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Mobility Restrictions and Risk-related Agency Conflicts

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Abstract

Stricter enforcement of post-employment restrictions that strengthens trade secrets protection also limits CEOs' alternative employment opportunities. We find that such mobility restrictions, which heightened CEO career concerns can dampen their risk-taking incentives and distort corporate financing decisions, particularly in firms whose CEOs value outside employment opportunities relatively highly. Stock market reactions to acquisition announcements suggest that intensified CEO career concerns from mobility restrictions compromise the quality of investment decisions. More generally, managerial career concerns adversely affect shareholder value by exacerbating risk-related agency conflicts. Thus, our evidence suggests that shareholders can benefit from more unconstrained labor markets that promote managerial risk-taking

Keywords: Career Concerns, Risk-Related Agency Conflicts, Leverage, Acquisitions

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1. Introduction

Theoretical and empirical research in corporate finance generally assumes the alignment of shareholder and manager interests. However, this classical assumption is violated when managers have vested interests that conflict directly with those of shareholders. Agency conflicts manifest themselves in several forms, including shirking and excessive perquisite consumption by incumbent managers. However, another variant, which is relatively difficult to detect and often ignored, is risk-related agency conflicts that arise from the inconsistency in risk preferences between diversified shareholders and their under-diversified managers. We study how managerial career concerns, which can create a risk-related shareholder-manager agency conflict, can impact major corporate policies. We explore the impacts of staggered state court adoptions of a doctrine that limits executive mobility by restricting future career opportunities at rival firms. Such labor market frictions trigger quasi-exogenous variation in managerial career concerns at firms headquartered in different states. Exploiting these state-level shocks in managerial mobility, we provide novel evidence that managerial career concerns can distort corporate risk-taking and adversely affect shareholder value.

Our study is important for several reasons. First, although difficult to detect, risk-related agency conflicts are quite pervasive at the firm-level (Gormley and Matsa 2016). As such, any violation of the assumption of perfect alignment of risk-preferences of shareholders and managers has significant value implications for shareholders (Amihud and Lev 1981). Second, since managerial career concerns influence their risk-taking preferences, which can affect a firm's financing and investment decisions (Jensen and Meckling 1976), our study has implications for a firm's growth, risk-taking, and aggregate investment.[1] Finally, a manager's career concerns alter her risk-taking incentives (Hölmstrom 1999), even in the presence of compensation contracts tied to performance (Amihud and Lev 1981, Gibbons and Murphy 1992), and thus, exacerbate risk-related agency problems (Hölmstrom and Ricart I Costa 1986). Consequently, our study has implications for public policy prescriptions (Aghion, Van Reenen, and Zingales 2013) and

[1] Ben Casselman argues that the "playing safe" preference of managers triggers an increasingly risk-averse culture in the U.S. that substantially lowers the growth rate of the economy (Source: The Wall Street Journal, June 2, 2013).

especially the design of flexible labor market statutes that support allocational efficiency (Arrow 1962).

In practice, testing the effect of risk-related agency conflicts on firm-level decisions is challenging for at least two reasons. First, isolating an exogenous increase in managerial career concerns without an associated increase in a firm's overall risk is rare. To overcome this identification challenge, we exploit the staggered state court adoption of the Inevitable Disclosure Doctrine (henceforth IDD) as a quasi-natural experiment. The *intended effect* of IDD is to enhance a firm's trade secrets protection by allowing a firm to prevent its former employees from working for a rival, given that this employment can "inevitably" lead these employees to divulge the firm's trade secrets to its competitor.[2]

Since trade secrets are among the key revenue-generating assets that provide a firm with a competitive edge, potential trade secret revelation could expose a firm to irreparable harm. Importantly, unlike other intellectual property, e.g., registered patents and copyrights, which are protected by federal law and relevant intellectual property acts, trade secrets are more vulnerable to theft by former employees and competing firms.[3] Since firms can lose highly valuable assets to a rival when the rival is able to hire a key executive with detailed knowledge of their trade secrets, firms generally impose post-employment contractional restrictions on senior executives on their initial appointment (Bishara, Martin, and Thomas 2015). Subsequently, these firms can and do sue these executives for breach of contract to deter predatory hiring by rivals.[4] However, the success of such trade secrets protection rests primarily with the enforcement of such post-employment restrictions by state courts in a firm's headquarter state (Yeh 2016) and on whether that court recognizes IDD (Appendix A1 includes some relevant court cases).

