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Director Liability Protection and the Quality of Independent Directors

Finance Working Paper N° 672/2020
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Abstract

We study whether legal liability protection helps companies to recruit and retain high-quality independent directors. We conduct difference-in-differences analyses exploiting the 1999 Ninth Circuit Court of Appeals Ruling on the Silicon Graphics case, which substantially raised the bar for filing securities class action (SCA) lawsuits as a shock. We document supporting evidence for the talent attraction hypothesis by showing improvements in newly recruited independent director quality following the ruling, but only for candidates who are previously not exposed to SCA litigation risk. The effects are stronger for firms facing greater litigation risk ex ante or smaller local supplies of director candidates. Results are more evident for experience-based quality dimensions. We also analyze a sample of voluntary independent director departures and find little support for the talent retention hypothesis, suggesting that more complex factors enter into a director's continuation decision once a director is already exposed to SCA litigation risk. A policy implication is that liability protection can be useful in attracting more unexposed high-quality candidates to the pool of public boards but do little to attract high-quality candidates who are already in the pool of public firms.

Keywords: Legal liability; board of directors; board quality; litigation; securities class actions

JEL Classification: G30, G34

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Abstract

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Director Liability Protection and the Quality of Independent Directors

"Corporate directorship had become a 'job nobody wants.'"

Baum, L., Byrne, J.A., *Business Week*, September 8, 1986, 56-61.

"Limiting the potential liability of directors will enhance the company's ability to attract and retain qualified individuals."

- The 1989 proxy statement of American Business Products Inc.

"More CEOs say 'No Thanks' to board seats"

- Anita Raghavan, *The Wall Street Journal*, January 28, 2005.

"Board seats are going begging [again]."

- Anne Fisher, *Fortune*, May 16, 2005.

"24.5% of bank respondents advised [the American Association of Bank Directors] AABD that at least one of the following had occurred during the past five years: director candidate refused offer to become director …, director resigned …, director refused to serve on Board Loan Committee or resigned from that committee because of fear of personal liability."

-AABD survey results on measuring bank director fear of personal liability are not good news, April 9, 2014[1]

1. Introduction

In this study, we assess whether director litigation protection facilitates the recruitment and retention of high-quality independent directors, hereafter labeled the talent attraction and talent retention hypotheses, respectively. Surprisingly there is little available evidence on this topic in the U.S. or elsewhere, although companies, practitioners and director candidates widely assert that liability risk is a serious concern in director hiring and retention, as vividly illustrated in the opening quotes.[2] This director concern reflects the fact that outside independent director candidates are typically risk averse (Amihud and Lev, 1981; May, 1995) and the potential size of monetary losses from lawsuit settlements, albeit rare thanks to liability limiting provisions (Black et al., 2006), can easily dwarf a director's annual remuneration when they do occur (Romano, 1989).[3] In addition, independent directors can find the time and reputation costs and potentially reduced labor market opportunities associated with lengthy shareholder litigation to be quite

[1] See http://aabd.org/aabd-survey-results-measuring-bank-director-fear-personal-liability-good-news/

[2] We define "director liability" or "liability risk" broadly as the risk of litigation faced by independent directors, rather than their out-of-pocket personal liability.

[3] For example, the ten former directors of WorldCom and the ten former directors of Enron had to pay a combined total of $31 million to settle shareholder class actions against them. See "U.S. Directors Fear for Own Pockets", Asian Wall Street Journal, January 14-16, 2005.

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onerous (Fich and Shivdasani; 2007; Brochet and Srinivasan, 2014); moreover, such costs are not covered under standard director and officer (D&O) insurance policies.

If director concerns about insufficient liability protection make it difficult to attract and retain good independent director candidates, then the quality of corporate boards and the board decision making can suffer. A company's success, however, depends crucially on the quality of its directors. This is because even if directors work diligently, if they are inexperienced, incompetent, exhibit poor judgement, or are prone to adopting poor strategies, then shareholders wealth will be reduced (Hermalin and Weisbach, 2017).

Several reasons for a lack of evidence on the talent attraction and retention hypotheses include difficulties finding a plausibly exogenous measure of director litigation exposure and a comprehensive measure of director quality, given its multiple dimensions. Existing firm-level director protection measures such as liability-limiting provisions (LLPs) stipulated in corporate charters/bylaws and D&O insurance often exhibit limited time series variation in typical sample periods, and more importantly, they are endogenous firm choices, which generally precludes drawing causal inference from them.

In the U.S., shareholder litigation includes 1) securities class action (SCA) lawsuits that are brought under federal securities laws in which the plaintiff shareholders believe that irregularities in corporate financial reporting or disclosures have inflated the company's stock price and thereby directly harmed them, and 2) derivative lawsuits brought under state corporate law on behalf of the company when plaintiff shareholders believe the board of directors has breached its fiduciary duties and caused harm to the company and thereby indirectly damaged shareholder interests. Unlike SCA lawsuits, any recovery from a derivative lawsuit accrues to the company rather than to plaintiff shareholders. Many derivative lawsuits impose little, if any, monetary cost on individual director defendants other than the award of attorney fees; instead, such lawsuits commonly end up with companies agreeing to improve their corporate governance practices (Ferris et al., 2007; Davis, 2008; Erickson, 2010). Notably, the court has long been applying the business judgement rule in handling duty-of-care-related derivative lawsuits so that directors are protected in business decisions as long as they make those decisions out of good faith and without serious conflicts of interest. Therefore, exposure to SCA litigation risk represents a more serious threat to independent directors and thus is the

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focus of our study. Supporting this choice, research conducted by PricewaterhouseCoopers (2017) reports that the frequency of SCA lawsuits in the U.S. rose by roughly 70% for the ten-year 2007-2016 period. Regardless of whether these lawsuits are frivolous or meritorious, they can constitute a serious threat to risk-averse outside candidates.

We attempt to fill the above gap in the director literature by empirically testing the talent attraction and talent retention hypotheses using a natural experiment. Specifically, we exploit the 1999 Ninth Circuit Court of Appeals Ruling on the Silicon Graphics case (hereafter the "1999 Court Ruling") as a legal shock which substantially raised the bar for SCA lawsuits and thereby lowered the SCA litigation risk directors face. We conduct a difference-in-differences (DiD) analysis of the changes in the quality of newly recruited independent directors and of a sample of independent directors who voluntarily exit the boards of publicly listed firms around the 1999 Court Ruling. We gauge director quality by hand-collecting ten items that cover a candidate's executive and director experience, education and professional credentials.[4]

Given the importance of independent directors as corporate monitors and protectors of shareholder interests (Gordon, 2006), we focus on these directors. In recent years, independent directors have become the primary type of director on the boards of U.S. public firms. Under the 2003 NYSE and Nasdaq listing rule changes, only independent directors can be on a board's major committees. As a result, many public company boards are now composed of the CEO and sixth to eight independent directors (Gordon, 2006).

Exploiting the 1999 Court Ruling as a negative shock to SCA litigation risk, we compare board changes in firms headquartered in the states under the Ninth Circuit Court's jurisdiction compared to other firms. We predict that high-quality independent director candidates become more willing to serve on boards of firms headquartered in states within the jurisdiction of the Ninth Circuit Court of Appeals compared to firms outside this Appeals Court if the talent attraction hypothesis is valid. As a result, we expect to observe improved quality of newly recruited independent directors following the 1999 Court Ruling. In particular, we expect that the reduction in SCA litigation risk following the 1999 Court Ruling helps to attract higher-quality candidates, who previously avoided exposure to SCA litigation risk. In contrast, the reduction in

[4] We detail our measurements of director quality later in this section.

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SCA litigation risk is likely to be smaller for high-quality seasoned candidates who are already exposed to SCA litigation risk at the time of nomination. If the talent retention hypothesis is valid, high-quality independent directors are more likely to leave due to higher SCA litigation risk before the 1999 Court Ruling, but are more likely to stay onboard after the Ruling lowers SCA litigation risk. Therefore, directors who leave the board due to non-mandatory reasons (e.g., health issue, reaching the retirement age) after the 1999 Court Ruling are expected to exhibit lower quality than directors who leave the board voluntarily before the 1999 Court Ruling.

These predictions, however, are not without tension. On the one hand, the 1999 Court Ruling only governs SCA lawsuits, but it has no impact on shareholder derivative lawsuits. If shareholders responded to this Court Ruling by increasing their use of derivative lawsuits to discipline corporate directors for irregularities in reporting and disclosures (even if such lawsuits cannot compensate the plaintiff shareholders for doing so), the overall litigation risk that directors face may not fall.[5] On the other hand, directors still enjoy various other legal protection from liability limiting provisions included in a firm's charter/bylaw (to the extent permitted by state law) and from D&O insurance coverage.[6] Thus, it is possible that the 1999 Court Ruling may fail to add significant new director litigation protection, so that we would not observe any measurable effects on the recruitment and retention of high-quality directors.

Faleye (2007) notes that factors affecting an incumbent director's continuation decision are more complex than those affecting a new director's initial decision to join a board. Thus, we argue the effects of lower SCA litigation risk on director retention are likely weaker than for new director recruitments for several reasons. First, after serving on the board, a director is likely to have a better understanding of the firm (e.g., its culture, working atmosphere, risks) and may have developed closer ties with its CEO and other directors and have built up substantial firm-specific human capital. As a result, litigation risk may be only one of the many factors that a director considers in her continuation decisions. In contrast, when a new

[5] Derivative lawsuits target misreporting, disclosure irregularities, insider trading, board failure to prevent misconduct, excessive executive compensation and some mergers and acquisition deals. Passage of the 1995 Private Securities Litigation Reform Act (PSLRA) raised the hurdle for filing SCA lawsuits, leading shareholders instead to file more derivative lawsuits (Davis, 2008) or both SCA and derivative lawsuits for the same cause of action (Erickson, 2010).
[6] Gillan and Panasian (2015) document that D&O insurance does not reduce, but increase, the incidence of litigation, since attorneys prefer to target companies with deep pockets including insurance coverage.

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candidate is deciding whether to join a board, she has a less in-depth understanding of the firm and fewer ties to its officers and directors. Thus, a new director candidate is likely to weight potential litigation risk more. Second, an incumbent director is already exposed to SCA litigation risk, indicating a relatively low risk aversion and a lower marginal value of added litigation protection for continuation decisions.

We select ten director quality characteristics, which are manually coded from corporate proxy filings, and divide them into two broad categories: an experience-based metric and a credential-based metric (educational and professional background). Traits reflecting director experience include being a key executive at another firm, executive or director experience at an S&P 1500 firm, executive experience at firms having superior performance (relative to the Fama-French 30 industry median in the year before nomination), executive experience at firms active in successful innovative activity (i.e., having at least one granted patent in the year before nomination), and the number of outside directorships held (being more than two or not). Characteristics capturing a director's educational and professional background include university degrees, financial, legal, and (same) industry expertise. We then aggregate these ten binary director quality indicators into a simple sum of the five experience-based indicators, and a simple sum of the five credential-based indicators to capture the quality of an independent director.

Examining a sample of firms that recruit at least one independent director before and after the 1999 Court Ruling over a window of [-3, +3], we find that the quality of newly recruited independent directors for firms headquartered in states within the jurisdiction of the Ninth Circuit Court of Appeals improves following the 1999 Court Ruling relative to a sample of matched control firms headquartered in states outside of the Ninth Circuit.[7] Importantly, we find the quality improvement is driven by recruitments of candidates who were not previously exposed to SCA litigation risk. An unexposed candidate refers to a nominee who does not serve as a director or a key executive (e.g., CFO) in any public firm at the time of nomination. For new seasoned independent director candidates who are already exposed to the SCA litigation risk, we find little evidence on a significant improvement in their quality following the 1999 Court Ruling. These patterns follow, but do not precede, the 1999 Court Ruling, suggesting that the results are

[7] We thank anonymous reviewers for suggesting an analysis of newly recruited independent directors.

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causal. Therefore, we find clean evidence supporting the talent attraction hypothesis when examining the recruitment of unexposed/unseasoned directors.

We conduct several robustness checks of our findings and show that they are robust to examining a subset of firms headquartered in adjacent states and are robust to model specifications that include a vector of time-varying state characteristics which help to mitigate concerns that differences between treatment and control states in terms of the local economic conditions, business environment, and political beliefs could alternatively explain our baseline findings. These results also hold employing a Heckman two-step sample selection procedure. We also run placebo tests that artificially assign firms headquartered in states adjacent to the Ninth Circuit Court states as pseudo-treatment firms to further sharpen our identification. Moreover, we rule out that our key findings regarding the talent attraction hypothesis are due to false positives arising from reusing the 1999 Court Ruling as an experimental setting.

Re-running the DiD tests using individual quality metrics for newly recruited independent directors, we find that quality improvements are primarily attributable to lower-rank executive experience at one or more S&P 1500 firms, executive experience at firms recently granted patents and firms with above-industry-median performance, as well as directors having a Master's degree or above. Classified boards elect one-third of directors each year, which means recruitments of new independent directors are even less frequent for classified boards than non-classified boards where all directors are up for re-election each year. Consistent with this view, we find that the improvement in the quality of newly recruited independent directors is concentrated in firms without classified boards.[8]

We also test for several alternative explanations. Specifically, to mitigate concerns that our results are due to the staggered passage of state-level universal demand (UD) laws that increased the hurdle required to bring shareholder derivative lawsuits, we exclude firm-years of firms incorporated in states that have ever passed a UD law within our sample period. Doing so ensures that our sample firm-years are not affected by UD laws. To test if our findings are due to the dot-com bubble period which peaked in year 2000 and collapsed shortly thereafter, we control for start-of-year stock valuation measured by the equity market-to-

[8] We thank an anonymous reviewer for suggesting this test.

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book ratio and exclude Hi-tech firms. Moreover, to assess whether our results are due to the enactment of the Sarbanes-Oxley Act (SOX) in 2002, we exclude observations in 2002. We conclude that these alternative explanations do not drive our finding. We note that the collapse of the dot-com Bubble or the enactment of SOX in our post-event period should *increase* the risk that directors face, and therefore the impacts of these events should bias against us observing the results that we report.

If the observed improvement in newly recruited independent director quality is due to their lower SCA litigation risk following the 1999 Court Ruling, then the results should be stronger in firms that face higher SCA litigation risk prior to the 1999 Court Ruling and this is what we find. We classify firms as having high litigation risk when they operate in a headquarters state experiencing a higher frequency of SCA lawsuits (Kedia et al., 2015), exhibiting a high level of predicted SCA litigation risk, as measured by Kim and Skinner's (2010), or firms scoring high in both litigation risk measures, for the pre-event period. We, however, do not find evidence that director liability limiting provisions stipulated in a firm's charters/bylaws attenuate the effect of the 1999 Court Ruling on talent attraction in a sample of S&P 1500 index constituent firms. Understandably, these large firms are unlikely to target candidates who are not already serving in any public boards or who are not key executives in public firms for being independent directors. Echoing Knyazeva et al.'s (2013) finding that local director labor market influences independent director recruiting, we find that the effect of the 1999 Court Ruling on the quality of newly recruited independent directors is stronger at firms near smaller pools of local director candidates, and therefore at firms that face greater difficulties in recruiting independent directors.

We find little support for the talent retention hypothesis, even in firms with non-classified boards. The evidence is consistent with litigation risk being only one of the many factors influencing a director's continuation decision. We also find that the improved quality of previously unexposed independent director candidates following the 1999 Court Ruling translates into better accounting performance when institutional monitoring helps to constrain the self-serving actions of directors who face weakened incentives after the 1999 Court Ruling. The positive firm performance effect is concentrated in the director experience metric.

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We also evaluate whether our evidence on the talent attraction hypothesis can be driven by firms' increased demand for high-quality directors following the 1999 Court Ruling, rather than by an increased supply of willing high-quality director candidates. Since director appointments are a mutual selection process, it is difficult to rule out firm demand playing a role in the independent director appointment process. Yet, in order to explain our results any demand-based argument must also be predicated on a larger supply of willing high-quality director candidates to serve (particularly considering we find no evidence of significant improvement in director compensation), which is our primary hypothesis.

