us to test seven of the eight firm outcomes examined. We do not test the likelihood of a firm experiencing an exchange-initiated delisting since there are only six occurrences of these within the resulting matched sample.

We also find that in firms having a board with a larger fraction of independent directors for whom this represents a relative low ranked board, directors are more likely to cut dividends.

In summary, we find results consistent with our primary findings for six out of seven testable outcomes when using a size and industry matched sample of firms. These findings underscore the robustness of our primary results across a wide range of firm outcomes, while mitigating concerns that firm size or other endogenous relations are causing the observed relations between board level director reputation incentives and firm outcomes.

4.4. Difference-in-differences analysis around an exogenous decrease in directorship ranking

In this section, we examine the opposite case to the exogenous shock examined in our primary analysis, namely a fall in a director's ranking of a board due to an exogenous rise in the market capitalization of another firm where the director also sits on the board. We then examine whether this fall in director reputation incentives is associated with a greater likelihood of negative firm outcomes. As before, we employ a difference-in-differences analysis around an exogenous rise in the other firm's size, where an independent director is also on the board. This results in a drop in rank of the board in question where this same independent director sits, which we define as the treatment firm. Treatment firms are required to remain relatively stable in size (within 10% in our primary tests and within 5% in unreported robustness analysis). Each treatment firm is matched to a control firm which does not have a treatment director, is in the same industry and is closest in equity capitalization. We use this matched sample to examine relative changes in the likelihood of negative and positive firm outcomes around these exogenous declines in directorship ranking.

Table 12 reports the results of this difference-in-differences analysis. For brevity, only the coefficient estimates for the key difference-in-differences estimates are reported. The control variables replicate the primary analysis of each dependent variable. The dependent variable is the likelihood of a firm experiencing a negative outcome defined earlier in Table 7. Model 1 reports estimates based on a specification with only indicators for treated firms and the post-treatment period and their interaction term. Model 2 adds all the previous controls. In both models, the difference-in-difference estimate is positive and significant, indicating that compared to the control firms, treatment firms are significantly more likely to experience a negative outcome following an exogenous decrease in an independent director's ranking of the board.

Overall, this difference-in-difference evidence shows that when a firm has an independent director whose ranking of the directorship exogenously declines, we obtain weaker firm performance outcomes, consistent with our earlier findings. We interpret this to mean that when a firm has an independent director whose attention shifts to another directorship due to an exogenous rise in the other firm's visibility and prestige, the director correspondingly pays less attention to this firm, making negative outcomes more likely. Thus, this evidence reinforces the importance of independent directors' allocation of their limited time, energy and attention, and highlights that reputation incentives lead directors to allocate more of these scarce resources to their relatively more prestigious directorships at the expense of their less prestigious ones.

5. Labor Market Incentives

Our evidence reveals that independent directors have greater incentives to avoid negative outcomes in their relatively more prestigious directorships. One channel that reinforces this incentive is the ex-post settling up function of the director labor market (Fama (1980)). Prior research has documented that the labor market does punish directors with fewer directorships when the firms that they are monitoring have poor outcomes. For example, directors experience a reduction in the number of directorships they hold when a firm where they serve experiences a dividend reduction (Kaplan and Reishus (1990), a shareholder class-action lawsuit (Fich and Shivdasani (2007) and Brochet and Srinivasan (2014)) or is associated with option-backdating (Ertimur, Ferri and Maber (2012)). In the Appendix, we report results consistent with these prior findings using our sample of directors. Specifically, we use the negative firm outcome indicator variable used in our difference-in-differences analysis in section 3.6 and examine the change in the number of total directorships for each director-year over the subsequent three years. In model 1 of Table A1, we find that independent directors associated with a negative firm outcome experience a significant drop in their number of directorships over the next three years.¹⁹ However, this analysis and that in prior research assumes that any poor firm outcome will be equally punished regardless the relative size of a director's directorships. This suggests that directors have equal incentives to avoid any negative outcomes in any of their directorships.

¹⁹ We also separately examine the change in the number of total directorships for the affiliated director-years in model 2 of Table A1. We find a negative, but insignificant coefficient estimate for the negative firm outcome indicator. This weaker relation for negative firm outcomes in affiliated directorships and subsequent adverse director labor market consequences is consistent with our findings in section 3.8, that independent directors have more of a monitoring role than affiliated directors and as such are held more accountable for any monitoring deficiencies.

Our analysis indicates that directors do not treat their responsibilities at each of their directorships equally, but instead work harder to avoid negative outcomes in their relatively most prestigious directorships. One reason for these unbalanced incentives across directorships is that director performance in relatively larger and more visible firms is likely to have greater impact on their director reputations. If the director labor market recognizes these uneven incentives across a director's directorships, then the expectations for performance and thus, the penalties for negative firm outcomes are likely greater in these more prestigious directorships. To test this hypothesis, we use a director-level analysis to examine the change in the number of directorships held by a director following the occurrence of at least one of the negative firm outcomes that we study. This experimental design is similar to that in prior studies of director labor market outcomes following adverse corporate events, but the key difference is that in this study we condition on whether the event occurs in a relatively more or less visible directorship.

Table 13 reports the results of independent director-level analysis where the dependent variable is the change in the number of directorships in the following three years. This analysis is based on independent director-years associated with the firm-years having negative outcomes. We continue to use robust standard errors clustered by firm to account for any serial dependence due to negative events occurring in adjacent years within a firm. In model 1, we find negative and significant coefficient estimates for both High and Low Ranked Directorship indicators. However, an F-test for the equality of coefficient estimates for the High and Low indicators is rejected (p -value <0.01 reported at the bottom of the table). Thus, a negative firm event in a director's more visible directorship is punished more heavily than a negative firm event in the director's less visible directorship. We find similar results in model 2 when we include industry and year fixed effects.

In model 3, we use director fixed effects. Thus, the variation is within a director's portfolio of directorships. We again find significantly stronger results for a director's relatively more prestigious directorships. In model 4, we add firm fixed effects to examine the variation in reputation effects among directors on the same board given the same poor firm performance. We continue to find a significantly greater negative coefficient estimate for those directors for whom this is a relatively more prestigious directorship compared to those for whom it is a relatively less prestigious directorship. Thus, even within a board, the labor market recognizes the varying incentives of directors and punishes directors based on the strength of those varying incentives.

The other controls reveal additional dimensions by which the labor market treats directors associated with a negative firm outcome differently. In three of the four models, older directors and those with greater tenure, who should be more experienced and knowledgeable lose more directorships following a negative outcome, consistent with these directors being held more accountable by the labor market. Directors with more directorships prior to the event, arguably reflecting their greater talent, suffer more following a negative firm outcome. Directors with only one directorship are significantly more likely to lose that directorship in three of the four models.²⁰ On the other hand, members of the audit committee, those who are CEOs elsewhere or in generally larger firms fair better.

In summary, when a negative firm outcome occurs in an independent director's more visible directorship, where the director is expected to provide more careful monitoring, the corresponding penalty in the labor market is greater.²¹ This evidence indicates that the labor market for directors treats director actions differently depending on which firm in a director's portfolio of directorships experiences a bad outcome. A major consequence is that this creates stronger incentives for independent directors to exert greater effort at their most visible and prestigious directorships.

6. Conclusions

It is well known that director reputation creates strong incentives for independent directors to be assessed by the labor market as capable corporate monitors so as to raise the likelihood of retaining their most valuable directorships. We analyze directors with multiple independent directorships and document the effects of having differential reputation incentives across directorships. Boards comprised of a greater portion of independent directors for whom this directorship is one of their most prestigious are positively associated with firm actions known to enhance director reputations and negatively associated with firm actions known to hurt

²⁰ The negative coefficient for sole directorships in models 2 and 4 reveal that compared to other directors within their industry or within their own board, sole directors are significantly more likely to lose directorships following a negative firm outcome. However, when we consider within-director variation in model 3, we find a positive coefficient estimate of 0.19 for sole directorships. This suggests that about one in five sole directors actually gain an additional directorship following a negative outcome. One possible explanation is that these directors are CEO-friendly and if they support the CEO after a negative outcome, CEOs looking for CEO-friendly directors may support their nomination to their board.

²¹ In unreported results, we do not find evidence following a positive firm outcome of the labor market providing a greater reward for directors in their relatively more prestigious directorships.

director reputations. Specifically, firms with stronger independent director reputation incentives have significantly lower likelihoods of covenant violations, shareholder class action lawsuits, backdating of CEO stock options, exchange initiated delisting, dividend reductions and higher likelihoods of dividend increases, stock repurchases and stock splits. We also find evidence that the director labor market recognizes these varying incentives across a director's directorships and provides stronger punishment when a negative firm outcome occurs in a relatively more prestigious directorship.