[2] A firm's trade secrets can be any formula, process, competitive business information, device, code, recipe, designs, cost information, HR policy, business plan, marketing and promotional strategies, financial data, sales training materials, actual and potential customer lists, past and current fundraising programs, performance information, industry know-how or any soft information that makes the firm unique. Thus, trade secrets allow a firm to obtain an advantage over competitors who do not know, use, or have access to such trade secrets (Lowry 1988).

[3] Estimates of trade secrets theft range from one to three percent of GDP of the U.S. and other advanced industrial economies (PwC report 2014, Economic Impact of Trade Secret Theft).

[4] Almeling, Snyder, Sapoznikow, and McCollum (2010) report that in over 93% of cases, the trade secrets misappropriator is by an employee or a business partner.

Unfortunately, by strengthening executive mobility restrictions, IDD adoption has another major effect, namely, it exacerbates executive career concerns and intensifies the conflict in risk preferences of well-diversified shareholders and their undiversified managers, i.e., risk-related agency conflicts (Hölmstrom 1999). Thus, such risk-related agency conflicts triggered by managerial career concerns lead to an *unintended dark side* of IDD adoption. The "double-edged" dimension (both the *intended* and *unintended* effects) of the staggered shock of IDD adoption across time and across states allows us to design a sharper empirical test where we can disentangle IDD's effects on firm trade secrets risk (-) from its effects on managerial career risk (+). This setting enables us to cleanly estimate the effects of intensified risk-related agency conflicts on firm-level policies while minimizing other potentially confounding explanations that often hinder a causal interpretation in the absence of a quasi-natural experiment.

Second, while firms frequently impose explicit post-employment restrictions in CEO employment contracts (Bishara et al., 2015), a survey of CEOs reports that 75% of respondents value the upward mobility in the labor market more than the compensation scheme at the CEOs' focal firms (Graham, Harvey, and Rajgopal 2005). However, identifying CEOs who rely more heavily on outside employment options and, thus, experience aggravated career concerns after IDD adoption is challenging. We overcome this challenge by assembling a unique hand-collected dataset that exploits the heterogeneity in managers' reliance on outside employment options. More precisely, we distinguish ex-ante differences in managers' entrepreneurial spirit based on whether these executives are founders of their firms. This cross-sectional variation in managers' reliance on outside employment options provides us with a rich set of empirically testable predictions.[5]

Founder CEOs, who start companies at the expense of pursuing more stable and better-paying employment opportunities, arguably have a lower degree of interest in conventional outside managerial employment options. At the same time, founder CEOs have a strong psychological commitment to the continued success of their firms. Importantly, founder CEOs have a longer horizon and a much lower probability of being forced out (Fahlenbrach 2009).

[5] In later analysis, we further classify executives' career concerns based on their age to retirement and whether they are specialist managers.

Therefore, founder CEOs are less likely to consider moving to rival firms. Even if they do move, founders are less likely to encounter serious legal battles since the firm is their brain-child, as suggested by anecdotal accounts.[6] We provide evidence that IDD adoption in a given state significantly reduces the mobility of CEOs generally; however, this mobility effect is only detectable for professional CEOs.