Our primary contribution is to provide new evidence on the infrequently tested talent attraction and retention hypotheses. Using a sample of re-incorporations announced between 1980 and 1992, Heron and Lewellen (1998) find a positive market reaction if a firm's stated reason for reincorporation is to limit director liability to attract outside directors. Their study confirms that outside candidates value litigation protection, but they do not examine whether there is a change in the quality of outside directors. Bradley and Chen (2011) is the only published U.S. study to test the talent attraction and retention hypotheses. Examining how director protection affects bond yields, they assess how LLP protection in corporate charters/bylaws are related to the appointment and departure rates of high-quality directors (defined as those having additional board seats or being active executives at other firms), but they find *no* significant results. Outside the U.S., Naaraayanan and Nielsen (2021) show that independent directors resign from their board seats after the introduction of personal liability risk exposure in India. Exploiting a 1999 judicial ruling at the Ninth Circuit Court of Appeals that raised the standards for bringing SCA lawsuits in its jurisdiction, we are the first study to find support for the talent attraction hypothesis in the U.S. Importantly, our finding that the talent attraction hypothesis only holds for candidates not serving as a director or a key executive of a public firm has an important policy implication: added liability protection helps to attract more high-quality candidates who are new to public boards, but it may do little to attract high-quality candidates already in this director pool as the added liability protection is likely to be of low marginal value. Interestingly, we find no support for the talent retention hypothesis, suggesting that SCA litigation risk is not a first-order concern for an incumbent director's continuation decision.

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Second, our study extends a growing literature on the longstanding debate over the extent that directors should be subject to shareholder litigation risk. Many studies examine ex-post incentive effects of director liability protection (e.g., on firm policies and performance),[9] and generally find significant costs of director liability protection. Some recent studies (e.g., Lin et al., 2021; Chu and Zhao, 2021; Guan et al., 2021) find that liability protection has a bright side by facilitating firm investment. Our study extends this literature by testing the talent attraction and retention hypotheses, which are widely cited by firms and practitioners. Our evidence is consistent with the talent attraction hypothesis, highlighting another bright side of director liability protection, thereby providing a better understanding of the effects of director litigation protection.

2. Research design and sample selection

2.1 The1999 Ninth Circuit Court of Appeals Ruling on the Silicon Graphics case

To reduce the number of frivolous lawsuits, the U.S. Congress enacted the Private Securities Litigation Reform Act (PSLRA) in 1995. This Act raised the pleading standard required for filing SCA lawsuits where a plaintiff is alleging irregularities in corporate financial reporting or inadequate information disclosure, before a court can approve the formation of a plaintive class. The specific interpretation and application of the pleading standard, however, were left to individual U.S. Circuit Courts of Appeal. On July 2, 1999, the Ninth Circuit Court of Appeals issued a ruling, *Re: Silicon Graphics Inc.*, which concluded that the PSLRA raised the level of recklessness that must be met in order for the plaintiff's lawsuit to survive a motion to dismiss by the company's officer-directors in SCA lawsuits, and that a plaintiff must plead "particular facts" that give rise to a "strong inference" of "deliberate recklessness." [10] This 1999 Appeals Court Ruling unexpectedly showed reasoning dramatically different from the other Circuit Courts of Appeal and imposed a more stringent pleading standard on plaintiffs in SCA lawsuits. Since evidence of defendants' intent is often unavailable before the discovery stage of a lawsuit, which is after the class is formed, the 1999 Court

[9] Some early event studies based on small samples (e.g., Netter and Poulsen, 1989; Janjigian and Bolster, 1990; Brook and Rao, 1994) find either insignificant or weakly negative market reactions to increasing director protection. Later studies (e.g., Chung and Wynn, 2008; Wynn, 2008; Zou et al., 2008; Lin et al., 2011, 2013, 2019; Aguir et al., 2014; Donelson and Yust, 2014; Appel, 2016) find evidence generally consistent with a net cost to director protection: where protection tends to exacerbate agency problems by lowering director vigilance and increasing their risk-taking.

[10] See Wiley (1999), *Recent Judicial Interpretations of the Pleading Requirements under the PSLRA*, August 1999, Available at https://www.wiley.law/newsletter-1093.

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Ruling creates significant difficulties for plaintiff shareholders to provide evidence that the defendants acted with "deliberate recklessness." Given the "independent" nature of court ruling, and that the unexpected "citing a new standard of 'deliberate recklessness'" by the Ninth Circuit Court of Appeals (Wiley, 1999), we believe that the 1999 Court Ruling represents an exogenous negative shock to the SCA litigation risk faced by directors of the firms headquartered in the states under the jurisdiction of the Ninth Circuit Court of Appeals. The 1999 Court Ruling immediately dealt a blow to the filing of SCA lawsuits in Ninth Circuit states. For example, Crane and Koch (2018) find that compared to the first half of 1999, filings of SCA lawsuits dropped by 43% in the second half of 1999 in the states under the jurisdiction of the Ninth Circuit Court of Appeals compared to a 14% average increase in SCA lawsuits in other states.

Several prior studies have used the 1999 Court Ruling as a legal shock to SCA litigation risk faced by firms and their directors and key executives. Hopkins (2018) finds that firms headquartered in the Ninth Circuit Court states (i.e., treatment firms) exhibit an increase in earnings restatements after the 1999 Court Ruling relative to matched sample of control firms headquartered in other states. Houston et al. (2019) report that treatment firms make fewer management earnings forecasts relative to the control firms following this Court ruling. Huang et al. (2020) document that treatment firms increase real earnings management following this Court ruling. Two studies also examine the effects of the 1999 Court Ruling on changes in corporate governance. Crane and Koch (2018) show that when it is difficult for small shareholders to monitor firms and discipline boards using SCA lawsuits, the ownership structure of treatment firms shifts to a greater proportion of institutional ownership which can compensate for the subsequent weaker monitoring and disciplining actions of SCA lawsuits. Yang et al. (2021) find that treatment firms decrease CEOs' equity vega relative to the control firms, which they argue is due to heightened concerns about misreporting after the 1999 Court Ruling. Notably, none of these studies examine the effects of the 1999 Court Ruling on the recruiting and retention of high-quality directors.

2.2 Data and sample selection

2.2.1 Identifying an initial list of treatment firms and control firms

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We follow the following procedures to identify the sample of treatment firms:

1) We start by matching the Compustat firm list with firms in the file downloaded from Prof. Bill McDonald's website to obtain firms' historical state of incorporation and headquarters.[11] A treatment firm is a firm headquartered in one of the nine states under the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the 1999 Court Ruling), which are: Washington (WA), Oregon (OR), California (CA), Montana (MT), Idaho (ID), Nevada (NV), Arizona (AZ), Alaska (AK), and Hawaii (HI).

2) A firm has non-missing proxy statements in the period between 1997 and 2001 in the EDGAR website, which corresponds to a minimally required event window of [-2, +2] straddling the 1999 Court Ruling (we need at least two consecutive years' proxy filings to determine whether a recruited independent director is new or not and whether an incumbent independent director exits or not in a year).

3) A treatment firm should not relocate its headquarters to a state outside of the jurisdiction of the Ninth Circuit Court of Appeals between year 1999 and 2002 (i.e., the post-event period) as such an endogenous relocation effectively enables a firm to no longer fall under the 1999 Court Ruling.

4) A firm should have information on total assets and market capitalization in Compustat in 1998.

5) We drop heavily regulated financial firms (SIC codes in the range of 6000-6999).

Applying these filters gives us 650 firms as the initial sample of treatment firms before matching.

To identify a list of an initial sample of control firms before matching, we require firms to be headquartered in a U.S. state outside of the jurisdiction of the Ninth Circuit Court of Appeals and then we follow the same steps described above except that in Step 3) we drop firms headquartered in a non-Ninth-Circuit state in 1998, but later relocated to a Ninth Circuit Court of Appeals jurisdiction state and so became treated by the 1999 Court Ruling over the 1999–2002 period.

2.2.2 The matching process

We follow the convention of prior studies of the 1999 ruling of the Ninth Circuit Court of Appeals (Crane and Koch, 2018; Hopkins, 2018; Houston et al., 2019; Huang et al., 2020; Yang et al., 2021) discussed in Section 2.1 by performing matching to identify a sample of treatment and control firms.

[11] Prof. MacDonald collected firms' historical headquarters and incorporation information from EDGAR filings using a crawling algorithm See https://www3.nd.edu/~mcdonald/

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Matching is necessary and offers three advantages. First, it mitigates concerns that treatment firms and control firms differ systematically in some important firm characteristics, and that these differences might drive any observed differential changes in independent director quality between treatment and control firms around the 1999 Court Ruling. Second, using a matched control sample makes the workload of labor-intensive hand collection of individual director's biographic information more tractable. A similar approach is also common in studies of corporate boards (e.g., Masulis and Mobbs, 2011; 2014).

We review the matching covariates used in the prior studies on the 1999 Court Ruling, and select seven firm characteristics for matching, which include *Ln(Market value of equity)*, *Leverage*, return on assets (*ROA*), *Big-6 auditor*, *Annual return*, return volatility (*Stk volatility*), and *Predicted SCA risk* (following the model specification of Kim and Skinner's (2010) Table 7 model 3). Firm size is a good proxy for director reputation incentives (Knyazeva et al., 2013; Masulis and Mobbs, 2014). *ROA* and *Annual return* reflect firms' performance; *Leverage* and *Stk volatility* capture firms' financial risk; *Big-6 auditor* and *Predicted SCA risk* measure firms' financial reporting and SCA litigation risk.

These matching variables are measured as three-year averages of the pre-event period (1996-1998) to better meet the parallel trend condition necessary for the DiD analysis. We employ propensity score (PS) matching estimated with a Probit model. For each treatment firm, we select a control firm that operates in the same Fama-French 30 industry,[12] has the nearest propensity score (subject to meeting a caliper of 0.1). We do not allow replacement to maximize the sample variation. This procedure gives us a sample of 542 treatment firms and 542 matched control firms. We collect these firms' independent director recruitments and departures over a window of annual data of [-3, +3] straddling the 1999 Court Ruling event year, define as event year 0. Examining a short fixed-event window around the event year helps to minimize the influence of confounding factors that can arise over a long continuous sample period. Table OA1 in the Online Appendix Panel A shows the number of firms in each headquarters state in the PS matched sample. California-based firms have the highest representation in the sample. Since many Hi-tech firms are

[12] Shareholder litigation exhibits industry patterns (Lin et al., 2011).

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headquartered in California, we examine the sensitivity of our results to removing Hi-tech firms later in our analysis in Section 3.9.2.

2.2.3 Balance check

Table OA2 in the Online Appendix presents several covariate balance tests before and after PS matching. In Panel A, we show the results of the Probit regression on *Treat (0/1)* that equals one for treatment firms as the dependent variable. After matching, the significant differences in the average covariates of the treatment and matched samples are eliminated. Panel B and Panel C further compare the (average) firm characteristics in the pre-event period 1996-1998 before and after PS matching, which again confirm that treatment and matched control firms are balanced over the seven matching covariates.

In untabulated results, we compared the propensity score distributions of the treatment and matched control groups using a Kolmogorov–Smirnov (KS) test and obtain a *p*-value of 0.998, suggesting that the PS matching produced statistically similar treatment and control groups. Further, we show that PS matching successfully removes significant differences in other observed characteristics not included in the PS matching model, suggesting the matching process is more broadly effective. The extended set of variables used in this comparison include *Ln(Assets)*, *Sale growth*, logged market value of the firm (*LnMktVal*), institutional ownership, capital expenditures scaled by assets (*CAPEX*), R&D spending scaled by assets (*R&D*), and the LLP index measuring director protection via corporate charters/bylaws.

Finally, we plot the distributions of the propensity scores for treatment and control groups before and after matching to visually check the overlapping condition in Table OA2 Panel D. Visual inspection indicates that after PS matching is undertaken, there is common support. Overall, treatment firms and control firms are closely matched, and this matched sample provides the basis for our identification of director recruitments and departures and limits our need to manually collect director quality data items from firms' proxy statements.

2.2.4 Identifying newly recruited independent directors and departures of incumbent directors

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Directors can be divided into three categories, namely, firm insiders or executives (E), affiliated or linked outsiders (L), and independent outsiders (I). We focus on independent directors throughout the analysis because unlike executive and affiliated directors, independent directors are free to depart from the board because they are not firm employees and do not have familial or financial ties to the firm or its senior executives. Since shareholder litigation risk is likely to be a graver concern for independent director candidates than for inside or linked director candidates, focusing on the recruiting of new independent directors and the continuation decision of incumbent independent directors provide a cleaner test of the talent attraction and retention hypotheses.

We first collect a full list of directors on the board for the 542 treatment and 542 control firms for the 1995-2003 period. We then follow the ISS (formerly *RiskMetrics*) director-type definitions and classify each director into inside, affiliated and independent directors. We then identify a sample of *newly recruited* independent directors for these treatment firms and matched control firms. A newly recruited independent director is defined as an independent director candidate who is not on a firm's board previously, but is nominated in the current year's proxy filing. We call this sample the *new recruitment sample* of independent directors. The *departure sample* consists of independent directors who voluntarily leave a company board in the sample period. We compare the director list of a company in two adjacent years to identify which independent directors leave the company. We then manually code the following director quality items for both the new recruitment and departure samples.

2.3 Measures for the quality of independent director candidates

Based on the information provided in director biographies disclosed in firm annual proxy statements, we focus on a broad list of ten director quality characteristics and divide them into two major categories. The characteristics in the first category capture an independent director's demonstrated management experience at the time of nomination. The characteristics in the second category reflect a director candidate's credentials - educational (i.e., degree) and professional (i.e., financial, legal, and industry) background at the time of nomination.

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For the experience-based quality metric, we employ five quality characteristics. The importance of the experience of director candidates is echoed by Tom Neff, Chairman of Spencer Stuart, who said in 2005 that "some of the most *experienced* board members are unavailable [after SOX]." Our first quality measure is whether a director candidate is a key executive of another company at the time of nomination (*Key_exec*), and this is also used in Bradley and Chen (2011) as a proxy for high quality. Following Knyazeva et al. (2013), we define a key executive as an executive holding one or more of the following management titles or equivalents: chief executive officer (CEO), president, chairman, chief financial officer (CFO), chief operating officer (COO), chief information officer (CIO), vice president (VP), executive VP, senior VP, managing partner, managing director, treasurer, or other chief officers at the time of nomination. To identify whether a director candidate currently holds any of the above titles, we read each biography and manually code each item. Masulis and Mobbs (2014) use this executive position measure to capture a director's general managerial skills and experience. Another experience measure is whether an independent candidate is a director or an executive of an S&P 1500 company at the time of nomination and we denote this by an indicator variable *S&P 1500*.

Superior firm performance should reflect positively on a candidate's quality, and a candidate from such a firm is often rewarded with more directorships in the labor market (Fama, 1980; Fama and Jensen, 1983). We therefore include an indicator denoting whether an independent director is an executive of a public firm exhibiting above industry median performance, measured by its *ROA* in the year before nomination (*HP_firm*). Industries are defined using the Fama-French (FF) 30 classification.

Innovation is vital to the development of a firm's core competitive advantage (Solow, 1957) and is a growth engine of a firm (Kang et al., 2018). A firm's success in innovation should reflect positively on the quality of its people, which we capture by an indicator variable for whether a candidate is an executive of a firm that has a granted patent in the year prior to nomination (*Patents*). Patent data are obtained from the Harvard Business School U.S. Patent Inventor Database compiled by Li et al. (2014) based on a cleaned version of a comprehensive patent data set (covering both public and private firms) that is sourced from the U.S. Patent and Trademark Office (USPTO) database and the further processed in the NBER U.S. Patent

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Citations database. Finally, we follow Bradley and Chen (2011) and use an indicator for candidates holding more than two corporate board seats before nomination (*Multiple_seats*) as our fifth experience measure, since these candidates generally have more board experience.