Our strongest evidence comes from an analysis of exogenous shocks to the relative ranking of one independent directorship due to a negative (positive) change in the size of another firm where the same director is also an independent director. Using a difference-in-differences analysis of firms experiencing such an exogenous shock, termed treatment firms, compared to other firms of similar size in the same industry not experiencing such an exogenous shock, we find that as independent director reputation incentives become stronger, the probability of negative (positive) firm outcomes significantly falls (rises) relative to that of control firms.

Using alternative approaches to extract out firm size effects potentially embedded in our director reputation measures, including using a matched sample based on firm size and controlling for the expected size factor in our director reputation measures by randomizing director-board assignments, shows that a firm's relative size in the sample population is not the primary driver of our findings. Our results are consistent with directors being more concerned with their reputation at their most prestigious and visible directorships.

In summary, our findings underscore the importance of considering individual reputation concerns and the corresponding consequences this can have for the amount of time and energy that directors devote to their duties across the various firms where they serve. In conclusion, the findings of this study highlight the importance of understanding the effects of independent director reputation incentives for researchers, boards of directors and policy makers, because they can significantly affect the supply of time and effort that busy directors are willing to allocate to their board duties, consistent with the evidence found in Masulis and Mobbs (2014), and they highlight the key board decisions and firm actions through which reputation incentives manifest themselves.

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Table 1. Firm Level Descriptive Statistics

This table reports means and medians for various firm-year level variables from fiscal years 1997 to 2012. Panel A reports the director level distribution of the number of directorships held by independent directors in the RiskMetrics universe. Panel B reports firm level characteristics for the censored sample, which excludes finance and utility firms. Panel C reports the percentage of independent directors by firm market capitalization deciles. Panel D reports results for the three sub-samples of firms with a (1) majority of independent directors for whom this is a high ranked directorship, (2) majority of independent directors for whom this is a low ranked directorship and (3) majority of independent directors for whom this is their only directorship.

Panel A

Number of Directorships for 158182

Independent Directors	Number	Percent
1	96311	61%
2	36419	23%
3	16471	10%
4	5976	4%
5	1945	1%
6	623	0.39%
7	251	0.16%
8	134	0.08%
9	31	0.02%
10	21	0.01%

Panel B**Firm Characteristics**

	N	Mean	Median
Total Assets (\$ million)	17159	3641.97	1310.8
Market Capitalization (\$ million)	17159	3676	1474
Percent Outside Directors	17131	80.11	83.3
Percent Independent Directors	17131	69.27	71.4
Independent Board	17159	0.88	1.0
Percent Independent Directors-Low Ranked	17159	15.99	12.5
Majority of Independent Directors-Low Ranked	17159	0.13	0.0
Percent Independent Directors-High Ranked	17159	12.03	9.1
Majority of Indep.-Directors High Ranked	17159	0.09	0.0
Per. Indep. Directors (Only): Sole directorship	17159	29.45	28.6
Maj. Indep. Directors (Only): Sole directorship	17159	0.40	0.0
Busy board	17131	0.04	0.0

Table 1. (continued)

Panel C								
Size Decile	Mean		Mean		Mean			
	Percent Independent		Percent Independent		Percent Independent			
	Directors		Directors Low Ranked		Directors High Ranked			
	<u>Pre-2005</u>	<u>Post-2004</u>	<u>Pre-2005</u>	<u>Post-2004</u>	<u>Pre-2005</u>	<u>Post-2004</u>	<u>Pre-2005</u>	<u>Post-2004</u>
Smallest	60.88	74.13	16.16	15.07	1.06	1.39		
2	61.23	75.13	15.50	16.54	2.70	2.74		
3	62.09	75.37	15.99	15.94	4.50	4.34		
4	59.97	76.58	15.46	16.20	5.83	6.85		
5	62.77	77.55	16.62	16.12	8.68	9.64		
6	63.66	77.30	17.03	16.90	11.28	12.11		
7	64.12	77.81	16.58	15.40	14.60	15.43		
8	63.58	78.57	16.98	14.56	18.17	17.63		
9	63.80	78.68	17.60	15.06	21.79	24.07		
Largest	66.54	79.90	16.20	12.89	29.83	28.70		

Panel D								
Size Decile	Mean		Mean		Mean		Mean	
	Majority Independent		Majority Independent		Majority Independent		Majority Independent	
	Directors		Directors Low Ranked		Directors High Ranked		Sole Directorship	
	<u>Pre-2005</u>	<u>Post-2004</u>	<u>Pre-2005</u>	<u>Post-2004</u>	<u>Pre-2005</u>	<u>Post-2004</u>	<u>Pre-2005</u>	<u>Post-2004</u>
Smallest	0.79	0.98	0.19	0.09	0.00	0.00	0.50	0.61
2	0.79	0.98	0.15	0.11	0.02	0.01	0.52	0.51
3	0.78	0.98	0.15	0.09	0.02	0.01	0.49	0.54
4	0.77	0.98	0.16	0.09	0.03	0.02	0.49	0.51
5	0.80	0.99	0.16	0.08	0.05	0.03	0.42	0.46
6	0.82	0.99	0.19	0.08	0.07	0.02	0.40	0.37
7	0.81	0.99	0.17	0.07	0.11	0.06	0.39	0.32
8	0.79	0.99	0.19	0.05	0.17	0.09	0.30	0.34
9	0.80	0.97	0.21	0.06	0.26	0.19	0.26	0.23
Largest	0.86	0.98	0.14	0.03	0.44	0.22	0.18	0.15

Table 1. (continued)

Panel E <i>Firm Characteristics</i>	Majority of Independent Directors-High Ranked			Majority of Independent Directors-Low Ranked			Majority of Independent Directors (Only): Solo		
	N	Mean	Median	N	Mean	Median	N	Mean	Median
Total Assets (\$ million)	1568	8755.42	4925.5	2154	3961.21	1489.2	7058	2017.32	886.1
Market Capitalization (\$ million)	1568	8979.66	6571.0	2154	2786.62	1267.9	7058	2343.86	1040.7
Percent Outside Directors	1568	81.81	85.7	2154	81.47	84.6	7058	78.00	80.0
Percent Independent Directors	1568	68.76	75.0	2154	68.57	72.7	7058	66.39	70.0
Independent Board	1568	0.85	1.0	2154	0.87	1.0	7058	0.85	1.0
Busy board	1568	0.23	0.0	2154	0.21	0.0	7058	0.00	0.0

Table 2. Lucky CEO Option Grants and Independent Director Reputation Incentives

This table presents results from multivariate probit regression analysis of board representation based on the portion of independent outside directors for which this board represents one of their largest or smallest boards and the CEO receiving a lucky option grant as in Bebchuk, Grinstein and Peyer (2010). The data are all the CEO option grants for option granting firms from fiscal years 1997 to 2012 and in the non-censored sample. A lucky grant is defined to be an option grant issued on the day with the lowest stock price for the month. There are 32,957 CEO option grants with 2,831 being identified as lucky. Models 1 and 2 report results from an analysis where the level of observations is the firm-year. Models 3 and 4 report results from analysis of all CEO option grant observations using firm-grant level observations. Percent Independent Directors-High (Low) Ranked is the percentage of independent directors for whom the firm of this board is a high (low) ranked firm (by market capitalization) relative to all the firms for which the individual also serves as director. Majority of Independent Directors-High (Low) is an indicator variable that equals one if more than 50% of the outside directors in this board have a High (Low) ranked (based on market capitalization) relative to the other boards where they also serve as a director. Relative Size is the natural logarithm of the ratio of year end market capitalization to the median market capitalization for the sample year. New Economy is an indicator if the firm is in one of the following SIC industries, as in Murphy (2003), 3570, 3571, 3572, 3576, 3577, 3661, 3674, 4812, 4813, 5045, 5961, 7370, 7371, 7372 and 7373. Standard errors are robust, clustered by firm and *p*-values are in parentheses below the coefficients. *, **, *** indicate significance at the