To account for educational background, we begin by focusing on the highest university degree held by an independent director candidate, we code an indicator variable *Degree* that equals one for a Master's degree or above, and zero otherwise. Given an MBA degree's importance to business education and firm management, we include a separate indicator variable to denote an independent director candidate with an MBA degree (*MBA*). SOX imposes a financial expertise requirement on boards (Linck et al., 2008), suggesting the importance of financial expertise. To capture a candidate's specialty, we include professional background indicators for whether an independent director candidate has financial expertise or legal expertise. *Financial* is an indicator variable, which equals one if a candidate has a financial background (is/was a CFO, a treasurer, a banker, an accountant, an auditor, or a securities broker; or worked/is working in a venture capital firm, a private equity firm, or investment banking; or majored in finance or accounting). *Legal* is an indicator variable, which equals one if a director is/was an attorney, a legal counsel, a lawyer or majored in law. Higher compliance regulatory requirements and a more litigious business environment make legal expertise increasingly important. We also include a professional background indicator denoting same-industry expertise (captured by an *Industry* indicator, which equals one if the director candidate is an executive of a listed firm in the same FF30 industry as the focal firm). Wang et al. (2015) provide evidence that relevant industry expertise helps independent directors to better monitor and advise the focal firm. Please see the Appendix for detailed variable definitions.

2.4 Difference-in-Differences Samples

2.4.1 The sample for testing the talent attraction hypothesis

Obtaining the final sample for our DiD analysis involves one more step. In the new recruitment sample, we further require a treatment and a control firm to have at least one new independent director recruitment in both the 3-year pre-event and 3-year post-event periods. This sample filter reduces the number of

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treatment firms to 242, and the number of control firms to 273, with a maximal sample of 2,312 recruitments of new independent directors available for testing the talent attraction hypothesis (See Table OA1 Panel B and Table 1). The exact number of usable observations also depends on the availability of control variables.

In Table OA2 Panel E of the Online Appendix, we further compare the (average) firm characteristics in the pre-event period 1996-1998 for the baseline sample used in testing the talent attraction hypothesis. Reassuringly, we find that the treatment firms and matched control firms used in our analysis exhibit covariate balance, not only in the case of the seven matching criteria, but also for the extended set of variables including the LLP index.

2.4.2 The sample used for testing the talent retention hypothesis

To test the talent retention hypothesis, we focus on voluntary departures of independent directors that are identified by excluding "reach the maximum tenure period", "died", "sick", "departure due to the violation of law", and "accept a position in the government" from the manually collected departure sample. We further require each treatment firm and matched control firm to have at least one voluntary departure of an independent director in both the 3-year pre-event and post-event periods. This data filter reduces the number of treatment firms to 184, and the number of control firms to 186, resulting in a maximal sample of 1,461 voluntary departures of incumbent independent directors at treatment and control firms that are available for testing the talent retention hypothesis. Again, the exact number of usable observations depends on the availability of required control variables.

2.5 Model specification

To test the effect of the exogenous reduction in SCA litigation risk caused by the 1999 Court Ruling on a treatment firm's ability to recruit talented candidates as independent directors, we estimate the following DiD model at the individual director level:

$$Director\ quality_{ikj,t} = \alpha + \beta Treat_i \times Post + \gamma FX_{ik,t-1} + \partial_1 D_1 X_{ij,t} + \theta_i + \delta_t + \varepsilon_{ikj,t} \qquad (1)$$

where $Director\ quality_{ikj,t}$ is a measure of director quality for the newly recruited independent director *j* at firm *i* headquartered in state *k* in year *t*. Since each of the ten quality measures discussed in Section 2.3

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is a binary variable, from these indicators we construct a simple aggregate director quality index, defined as the sum all of these indicators or the sum of all the respective indicators in the experience or credential category. We will discuss these quality indices in detail when we present the regression results. We estimate Eq. (1) with Poisson regressions that are appropriate for count dependent variables. We also check the robustness of these results with OLS regression estimates.

Treat is an indicator that equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event), and zero otherwise. *Post* is an indicator variable that equals one for years from 1999 to 2002 and zero for years from 1996 to 1998. *Treat* is absorbed by θ_i, firm fixed effects that are included to control for unobserved firm-specific time-invariant factors, and *Post* is absorbed by δ_t, the year fixed effects included to control for any unobserved year-specific factors impacting director recruitment.[13] The main coefficient estimate of interest is β, capturing the DiD treatment effect – the average change in the quality of newly recruited independent directors following the 1999 Court Ruling in treatment firms relative to their matched control firms. A positive and statistically significant β would be consistent with the talent attraction hypothesis.

We also include in the full model a set of firm-level control variables $FX_{ik,t-1}$ measured in the year before the recruitment to mitigate any concern that treatment firms and their matched control firms differ in some other dimensions beyond the matching criteria variables. Specifically, *LnCashPay* is the natural logarithm of (annual cash retainer fee + the expected number of regular board meetings in a year × attendance fee per meeting for an independent director + one dollar), which represents the cash-based pay that an independent director expects to receive if he or she attends all the regular board meetings in a year. This pay measure is a conservative figure as we do not include the extra pay (often marginally higher) earned by serving on board committees, attending committee meetings, serving as a committee chair, or by attending any non-regular board meetings. We use this as our ex-ante measure of expected director base compensation when a candidate is evaluating whether to join a board. We control for other compensation

[13] We do not further include industry-by-year fixed effects in the model, since the treatment firms and control firms have been exactly matched by Fama-French 30 industries so that they are subject to the same industry-specific trends.

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components by including *StkPay* (an indicator variable that equals one if a firm's independent directors receive equity-based compensation, e.g., restricted stock or stock option grants).

Independent candidates are predicted to be more likely to join boards of large and less risky firms. Thus, we control for firm size measured by the natural logarithm of market value (*LnMktVal*) and conventional firm risk measures including financial leverage (*Leverage*) and stock return volatility (*Stk volatility*), defined as the natural logarithm of the annual standard deviation of a firm's percentage daily stock return. In addition to the firm-level controls, we also include $D_1X_{ij,t}$, which comprise two director indicator variables (*Age>65* and *Female*) to control for the effect of being older than 65 and a female which could affect the likelihood of a candidate being asked to join the board. Detailed variable definitions are provided in the Appendix. In calculating *t*-statistics, we use robust standard errors clustered at the headquarters-state level.

3. Empirical results

3.1 Baseline results: Effects of the 1999 Court Ruling on the director talent attraction hypothesis

3.1.1 Univariate DiD

Before we formally estimate the DiD regressions in Eq. (1), we conduct a univariate DiD analysis to better understand the basic patterns on the director quality measures. Specifically, we first compare the change in the mean quality index of newly recruited independent directors from the pre-event to post-event period for treatment and matched control firms, respectively; we then compare the difference in the mean quality change between the treatment and control groups. The results are reported in Panel A of Table 2.

Qindex is a simple aggregation of the ten director quality indicators of a newly recruited independent director (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). Comparing the pre-event period to the post-event period, we see that the mean quality of newly recruited independent directors in treatment firms experiences an improvement of 0.077 as opposed to a change of -0.090 in the control firm sample, but the change in treatment firms is statistically insignificant,

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nor is the DiD coefficient of 0.167 significantly different from zero. This overall data pattern based on all newly recruited independent directors is not supportive of the talent attraction hypothesis.

We hypothesize that the benefit of a SCA litigation risk reduction is smaller for talented seasoned director candidates, who already face SCA litigation risk exposure; for example, those candidates currently serving on public firm boards or serving as key executives in public firms at the time of their nomination. In contrast, any benefit of a reduction in SCA litigation risk should be larger for unseasoned talented director candidates, who previously were not exposed to SCA litigation risk. Therefore, the previous insignificant univariate DiD result could be the result of mixing exposed and unexposed director candidates in our analysis. This reasoning leads us to condition our analysis on whether a director candidate is seasoned (already exposed to SCA litigation risk) or unseasoned (not exposed) at the time of nomination.

However, it is difficult for us to directly use a subsample of exposed or unexposed director candidates in the DiD test. This is because recruitments of new independent directors are discrete and infrequent events (i.e., firms may not have such new recruitments every year), and when separating recruitments of new independent directors into exposed and unexposed nominees, the frequency is even lower. Thus, only including exposed or unexposed director nominees in the analysis would create many "holes" in the sample, making it difficult to perform a DiD analysis. To sidestep this operational issue, we retain all a firm's newly recruited independent directors in our analysis. When we examine changes in the quality of exposed director candidates, we use *Qindex*×*Exposed* as the outcome variable which identifies exposed director candidates by setting the quality of all unexposed director candidates to zero. Similarly, when we examine the change in the quality of unexposed director candidates, we use *Qindex*×*Unexposed* as the outcome variable for unexposed director candidates where the quality of all exposed director candidates is set to zero. *Unexposed* is an indicator that equals one if an independent director nominee does not currently serve as a director or a key executive of any public firm at their nomination, thereby being unexposed to SCA litigation risk.

The univariate DiD results from using *Qindex*×*Exposed* as the measure of director quality show that for treatment firms there is no improvement in the quality of director candidates who are already serving on at least a public board or as a key executive of a public firm, and hence are already exposed to SCA

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litigation risk. The change, if any, is a decline in director quality though it is not statistically significant (Row 2 of Panel A). This direction of the change likely reflects a secular trend as the change in control firms from the pre-event period to the post-event period is also negative. In contrast, there is an improvement in the quality of independent director candidates who are not yet exposed to SCA litigation risk in the treatment firms (0.160, statistically significant at the 5% level); the change in the same period is 0.018 in control firms, which is statistically insignificant, leaving us a DiD estimate of 0.142 (*t*-value =1.94). Such a pattern in data provides some preliminary support for the talent attraction hypothesis for the recruitment of previously unexposed high-quality director candidates.

3.1.2 Difference-in-Differences Regressions

One limitation with the prior univariate DiD analysis is that it neither controls for year fixed effects, nor the effects of firm-level and director-level characteristics, which we account for through a formal regression-based DiD analysis in this section. We first estimate Eq. (1) with the Poisson regression and report the results in Panel B of Table 2. Column (1) employs *Qindex* as the director quality metric, and we find that the DiD estimate is marginally significant at the 10% level. This suggests that following the 1999 Court Ruling, the quality of the newly recruited independent directors on average improves relative to the control firms.[14] When we examine the recruitment of exposed independent director nominees and unexposed independent director nominees separately in Columns (2) and (3), we find the improvement is entirely driven by the recruitment of unexposed independent director nominees. The DiD point estimate in Column (3) is 0.261, which is about 28% of the sample mean of the quality index value of the unexposed independent director nominees (0.935). These results provide support for the talent attraction hypothesis regarding successful recruitment of unexposed high-quality independent director candidates.[15]

[14] The actual sample size entering the regression is smaller than the maximum of 2,312 observations because 1) there are missing values on some control variables and 2) the Poisson regression model automatically drops some singleton observations (i.e., when a director quality measure within the same firm takes the value of zero for all years in our event window of [-3, +3]). The singleton observation issue is especially evident for Column (4). Although Poisson regressions are the preferred choice for count dependent variables, results using OLS estimation (reported in Table OA3 of the Online Appendix) yield broadly similar results.

[15] Our DiD results are qualitatively similar if we do not include any firm-level and director-level control variables in the regressions.

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The statistically significant control variables also deserve some discussion. First, old unexposed director candidates tend to exhibit lower quality, while unexposed female director candidates appear to have higher overall quality. Second, the improvement in the quality of unexposed director candidates is associated with firms having lower equity market value and higher leverage, suggesting that the reduction in SCA litigation risk as a result of the 1999 Court Ruling appears to mainly help relatively risky firms to attract previously unexposed high-quality candidates to join their boards as independent directors. In Columns (4) and (5), we separately examine director experience-based quality metric (*Experience* is the sum of the first five quality items) and the credential-based quality metric (*Credential* is the sum of the last five quality items). Both director quality metrics show an improvement after the 1999 Court Ruling.

A valid DiD inference requires the existence of a parallel trend between the treatment and control groups prior to the event. We check this assumption in two ways. First, following Adelino et al. (2017) and Ye et al. (2023), we plot the regression coefficients for treatment and control firms separately relative to the initial sample year (i.e., year 1996 or event year = -3) along with the 90% confidence interval as indicated by the dashed line in Figure 1. We omit the 1996 indicator variable from the regression, since observations in 1996 serve as our reference group. This helps us to trace the evolution in the average quality of newly recruited independent directors for both treatment and matched control firms around the event year. Figure 1 shows that for the quality of new unexposed independent directors, the treatment and control groups approximately follow a parallel trend before the 1999 Court Ruling. Second, we follow Bertrand and Mullainathan (2003), Karpoff and Wittry (2018), and Donelson et al. (2022) and provide results in the next section based on a dynamic lead-lag DiD analysis to check if our results reflect a pre-existing trend.

3.2 Results from the dynamic DiD analysis

In Table 3, we present the results from a dynamic DiD analysis. We break the indicator variable *Post* in Eq. (1) into seven yearly indicator variables reflecting the event time dynamics relative to the 1999 Court Ruling year (i.e., year 0 denoted by *Post(0)*). *Pre(-3)* refers to year 1996, *Post(3)* refers to year 2002, and the other year indicator variables are defined analogously. *Pre(-1)* is omitted from the model as it is used as

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the base group for comparison. The results show that none of the coefficient estimates for *Treat×Pre(-3)* and *Treat×Pre(-2)* are statistically significant, supporting the existence of a parallel trend between the treatment and control groups before the 1999 Court Ruling. A divergence in the changes in director quality of the unexposed independent director candidates between the treatment and matched control firms starts to emerge in the 1999 Court Ruling year and continues into the following years, despite a reversal in the DiD effect in year = +1 (Column (3)). Therefore, our DiD results, which show an improvement in the quality of ID nominees who are previously unexposed to SCA risk, do not simply reflect a pre-event trend. Unlike many ex-post business decisions, recruiting high-quality unexposed independent directors can be implemented relatively quickly because the identities of these unexposed candidates were already known, but they were reluctant to join the pool of public boards due to the high SCA litigation risk prior to the 1999 Court Ruling. Thus, a change in board composition can be observed almost immediately provided that the 1999 Court Ruling raises the willingness of high-quality unexposed candidates to serve on public boards.

Separately examining experience-based and credential-based director quality metrics, we observe in Columns (4) and (5) that improvements in the experience-based quality metric for unexposed independent directors are more significant than the credential-based quality metric. One possible explanation is that candidates with stronger experience are more sensitive to litigation risk given their greater reputation capital exposure. Also, boards may value demonstrated managerial and director experience more than educational qualifications and technical background in selecting new directors (Tenenbaum, 2017).

3.4 Robustness checks

3.4.1 Results from using an equal number of treatment firms and control firms

Table OA1 Panel B of the Online Appendix shows that after requiring firms to have at least one newly recruited independent director before and after the 1999 Court Ruling in the event window years [-3, +3], there are 242 treatment firms and 273 control firms in the matched sample of new independent director appointments. This imbalance in sample sizes of the two groups is a natural result after we require firms to have at least one new independent director recruitment in both the pre-event and post-event periods in the

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manually collected sample of director recruitments. Importantly, Table OA2 Panel E of the Online Appendix shows that these treatment and control firms are well balanced in terms of the matching covariates and in terms of an extended set of firm characteristics, indicating that there is no obvious reason for the unequal number of treatment and control firms to bias our inferences. Nevertheless, in this section, we conduct robustness checks of our baseline results using an equal number of treatment and control firms.

Specifically, we randomly select 242 control firms out of the 273 control firms and repeat the DiD results for the new independent director recruitments in these randomly chosen 242 control firms and 242 treatment firms. The results are reported in Table OA4 of the Online Appendix. We find consistent results that are even stronger than the baseline DiD results (Panel A) and for the *Treat×Post (3)* estimate in the dynamic DiD analysis (Panel B). We also confirm that these 242 treatment firms and the randomly chosen 242 control firms remain balanced in the matching covariates and in the extended set of firm characteristics listed in Table OA2 Panel E of the Online Appendix.

3.4.2 Results using firms from adjacent headquarters states

Thus far, we find a significant improvement in the quality of newly recruited unexposed independent directors for treatment firms following the 1999 Court Ruling. We cannot include headquarters state-by-year fixed effects in our baseline models to control for potential confounding effects of time-varying differences in, and/or unobserved shocks to, the economic, local business, and cost of living conditions of a firm's headquarters state because our treatment firms are defined based on their headquarters states.[16] To mitigate this concern, we alternatively repeat our DiD analysis with matched firms from adjacent states.