	Model 1	Model 2	Model 3	Model 4
<i>Dependent Variable: Lucky CEO Option Grant Indicator</i>	Probit	Probit	Probit	Linear Probability Model
Percent Independent Directors-High Ranked	-0.003** (0.02)		-0.003** (0.02)	-0.0004** (0.02)
Percent Independent Directors-Low Ranked	-0.001 (0.26)		-0.0005 (0.62)	-0.00008 (0.63)
Majority Independent Directors-High Ranked		-0.074 (0.23)		
Majority Independent Directors-Low Ranked		0.011 (0.87)		
Majority Independent Directors (Sole)		0.06 (0.14)		
Independent Board	0.018 (0.8)	-0.017 (0.81)	-0.027 (0.63)	-0.006 (0.55)
Busy Board	-0.044 (0.64)	-0.086 (0.36)	-0.034 (0.63)	-0.0048 (0.63)
Number of Grants	0.142*** (<.01)	0.142*** (<.01)		
Relative Size	0.04* (0.09)	0.036 (0.11)	0.03 (0.14)	0.005 (0.14)
Ln(Assets)	-0.016 (0.42)	-0.02 (0.31)	-0.033 (0.1)	-0.0052* (0.1)
New Economy	0.088 (0.12)	0.095* (0.09)	-0.044 (0.56)	-0.0062 (0.62)
CEO Board Tenure	0.001 (0.59)	0.002 (0.5)	0.002 (0.41)	0.0003 (0.45)
CEO Ownership	-0.002 (0.62)	-0.002 (0.62)	-0.002 (0.47)	-0.0004 (0.49)
SOX	-0.159 (0.11)	-0.15 (0.13)	-0.11 (0.28)	-0.012 (0.470)
Number of Observations	8550	8550	20425	20441
Fixed Effects	Year	Year	Year/Industry	Year/Industry
Pseudo-R ² / Adjusted-R ²	11.20%	11.15%	1.04%	0.26%

Table 3. Covenant Violations and Independent Director Reputation Incentives

This table presents results from a multivariate probit analysis of board representation based on the portion of independent directors for which this board represents one of their largest or smallest boards and covenant violations. The data are from fiscal years 1997 to 2007 and exclude finance and utility firms. Covenant violations are from Nini, Smith and Sufi (2012). There are 755 covenant violations and 572 new covenant violations. New covenant violations are ones where there was not violation in the prior four quarters. Lowest (Highest) for Majority of Independent is an indicator variable that equals one if for more than 50% of the independent directors this board seat is for the smallest (highest) ranked firm (by market capitalization) relative to the size of the firms of the other boards on which they sit as a director. Percent Independent Directors-High (Low) Ranked is the percentage of independent directors for whom the firm of this board is a high (low) ranked firm (by market capitalization) relative to all the firms for which the individual also serves as director. All models include year fixed effects and model 4 includes industry fixed effects. Standard errors are robust, clustered by firm and *p*-values are in parentheses beneath the coefficients. *, **, *** indicate significance at the 10%, 5% and 1% levels respectively.

	Model 1	Model 2	Model 3	Model 4
<i>Dependent Variable: Covenant Violation Indicator</i>	Probit Covenant Violation	Probit New Covenant Violation	Probit Covenant Violation	Linear Probability Model Covenant Violation
% Indep. Directors-High Ranked	-0.009*** (<i><.01</i>)	-0.006*** (<i><.01</i>)		-0.0010** (<i>0.02</i>)
% Indep. Directors-Low Ranked	0.003* (<i>0.1</i>)	0.002 (<i>0.25</i>)		0.0003 (<i>0.25</i>)
Maj. Indep. Directors-High Ranked			-0.257*** (<i><.01</i>)	
Maj. Indep. Directors-Low Ranked			0.156** (<i>0.04</i>)	
Majority Independent Directors (Sole)			0.012 (<i>0.84</i>)	
Independent Board	0.026 (<i>0.74</i>)	0.018 (<i>0.82</i>)	0 (<i>1</i>)	0.004 (<i>0.64</i>)
Busy Board	0.079 (<i>0.56</i>)	0.011 (<i>0.93</i>)	0.013 (<i>0.92</i>)	0.007 (<i>0.62</i>)
CEO Chair	0.033 (<i>0.55</i>)	0.03 (<i>0.57</i>)	0.032 (<i>0.57</i>)	0.003 (<i>0.68</i>)
Ln(Board Size)	-0.034 (<i>0.79</i>)	-0.024 (<i>0.83</i>)	-0.036 (<i>0.78</i>)	-0.0076 (<i>0.63</i>)
Institutional Holdings	0 (<i>0.94</i>)	0.001 (<i>0.49</i>)	0 (<i>0.97</i>)	-0.00013 (<i>0.45</i>)
Founder Family Director	-0.202* (<i>0.07</i>)	-0.155 (<i>0.1</i>)	-0.197* (<i>0.08</i>)	-0.018* (<i>0.07</i>)
GIM Index	-0.028** (<i>0.01</i>)	-0.024** (<i>0.01</i>)	-0.029*** (<i><.01</i>)	-0.003** (<i>0.04</i>)
Ln(Assets)	-0.0313 (<i>0.37</i>)	-0.029 (<i>0.33</i>)	-0.061* (<i>0.070</i>)	-0.01** (<i>0.02</i>)
ROA	-0.889*** (<i><.01</i>)	-0.643*** (<i><.01</i>)	-0.949*** (<i><.01</i>)	-0.121*** (<i><.01</i>)
Industry Adjusted Leverage	0.845*** (<i><.01</i>)	0.468*** (<i><.01</i>)	0.867*** (<i><.01</i>)	0.144*** (<i><.01</i>)
Growth Rate of Assets	0 (<i>0.58</i>)	0.0001 (<i>0.87</i>)	0 (<i>0.55</i>)	0 (<i>0.84</i>)
Volatility	1.688*** (<i><.01</i>)	1.447*** (<i><.01</i>)	1.626*** (<i><.01</i>)	0.385*** (<i><.01</i>)
Number of Business Segments	0.054*** (<i><.01</i>)	0.03** (<i>0.02</i>)	0.054*** (<i><.01</i>)	0.006*** (<i><.01</i>)
Number of Observations	8674	8674	8674	8691
Fixed Effects	Year	Year	Year	Year/Industry
Pseudo-R ² / Adjusted-R ²	6.82%	4.39%	6.64%	4.60%

Table 4. Exchange Initiated Delistings and Independent Director Reputation Incentives

This table presents results from multivariate regression analysis of board representation based on the portion of independent directors for which this board represents one of their largest or smallest boards and firm delisting. Delisting is defined as the exchange dropping the firm. Delisting due to mergers are not included. Finance and utility firms are excluded. There are 209 delistings from fiscal years 1997 to 2012. The dependent variable is one if the firm is delisted due to an exchange-initiated delisting as indicated in the CRSP delisting codes. Percent Independent Directors-High (Low) Ranked is the percentage of independent directors for whom the firm of this board is a high (low) ranked firm (by market capitalization) relative to all the firms for which the individual also serves as director. Majority of Independent Directors-High (Low) is an indicator variable that equals one if for more than 50% of the outside directors this board seat is for a High (Low) ranked firm (by market capitalization) relative to the size of the firms of the other boards on which they sit as a director. *p*-values are in parentheses beneath the coefficients. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

	Model 1	Model 2	Model 3
<i>Dependent Variable: Delisted Indicator</i>	Probit	Probit	Linear Probability Model
Percent Independent Directors-High Ranked	-0.020*** (<i><.01</i>)		-0.0002*** (<i><.01</i>)
Percent Independent Directors-Low Ranked	0.007** (<i>0.01</i>)		0.0001* (<i>0.05</i>)
Majority Independent Directors-High Ranked		-0.665** (<i>0.04</i>)	
Majority Independent Directors-Low Ranked		0.11 (<i>0.38</i>)	
Majority Independent Directors (Sole)		-0.028 (<i>0.77</i>)	
Independent Board	-0.277* (<i>0.06</i>)	-0.265* (<i>0.05</i>)	-0.004 (<i>0.28</i>)
Busy Board	-0.268 (<i>0.36</i>)	-0.219 (<i>0.45</i>)	-0.004 (<i>0.31</i>)
CEO Chair	0.186** (<i>0.04</i>)	0.185** (<i>0.04</i>)	0.002* (<i>0.06</i>)
Ln(Board Size)	-0.151 (<i>0.44</i>)	-0.167 (<i>0.39</i>)	-0.004 (<i>0.32</i>)
Institutional Holdings	-0.002 (<i>0.19</i>)	-0.0022 (<i>0.25</i>)	-0.00003 (<i>0.37</i>)
Outside Director Ownership	0.006 (<i>0.3</i>)	0.006 (<i>0.28</i>)	0.0001 (<i>0.63</i>)
Founder Present	0.01 (<i>0.92</i>)	0.013 (<i>0.92</i>)	-0.003 (<i>0.26</i>)
GIM Index	-0.007 (<i>0.82</i>)	-0.004 (<i>0.89</i>)	0.0001 (<i>0.93</i>)
Ln(Assets)	-0.13 (<i>0.72</i>)	-0.153 (<i>0.66</i>)	-0.0014 (<i>0.81</i>)
Ln(Assets) ²	0.01 (<i>0.75</i>)	0.0047 (<i>0.83</i>)	0.0001 (<i>0.77</i>)
ROA	-2.44*** (<i><.01</i>)	-2.61*** (<i><.01</i>)	-0.0441*** (<i><.01</i>)
Leverage	0.94*** (<i><.01</i>)	1.033*** (<i><.01</i>)	0.018*** (<i><.01</i>)
Current Ratio	-0.05 (<i>0.21</i>)	-0.055 (<i>0.18</i>)	-0.0005 (<i>0.22</i>)
Volatility	1.77** (<i>0.02</i>)	1.814** (<i>0.03</i>)	0.079*** (<i><.01</i>)
Tobin's Q	-0.37*** (<i><.01</i>)	-0.436*** (<i><.01</i>)	0.0001 (<i>0.86</i>)
Number of Observations	14496	14496	14496
Fixed Effect	none	none	Year/Industry
Pseudo-R ² / Adjusted-R ²	20.77%	19.62%	2.15%

Table 5. Dividend Reductions and Independent Director Reputation Incentives

This table presents results from multivariate regression analysis of board representation based on the portion of independent directors for which this board represents one of their largest or smallest boards and the propensity of dividend paying firms to reduce its dividend by 10% or more. There are 2,463 instances of dividend reductions in the sample excluding financial and utility firms from fiscal years 1997 to 2012 and 875 are by 10% or more. Percent Independent Directors-High (Low) Ranked is the percentage of independent directors for whom the firm of this board is a high (low) ranked firm (by market capitalization) relative to all the firms for which the individual also serves as director. Majority of Independent Directors-High (Low) is an indicator variable that equals one if for more than 50% of the outside directors this board seat is for a High (Low) ranked firm (by market capitalization) relative to the size of the firms of the other boards on which they sit as a director. The dependent variable in model 3 is one if the firm reduced its dividend by 25% or more from the prior year (650 instances). Standard errors are robust, clustered by firm and *p*-values are in parentheses beneath the coefficients. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

	Model 1	Model 2	Model 3	Model 4
Dependent Variable: Dividend Reduction of $\geq 10\%$ or $\geq 25\%$	Probit -10%	Probit -10%	Probit -25%	Linear Probability -10%
Percent Independent Directors-High Ranked	-0.004** (0.01)		-0.004** (0.03)	-0.0005* (0.08)
Percent Independent Directors-Low Ranked	0.005*** ($<.01$)		0.004** (0.01)	0.0010*** ($<.01$)
Majority Independent Directors-High Ranked		-0.134* (0.09)		
Majority Independent Directors-Low Ranked		0.131** (0.03)		
Majority Independent Directors (Sole)		-0.037 (0.46)		
Independent Board	0.026 (0.74)	0.053 (0.48)	-0.0061 (0.94)	0.003 (0.78)
Busy Board	-0.009 (0.93)	0.011 (0.91)	-0.048 (0.68)	-0.001 (0.95)
CEO Chair	-0.049 (0.32)	-0.043 (0.38)	-0.048 (0.37)	-0.009 (0.25)
CEO Board Tenure	-0.004 (0.16)	-0.004 (0.13)	-0.004 (0.19)	-0.0004 (0.29)
Ln(Board Size)	-0.3995*** ($<.01$)	-0.379*** ($<.01$)	-0.433*** ($<.01$)	-0.053*** ($<.01$)
Institutional Holdings	-0.0011 (0.31)	-0.0009 (0.41)	-0.002 (0.12)	-0.0003* (0.08)
Founding Family Director	-0.09 (0.23)	-0.084 (0.26)	-0.143* (0.07)	-0.012 (0.28)
Ln(Assets)	-0.18 (0.28)	-0.1897 (0.25)	-0.188 (0.29)	-0.029 (0.28)
Ln(Assets) ²	0.01 (0.26)	0.011 (0.3)	0.0119 (0.28)	0.002 (0.33)
Ind. Adj. ROA	-1.71*** ($<.01$)	-1.8107*** ($<.01$)	-1.919*** ($<.01$)	-0.3142*** ($<.01$)
Leverage	1.08*** ($<.01$)	1.119*** ($<.01$)	0.9815*** ($<.01$)	0.216*** ($<.01$)
NYSE	-0.17*** ($<.01$)	-0.1633*** ($<.01$)	-0.205*** ($<.01$)	-0.0235** (0.03)
Number of Observations	8952	8952	8952	8949
Fixed Effects	Year	Year	Year	Year/Industry
Pseudo-R ² / Adjusted-R ²	9.13%	8.92%	9.91%	6.12%

Table 6. Shareholder Class Action Lawsuits and Independent Director Reputation Incentives

This table presents results from multivariate regression analysis of board representation based on the portion of independent directors for which this board represents one of their largest or smallest boards and the propensity of being sued. The data are from fiscal years 1997 to 2012. There are 511 class action lawsuits for the sample excluding financial and utility firms. Percent Independent Directors-High (Low) Ranked is the percentage of independent directors for whom the firm of this board is a high (low) ranked firm (by market capitalization) relative to all the firms for which the individual also serves as director. Majority of Independent Directors-High (Low) is an indicator variable that equals one if for more than 50% of the outside directors this board seat is for a High (Low) ranked firm (by market capitalization) relative to the size of the firms where they also sit as a director. All models include year fixed effects. Standard errors are robust, clustered by firm and *p*-values are in parentheses below the coefficients. *, **, *** indicate significance at the 10%, 5%, and 1%

	Model 1	Model 2	Model 3	Model 4
<i>Dependent Variable: Class Action Lawsuit Indicator</i>	Probit	Probit	Probit	Linear Probability
Percent Independent Directors-High Ranked	-0.0043** (0.03)			-0.0003** (0.02)
Percent Independent Directors-Low Ranked	-0.0022 (0.17)			-0.00007 (0.38)
Majority Independent Directors-High Ranked		-0.152* (0.08)		
Majority Independent Directors-Low Ranked		-0.058 (0.47)		
Majority Independent Directors-High Ranked (Audit)			-0.232** (0.02)	
Majority Independent Directors-Low Ranked (Audit)			-0.108 (0.22)	
Majority Independent Directors (Sole)		0.039 (0.44)	0.035 (0.49)	
Independent Board	0.1512* (0.07)	0.1 (0.22)	0.116 (0.15)	0.008* (0.05)
Busy Board	-0.0028 (0.98)	-0.017 (0.9)	-0.031 (0.8)	0.0003 (0.97)
CEO Chair	-0.029 (0.56)	-0.0372 (0.44)	-0.0391 (0.42)	0 (0.9)
CEO Board Tenure	-0.0054** (0.05)	-0.005* (0.08)	-0.005* (0.08)	-0.00023** (0.05)
Ln(Board Size)	-0.154 (0.16)	-0.184* (0.09)	-0.179 (0.1)	-0.003 (0.61)
Institutional Holdings	0.001 (0.24)	0.001 (0.25)	0.001 (0.26)	0 (0.33)
Founding Family Director	-0.081 (0.51)	-0.078 (0.53)	-0.075 (0.55)	0 (0.94)
Ln(Q)	0.3865*** (<i><.01</i>)	0.3784*** (<i><.01</i>)	0.3763*** (<i><.01</i>)	0.0206*** (<i><.01</i>)
Ln(Assets)	-0.2263* (0.1)	-0.2355* (0.08)	-0.2507* (0.07)	-0.0132 (0.21)
Ln(Assets) ²	0.0233*** (<i><.01</i>)	0.0232*** (<i><.01</i>)	0.0242*** (<i><.01</i>)	0.0014** (0.05)
Leverage	0.1853 (0.13)	0.1894 (0.12)	0.1985 (0.11)	-0.0031 (0.71)
ROA	-0.1822 (0.23)	-0.1821 (0.23)	-0.179 (0.22)	-0.0218 (0.22)
Growth Rate of Assets	0.0006** (0.03)	0.0006** (0.03)	0.0006** (0.02)	0.0001** (0.01)
Industry Litigation Activity	24.17*** (<i><.01</i>)	24.18*** (<i><.01</i>)	24.2*** (<i><.01</i>)	2.98*** (<i><.01</i>)
Number of Observations	16624	16624	16624	16624
Fixed Effect	Year	Year	Year	Year/Industry
Psuedo-R ² / Adjusted-R ²	12.97%	12.92%	13.04%	5.49%