We exclude treatment firms headquartered in Alaska (AK) and Hawaii (HI) as these two states are far off the US mainland and analyze firms headquartered in the remaining seven Ninth Circuit Court of Appeals states: Washington (WA), Oregon (OR), California (CA), Montana (MT), Idaho (ID), Nevada (NV) or Arizona (AZ). We include all firms that are headquartered in the adjacent states including North Dakota (ND), South Dakota (SD), Wyoming (WY), Utah (UT), and New Mexico (NM) and have at least one newly

[16] Time-invariant interstate differences (e.g., in local culture and infrastructure) are accounted for by our inclusion of firm fixed effects, as these firm fixed effects enable us to compare director quality within the same firm.

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recruited independent director in both the pre-event and post-event periods as potential control firms. These five adjacent control states are chosen following Crane and Koch (2018). Table OA5 of the Online Appendix provides a by-state tabulation of firms the firms. Since some of these control firms are not in our baseline matched sample and the treatment firm sample is significantly larger than the potential control firm sample in the adjacent states, we perform propensity score matching to select the closest matches to minimize any imbalances in the covariates of the two samples.

For each treatment firm, we select two control firms headquartered in the five adjacent states with the nearest propensity score and that operate in the same Fama-French 30 industries. The propensity score matching model employs three-year averages of the following three firm characteristics in the pre-event period 1996-1998, i.e., *Ln (market value of equity)*, *Big-6 auditor*, and *Predicted SCA risk* (Kim and Skinner (2010) Table 7 model 3). We do not include *Leverage*, *ROA*, *Annual return*, and Return volatility (*Stk volatility*) in this matching analysis because the firms are already balanced before this round of matching, and they remain balanced after matching between the treatment group and control group.

Table 4 reports the DiD results using firms in adjacent states, and the results are similar to the baseline results reported in Table 2 Panel B, but they exhibit larger magnitudes. A limitation with this analysis is that the sample size is small, even though we performed matching of one treatment firms to two control firms. To remedy this limitation, we alternatively add an extensive set of state variables to the baseline model, estimated using the full sample in Table 2 to control for the potential effects of time-varying state characteristics on independent director recruiting process in Section 3.4.4.

3.4.3 Results from placebo tests

We conduct placebo tests to further sharpen our identification. Firms headquartered in states that are adjacent to the Ninth Circuit Court states face similar economic and business environments and cost of living conditions to the treatment firms but they are not affected by the 1999 Court Ruling. These firms headquartered in adjacent states therefore can be used as pseudo-treatment firms in our placebo tests. Specifically, we artificially assign the states adjacent to the states under the jurisdiction of the Ninth Circuit

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Court as pseudo-treatment states, which include North Dakota (ND), South Dakota (SD), Wyoming (WY), Utah (UT), and New Mexico (NM). We define firms that are headquartered in these pseudo-treatment states in year 1998 (the year before the 1999 Ninth Circuit Court Ruling) as pseudo-treatment firms, which are denoted by the indicator variable *Pseudo_Treat* taking a value of one and zero otherwise. We then incorporate *Pseudo_Treat×Post* in our baseline DiD regression to create placebo tests with these pseudo-treatment firms. We then conduct a horserace on the change in the quality of newly recruited independent directors from the pseudo and real treatment firms. In the DiD regressions, the control group firms are headquartered in non-Ninth Circuit Court states and are not adjacent to Ninth Circuit Court states.

The placebo tests reported in Table OA6 of the Online Appendix reveal that none of our five dependent variables, namely, *Qindex*, *Qindex×Exposed*, *Qindex×Unexposed*, *Experience×Unexposed* and *Credentials×Unexposed*, the coefficient on *Pseudo_Treat×Post* have a statistically significant coefficient. Importantly, the *Treat×Post* coefficient estimates are qualitatively similar to those reported in Table 2 Panel B. These placebo and horserace tests results help to further sharpen our identification.[17]

3.4.4 Results from controlling for state characteristics

The state-level time varying characteristics we control for reflect a state's economic, business, and political environment. *Ln (GDP per capita)* is the natural logarithm of the GDP per capita of a state-year. *Ln (Population)* is the natural logarithm of the population of a state-year. *State unemployment rate* (*%*) is the unemployment rate in a state-year. *Ln* (*# of incorp. firms*) is the natural logarithm of the number of firms incorporated in a state, to capture labor market opportunities. *Republican control* is an indicator that equals one if a state's two legislative chambers and the governor's office are controlled by the Republican, and zero otherwise. This variable controls for the business friendliness of a state's political environment as research shows that the Republican Party tends to be more pro-business (Bartels, 2008).

[17] When we drop real treatment firms from the sample used in the placebo DiD tests and drop *Treat×Post* from the DiD regression model, as expected, the untabulated results show that all the five coefficient estimates on *Pseudo_Treat×Post* remain statistically insignificant.

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The results of the DiD regressions based on the baseline sample incorporating the one-period lagged values of the above state-level time-varying characteristics are reported in Table OA7 of the Online Appendix. Importantly, the tenor of our main results is unaltered. We note that in Columns (1) and (2), *Republican control* appears to be positively associated with higher-quality newly recruited independent directors, but this result is not robust in the other columns. Taken together, the results in adjacent-state analysis and the robustness analysis after controlling for time-varying state characteristics help to mitigate the concern that our baseline findings are due to different economic, business, and living environments across treatment and control states.

3.5 Results for changes in each director quality component indicator

In this section, we examine where the improvement in director quality in treatment firms following the 1999 Court Ruling is primarily coming from by repeating the DiD analysis using each director quality component for the unexposed independent director candidates as the dependent variable.[18] Across Columns (1) to (9) of Table 5, most of the DiD coefficient estimates are positive (except for the coefficient of *MBA* in Column (7)). Examining the components of the experience-based metric, we first observe a significant increase in candidates who are currently associated with S&P 1500 firms (Column (2)). Since we define directors and key executives of public firms (e.g., CFO) as being exposed to SCA litigation risk, the result suggests that treatment firms can attract some active lower-ranked executives of S&P 1500 firms to be independent directors following the 1999 Court Ruling. Second, it appears that treatment firms successfully attract more active executives from firms with good performance ((Column (3)) and executives serving in private firms that are active in innovation or lower-ranked executives serving in public firms active in innovation (Column (4)).

When it comes to the components of the credential-based quality metric, only the DiD coefficient estimate for the higher education indicator (*Degree*) is statistically significant, which indicates treatment firms manage to attract more previously unexposed candidates with a master's degree or above to be

[18] We do not consider the same industry background indicator as a dependent variable in this test because *Unexposed*×*Industry* equals zero for all unexposed independent director nominees.

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independent directors after the 1999 Court Ruling. Taken together, the quality component analysis suggests that the improvement in the quality of newly recruited and previously unexposed independent directors is primarily in the experience-based quality metrics.

3.6 Results on director quality changes in classified vs. non-classified boards

Since classified boards typically only have one-third of the director seats up for reelection every year and this means that the recruitments of new independent directors in classified boards are sparser than those in non-classified boards where all board seats are reelected each year. We therefore expect that the improvement in the quality of unexposed director candidates is stronger in treatment firms with a non-classified board than in a classified board. Table 6 Panel A (Panel B) reports the DiD results for the non-classified (classified) boards. The results suggest that the improvement in the quality of newly recruited independent directors is concentrated in firms with a non-classified board.

3.7 Firm-level DiD results on quality changes

So far, our DiD tests are based on director-level evidence, and these tests speak to the *average* change in the quality of newly recruited independent directors. While director-level tests exploit a richer variation in the data, it is reassuring to observe similar results for our firm-level tests. In performing the firm-level tests, we aggregate each newly recruited independent director's quality index into a firm-year sum. For example, if a firm recruited two new independent directors in the year, with quality *Qindex* values of 4 and 3, respectively, then, the firm's total quality index level equals 7 in the year. Therefore, the firm-level quality index not only captures the change in the quality of an independent director, but also reflects the number of newly recruited independent directors. Similarly, we also count the number of old and female candidates among all the newly recruited independent directors in the year (denoted as *Age>65* and *Female*, respectively). The DiD results reported in Table 7 Columns (3) - (5) are in line with the corresponding columns in Table 2 Panel B for unexposed independent director candidates.

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In Table OA8 of the Online Appendix, we also conduct a firm-year-level DiD analysis to verify that following the 1999 Court Ruling, treatment firms manage to attract more independent director candidates who are previously unexposed to SCA litigation risk. In Column (1), the coefficient estimate for the DiD interaction term is 0.149 and statistically significant using the full sample of newly recruited independent directors. The point estimate is about 21.4% of the mean proportion of unexposed director candidates before the 1999 Court Ruling (i.e., 0.695). As classified boards have a lower recruiting frequency than non-classified boards, in Column (2), we repeat the analysis for non-classified boards. The point estimate is about 0.235 and statistically significant, which represents an expectedly larger economic magnitude than that in Column (1).

3.8 Robustness analysis for multiple-hypotheses testing

Reusing an experimental setting for many different dependent variables can increase the likelihood of Type I errors (i.e., false positives) (Jones et al., 2019; Heath et al., 2023). Several recent studies (Crane and Koch, 2018; Hopkins, 2018; Houston et al., 2019; Huang et al., 2020; Yang et al, 2021) have used the 1999 ruling of the Ninth Circuit Court of Appeals as a shock to investigate the influence of litigation risk (see Section 2.1 for detail). Thus, one may worry that our finding is due to the understatement of Type-I errors.

To address this concern, we follow Jones et al. (2019) and Heath et al. (2023) to conduct multiple hypothesis testing when reusing the 1999 Court Ruling setting. The key to this test is employing the Westfall and Young's (1993) free step-down resampling procedure to control for the family-wise error rate (FWER) (i.e., the probability of incorrectly rejecting one or more null hypotheses belonging to a family of hypotheses). In this firm-year-level DiD test, we define a family of hypotheses that encompass six outcome variables including one firm-year sum of a director quality index for unexposed independent director candidates and the other five outcome variables examined in the prior studies – i.e., total percentage of institutional ownership (Crane and Koch, 2018), financial restatements (Hopkins, 2018), frequency of management earnings forecasts (Houston et al., 2019), a measure of real earnings management (Huang et

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al., 2020), and a CEO's equity vega (in natural log) (Yang et al., 2021).[19] We calculate the five outcome variables examined in these prior studies over our sample period (1996 to 2002). Following the free step-down resampling procedure in Westfall and Young (1993), we employ firm-level clustered bootstrap resampling using 1,000 repetitions. We then repeat our DiD analysis for each dependent variable in each bootstrap sample and calculate their adjusted *p*-values.

The multiple-hypothesis testing results are reported in Table 8. We find that the improvement in the three quality proxies for previously unexposed director candidates (*Qindex*×*Unexposed*, *Experience*×*Unexposed*, and *Credential*×*Unexposed*) remain statistically significant at the 10% level or better. We conclude that our key findings regarding the talent attraction hypothesis are not the result of false positives arising from the reuse of the 1999 Court Ruling as an experimental setting; instead, the 1999 Court Ruling has a separate effect on the recruiting of high-quality unexposed independent director candidates.

3.9 Alternative explanations

In this section, we consider the credibility of several alternative interpretations of our results.

3.9.1 Are our findings due to the passage of the Universal Demand law?

Over the 1989-2005 period, 23 states adopted Universal Demand (UD) laws that require shareholders to first obtain board consent prior to initiating derivative lawsuits (i.e., mandating the demand requirement), unless doing so could result in irreparable harm to the firm. With the legal barrier created by UD laws, director litigation risk due to derivative lawsuits was significantly reduced in the affected states (Appel, 2016). Since UD laws also reduce the litigation risk that directors face, a legitimate concern is that our finding could be due to the effect of the UD law, instead of the 1999 Ninth Circuit Court of Appeals Ruling.[20]

[19] We control for three (lagged) firm characteristics (*LnMktVal*, *Leverage* and *Stk volatility*) that we include as control variables in Table 7's firm-year-level robustness checks as common control variables in all the DiD regression models since the information needed for their construction is readily available for these broad samples.

[20] Donelson et al. (2022), however, show that UD law passage only results in fewer derivative lawsuits from 1996 to 2010 but not for the longer period from 1996 to 2015.

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To assess whether this concern is valid, we exclude from our analysis treatment and control firms incorporated in states that passed a UD law before 2003, which is after the 3-year post event window. This exclusion ensures that the remaining treatment and control firms are free from the impacts of the passage of UD laws since our sample period is over 1996 - 2002.[21] We repeat our DiD analysis and report the results in Table OA9 of the Online Appendix. The findings are in line with the baseline results reported in Table 2 Panel B. Thus, we conclude that our findings are not due to the passage of UD laws lowering the litigation risk of derivative lawsuits.

3.9.2 Are our findings due to the Dot-Com Bubble leading up to 2000 and its collapse afterwards?

The Dot-Com Bubble peaked in year 2000 and then collapsed, resulting in high volatilities in stock prices and heightened firm risk following the collapse. In our sample, tech firms are heavily represented and so a natural concern is whether our finding is due to the buildup and burst of the Dot-Com Bubble. We first note that the collapse of the Dot-Com Bubble after 2000 coincided with our pre-event period, and falling stock price in that period should increase, rather than decrease, SCA litigation risk given that large stock price declines often trigger SCA litigation. Such heightened SCA litigation risk should deter some talented candidates from serving as independent directors, which is *opposite* to what we find. Nevertheless, we conduct two further tests to show that our results are unlikely to be an artifact of the Dot-Com Bubble.

In the first test, we add the year-beginning level of stock valuation measured by the equity market-to-book ratio as an additional control variable in our DiD models. Stock valuation helps to capture the development dynamics of the Dot-Com Bubble, and we use the same strategy to refute the importance of the Dot-Com Bubble as a confounding event following Hopkins (2018). The results reported in Table OA10 of the Online Appendix are qualitatively similar. In the second test, we directly exclude Hi-tech firms that are most affected by the Dot-Com Bubble from our analysis, where our definition of Hi-tech firms follows that of Yang et al. (2021). The results reported in Table OA11 of the Online Appendix continue to hold.

[21] Specifically, we exclude firms incorporated in the states of GA, MI, FL, WI, MT, UT, VA, MS, NH, NC, AZ, NE, CT, ME, PA, TX, WY, ID and HI.

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3.9.3 Are our findings due to SOX and the associated exchange listing rule changes?

SOX became law on July 30, 2002 and it placed new requirements on the composition of U.S. public company boards of directors. Linck et al. (2008) find that the effects of SOX and the adoption of new NYSE and NASDAQ listing rules requiring a majority of independent directors are two-fold. On the one hand, it reduces the supply of directors by increasing their workload and liability risk; and on the other hand, it increases corporate demand for directors by requiring many listed firms to recruit additional independent directors, which makes the recruiting of high-quality directors more difficult.[22] Also, SOX and the new listing requirements have the added effect of *increasing* director legal liability for both treatment and control firms, which again has the *opposite* effect to the 1999 Court Ruling. Nonetheless, we formally test this in Table OA12 of the Online Appendix by excluding observations in year 2002 (that are affected by SOX) from our analysis, shortening the post-event period by a year. The results are qualitatively similar to Table 2 Panel B, except the statistical significance of the DiD coefficient estimate for *Credential×Unexposed* becomes marginally weaker.

3.9.4 Results from employing the Heckman sample selection procedure

Our dependent variable comprises two components: one involves a firm finding an ID candidate who is already exposed or unexposed to SCA risk at the time of nomination, and the other pertains to the quality of the recruited director. An alternative approach is to model this process with the Heckman two-step sample selection procedure under which the first stage estimates the likelihood of finding an exposed or unexposed director candidate and the second stage estimates the quality of the selected director candidate.

Inspired by Bernstein et al. (2016) and Levine et al. (2020), we employ passenger flight routes as the instrument for the recruitment of exposed/unexposed independent directors. A larger number of flight routes may help a company to more easily attract candidates from public firms that are not from the same city where a company is headquartered due to the location's relatively high travel convenience. Therefore, more flight routes can aid in the recruitment of director candidates from public firms who are already

[22] The governance proposals of the NYSE and NASDAQ, referred to as Public Law 107-204, were issued on July 30, 2002, and mandated firms to have more than 50% of independent directors on their boards.

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exposed to SCA risk, effectively increasing the supply of willing candidates. However, there is no obvious reason to expect travel convenience to directly impact the quality of these recruited directors.