Table 7. Occurrence of Negative Firm Outcomes: Difference-In-Differences Analysis around Exogenous Directorship Ranking Changes

This table presents results from multivariate difference-in-differences regression analysis of board representation based on the portion of independent directors for which this board represents one of their largest or smallest boards and the propensity of the firm experiencing a negative outcome. The dependent variable equals one if the firm experiences a covenant violation, a dividend reduction, a class action lawsuit, a lucky CEO option grant or an exchange initiated delisting and zero otherwise. Control variables are the same as in the previous tables, but are not reported for brevity. Percent Independent Directors-High (Low) Ranked is the percentage of independent directors for whom the firm of this board is a high (low) ranked firm (by market capitalization) relative to all the firms for which the individual also serves as director. The data are for fiscal years 1997 to 2012 and exclude financial and utility firms. A treatment firm has at least one treatment director. A treatment director is an independent director with multiple directorships for whom the firm of another one of their directorships decreased in size and this resulted in a ranking increase for the current directorship. Control firms are in the same Fama and French industry, with the nearest market capitalization to the treatment firm, but have no treatment directors. The estimated model is

$$\text{Negative Firm Outcome}_{i,t} = \beta_0 + \beta_1 \text{Treatment}_i + \beta_2 \text{Post-Treatment}_t + \beta_3 \text{Treatment}_i * \text{Post-Treatment}_t + \text{Controls}_{i,t} + \varepsilon_{i,t}$$

Post-treatment_t is an indicator variable that equals zero in the two years prior to the ranking change and one in the second and third years following the ranking change event. Treatment_i equals one for treatment firm-years and zero for control firm-years. The coefficient estimate of the interaction term, β_3 , is the difference-in-differences estimate. Standard errors are robust, clustered by firm and p -values are in parentheses beneath the coefficients. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

	Model 1	Model 2	Model 3	Model 4
				Linear
Dependent Variable:	Probit	Probit	Probit	Probability
	Negative	Negative	Negative	Model
	Outcome	Outcome	Outcome	Negative
				Outcome
Per. Indep. Directors-High Ranked	-0.0026** (0.02)			
Per. Indep. Directors-Low Ranked	0.0034*** (<.01)			
Treatment		0.129 (0.11)	0.054 (0.54)	0.019 (0.49)
Post-Shock		0.004 (0.96)	0.131 (0.18)	0.04 (0.19)
Treatment X Post-Shock		-0.224** (0.05)	-0.205* (0.09)	-0.067* (0.07)
Number of Observations	16864	2387	2176	2176
Controls	Yes	No	Yes	Yes
Pseudo-R ² / Adjusted-R ²	3.26%	0.32%	4.68%	3.48%

Table 8. Stock Repurchases, Dividend Increases and Stock Splits and Independent Director Reputation Incentives

This table presents results from multivariate regression analysis of the percentage of stock repurchases, dividend increases and stock splits. Share repurchase (%) is the expense on repurchasing common and preferred stock less the reduction in value of the net preferred shares outstanding all scaled by the end of year market capitalization. Dividend increase is an indicator variable that equals one if the current year dividend is higher than the prior year dividend by 5% or more. Stock Split is an indicator variable that equals one if the firm conducts a split of 5 for 4 or better during the year and zero otherwise. The sample excludes financial and utility firms and is from fiscal years 1997 to 2012. Percent Independent Directors-High (Low) Ranked is the percentage of independent directors for whom the firm of this board is a high (low) ranked firm. Majority of Independent Directors-High (Low) is an indicator variable that equals one if for more than 50% of the outside directors this board seat is for a High (Low) ranked firm. For stock repurchases, we use OLS and models 1, 2 and 3 include industry fixed effects and model 4 incorporates firm fixed effects. We use probit models to examine the dividend increases, stock splits and the positive firm outcome indicator variables. Models 7, 10 and 13 are linear probability models that include industry fixed effects. All models include year fixed effects. Models 11 - 13 report results from difference-in-differences tests using treatment and control firms for dividend paying firms. A treatment firm has at least one treatment director. A treatment director is an independent director with multiple directorships for whom the firm of another one of their directorships decreased in size and this resulted in a ranking increase for the current directorship. Control firms are in the same Fama and French industry, with the nearest market capitalization to the treatment firm, but have no treatment directors. The dependent variable, positive outcome, equals one if the firm experiences a dividend increase, repurchases a portion of the shares outstanding during the year, or conducts a stock split of 5 for 4 or better and zero otherwise. The estimated model is

$$Positive\ Firm\ Outcome_{i,t} = \beta_0 + \beta_1 Treatment_i + \beta_2 Post-Treatment_t + \beta_3 Treatment_i * Post-Treatment_t + Controls_{i,t} + \varepsilon_{i,t}.$$

Post-treatment_t is an indicator variable that equals zero in the year prior to the ranking change and one in the two years following the ranking change. *Treatment_i* equals one for treatment firm-years and zero for control firm-years. The coefficient estimate of the interaction term, β_3 , is the difference-in-differences estimate. Standard errors are robust, clustered by firm and *p*-values are in parentheses beneath the coefficients. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

Table 8. (continued)

Dependent Variable:	Share Repurchases				Dividend Increase Indicator			Stock Split Indicator			Positive Outcome Indicator		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13
	Full Sample	Full Sample	Dividend Payers	Dividend Payers	Probit	Probit	Linear Probability Model	Probit	Probit	Linear Probability Model	Probit	Probit	Linear Probability Model
Percent Independent Directors-High Ranked	0.032*** ($<.01$)		0.045*** ($<.01$)	0.038*** ($<.01$)	0.004*** ($<.01$)		0.001*** ($<.01$)	0.008*** ($<.01$)		0.001*** ($<.01$)			
Percent Independent Directors-Low Ranked	0.009 (0.12)		0.012 (0.22)	0.013 (0.19)	-0.006*** ($<.01$)		-0.002*** ($<.01$)	-0.008*** ($<.01$)		-0.001*** ($<.01$)			
Majority Independent Directors-High Ranked		0.341 (0.23)				0.077 (0.15)			0.255*** ($<.01$)				
Majority Independent Directors-Low Ranked		-0.239 (0.49)				-0.151*** ($<.01$)			-0.297*** ($<.01$)				
Majority Independent Directors (Sole)		-0.179 (0.4)				0.048 (0.23)			0.082** (0.04)				
Treatment											-0.127 (0.19)	-0.08 (0.44)	-0.029 (0.35)
Post-Shock											-0.019 (0.79)	0.093 (0.29)	0.02 (0.44)
Treatment X Post-Shock											0.274*** ($<.01$)	0.209* (0.06)	0.068** (0.04)
Independent Board	0.036 (0.91)	0.293 (0.35)	0.1798 (0.73)	-0.403 (0.24)	-0.019 (0.76)	-0.058 (0.31)	0.0003 (0.99)	0.074 (0.21)	0.057 (0.32)	0.01 (0.29)		-0.041 (0.77)	0.0136 (0.72)
Busy Board	-1.378 (0.1)	-0.816 (0.33)	-1.668* (0.1)	-0.963 (0.29)	0.062 (0.39)	0.047 (0.52)	0.019 (0.47)	-0.079 (0.38)	-0.068 (0.46)	-0.018 (0.12)		0.02 (0.87)	0.023 (0.54)
CEO Chair	-0.098 (0.61)	-0.037 (0.85)	-0.328 (0.24)	0.167 (0.52)	0.001 (0.99)	-0.009 (0.83)	0.004 (0.77)	0.018 (0.65)	0.0159 (0.69)	0 (0.92)		0.022 (0.79)	0 (0.99)
CEO Board Tenure	0.008 (0.44)	0.004 (0.72)	0.021 (0.16)	-0.003 (0.85)	0.0060*** ($<.01$)	0.0060*** ($<.01$)	0.002** (0.02)	0.004* (0.06)	0.004* (0.07)	0.0004 (0.17)		0.004 (0.35)	0.0015 (0.20)
Ln(Board Size)	0.2628 (0.63)	0.41 (0.45)	0.992 (0.3)	0.294 (0.72)	0.1968** (0.03)	0.161* (0.08)	0.028 (0.4)	-0.189** (0.03)	-0.217** (0.01)	-0.035*** ($<.01$)		0.278 (0.14)	0.0566 (0.27)
Institutional Holdings	0.0119** (0.02)	0.0122** (0.02)	0.019** (0.03)	0.0069 (0.51)	-0.002** (0.02)	-0.0022** (0.01)	-0.0008*** ($<.01$)	-0.012*** ($<.01$)	-0.012*** ($<.01$)	-0.002*** ($<.01$)		-0.0029 (0.12)	-0.0008 (0.13)
Founding Family Director	0.521** (0.04)	0.467* (0.06)	1.0240*** ($<.01$)	0.776* (0.07)	0.024 (0.69)	0.021 (0.73)	0.006 (0.76)	0.075 (0.25)	0.062 (0.35)	0.008 (0.39)		-0.212 (0.13)	-0.074 (0.11)
Ln(Assets)	-0.6 (0.42)	-0.6038 (0.41)	-2.428* (0.09)	-2.17 (0.31)	0.5*** ($<.01$)	0.5111*** ($<.01$)	0.163*** ($<.01$)	0.81*** ($<.01$)	0.83*** ($<.01$)	0.097*** ($<.01$)		0.227 (0.37)	0.086 (0.23)
Ln(Assets) ²	0.03 (0.49)	0.045 (0.36)	0.1445 (0.11)	0.098 (0.43)	-0.03*** ($<.01$)	-0.026*** ($<.01$)	-0.0082** (0.01)	-0.053*** ($<.01$)	-0.052*** ($<.01$)	-0.0061*** ($<.01$)		-0.009 (0.55)	-0.0031 (0.49)
Ind. Adj. ROA	4.32*** ($<.01$)	4.5367*** ($<.01$)	9.606*** ($<.01$)	2.297 (0.29)	1.96*** ($<.01$)	2.0987*** ($<.01$)	0.692*** ($<.01$)	0.53*** ($<.01$)	0.537*** ($<.01$)	0.105*** ($<.01$)		2.3929*** ($<.01$)	0.606*** ($<.01$)
Leverage	0.29 (0.76)	0.21 (0.83)	-1.0755 (0.57)	1.242 (0.6)	-0.53*** ($<.01$)	-0.575*** ($<.01$)	-0.1954*** ($<.01$)	-0.933*** ($<.01$)	-0.993*** ($<.01$)	-0.095*** ($<.01$)		-1*** ($<.01$)	-0.3*** ($<.01$)
NYSE	0.33 (0.26)	0.3651 (0.21)	1.243* (0.07)		-0.04 (0.46)	-0.0425 (0.39)	-0.023 (0.21)	-0.007 (0.86)	-0.009 (0.83)	-0.002 (0.66)		0.0433 (0.67)	0.008 (0.79)
Number of Observations	15601	15601	8691	8691	8952	8952	8949	16637	16637	16634	2719	2681	2681
Fixed Effect	Year/Industry	Year/Industry	Year/Industry	Year/Firm	Year	Year	Year/Industry	Year	Year	Year/Industry	none	Year	Year/Industry
Adjusted-R ²	5.86%	5.68%	9.61%	53.46%	7.48%	7.21%	10.29%	19.83%	19.64%	12.63%	0.39%	7.76%	11.77%

Table 9. Affiliated Directors

This table presents results of the primary models in each prior table using affiliated director reputation incentives instead of independent director reputation incentives. Percent Affiliated Directors-High (Low) Ranked is the percentage of affiliated directors for whom the firm of this board is a high (low) ranked firm (by market capitalization) relative to all the firms for which the individual also serves as director. The controls in each model are the same as in the prior tables. Just the primary reputation measures are reported here for brevity. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
<i>Dependent Variable:</i>	Probit Lucky Option Grants	Probit Covenant Violation	Probit Delisting	Probit Dividend Reduction	Probit Shareholder Lawsuit	OLS Stock Repurchase	Probit Dividend Increase	Probit Stock Split
Per. Affiliated Directors-High Ranked	-0.002 (0.63)	-0.022*** (<i><.01</i>)	0.003 (0.76)	-0.004 (0.45)	0.005 (0.29)	0.014 (0.48)	-0.001 (0.72)	0.007** (0.04)
Per. Affiliated Directors-Low Ranked	-0.002 (0.62)	0.0037 (0.44)	0.0055 (0.39)	0.004 (0.39)	-0.004 (0.49)	-0.039 (0.2)	-0.005 (0.16)	-0.013*** (<i><.01</i>)
Number of Observations	8550	8674	14496	8952	16624	15601	8952	16637
Adjusted or Psuedo-R ²	11.10%	6.70%	19.13%	8.76%	12.83%	5.71%	7.08%	19.22%

Table 10. Robustness Analysis Using Randomized Size Adjustment Factors

This table presents results of the primary models in each prior table while controlling for randomized size factors that correspond to our primary measures of representation of independent directors who view the directorship as relatively High or Low in its prestige. The randomized factors are created by randomly assigning all of the directors in a year to the sample firms and then computing our primary measures. This process is repeated 100 times and the average measures are computed as the size adjustment factors, both large and small. Percent Independent Directors-High (Low) Ranked is the percentage of independent directors for whom the firm of this board is a high (low) ranked firm (by market capitalization) relative to all the firms for which the individual also serves as director. Majority Independent Directors-Highest (Lowest) Ranked is an indicator variable that equals one if for a majority of the independent directors this firm is the largest (smallest) firm of all their directorships. The controls in each model are the same as in the prior tables. Just the primary reputation measures and the randomized size adjustment factors are reported here for brevity. The results are for the full uncensored sample. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
<i>Dependent Variable:</i>	Probit Lucky Option Grants	Probit Covenant Violation	Probit Shareholder Lawsuit	Probit Delisting	Probit Dividend Reduction	OLS Stock Repurchase	Probit Dividend Increase	Probit Stock Split
Per. Indep. Directors-High Ranked	-0.003** (0.05)	0.001 (0.72)	-0.005** (0.02)	-0.012** (0.04)	-0.002 (0.27)	0.016** (0.04)	0.003** (0.03)	-0.001 (0.77)
Per. Indep. Directors-Low Ranked	-0.0014 (0.34)	0.00005 (0.98)	-0.003* (0.05)	0.005** (0.05)	0.004*** ($<.01$)	0.011* (0.1)	-0.001 (0.35)	-0.005*** ($<.01$)
Adjustment Factor High	0.005 (0.35)	-0.04*** ($<.01$)	0.003 (0.65)	-0.05560*** ($<.01$)	-0.018*** ($<.01$)	0.126*** ($<.01$)	0.009** (0.03)	0.04*** ($<.01$)
Adjustment Factor Low	-0.008 (0.2)	0.023*** ($<.01$)	0.009 (0.22)	0.03460*** ($<.01$)	0.007 (0.2)	-0.01 (0.7)	-0.009** (0.05)	-0.034*** ($<.01$)
Independent Board	0.056 (0.51)	0.054 (0.6)	0.05 (0.66)	-0.5510*** ($<.01$)	0.094 (0.34)	-0.457 (0.340)	-0.013 (0.86)	0.046 (0.58)
Busy Board	-0.077 (0.43)	0.102 (0.48)	0.052 (0.7)	-0.2710 (0.26)	0.056 (0.57)	-1.292 (0.19)	0.011 (0.88)	-0.155 (0.14)
Number of Observations	8029	8004	14840	15146	8849	13927	16533	14837
Adjusted or Psuedo-R ²	11.64%	9.31%	13.38%	26.99%	8.80%	5.36%	11.99%	22.92%

Table 11. Robustness Analysis Using a Matched Sample

This table presents results from multivariate regressions using a matched sample. The sample is constructed by matching firms with a Majority of Independent Directors with High reputation incentives (treatment) to firms with a Majority of Independent Directors with Low reputation incentives (control). Both treatment and control firms must have at least 50% independent directors. For each year we match each treatment firm with up to four control firms in the same Fama-French 49 Industry classification that are closet in size (market capitalization) to the treatment firm. We discard treatment firms that we are not able to find at least one match that is within 75% of its size. We report the regression coefficient estimate for our primary measures of board reputation incentives from each of the firm outcomes we examine. Percent Independent Directors-High (Low) Ranked is the percentage of independent directors for whom the firm of this board is a high (low) ranked firm (by market capitalization) relative to all the firms for which the individual also serves as director. All models include year fixed effects. The controls in each model are the same as in the prior tables and are suppressed here for brevity. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<i>Dependent Variable:</i>	Probit Lucky Option Grants	Probit Covenant Violation	Probit Shareholder Lawsuit	Probit Dividend Reduction	OLS Stock Repurchase	Probit Dividend Increase	Probit Stock Split
Per. Indep. Directors-High Ranked	-0.010** (0.05)	-0.002 (0.75)	-0.017** (0.03)	-0.001 (0.9)	0.030* (0.06)	0.008** (0.03)	0.009** (0.04)
Per. Indep. Directors-Low Ranked	-0.007 (0.15)	-0.002 (0.77)	0.0004 (0.95)	0.009** (0.02)	0.029 (0.13)	-0.002 (0.54)	-0.006 (0.19)
Busy Board	0.336* (0.07)	-0.037 (0.89)	0.286 (0.33)	-0.11 (0.49)	0.319 (0.56)	-0.013 (0.93)	0.052 (0.75)
Number of Observations	521	609	872	734	1032	1079	887
Adjusted or Psuedo-R ²	18.94%	19.39%	31.22%	10.05%	6.89%	15.22%	18.03%