We calculate the number of passenger flight routes (*RouteNum*) as the total count of unique airline routes at the airports in the firm's headquarters city and airports within a 60-mile radius at the beginning of each year. We download the airline routes data from the T-100 Domestic Segment Database. We only tally unique passenger flight routes with flight times up to five hours as five hours of travel plus two to three hours of the lead time needed to go to an airport add up to about one working day. The results are qualitatively similar if we cap flight times at four hours. Latitude and longitude data for U.S. airports are downloaded from The Humanitarian Data Exchange, while coordinates for firms' headquarters are taken from Prof. Bill MacDonald's website (https://sraf.nd.edu/data/augmented-10-x-header-data/).

Following Huang et al. (2023), we estimate a Probit regression in the first stage of the Heckman procedure that models whether a new director is identified from candidates previously exposed or not-yet exposed to SCA risk at their recruitment. The regression model includes a DiD interaction term, *Treat*×*Post*, to enable us to infer changes in the probability of recruiting exposed/unexposed director candidates around the 1999 Court Ruling for treatment firms compared to the control firms. To avoid the incidental parameter problem for Probit model estimates with a large number of firm fixed effects (Wooldridge, 2010), we remove firm fixed effects, but add back the indicator variable, *Treat*, to facilitate a DiD analysis. The second step of the Heckman procedure includes the selection correction parameter (the inverse Mills ratio, *IMR*) obtained from the first-stage estimation that is based on the subsample of exposed or unexposed director candidates. In both steps, we employ robust standard errors clustered at the headquarters-state level.

Table OA13 of the Online Appendix presents results for the Heckman selection regressions. Column (1) uses *Unexposed* as the dependent variable. The negative and statistically significant coefficient of the instrument, *RouteNum*, shows that the more passenger flight routes available at local or nearby airports, the less likely is the firm to recruit candidates that are not yet exposed to SCA risk as new directors. Also, the coefficient estimate of *Treat*×*Post* is notably positive and statistically significant, suggesting that the recruitment of candidates unexposed to SCA risk increases dramatically (the coefficient estimate of 0.189

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is sizable relative to the sample mean of 0.518) following the 1999 Ninth Circuit Court Ruling. This is consistent with what we report in Table A6 and supports our argument that the 1999 Ninth Circuit Court Ruling lowers SCA risk and so mitigates the litigation concerns of director candidates from private firms, leading them to be more willing to join the boards of public firms, i.e., join the public director market.

In Columns (3)-(5), after incorporating the inverse Mills ratio, which captures the probability of recruiting an unexposed director, we find that the positive and statistically significant coefficients of *Treat×Post* persist. This is consistent with our baseline findings reported in Table 2 Panel B, indicating enhanced quality of newly recruited unexposed directors after including the Heckman sample selection correction.[23] Overall, these findings demonstrate the robustness of our results. The positive and statistically significant coefficient on the Inverse Mills ratio in the columns representing the quality of previously unexposed independent director candidates suggests that factors such as lower SCA risk that facilitate the recruitment of unexposed director candidates also lead to the recruitment of higher-quality candidates.

3.9.5 Are our findings due to a rise in director compensation?

Another possible concern with our findings of improved quality for previously unexposed independent directors is that firms could be paying higher compensation to independent directors after the 1999 Court Ruling. This concern, however, is unlikely to drive our findings since Aguir et al. (2014) find that director litigation protection and compensation tend to be substitutes. To the extent that the 1999 Court Ruling increases director protection, firms should be able to pay *lower* rather than higher compensation. Nevertheless, we test whether there is a rise in independent director remuneration around the 1999 Court Ruling that could lead to increased director quality.

We use two measures of compensation in these director remuneration tests, namely, *LnCashPay* and *StkPay*. *LnCashPay* represents the total annual cash compensation that an independent director candidate expects to receive as base compensation. *StkPay* is an indicator variable that equals one if a firm grants

[23] With the inclusion of the inverse Mills ratio, the coefficient of *Treat×Post* in Column (2) becomes significantly positive, indicating an improvement in the quality of newly recruited exposed directors following the 1999 Court Ruling. We refrain from stressing this result since we do not find a significant improvement in the quality of previously exposed independent director candidates in our baseline test.

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equity-based compensation (stock and/or options) to its independent directors. The results of this analysis are reported in Table 9. They show that companies do not significantly change the way they remunerate independent directors after the 1999 Court Ruling. Thus, we conclude that better post-event director compensation cannot explain our findings.

4. Heterogeneities in the effects of the 1999 Court Ruling on talent attraction

4.1 Evidence on the litigation risk channel

Our baseline finding is consistent with SCA litigation risk deterring high-quality candidates from serving on public boards as independent directors. To provide more direct evidence on the litigation risk channel, we conduct a difference-in-difference-in-differences (DDD) analysis. This analysis tests whether director quality improvement following the 1999 Court Ruling is more pronounced in firms that face higher SCA litigation risk and hence should experience greater difficulty in attracting talented outside candidates.

We first measure a firm's pre-event litigation risk by the frequency of SCA lawsuits experienced by its headquarters state, given the existence of a geographic litigation contagion effect (Kedia et al., 2015). Second, we assess a firm's SCA litigation risk following the litigation prediction model of Kim and Skinner's (2010). Third, we combine these two measures into a composite SCA litigation risk proxy. All three litigation risk measures are based on the year *before* the 1999 Court Ruling to avoid any direct feedback effects from the 1999 Court Ruling (and for the same reason, the partitioning variables used in other interaction tests in this section are measured prior to the 1999 Court Ruling).

We use negative indicators of litigation risk so that the coefficient estimate (β_1) can be conveniently interpreted to capture the DiD effect on the quality of independent directors at firms subject to *higher* ex ante litigation risk – which is the focus of these heterogeneity tests. Specifically, *Low state SCA suits* is an indicator variable that equals one if the total number of SCA lawsuits in a firm's headquarters state in the pre-event period (1996-1998) is below the top tercile of states. We obtain SCA lawsuit data at Stanford University's Securities Class Action Clearinghouse (SCAC) (https://securities.stanford.edu/). *Low predicted SCA risk* is an indicator variable that equals one if a firm's predicted SCA litigation risk measure

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in year 1998, calculated according to Table 7, model 3 of Kim and Skinner (2010), is below the top tercile of its sample distribution. *Low composite SCA risk* equals one if either *Low state SCA suits* or *Low predicted SCA risk* equals one. We then interact each of the above three indicators with *Treat*×*Post*. If the 1999 Court Ruling improves the quality of newly recruited independent directors through the litigation risk channel, then we expect β_1 to be significantly positive and the interaction term coefficients to be significantly negative indicating a less pronounced effect on director quality in firms with lower ex ante litigation risk.

The results of the DDD analysis are reported in Table 10 using the total quality index (*Qindex*) for unexposed independent director candidates. In Columns (1) to (3), the coefficients on *Treat*×*Post* (β_1) are all positive and statistically significant at the 1% level. This indicates that firms facing higher SCA litigation risk experience a larger increase in the quality of previously unexposed independent director candidates following the 1999 Court Ruling. Also, the benefit of litigation protection afforded by the 1999 Court Ruling is less pronounced for firms that face lower litigation risk ex ante as indicated by the negative coefficients of the interaction terms (β_2) (statistically significant at the 10% level or better). Unsurprisingly, high SCA risk firms gauged by the composite SCA litigation risk measure before the event experience the largest quality improvement for unexposed ID nominees after the 1999 Court Ruling. Thus, our DDD evidence on the litigation risk channel supports our earlier DiD results reported in Table 2. Note that even for firms facing lower litigation risk, there is some evidence that the quality of newly recruited independent directors improves, albeit to a lesser extent, as indicated by the statistically significant combined coefficients ($\beta_1 + \beta_2$) reported in the lower portion of the table in Column (2).[24]

Next, we further investigate whether the effect of the 1999 Court Ruling on independent director recruiting varies with the level of pre-event LLP protection.[25] One caveat with this test is that LLP data are

[24] In Figure 2, we check the parallel trend assumption for our litigation risk channel test by focusing on the subsample of treatment and control firms with higher pre-event SCA risk defined in Column (3). We do so by plotting director-level regression coefficients along with a 90% confidence interval, which is derived from a model that estimates the quality of newly recruited independent directors based on yearly indicator variables separately for treatment firms and control firms facing higher pre-event SCA risk. Our first sample year, 1996 (i.e., event year = -3), is omitted as the base group. The two plots show a parallel trend before the event in the treatment and control groups, especially for unexposed ID nominees (*Qindex***Unexposed*) where the improvements in quality are concentrated.

[25] Virtually all U.S. listed firms carry D&O insurance (details are not publicly available) and there is no reason to believe corporate purchases of D&O insurance change significantly around the 1999 Court Ruling in our short window of analysis. Any change is likely to reduce D&O insurance coverage since directors face lower litigation risk

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only available for S&P 1500 constituent firms. Following Bradley and Chen (2011), we look at the sum of three items from the G-index as a measure of firm-level director protection: the director indemnification provision, the director liability limitation provision, and indemnification contracts embedded in corporate charters/bylaws when allowed by state laws. *Having LLP protection* is an indicator variable that equals one if in 1998 a firm has at least one of these three provisions that limits director liability. We use the LLP indicator variable to construct the DDD triple interaction term and re-estimate the DiD analysis.

Results of our DDD analysis are reported in Column (4) of Table 10. While both estimates of $\beta_1$and β_2 have their predicted sign, neither is statistically significant. Since our data is only available for S&P 1500 index constituent firms, it is not surprising that these large firms are unlikely to recruit independent director candidates who lack public firm experience as directors or key executives.

4.2 Do firms surrounded by a smaller local director pool benefit more from the 1999 Court Ruling?

Knyazeva et al. (2013) show that the size of the local pool of director candidates affects the likelihood of independent director recruitments. This suggests that the effect of the 1999 Court Ruling on director recruiting is likely to vary with the size of the local pool of director candidates. To test this proposition, we follow Knyazeva et al. (2013) and measure the size of the local supply of director talent as the number of non-financial S&P 1500 firms whose business addresses are within 60 miles of a firm's headquarters, excluding firms in the same 4-digit SIC industry (that are likely competitors of the focal firm, and thus whose executives are unlikely to be serious director candidates due to competitive concerns). *Large local pool* equals one if a firm's average local pool of director candidates in the pre-event period (1996-1998) is above the top tercile of the sample distribution. Since it is easier for firms surrounded by a larger local pool of director talent to recruit high-quality directors, it follows that the 1999 Court Ruling is less likely to have as strong an effect on director recruiting at these firms. Thus, we expect the interaction coefficient *Treat×Post×Large local pool* to be significantly negative.

after the 1999 Court Ruling, and any reduction in D&O coverage should bias against our finding of improved independent director quality. The same argument applies to director liability protection provided by LLPs included in corporate charters/bylaws. Indeed, Crane and Koch (2018) find that after the 1999 Court Ruling, an LLP index for treatment firms either remains unchanged for non-dividend paying firms or declines for dividend paying firms in 1998.

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The results reported in Column (5) of Table 10 show that firms facing a smaller local pool of director talent experience a significantly greater improvement in director quality after the 1999 Court Ruling (β_1). The combined coefficient ($\beta_1 + \beta_2$) is statistically insignificant, suggesting that the beneficial effect of the reduction in SCA litigation risk on recruiting of higher-quality unexposed independent director candidates does not hold for firms facing a large local pool of director candidates. These results are broadly consistent with the finding of Knyazeva et al. (2013) on the important role that the local supply of director candidates plays in corporate board composition.

Taken together, we find support for the talent attraction hypothesis, which predicts that recruiting previously unexposed high-quality candidates to be independent directors of treatment firms following the 1999 Court Ruling becomes easier relative to the matched control firms. The effect is stronger for firms that face higher SCA litigation risk ex ante or those that are surrounded by smaller local director pools. We next test the talent retention hypothesis.

4.3 Testing the effect of the 1999 Court Ruling on the retention of high-quality independent directors

If the talent retention hypothesis is valid, high-quality independent directors are more likely to leave due to higher SCA litigation risk before the 1999 Court Ruling, but are more likely to stay onboard after the Ruling lowers SCA litigation risk. Therefore, directors who leave the board due to non-mandatory reasons (e.g., health issue, reaching the retirement age) after the 1999 Court Ruling are expected to exhibit lower quality than directors who leave the board voluntarily before the 1999 Court Ruling, other things being equal. We test this hypothesis with the following DiD model specified in Eq. (2):

$$Director\ quality_{ikj,t+1} = \alpha + \beta Treat_i \times Post + \gamma FX_{ik,t} + \partial_2 D_2 X_{ij,t+1} + \theta_i + \delta_{t+1} + \varepsilon_{ikj,t+1} \qquad (2)$$

where $Director\ quality_{ikj,t+1}$ is a measure of director quality for independent director *j* who left firm *i* headquartered in state *k* in year *t*+1. $D_2X_{ij,t+1}$ is a vector of director characteristics used as control variables, which includes *Age>65 (0/1)*, *Female*, and *Attendance<75%*. *Attendance<75%* is an indicator variable

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taking the value of one for a director who attended less than 75% of board meetings in the year prior to departure, and is zero otherwise. All other variables are defined in Eq. (1). Estimation of Eq. (2) is limited to a sample of incumbent independent directors who exit for voluntary reasons (please refer to Section 2.4.2 for details). A firm also must have at least one voluntary departure of an independent director in both the pre-event and post-event periods to enter this analysis.

The results of the DiD estimation using the overall quality index as the dependent variable are reported in Table 11. In Column (1), the *Treat×Post* coefficient estimate is statistically insignificant. Since firms with a classified board only re-elect 1/3 of their directors each year, directors' continuation decisions might be confounded if a resignation prior to the normal term expiration is undesirable from a director reputation perspective. In Columns (2) and (3), we therefore divide the voluntary departures into those from non-classified boards and classified boards, respectively. The *Treat×Post* coefficient estimate is negative as predicted by the talent retention hypothesis, but it is not statistically significant in Column (2) for non-classified boards. For classified boards, the *Treat×Post* coefficient estimate is positive and statistically insignificant. These results fail to support the talent retention hypothesis, but are consistent with incumbent director basing their continuation decisions on a broader set of considerations than simply litigation risk.

As pointed out by Faleye (2007), an independent director's continuation decision is more complex than a director's initial decision to join a board. For example, other than litigation risk, the relationships an independent director has developed with the CEO and other directors, a director's understanding of, and affinity for, a firm's culture, as well as outside career options, can all affect a director's continuation decision. In addition, whether a director is retained also depends on his/her board performance (Coles and Hoi, 2003), and sometimes is also affected by a CEO turnover (Denis and Sarin, 1999). Therefore, litigation risk is only one of the many factors to consider in making a continuation decision. In particular, since an incumbent independent director is *already* exposed to SCA litigation risk in his/her current director capacity, litigation risk may no longer be a primary additional factor to consider.

4.4 Can our results be due to a higher demand for high-quality directors?

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One could alternatively argue that our finding is due to firms having a higher post-event demand for high-quality directors rather than an improved supply of high-quality directors. Since director recruitment is a bilateral matching process, it is difficult to completely rule out the possibility that changing firm demand plays a role in increasing the recruitment of high-quality independent directors. However, we have several reasons to believe that the observed improvement in director quality is unlikely to be primarily driven by an increase in firms' demand for independent directors.

First, firms continually seek to recruit high-quality directors, and so there is no compelling reason to expect this demand to significantly increase following the 1999 Court Ruling. Second, it is also unclear why firms necessarily have a greater demand for high-quality directors when shareholder monitoring via SCAs is weakened by the 1999 Court Ruling (e.g., Hopkins, 2018). In addition, shareholders in the U.S. appear to have very limited power to successfully nominate new directors (Bebchuk, 2003; Cai et al., 2009) or replace existing directors (Bebchuk, 2007) despite their desire for talented directors. Third, more importantly even if firms have a greater demand for high-quality directors following the 1999 Court Ruling, there will *not* be an increase in independent director quality if director candidates continue to be concerned about litigation risk and remain unwilling to come onboard without a substantial increase in compensation. Taken together, our results are mainly attributable to a rise in director supply following the 1999 Court Ruling, which reduces director litigation risk, leading previously unexposed high-quality candidates to be willing to join the boards of public firms.

4.5 Firm performance effects of improved independent director quality

While it is generally accepted that firms want high-quality directors, a less clear question is whether the change in the quality of independent directors translates into better firm performance. The effects of the 1999 Court Ruling on the performance of treatment firms are two-fold: on one hand, more director protection may help to improve director quality by facilitating the hiring of better (unexposed) candidates as we have shown; on the other hand, more director protection can also generate moral hazard effects (Lin et al., 2013). Consistent with the latter view, Crane and Koch (2018) show that following the 1999 Court

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Ruling, performance drops among treatment firms, when institutional ownership does not increase to substitute for reduced monitoring and disciplining threat of SCA lawsuits. This suggests that institutional investor monitoring and the ability of shareholders to coordinate and litigate against management via SCA lawsuits are important corporate governance mechanisms. Hopkins (2018) find that following the 1999 Court Ruling treatment firms exhibit more financial restatements, which is another indication of aggravated managerial agency problems following reduced director SCA litigation risk.

In this section, we conduct a supplementary test of whether after the 1999 Court Ruling, the observed improvement in independent director quality in treatment firms translates into better performance. Since closer monitoring by institutional ownership helps to limit the adverse director incentive effects engendered by the 1999 Court Ruling (Lin et al., 2013; Crane and Koch, 2018; Hopkins, 2018), we predict that in firms with more institutional monitoring, relatively large improvements in director quality are likely to translate into improvements in performance around the 1999 Court Ruling.

To operationalize the test, we focus on the change in annual accounting performance (i.e., ΔROA) of treatment firms over the event window of [-3, +3] around the 1999 Court Ruling. *Quality improvement* is an indicator variable that equals one if a firm's one-period lagged pre-to-post change in the sum of a quality index of newly recruited independent directors is in the top tercile of the measure's sample distribution. *High institutional ownership* is an indicator variable that equals one if a firm's percentage institutional ownership is above the sample median in 1998 and the firm does not experience a significant deterioration in blockholder monitoring in the post-event period. We define a significant deterioration in blockholder monitoring after the 1999 Court Ruling if a firm's pre-to-post change in the number of blockholders (i.e., post-event mean number of blockholders – the number of blockholders in 1998) is below the 10th percentile level of the variable's distribution (which corresponds to a loss of more than one blockholder). Blockholders are defined as investors holding 5% or more of the firm's outstanding shares. We estimate this model using OLS regressions. Since we only have nine headquarters states in our treatment sample, we use standard errors robust to heteroskedasticity, instead of clustered standard errors at the headquarters-state level, to avoid having too small a number of clusters.

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The results are reported in Table 12. β_1 captures the effect of improved independent director quality on ΔROA in firms that are subject to less institutional investor monitoring before the event. β_2 captures the difference in the firm performance effects of the improved quality of recruited independent directors between firms with more versus less institutional monitoring. The combination of $(\beta_1 + \beta_2)$ reported in the lower section of the table measures the effect of improved independent director quality on the ΔROA in firms subject to relatively more institutional investor monitoring before the event.

We focus on the effects of a large improvement in the quality of newly recruited, previously unexposed independent directors (i.e., summed *Qindex*) given that we find in our baseline analysis that the improvement in the quality of newly recruited directors following the 1999 Court Ruling is driven by those candidates who are previously unexposed to SCA litigation risk. As the results show that, the coefficient on β_1 in Column (1) is negative, suggesting that without strong monitoring by institutional investors, a large improvement in the quality of newly recruited, previously unexposed independent directors appears to have a negative effect on performance although it is not statistically significant. As we have discussed previously, this is due to the adverse incentive effect engendered by the exogenous reduction in the monitoring and disciplining function of SCA lawsuits following the 1999 Court Ruling. The coefficient of its interaction with institutional investor monitoring (β_2) is positive and statistically significant at the 5% level, and the combination of $(\beta_1 + \beta_2)$ reported in the lower section of Column (1) is positive and statistically significant at the 10% level. These results suggest that in firms subject to stronger monitoring by institutional investors, the adverse incentive effects of the 1999 Court Ruling on directors and executives is attenuated, so that the improved director quality translates into a rise in ROA

In Columns (2) and (3), we consider the effects of the experience and credential dimensions of director quality, respectively. The results show that the higher firm performance effect of higher-quality newly recruited directors, who are previously unexposed to SCA lawsuits is concentrated in the directors' experience-based quality metric. In summary, we find supporting evidence that the improved quality of previously unexposed independent directors following the 1999 Court Ruling translates into better firms'

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accounting performance when institutional monitoring helps to constrain the self-serving actions of directors who are facing weakened SCA lawsuit monitoring incentives following the 1999 Court Ruling.

5. Conclusion

The success of a firm depends crucially on the quality of its independent directors. Firms frequently lament that because many independent director candidates are seriously concerned about litigation risk and such concern undercuts firms' efforts to recruit and retain high-quality independent directors. Despite the important policy implications of this popular claim, there is almost no supporting evidence for this proposition. One reason for this gap is that empirical tests are hampered by the difficulty in measuring director legal protection and director quality, coupled with a limited amount of time series variation in legal protection measures. These factors make it difficult to establish causal relationships. We help to fill this gap in the literature by exploiting the 1999 Court Ruling of the Ninth Circuit Court of Appeals regarding the Silicon Graphics case which substantially raised the bar for filing securities class action (SCA) lawsuits. We use this Ruling as a shock to test the widely asserted director talent attraction and retention hypotheses.

Using a difference-in-differences approach, we find support for the talent attraction hypothesis by showing improvements in the quality of newly recruited independent director following the 1999 Court Ruling, but only for candidates previously unexposed to SCA litigation risk. The effects are concentrated in non-classified boards and are stronger for firms facing greater ex ante litigation risk or smaller local supplies of director candidates. Examining changes in the individual components of the director quality index, it appears that the improvements primarily come from experienced-based director characteristics, rather than credential-based characteristics. We consider several alternative explanations for our findings including staggered passage of the Universal Demand laws that raise the evidentiary hurdle for filing shareholder derivative lawsuits, the Dot-Com bubble, passage of SOX, and director remuneration policy changes. We conclude that these alternative explanations are unlikely to be responsible for our findings.

We also analyze a sample of voluntary independent director departures and find no support for the talent retention hypothesis, suggesting that directors consider more complex set of factors beyond litigation

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risk in making their continuation decision and this may in part reflect the fact that current directors are already exposed to SCA litigation risk. We show that a large improvement in the quality of newly recruited, but previously unexposed independent directors is associated with an improvement in firm performance following the 1999 Court Ruling when the monitoring of institutional investors helps to constrain the weakened director monitoring and disciplinary incentives following the 1999 Court Ruling, attesting to the value of high-quality independent directors.

Overall, our study provides the first piece of evidence in support of a revised version of the director talent attraction hypothesis (i.e., it affects recruitment of director candidates not previously exposed to securities class action litigation risk). These findings add to the on-going debate over the costs and benefits of lowering litigation risk faced by independent directors. A policy implication is that liability protection can be useful in attracting previously unexposed high-quality candidates to the pool of public boards of directors.

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Figure 1: The evolution in the average quality of newly recruited independent directors for treatment firms and matched control firms around the event: The baseline sample

This Figure is based on the director-level regression coefficients with a 90% confidence interval estimated from the model that regresses the quality of newly recruited independent directors on yearly indicator variables with the first sample year (year 1996, denoted by event year = -3) being omitted since it serves as the reference group. The regression is separately estimated for the treatment and control groups. *Qindex* is a simple aggregation of ten director quality indicators of an ID (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. Please see *Keyexec(0/1)* for the definition of key executives. *Exposed* = 1 - *Unexposed*.

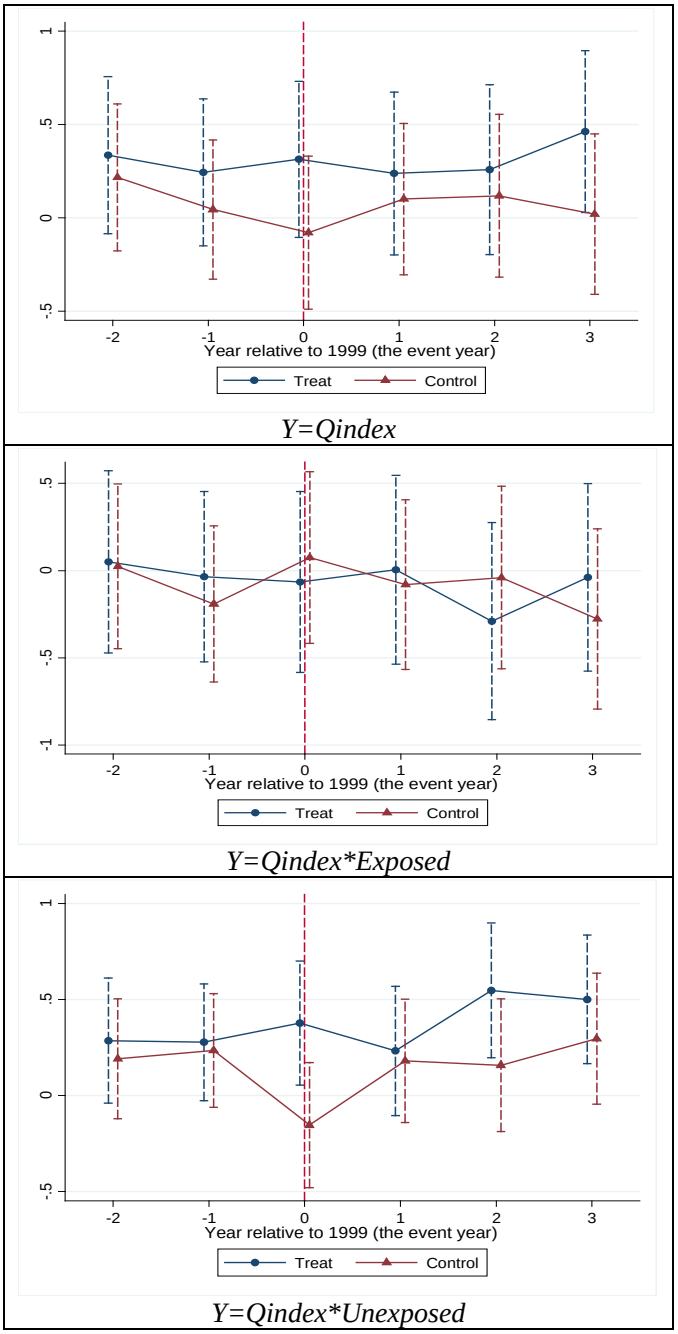

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Figure 2: The evolution in the average quality of newly recruited independent directors for treatment firms and matched control firms around the event: The subsample of higher pre-event SCA litigation risk

This Figure plots the director-level regression coefficients with a 90% confidence interval estimated from the model that regresses the quality of newly recruited independent directors on yearly indicator variables with the first sample year (year 1996, denoted by event year = -3) being omitted as the reference group. The regression is separately estimated for the treatment and control groups within the firms with higher SCA risk (measured by the composite SCA risk measure). Firms with higher composite SCA risk are firms whose headquarters state have reported an above-top-tercile number of SCA suits during the pre-event period (1996-1998) and firms' predicted SCA litigation risk measure (following Kim and Skinner (2010)) for the year 1998 falls in the top tercile of the sample distribution. *Qindex* is a simple aggregation of ten director quality indicators of an ID (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. Please see *Keyexec(0/1)* for the definition of key executives. *Exposed* = 1 - *Unexposed*.

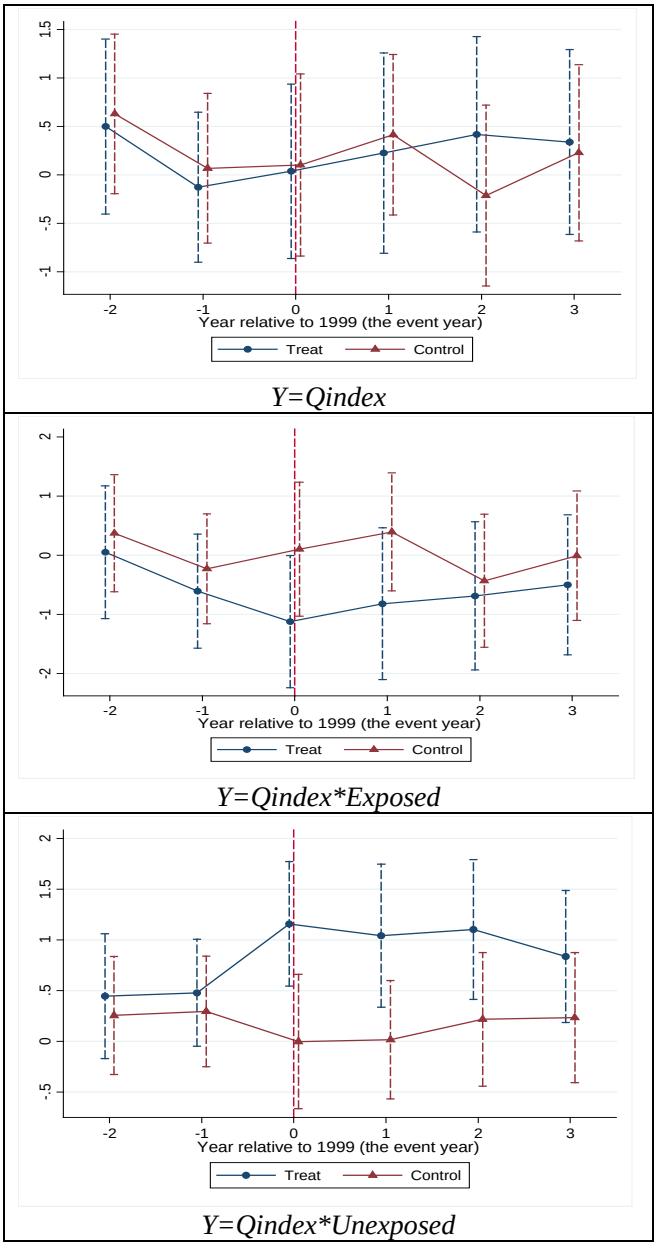

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Table 1 Summary statistics

This table reports the summary statistics of the variables in the new independent director recruitments sample used in our baseline tests. Detailed variable definitions are provided in the Appendix.

Variables	N	Mean	SD	Min	p50	Max
Treat	2312	0.470	0.499	0	0	1
Post	2312	0.575	0.494	0	1	1
Qindex	2312	2.595	1.650	0	2	8
Exposed	2312	0.482	0.500	0	0	1
Unexposed	2312	0.518	0.500	0	1	1
Qindex×Exposed	2312	1.660	2.056	0	0	8
Qindex×Unexposed	2312	0.935	1.265	0	0	7
Experience×Unexposed	2312	0.336	0.579	0	0	4
Credential×Unexposed	2312	0.599	0.918	0	0	4
Keyexec	2312	0.570	0.495	0	1	1
S&P 1500	2312	0.271	0.445	0	0	1
HP_pubfirm	2312	0.135	0.342	0	0	1
Patents	2312	0.117	0.322	0	0	1
Multiple_seats	2312	0.221	0.415	0	0	1
Degree	2312	0.525	0.499	0	1	1
MBA	2312	0.229	0.420	0	0	1
Financial	2312	0.381	0.486	0	0	1
Legal	2312	0.107	0.309	0	0	1
Industry	2312	0.039	0.193	0	0	1
Age>65 (0/1)	2311	0.084	0.278	0	0	1
Female (0/1)	2312	0.103	0.305	0	0	1
LnCashPay	2312	8.240	3.671	0	9.741	11.23
StkPay (0/1)	2312	0.908	0.289	0	1	1
LnMktVal	2301	5.936	2.259	1.722	5.671	11.81
Leverage	2310	0.207	0.219	0	0.147	1.009
Stk volatility	2220	1.419	0.531	0.178	1.466	2.585

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Table 2 Baseline results: Effects of the 1999 Court Ruling on the quality of new independent director recruitments

Panel A reports the results from a univariate DiD, where we compare the change in the quality of new independent director (ID) nominees from the pre-event to the post-event period in treatment and control groups. Panel B reports the results from director-year-level difference-in-differences (DiD) regressions regarding the impacts of the 1999 Court Ruling on the quality of newly recruited IDs. *Qindex* is a simple aggregation of ten director quality indicators of (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). We divide *Qindex* into two components: *Experience* is a simple aggregation of the first five quality indicators reflecting a candidate's experience, and *Credential* is a simple aggregation of the last five director quality indicators reflecting a candidate's background. *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. Please see *Keyexec(0/1)* for the definition of key executives. *Exposed = 1 - Unexposed. Treat* is an indicator that equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event). *Post* is an indicator variable that equals one for years 1999 to 2002 and zero for years 1996 to 1998. Detailed variable definitions are provided in the Appendix. Estimates are based on Poisson regressions with robust standard errors clustered at the headquarters-state level. T-statistics are reported in parentheses. Significance at the 10%, 5% and 1% levels (two-tailed) are indicated by *, ** and ***, respectively.