Table 12. Difference-In-Differences Analysis around Exogenous Directorship Ranking Decrease

This table presents results from multivariate difference-in-differences regression analysis of various firm outcomes and the decrease in ranking of at least one independent director on a firm's board arising from an increase in size of another firm where the director also sits on the board. The dependent variable is a binary variable that equals one if the firm experiences a negative outcome as defined in Table 7 and zero otherwise. The data are for fiscal years 1997 to 2012 and exclude financial and utility firms. A treatment firm has at least one independent director with multiple directorships for whom the firm of another one of their directorships increased in size and this resulted in a ranking decrease for the current directorship. The treatment firm also did not decrease in size by more than 10%. Control firms are in the same Fama and French industry, with the nearest market capitalization to the treatment firm, but have no treatment directors. The estimated model is

$$\text{Negative Firm Outcome}_{i,t} = \beta_0 + \beta_1 \text{Treatment}_i + \beta_2 \text{Post-Treatment}_t + \beta_3 \text{Treatment}_i * \text{Post-Treatment}_t + \text{Controls}_{i,t} + \varepsilon_{i,t}$$

Post-treatment_t is an indicator variable that equals zero in the two years prior to the ranking change and one in the two years following the ranking change event. *Treatment_i* equals one for treatment firm-years and zero for control firm-years. The coefficient estimate of the interaction term, β_3 , is the difference-in-differences estimate. Control variables are the same as in previous Tables but are not reported here for brevity. Standard errors are robust, clustered by firm and *p*-values are in parentheses beneath the coefficients. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

	Model 1	Model 2
Dependent Variable:	Probit Negative Outcome	Probit Negative Outcome
Treatment	0.132* (0.06)	0.0570 (0.46)
Post-Shock	-0.162** (0.03)	-0.139* (0.1)
Treatment X Post-Shock	0.23** (0.02)	0.219** (0.05)
Number of Observations	3075	2806
Controls	No	Yes
Pseudo-R ²	0.82%	6.28%

Table 13. Changes in Number of Directorships Held after a Negative Outcome

This table presents results from multivariate director level regression analysis of change in the number of directorships three years after a negative outcome occurs. The sample consists of all independent directors in firm-years that experience a negative firm outcome that we study. In all models, standard errors are robust and clustered by firm. *p*-values are in parentheses beneath the coefficients. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

	Model 1	Model 2	Model 3	Model 4
<i>Dependent Variable:</i>	Change in the number of directorships (t+3) - t	Change in the number of directorships (t+3) - t	Change in the number of directorships (t+3) - t	Change in the number of directorships (t+3) - t
High Ranked Directorship	-0.355*** (<i><.01</i>)	-0.354*** (<i><.01</i>)	-0.601*** (<i><.01</i>)	-0.368*** (<i><.01</i>)
Low Ranked Directorship	-0.261*** (<i><.01</i>)	-0.266*** (<i><.01</i>)	-0.5091*** (<i><.01</i>)	-0.2439*** (<i><.01</i>)
Sole Directorship	-0.076*** (<i><.01</i>)	-0.076*** (<i><.01</i>)	0.199*** (<i><.01</i>)	-0.118*** (<i><.01</i>)
Age	-0.008*** (<i><.01</i>)	-0.009*** (<i><.01</i>)	0.0027 (<i>0.7</i>)	-0.0093*** (<i><.01</i>)
Number of Directorships _(t-1)	-0.250*** (<i><.01</i>)	-0.252*** (<i><.01</i>)	-0.3477*** (<i><.01</i>)	-0.2512*** (<i><.01</i>)
Audit Committee Member	0.033** (<i>0.02</i>)	0.0379*** (<i><.01</i>)	0.06140*** (<i><.01</i>)	0.04130*** (<i><.01</i>)
Nominating Committee Member	0.0198 (<i>0.14</i>)	0.02 (<i>0.15</i>)	0.032 (<i>0.13</i>)	0.009 (<i>0.53</i>)
Compensation Committee Member	0.017 (<i>0.19</i>)	0.0235* (<i>0.08</i>)	0.0605** (<i>0.01</i>)	0.0235 (<i>0.11</i>)
CEO elsewhere	0.0961*** (<i><.01</i>)	0.094*** (<i><.01</i>)	0.04418 (<i>0.27</i>)	0.09752*** (<i><.01</i>)
Board Tenure	-0.0036*** (<i><.01</i>)	-0.0034*** (<i><.01</i>)	0.002 (<i>0.51</i>)	-0.0054*** (<i><.01</i>)
Attended Less than 75% of Meetings	-0.074 (<i>0.12</i>)	-0.0673 (<i>0.16</i>)	-0.0232 (<i>0.75</i>)	-0.086 (<i>0.1</i>)
Chairman	-0.0173 (<i>0.45</i>)	-0.019 (<i>0.4</i>)	-0.063 (<i>0.13</i>)	-0.018 (<i>0.5</i>)
Ownership	-0.002 (<i>0.71</i>)	-0.0009 (<i>0.82</i>)	0.0026 (<i>0.78</i>)	0.0024 (<i>0.61</i>)
Ln(Market Capitalization)	0.036*** (<i><.01</i>)	0.044*** (<i><.01</i>)	0.03** (<i>0.05</i>)	0.034 (<i>0.14</i>)
Board Size	0.004 (<i>0.18</i>)	0.006* (<i>0.05</i>)	0 (<i>0.99</i>)	-0.006 (<i>0.36</i>)
Annul Stock Return	0.023* (<i>0.07</i>)	0.017 (<i>0.19</i>)	0.0189 (<i>0.26</i>)	0.0167 (<i>0.32</i>)
Annual Stock Return _(t-1)	-0.02** (<i>0.02</i>)	-0.0123 (<i>0.18</i>)	0.0094 (<i>0.51</i>)	0.004 (<i>0.8</i>)
F-Test:				
High Ranked Dir. - Low Ranked Dir. = 0	-0.094***	-0.088***	-0.092**	-0.124***
<i>p</i> -value	(<i><.01</i>)	(<i><.01</i>)	(<i>0.02</i>)	(<i><.01</i>)
Number of Observations	17684	17684	17684	17684
Fixed Effect	None	Industry / Year	Director / Year	Firm / Year
R ² or Adjusted-R ²	26.41%	26.89%	35.63%	30.38%

Appendix: Variable Definitions

Variable	Definition and Data Source
<i><u>Director Characteristics</u></i>	
High Ranked Directorship	Indicator variable: equals 1 if the directorship is 10% larger than the director's smallest directorship measured by the market capitalization of the firm. Source: RiskMetrics.
Low Ranked Directorship	Indicator variable: equals 1 if the directorship is 10% smaller than the director's largest directorship measured by the market capitalization of the firm. Source: RiskMetrics.
Sole Directorship	Indicator variable: equals 1 if the directorship is the director's only directorship. Source: RiskMetrics.
Number of Directorships	Number of additional directorship identified within the RiskMetrics data set. Source: RiskMetrics.
<i><u>Board Characteristics</u></i>	
Independent Board	Indicator variable: equals 1 if the percent independent outside directors is greater than 50% and is 0 otherwise. Source: RiskMetrics.
Percent Independent Directors Low Ranked (ID-LOW)	Percentage of board members who are independent outside directors and this directorship is 10% smaller than their largest directorship measured by the market capitalization of the firm. Source: RiskMetrics
Percent Independent Directors High Ranked (ID-HIGH)	Percentage of board members who are independent outside directors and this directorship is 10% larger than their smallest directorship measured by the market capitalization of the firm. Source: RiskMetrics.
Majority Independent Directors Low Ranked (Maj-ID-LOW)	Indicator variable: equals 1 if the percent of independent outside directors for whom this is directorship is 10% smaller than their largest directorship by market capitalization of the firm is greater than 50% and is 0 otherwise. Source: RiskMetrics.
Majority Independent Directors High Ranked (Maj-ID-HIGH)	Indicator variable: equals 1 if the percent of independent outside directors for whom this is directorship is 10% larger than their smallest directorship by market capitalization of the firm is greater than 50% and is 0 otherwise. Source: RiskMetrics.
Percent Independent Directors (Sole)	Percentage of board members for whom this directorship is their only directorship. Source: RiskMetrics.
Majority Independent Directors (Sole)	Indicator variable: equals 1 if for more than 50% of the independent outside directors, this directorship is their only directorship. Source: RiskMetrics.
Majority Independent Directors High Ranked (Audit) (Comp)	Indicator variable: equals 1 if the percent of directors on the audit (compensation) committee are independent and this directorship is 10% larger than their smallest directorship by market capitalization of the firm is greater than 50% and is 0 otherwise. Source: RiskMetrics.
Majority Independent Directors	Indicator variable: equals 1 if the percent of directors on the audit