Panel A: Univariate DiD

	Pre-to-Post changes		Difference-in-Differences	
	Treatment (1)	Control (2)	Difference in change (1) – (2)	*t-stat* for (1) = (2)
Qindex	0.077	-0.090	0.167	1.51
Qindex×Exposed	-0.083	-0.108	0.025	0.19
Qindex×Unexposed	0.160**	0.018	0.142*	1.94

Panel B: Regression DiD

	(1)	(2)	(3)	(4)	(5)
Y=	*Qindex*	*Qindex× Exposed*	*Qindex× Unexposed*	*Experience× Unexposed*	*Credential× Unexposed*
Treat* × *Post	0.069*	-0.012	0.261***	0.366**	0.208**
	(1.72)	(-0.14)	(2.69)	(2.48)	(2.33)
Age>65 (0/1)	-0.283***	-0.145	-0.516***	-0.835***	-0.392***
	(-2.91)	(-0.91)	(-5.37)	(-6.54)	(-3.61)
Female (0/1)	-0.014	-0.124	0.227***	0.266**	0.203**
	(-0.38)	(-1.57)	(2.74)	(2.30)	(2.13)
LnCashPay	0.009	-0.002	0.025	0.055*	0.009
	(1.59)	(-0.15)	(1.45)	(1.69)	(0.56)
StkPay (0/1)	-0.028	-0.035	-0.045	-0.013	-0.071
	(-0.45)	(-0.24)	(-0.25)	(-0.05)	(-0.34)
LnMktVal	-0.031	0.095**	-0.188***	-0.247***	-0.159***
	(-1.50)	(2.21)	(-3.41)	(-3.19)	(-2.88)
Leverage	0.060	-0.329	0.534***	0.170	0.700***
	(0.54)	(-1.47)	(3.65)	(0.59)	(4.57)
Stk volatility	-0.032	-0.068	0.003	-0.132	0.053
	(-0.51)	(-0.48)	(0.02)	(-0.74)	(0.38)
Observations	2,207	1,917	1,939	1,645	1,806
Pseudo R^2	0.093	0.158	0.132	0.101	0.119
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

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Table 3 Dynamic DiD analysis of the effects of the 1999 Court Ruling on the quality of new independent director recruitments

This table reports the results from dynamic DiD regressions examining the impacts of the 1999 Court Ruling on the quality of newly recruited IDs. *Qindex* is a simple aggregation of ten director quality indicators (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). We divide *Qindex* into two components: *Experience* is a simple aggregation of the first five quality indicators reflecting a candidate's experience, and *Credential* is a simple aggregation of the last five director quality indicators reflecting a candidate's background. *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. Please see *Keyexec(0/1)* for the definition of key executives. *Exposed* = 1 - *Unexposed*. *Treat* is an indicator that equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event). *Post* is an indicator variable that equals one for years 1999 to 2002 and zero for years 1996 to 1998. Detailed variable definitions are provided in the Appendix. Estimates are based on Poisson regressions with robust standard errors clustered at the headquarters-state level. T-statistics are reported in parentheses. Significance at the 10%, 5% and 1% levels (two-tailed) are indicated by *, ** and ***, respectively.

	(1)	(2)	(3)	(4)	(5)
Y=	*Qindex*	*Qindex*× *Exposed*	*Qindex*× *Unexposed*	*Experience*× *Unexposed*	*Credential*× *Unexposed*
$\boldsymbol{Treat \times Pre\ (-3)}$	-0.059	-0.063	-0.119	-0.079	-0.145
	(-0.77)	(-0.56)	(-0.56)	(-0.34)	(-0.58)
$\boldsymbol{Treat \times Pre\ (-2)}$	-0.024	-0.082	0.033	0.355	-0.174
	(-0.37)	(-0.56)	(0.17)	(1.47)	(-0.65)
Treat × Post (0)	0.096	-0.135	0.549***	0.584**	0.517**
	(1.16)	(-1.00)	(3.28)	(2.39)	(2.38)
Treat × Post (1)	-0.005	0.013	-0.030	0.234	-0.190
	(-0.07)	(0.08)	(-0.16)	(1.05)	(-1.00)
Treat × Post (2)	0.008	-0.163	0.397**	0.845***	0.152
	(0.08)	(-0.77)	(2.09)	(3.78)	(0.70)
Treat × Post (3)	0.119	0.101	0.193	0.290*	0.156
	(1.41)	(0.73)	(1.54)	(1.85)	(1.03)
Observations	2,207	1,917	1,939	1,645	1,806
Pseudo R^2	0.093	0.158	0.134	0.103	0.121
Controls in Table 2	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

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Table 4 Effects of the 1999 Court Ruling on the quality of new independent director recruitments: Results using control firms in adjacent states

This table reports the results from director-year-level DiD regressions regarding the impacts of the 1999 Court Ruling on the quality of newly recruited IDs using control firms headquartered in the states adjacent to the states within the jurisdiction of the Ninth Circuit Court. We exclude treatment firms headquartered in Alaska (AK) and Hawaii (HI) as the two states are off the US mainland. We perform the PS matching to deal with the imbalance in sample size (more treatment firms and fewer control firms in the five adjacent states including North Dakota (ND), South Dakota (SD), Wyoming (WY), Utah (UT), and New Mexico (NM)). These five adjacent control states are chosen following Crane and Koch (2018). We match each treatment firm headquartered in Washington (WA), Oregon (OR), California (CA), Montana (MT), Idaho (ID), Nevada (NV) or Arizona (AZ) with two control firms headquartered in the five adjacent states with the nearest propensity score (subject to a caliper of 0.01), operating in the same Fama-French 30 industry, and having at least one new ID recruitment in both the pre-event and post-event periods. The PS matching uses three average firm characteristics in the pre-event period 1996-1998, i.e., *Ln (market value of equity)*, *Big-6 auditor*, and *Predicted SCA risk* (Kim and Skinner (2010) Table 7 model 3). We do not include *Leverage*, *ROA*, *Annual return*, and Return volatility (*Stk volatility*) in matching because they are balanced before and after matching between the treatment group and control group. After matching, treatment and control firms are also balanced in *Leverage*, *ROA*, *Annual return*, and *Stk volatility*. *Qindex* is a simple aggregation of ten director quality indicators (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). We divide *Qindex* into two components, *Experience* is a simple aggregation of the first five experience-based director quality indicators, and *Credential* is a simple aggregation of the second five background-based director quality indicators. *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. *Exposed* = 1 - *Unexposed*. *Treat* is an indicator that equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event). *Post* is an indicator variable that equals one for years 1999 to 2002 and zero for years 1996 to 1998. Detailed variable definitions are provided in the Appendix. Estimates are based on Poisson regressions with robust standard errors clustered at the headquarters-state level. The regression models include all director-level and firm-level controls used in Table 2 Panel B. T-statistics are reported in parentheses. Significance at the 10%, 5% and 1% levels (two-tailed) are indicated by *, ** and ***, respectively.

	(1)	(2)	(3)	(4)	(5)
Y=	*Qindex*	*Qindex*× *Exposed*	*Qindex*× *Unexposed*	*Experience*× *Unexposed*	*Credential*× *Unexposed*
Treat* × *Post	0.212**	-0.259	0.753***	0.703***	0.827**
	(2.23)	(-1.00)	(3.27)	(2.94)	(2.35)
Observations	294	280	258	208	247
Pseudo R^2	0.076	0.137	0.122	0.147	0.113
Controls in Table 2	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

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Table 5 Effects of the 1999 Court Ruling on each component quality indicator of new independent director recruitments

This table reports the OLS results from examining the impacts of the 1999 Court Ruling on each quality indicator of newly recruited IDs. The analysis is limited to IDs who are not exposed to SCA litigation risk in public firms. *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. *Treat* equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event) and zero otherwise. *Post* equals one for years 1999 to 2002 and zero for years 1996 to 1998. Detailed variable definitions are provided in the Appendix. Estimates are based on linear probability regressions with robust standard errors clustered at the headquarters-state level. T- statistics are reported in parentheses. Significance at the 10%, 5% and 1% levels (two-tailed) are indicated by *, ** and ***, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Y=	*Keyexec*	*S&P 1500*	*HP_pubfirm*	*Patents*	*Multiple_seats*	*Degree*	*MBA*	*Financial*	*Legal*
Treat* × *Post	0.025	0.013**	0.015**	0.050***	0.015	0.056*	-0.008	0.029	0.014
	(0.70)	(2.06)	(2.64)	(3.01)	(1.44)	(2.00)	(-0.28)	(1.04)	(0.72)
Observations	2,209	2,209	2,209	2,209	2,209	2,209	2,209	2,209	2,209
Adjusted R^2	0.139	-0.002	-0.018	-0.009	0.030	0.087	0.029	0.065	0.024
Controls in Table 2	YES	YES	YES	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES

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Table 6 Effects of the 1999 Court Ruling on the quality of new independent director recruitments: Firms with classified boards versus non-classified boards

This table reports the results from difference-in-differences (DiD) regressions regarding the impact of the 1999 Court Ruling on the quality of newly recruited IDs for classified boards and non-classified boards. *Qindex* is a simple aggregation of ten director quality indicators (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). We divide *Qindex* into two components: *Experience* is a simple aggregation of the first five quality indicators reflecting a candidate's experience, and *Credential* is a simple aggregation of the last five director quality indicators reflecting a candidate's background. *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. *Exposed* = 1 - *Unexposed*. *Treat* equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event) and zero otherwise. *Post* equals one for years 1999 to 2002 and zero for years 1996 to 1998. Detailed variable definitions are provided in the Appendix. Estimates are based on Poisson regressions with robust standard errors clustered at the headquarters-state level. All regression models include the same director-level and firm-level control variables as in Table 2 Panel B. T-statistics are reported in parentheses. Significance at the 10%, 5% and 1% levels (two-tailed) are indicated by *, ** and ***, respectively.

Panel A: Non-classified-board sample

	(1)	(2)	(3)	(4)	(5)
Y=	*Qindex*	*Qindex*× *Exposed*	*Qindex*× *Unexposed*	*Experience*× *Unexposed*	*Credential*× *Unexposed*
Treat* × *Post	0.120*	-0.063	0.465***	0.498***	0.467***
	(1.87)	(-0.46)	(3.76)	(2.95)	(3.83)
Observations	1,113	926	1,004	857	939
Pseudo R^2	0.101	0.164	0.142	0.105	0.132
Controls in Table 2	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

Panel B: Classified-board sample

	(1)	(2)	(3)	(4)	(5)
Y=	*Qindex*	*Qindex*× *Exposed*	*Qindex*× *Unexposed*	*Experience*× *Unexposed*	*Credential*× *Unexposed*
Treat* × *Post	-0.015	-0.045	0.044	0.177	-0.015
	(-0.22)	(-0.43)	(0.37)	(0.95)	(-0.10)
Observations	1,080	970	917	770	847
Pseudo R^2	0.086	0.154	0.128	0.102	0.115
Controls in Table 2	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

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Table 7 Effects of the 1999 Court Ruling on the quality of new independent director recruitments: Firm-year-level results

This table reports the results from firm-year-level difference-in-differences (DiD) regressions regarding the impacts of the 1999 Court Ruling on the aggregate quality of all newly recruited IDs in a firm-year. In this test, we aggregate each newly recruited independent director's quality index in a firm-year. We also count the number of old and female candidates among all the newly recruited independent directors in the year (denoted as *Age>65* and *Female*, respectively). *Qindex* is a simple aggregation of ten director quality indicators of (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). We divide *Qindex* into two components: *Experience* is a simple aggregation of the first five quality indicators reflecting a candidate's experience, and *Credential* is a simple aggregation of the last five director quality indicators reflecting a candidate's background. *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. Please see *Keyexec(0/1)* for the definition of key executives. *Exposed* = 1 - *Unexposed*. *Treat* is an indicator that equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event). *Post* is an indicator variable that equals one for years 1999 to 2002 and zero for years 1996 to 1998. Detailed variable definitions are provided in the Appendix. Estimates are based on Poisson regressions with robust standard errors clustered at the headquarters-state level. T-statistics are reported in parentheses. Significance at the 10%, 5% and 1% levels (two-tailed) are indicated by *, ** and ***, respectively.

	(1)	(2)	(3)	(4)	(5)
Y=	*Qindex*	*Qindex*× *Exposed*	*Qindex*× *Unexposed*	*Experience*× *Unexposed*	*Credential*× *Unexposed*
Treat* × *Post	0.055	-0.032	0.248**	0.343**	0.200*
	(0.87)	(-0.28)	(2.29)	(2.24)	(1.95)
Observations	1,536	1,309	1,325	1,099	1,224
Pseudo R^2	0.192	0.228	0.190	0.120	0.170
Controls in Table 2	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

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Table 8: Robustness check with multiple hypothesis testing

This table reports the results of the robustness check by conducting a multiple hypothesis test (at the firm-year level) that considers the quality of newly recruited, previously unexposed independent directors aggerated at the firm-year level (*Qindex*×*Unexposed*, *Experience*×*Unexposed* and *Credential*×*Unexposed*) jointly with five other outcome variables from the existing literature using the 1999 Ninth Circuit Court Ruling setting. The five other outcome variables include the total percentage institutional ownership (Crane and Koch, 2018), an indicator variable for having a financial restatement in a year (Hopkins, 2018), the total number of management earnings forecasts in a year (Houston et al., 2019), an aggregate measure of real earnings management that combines the abnormal discretionary expenses and abnormal production costs (Huang et al., 2020), and the natural logarithm of a CEO's equity vega plus one following Yang et al. (2021). Following the free step-down resampling procedure in Westfall and Young (1993), we employ a firm-level clustered bootstrap with 1,000 repetitions, repeat the DiD analysis for each dependent variable in each bootstrap sample, and calculate the adjusted *p*-values. *Qindex* is a simple aggregation of ten director quality indicators (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). We divide *Qindex* into two components: *Experience* is a simple aggregation of the first five quality indicators reflecting a candidate's experience, and *Credentials* is a simple aggregation of the last five director quality indicators reflecting a candidate's background. *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. *Treat* equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event) and zero otherwise. *Post* equals one for years 1999 to 2002 and zero for years 1996 to 1998. Estimates of our three dependent variables and the frequency of management earnings forecast are based on Poisson regressions, and other dependent variables are based on OLS regression. All regressions use robust standard errors clustered at the headquarters-state level. We include three common firm-level control variables (*LnMktVal*, *Leverage* and *Stk volatility*), firm fixed effects (Firm FE) and year fixed effects (Year FE) in all the regressions. Westfall and Young's (1993) adjusted *p*-values are reported. Significance at the 10%, 5% and 1% levels (two-tailed) are indicated by *, ** and ***, respectively.

Dependent variables	Coefficient on *Treat* × *Post*	Westfall and Young Adjusted *p*-value
Qindex×*Unexposed*	0.235**	0.035
Experience×*Unexposed*	0.349**	0.034
Credential×*Unexposed*	0.179*	0.062

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Table 9 Is the result due to better director compensation post the 1999 Ruling?