Low Ranked (Audit) (Comp)	(compensation) committee are independent and this directorship is 10% smaller than their largest directorship by market capitalization of the firm is greater than 50% and is 0 otherwise. Source: RiskMetrics.
Board Size	Number of directors on the board at year-end. Source: RiskMetrics.
Busy Board	Indicator variable: equals 1 if a majority of the independent outside directors each hold 3 or more additional directorships. Source: RiskMetrics.
Founding Family Director	Indicator variable: equals 1 if one of the directors is a member of the founding family. Source: Hand collected.
Founder Present	Indicator variable: equals 1 if one of the directors is the founder. Source: Hand collected.
Outside Director Ownership	Percent of common shares outstanding held by all outside directors of the board at year-end, including stock options. Source: RiskMetrics.
Percent Independent Directors	Percentage of the board who are independent outside directors. Source: RiskMetrics.
<u><i>CEO Characteristics</i></u>	
CEO Chair	Indicator variable: equals 1 if the CEO is also the chairperson and is 0 otherwise. Source: RiskMetrics
CEO Ownership	Percent of common shares outstanding held by the CEO at year-end, including stock options. Source: RiskMetrics.
CEO Tenure	The number of years the CEO has served on the board. Source: RiskMetrics
“Lucky” CEO Option Grant	Indicator variable: equals 1 if the CEO received an option grant issued on the day with the lowest stock price for the month as in Bebchuk, Grinstein and Peyer (2010) Source: Thomson’s Financial’s Insider Trading database.
Founder CEO	Indicator variable: equals 1 if the CEO is also the founder. Source: Hand collected.
<u><i>Firm Characteristics</i></u>	
Annual Stock Return	Twelve month monthly compounded return during the fiscal year. Source: CRSP.
Total Assets (\$ millions)	Year-end assets. Source: Compustat database.
Capital Expenditure /Sales	Capital Expense/Sales: Year-end Capital Expenditure/ year-end Total Assets: Source: Compustat database.
Covenant Violation	Indicator variable: equals 1 if the firm violated a covenant during the year. Source: Nini, Smith and Sufi (2012).
Current Ratio	Current Assets / Current Ratio. Source: Compustat database
Delisting	Indicator variable: equals 1 if the firm is delisted due to the exchange dropping the firm. Delistings due to mergers are not included. Source: CRSP.
Depreciation Expense/Sales	Year-end Depreciation Expense/ year-end Total Sales: Source: Compustat database.
Dividend Increase	Indicator variable: equals 1 if the firm increased its dividends from the prior year. Source: Compustat database.

Dividend Reduction	Indicator variable: equals 1 if the firm reduced its dividends from the prior year by 10% (or 25%) or more. Source: Compustat database.
Firm Age	Number of years a firm is listed in CRSP.
G-Index	Number of anti-takeover provision from the RiskMetrics governance database as in Gompers et al. (2003). We use the most recent G-Index for missing years, unless otherwise noted.
Growth Rate of Assets	Growth rate in total assets from prior year to current year. Source: Compustat database.
Herfindahl Index	Calculated using all available firms for each of the SIC 2-digit industry definitions as $\sum_i (\text{sales}_i / \text{sales}_{\text{ind}})^2$, where i is the number of firms in the industry.
Industry Litigation Activity	Number of lawsuits filed in an Fama-French defined industry during the year, scaled by the number of firms in the industry.
Industry Relative Settlement Value	The total dollar amount of the settlements of all claims in the Fama French defined industry during the year, scaled by the market capitalization of all the firms in the industry.
Institutional Holdings	Percent ownership from institutions. Source: RiskMetrics and Thompson Financial.
Leverage	$(\text{Year-ending Long-term Debt plus Debt in Current Liabilities}) / \text{year-end Total Assets}$. Source: Compustat database.
Market Capitalization (\$millions)	Market value of equity at year end. Source: Compustat database.
New Covenant Violation	Indicator variable: equals 1 if the firm violated a covenant during the year and there was not a violation in the prior four quarters. Source: Nini, Smith and Sufi (2011).
New Economy	An indicator variable that equals one if the firm is in one of the following SIC industries: 3570, 3571, 3572, 3576, 3577, 3661, 3674, 4812, 4813, 5045, 5961, 7370, 7371, 7372 and 7373.
Number of Business Segments	The number of business segments listed in Compustat.
NYSE	Indicator variable: equals one if the firm's stock is listed on the New York Stock Exchange.
Operating Cash Flow (CF)	$(\text{Annual Cash Flow from Operations}) / \text{Beginning-year Total Assets}$. Source: Compustat.
Recent M&A	Indicator variable: equals 1 if the firm engaged in M&A activity within the current or previous year from the SDC M&A database.
Relative Size	The natural logarithm of the ratio of year end market capitalization to the median market capitalization for the sample year. Used in Option Grant Analysis. Source: Compustat database.
ROA	$(\text{EBITDA}) / \text{Beginning-year Total Assets}$. Source: Compustat.
R&D/Assets	$\text{R\&D/Assets: Max}(\text{year-end R\&D expense}, 0) / \text{year-end Total Assets}$. Source: Compustat database.

Sales	Year-end sales. Source: Compustat database.
SOX	Indicator variable: equals one for fiscal years 2001 and greater and zero otherwise.
Stock Repurchases (Repo)	Percent repurchases is the expenditure on repurchasing common stock and preferred stock less the reduction in value of the net preferred shares outstanding all scaled by end of year market capitalization. Source: Compustat database
Stock Split	Indicator variable: equals one if the firm conducts a stock split of 5 for 4 or greater during the year and zero otherwise. Source: CRSP database
Sued (Class Action Lawsuit)	Indicator variable: equals 1 if the firm is the target of a class action lawsuit. Source: Stanford Law School Securities Litigation database.
Tangible Assets	Percentage of year-end total assets that are tangible: $(1 - (\text{Intangible Assets} / \text{Assets}) * 100\%)$. Source: Compustat database.
Tobin's Q	$(\text{Total Assets} - \text{Book Equity} + \text{Market Value of Equity}) / \text{Total Assets}$. All year end values. Source: Compustat
Volatility	Standard deviation of most recent 3 years of monthly stock returns from CRSP.

Table A1

This table presents results from multivariate director level regression analysis of change in the number of directorships over the next three years for the sample of independent director-years. Model 2 reports results using the sample of affiliated director-years. The dependent variable in both models is the change in the total number of directorships held three years from the current year. Both models include industry and year fixed effects. *p*-values are in parentheses beneath the coefficients. *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively.

Dependent Variable:	Model 1	Model 2
	Independent Directors	Affiliated Directors
	Change in the number of directorships (t+3) - t	Change in the number of directorships (t+3) - t
Negative Outcome	-0.017** (0.03)	-0.02 (0.24)
Age	-0.008*** (<.01)	-0.006*** (<.01)
Number of Directorships _(t-1)	-0.340*** (<.01)	-0.367*** (<.01)
Audit Committee Member	0.031*** (<.01)	0.0159 (0.42)
Nominating Committee Member	0.0206*** (<.01)	0.054*** (<.01)
Compensation Committee Member	0.021*** (<.01)	0.0439** (0.03)
CEO elsewhere	0.0746*** (<.01)	0.055* (0.07)
Board Tenure	-0.0013** (0.03)	0.0008 (0.39)
Attended Less than 75% of Meetings	-0.065** (0.01)	-0.1706* (0.06)
Chairman	-0.0165 (0.2)	0.017 (0.58)
Ownership	-0.0004 (0.89)	-0.0029 (0.15)
Ln(Market Capitalization)	0.032*** (<.01)	0.033*** (<.01)
Board Size	0.004* (0.05)	0.002 (0.61)
Annul Stock Return	-0.001 (0.92)	-0.002 (0.91)
Annual Stock Return _(t-1)	-0.013** (0.04)	-0.0198 (0.19)
Number of Observations	60656	9209
Fixed Effect	Industry / Year	Industry / Year
R ² or Adjusted-R ²	24.04%	29.19%

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