This table reports the difference-in-differences (DiD) regressions regarding the impacts of the 1999 Court Ruling on a firm's compensation policy for independent directors as measured by two variables, *LnCashPay* and *StkPay (0/1)*. *LnCashPay* is the natural logarithm of (annual cash retainer fee + regular board meeting fee + $1). *StkPay* is an indicator variable that equals one if a firm grants stocks or stock options to independent directors. *Treat* is an indicator that equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event). *Post* is an indicator variable that equals one for years 1999 to 2002 and zero for years 1996 to 1998. Detailed variable definitions are provided in the Appendix. Estimates are based on OLS regressions with robust standard errors clustered at the headquarters-state level. T-statistics are reported in parentheses. Significance at the 10%, 5% and 1% level (two-tailed) is indicated by *, ** and ***, respectively.

	(1)	(2)
Y =	*LnCashPay*	*StkPay (0/1)*
Treat × *Post*	0.016	0.011
	(0.48)	(0.05)
LnMktVal	-0.028**	0.127
	(-2.48)	(1.22)
Leverage	0.002	-0.544
	(0.04)	(-0.42)
Stk volatility	-0.013	-0.365
	(-0.43)	(-0.60)
Observations	1,405	1,405
Adjusted R^2	0.585	0.807
Firm FE	YES	YES
Year FE	YES	YES

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Table 10 Heterogeneities in the effects of the 1999 Court Ruling on the quality of new independent director recruitments

This table examines how the impact of the 1999 Court Ruling on the quality of newly recruited IDs varies with four measures of a firm's pre-event litigation risk (the frequency of SCA suits in a firm's headquarters state in Column (1), a firm's predicted SCA risk in Column (2), a composite SCA litigation risk in Column (3), and the availability of director liability limitation provision (LLP) in Column (4)) and the size of the local pool of director supply in Column (5). The interacting dummy variable is defined to be one for low pre-event litigation risk in Columns (1)-(4) so that the coefficient estimate (β_1) can be conveniently interpreted to reflect the DiD effect in the group of firms facing higher litigation risk ex ante. The interacting dummy variable is defined to be one denoting a larger pre-event local director supply pool in Column (5) so that the coefficient estimate (β_1) can be interpreted to reflect the DiD effect in the group of firms surrounded by a smaller pre-event local director supply pool. *Low state SCA suits* equals one if the total number of SCA suits in a firm's headquarters state in the pre-event period (1996-1998) is below the top tercile of the sample distribution, and zero otherwise. *Low predicted SCA risk* equals one if a firm's predicted SCA litigation risk measure calculated according to Table 7 model 3 of Kim and Skinner (2010) in year 1998 is below the top tercile of the sample distribution, and zero otherwise. *Low composite SCA risk* equals one if either *Low state SCA suits* or *Low predicted SCA risk* equals one. *Having LLP protection* equals one if a firm has at least one of the following three provisions limiting director liability in corporate charters/bylaws: the director liability limitation provision, the director indemnification provision, and indemnification contracts in 1998. *Large local pool* equals one if a firm's average local pool of director candidates in the pre-event period (1996-1998) is above the top tercile of the sample distribution. A firm's local pool of director supply is defined as the number of S&P 1500 firms whose business addresses are within 60 miles of a firm's headquarters, excluding firms in the same 4-digit SIC industry (as they are likely competitors of the firm concerned). *Qindex* is a simple aggregation of ten director quality indicators (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). *Unexposed* is an indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. *Treat* is an indicator that equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event). *Post* is an indicator variable that equals one for years 1999 to 2002 and zero for years 1996 to 1998. Detailed variable definitions are provided in the Appendix. Estimates are based on Poisson regressions with robust standard errors clustered at the headquarters-state level. T- statistics are reported in parentheses. Significance at the 10%, 5% and 1% levels (two-tailed) are indicated by *, ** and ***, respectively.

	(1)	(2)	(3)	(4)	(5)
	Interacting variable =				
Y= *Qindex*×*Unexposed*	*Low state SCA suits*	*Low predicted SCA risk*	*Low composite SCA risk*	*Having LLP protection*	*Large local pool*
***Treat* × *Post* (β_1)**	0.359***	0.516***	0.699***	0.210	0.349***
	(5.60)	(3.00)	(4.06)	(0.98)	(3.04)
Treat×*Post*×*Interacting var.* (β_2)	-0.371*	-0.327**	-0.541**	-0.154	-0.438***
	(-1.82)	(-2.05)	(-2.57)	(-0.43)	(-2.70)
Post× *Splitting indicator*	0.031	-0.012	0.068	0.389*	0.381***
	(0.17)	(-0.10)	(0.42)	(1.76)	(2.67)
Observations	1,939	1,939	1,939	990	1,722
Pseudo R^2	0.133	0.133	0.134	0.138	0.133
$\beta_1 + \beta_2$	-0.012	0.189**	0.158	0.056	-0.089
$\beta_1 + \beta_2$=0 *p*-value	0.953	0.031	0.128	0.869	0.386
Controls in Table 2	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

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Table 11 The effects of the 1999 Court Ruling on the quality of voluntarily departing independent directors

We test the talent retention hypothesis by examining the changes in the quality of the voluntarily departing IDs around the 1999 Court Ruling. The table reports the DiD results at the director-year-level in columns (1) to (3) and the firm level results in columns (4) to (6). We aggregate all the related director level quality or control variables in one firm-year when conducting the firm level analysis. Columns (1) and (4) report the results for the full retention sample, columns (2) and (5) report the non-classified board subsample results, and columns (3) and (6) report the classified board subsample results. We define an ID departing as *voluntary* if an ID leaves the board in the next period for reasons other than "retired (including those reaching the mandatory retirement age)", "died", "sick", "being sanctioned due to the violation of law", "found a position in the government". *Qindex* is a simple aggregation of ten director quality indicators of (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*). *Treat* is an indicator that equals one if a firm is headquartered in one of the nine states within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event). *Post* is an indicator variable that equals one for years 1999 to 2002 and zero for years 1996 to 1998. Detailed variable definitions are provided in the Appendix. Estimates are based on Poisson regressions with robust standard errors clustered at the headquarters-state level. T- statistics are reported in parentheses. Significance at the 10%, 5% and 1% levels (two-tailed) are indicated by *, ** and ***, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Director-level			*Firm-level*		
Y= *Qindex*	*All*	*Non-classified boards*	*Classified boards*	*All*	*Non-classified boards*	*Classified boards*
Treat × Post	0.062	-0.046	0.232	0.012	-0.091	0.082
	(0.94)	(-0.52)	(1.56)	(0.13)	(-0.73)	(0.39)
Age>65	-0.608***	-0.504***	-0.716***	0.024	0.003	-0.004
	(-8.96)	(-9.81)	(-6.44)	(0.37)	(0.04)	(-0.05)
Female	-0.093	0.013	-0.213*	0.259***	0.352***	0.095
	(-1.24)	(0.14)	(-1.94)	(2.59)	(3.12)	(0.59)
Attendance<75%	0.087	0.108	0.114	0.181	0.234	0.210
	(0.77)	(0.71)	(0.73)	(1.22)	(1.22)	(1.13)
LnCashPay	-0.001	-0.002	0.007	0.004	-0.010	0.012
	(-0.04)	(-0.12)	(0.31)	(0.26)	(-0.70)	(0.37)
StkPay (0/1)	-0.138	-0.096	-0.310	-0.016	-0.061	-0.284
	(-0.94)	(-0.53)	(-0.75)	(-0.06)	(-0.17)	(-0.65)
LnMktVal	-0.055**	0.035	-0.117***	-0.041	0.054	-0.127***
	(-2.02)	(0.71)	(-3.69)	(-1.03)	(0.95)	(-2.68)
Leverage	-0.068	0.462	-0.593***	0.060	0.665**	-0.552**
	(-0.23)	(1.17)	(-3.16)	(0.18)	(1.99)	(-2.23)
Stk volatility	-0.013	0.108	0.090	-0.073	0.061	-0.054
	(-0.13)	(0.82)	(0.68)	(-0.61)	(0.39)	(-0.29)
Observations	1,271	693	557	976	536	414
Pseudo R^2	0.130	0.133	0.138	0.182	0.188	0.191
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

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Table 12 Firm performance effects of quality changes in independent directors following the 1999 Appeals Court Ruling

This table reports the effects of treatment firms' change in the quality of newly recruited independent directors on the change in average ROA conditional on the monitoring of institutional investors over the event window of [-3, +3] surrounding the 1999 ruling of the Ninth Circuit Court. Only treatment firms are included in the analysis. ΔROA is a firm's pre-to-post change in average ROA over the event window [-3, +3]. *Quality improvement* is an indicator variable that equals one if a firm's pre-to-post change in the sum of a quality index of newly recruited, previously unexposed independent directors is in the top tercile of the measure's sample distribution and zero otherwise. Independent director quality improvements are measured by a one-period lag relative to the ΔROA. The quality index used in Columns (1) to (3) is *Qindex×Unexposed*, *Experience×Unexposed*, and *Credential×Unexposed*, respectively. *High instown* is an indicator variable that equals one if a firm's institutional ownership is above the sample median in 1998 and does not experience a significant deterioration in blockholder monitoring after the ruling. We interpret there to be a significant deterioration in blockholder (ownership >5%) monitoring after the ruling if the pre-to-post change in the number of blockholders (i.e., post-event mean number of blockholders - the number of blockholders in 1998) is below the 10th percentile of the variable (which corresponds to the loss of more than one blockholder). Estimates are based on OLS regressions with robust standard errors. T-statistics are reported in parentheses. Significance at the 10%, 5% and 1% level (two-tailed) is indicated by *, ** and ***, respectively.

	(1)	(2)	(3)
	Director quality =		
Y = ΔROA[-3, +3]	*Qindex× Unexposed*	*Experience× Unexposed*	*Credential× Unexposed*
Quality improvement (β_1)	-0.078	-0.079	-0.002
	(-1.40)	(-1.32)	(-0.05)
High instown × Quality improvement ($\boldsymbol{\beta_2}$)	0.134**	0.138**	0.027
	(2.11)	(2.09)	(0.51)
High instown	-0.011	-0.014	0.022
	(-0.29)	(-0.36)	(0.57)
LnMktVal	-0.011	-0.010	-0.011
	(-1.26)	(-1.19)	(-1.32)
Leverage	0.303***	0.298***	0.291***
	(2.95)	(2.83)	(2.73)
Observations	223	223	223
Adjusted R^2	0.034	0.035	0.021
$\beta_1 + \beta_2$	0.056*	0.059*	0.025
$\beta_1 + \beta_2$ *p*-value	0.077	0.064	0.434

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Appendix: Variable definitions

Variables	Definitions
Key director quality measures	
Qindex	A simple aggregation of ten director quality indicators of an ID nominee (i.e., *Keyexec, HP_firm, S&P 1500, Patents, Multiple_seats, Degree, MBA, Financial, Legal, Industry*).
Experience	A simple aggregation of the first five director quality indicators (capturing a candidate's managerial experience) of an ID nominee (i.e., *Keyexec, S&P 1500, HP_firm, Patents, Multiple_seats*).
Credential	A simple aggregation of the last five director quality indicators (capturing a candidate's educational and professional background) of an ID nominee (i.e., *Degree, MBA, Financial, Legal, Industry*).
Sub-items of director quality	
Keyexec(0/1)	An indicator variable that equals one if an ID nominee is a key executive with one, or some, of the titles or equivalents: chief executive officer (CEO), president, chairman, chief financial officer (CFO), chief information officer (CIO), chief operating officer (COO), vice president (VP), executive VP, senior VP, managing partner, managing director, treasurer, other chief officers (Knyazeva et al., 2013) at the time of nomination.
S&P 1500(0/1)	An indicator variable that equals one if an ID candidate is an executive or a director of a constituent firm of the S&P 1500 index at the time of nomination.
HP_firm(0/1)	An indicator variable that equals one if an ID candidate is an executive of a firm with ROA above its Fama-French 30 industry median in the year before nomination.
Patents (0/1)	An indicator variable that equals one if an ID candidate is an executive from a firm that has at least one granted patent in the year before nomination
Multiple_seats(0/1)	An indicator variable that equals one if an ID candidate serves in more than two other firms' board at the time of nomination.
Degree(0/1)	An indicator variable that equals one if an ID candidate's highest academic degree is Master or above, and zero otherwise.
MBA(0/1)	An indicator variable that equals one if an ID candidate has a Master of Business Administration (MBA) degree or a Doctorate of Business Administration (DBA), and zero otherwise.
Financial(0/1)	An indicator variable that equals one if an ID candidate has a financial background (is/was a CFO, a treasurer, a banker, an accountant, an auditor, or a securities broker; or worked/is working in a venture capital, a private equity, an investment bank; or majored in finance or accounting).
Legal(0/1)	An indicator variable that equals one if an ID candidate has a legal background (is/was an attorney, a legal counsel, a lawyer; or majored in law).
Industry(0/1)	An indicator variable that equals one if an ID candidate is an executive of a company in the same FF30 industry as the focal company at the time of nomination.
Key explanatory variables	
Treat(0/1)	An indicator that equals one if a firm is headquartered in a state within the jurisdiction of the Ninth Circuit Court of Appeals in 1998 (the year before the ruling event). The nine states under the jurisdiction of the Ninth Circuit Court include Washington (WA), Oregon (OR), California (CA), Montana (MT), Idaho (ID), Nevada (NV), Arizona (AZ), Alaska (AK) and Hawaii (HI).
Post(0/1)	An indicator variable that equals one for years 1999 to 2002 and zero for years 1996 to 1998. The Ninth Circuit Court ruling was issued in 1999.
Pre(-3), Pre(-2), Post (0), Post(1), Post(2), Post(3)	Indicator variables. *Pre(-3)* equals one for year 1996, and zero otherwise. *Pre(-2)* equals one for year 1997. *Post(0)* equals one for year 1999. *Post(1)*, *Post(2)* and *Post(3)* are defined analogously.

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Low State SCA suits	An indicator variable that equals one if a firm's headquarters state is ranked below the top tercile based on the total number of securities class action (SCA) cases filed in a state in the pre-event period from 1996 to 1998, and zero otherwise. SCA lawsuits are sourced from the Stanford Law School Security Class Action Clearinghouse (SCAC) database.
Low predicted SCA risk	An indicator variable that equals one if a firm's predicted SCA litigation risk measure calculated according to Kim and Skinner (2010) (Table 7 model 3) in year 1998 is below the top tercile of the sample distribution, and zero otherwise.
Low composite SCA risk	An indicator variable that equals one if either *Low state SCA suits* or *Low predicted SCA risk* equals one.
Having LLP protection	An indicator variable that equals one if a firm has at least one of the following three provisions limiting director liability in corporate charters/bylaws: the director liability limitation provision, the director indemnification provision, and indemnification contracts in 1998 (Bradley and Chen, 2011).
Large local pool	An indicator variable that equals one if a firm's average local pool of director supply in the pre-event period (1996-1998) is above the top tercile of the sample distribution, and zero otherwise. Following Knyazeva et al. (2013), a firm's local pool of director supply is defined as the number of S&P 1500 firms whose business addresses are within 60 miles of a firm's headquarters, excluding firms in the same 4-digit SIC industry (as they are likely competitors of the firm concerned). The latitude and longitude information of a firm's business address is obtained from the data compiled by Prof. Bill McDonald.
Director characteristics	
Unexposed	An indicator variable that equals one if an ID nominee does not serve as a director or a key executive in any public firm at the time of nomination. Please see *Keyexec(0/1)* for the definition of key executives.
Exposed	*Exposed* = 1 – *Unexposed.*
Age>65 (0/1)	An indicator variable that equals one if the age of an ID nominee is over 65.
Female (0/1)	An indicator variable that equals one if an ID nominee is female.
Attendance<75% (0/1)	An indicator variable that equals one if an ID attended less than 75% of board meetings in a year. The variable is used in the talent retention test.
Director compensation policy	
LnCashPay	Expected cash pay to an ID nominee, defined as the natural logarithm of (annual cash retainer fee + the number of regular board meetings a year × attendance fee per meeting for an outside director +$1). The pay is measured in dollars before the log transformation.
StkPay (0/1)	An indicator variable that equals one if a firm has a policy of granting stocks or stock options to independent directors, and zero otherwise.
Firm characteristics	
Leverage	Book leverage, defined as the book value of long-term debt plus short-term debt scaled by the book value of total assets.
Stk volatility	Natural logarithm of the standard deviation of a firm's percentage daily stock return in a year.
LnMktVal	Natural logarithm of the market value of a firm.

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