Our study builds on two opposing hypotheses. First, a serious reduction in the competitive threats associated with the loss of trade secrets when competitors hire away key employees (lower trade secrets risk), should generally allow firms to pursue riskier corporate policies (Klasa, Ortiz-Molina, Serfling, and Srinivasan 2018). Building on these arguments, we propose a "trade secrets protection hypothesis". This hypothesis applies broadly to all firms since trade secrets are prevalent across all industries, from fast-food retail (KFC fried chicken recipe), and beverages (Coca Cola formula) to high-technology industry (Google search engine algorithm) (Lobel 2013). Second, other theories suggest that mobility restrictions can heighten an executive's career concerns and dampen her risk-taking incentives (Hölmstrom and Ricart I Costa 1986, Fulghieri and Sevilir 2011). These incentives are likely to hold more strongly at firms where a manager's future career path hinges crucially on the extent of outside employment opportunities. We refer to this as the "exacerbated career concerns hypothesis".

To empirically test our hypotheses, we first investigate how the quasi-exogenous variations in trade secrets risk and managers' career concerns affect *Cashflow Volatility*. If stricter enforceability of post-employment restrictions intensifies career concerns of professional CEOs, we expect to observe a decline in *Cashflow Volatility* for this subsample of firms. Consistent with our conjecture, we find that firms managed by professional CEOs (hereafter, professional CEO firms), who experience aggravated career concerns, exhibit a significant decline in *Cashflow Volatility* after IDD adoption. At the same time, firms managed by founder CEOs (hereafter, founder CEO firms) exhibit an increase in *Cashflow Volatility* after IDD adoption.

[6] Bernie Gordon, a serial entrepreneur, a prolific inventor, and founder CEO of Analogic Corporation, had not been sued by Analogic when he founded another competing firm NeuroLogica, headquartered in Massachusetts- a state that recognizes IDD. However, Analogic raised concerns that its intellectual property and other rights had been violated. Indeed, Gordon successfully sued against Analogic later for freezing NeuroLogica's effort to sell the company to another acquirer.

An important caveat to this initial analysis is that a CEO may not directly influence a firm's *Cashflow Volatility*. Yet, this risk measure can, over time, reflect market forecasts of future managerial financing and investment decisions, over and above other external factors that determine a firm's risks. Thus, to provide more direct evidence on the effect of intensified managerial career concerns, we extensively test our two baseline hypotheses across a number of major corporate policy decisions, e.g., capital structure and acquisitions, over which CEOs have significant influence (Graham, Harvey, and Puri 2013).

We choose to begin our analysis by focusing on a firm's major capital structure decision, its financial leverage ratio since the previous literature has established that IDD adoption alters a firm's leverage ratio (Klasa et al., 2018). We use the same empirical setting to investigate the separate effects of managerial career concerns stemming from stricter enforceability of post-employment restrictions on corporate policies. Besides, "*Leverage*" is often used in this literature as a proxy for risky corporate policies (Coles, Daniel, and Naveen 2006, Malmendier, Tate, and Yan 2011, Bernile, Bhagwat, and Rau 2017, Cziraki and Goren-Xu 2019). Importantly, using *Leverage* allows us to test the predictions of our two opposing hypotheses more precisely. Here, the "trade secrets protection hypothesis" predicts that after IDD adoption, reduced trade secrets risk decreases the strategic benefits to a firm in maintaining unused debt capacity and, thus, it should lead to a higher *Leverage* ratio (Klasa et al., 2018).[7] However, higher debt implies a higher risk of CEO termination (DeMarzo and Fishman 2007), a higher probability of bankruptcy, and higher perceived human capital costs due to bankruptcy, which can be substantial risks for senior executives. The effects of increased firm financial risk are likely to be even more dramatic when a CEO's outside employment options are restricted. Thus, the "exacerbated career concerns hypothesis" predicts that after IDD adoption, professional CEO firms are less likely to increase *Leverage* (Berk, Stanton, and Zechner 2010) than founder CEOs.[8]

[7] Klasa et al. (2018) argue that, when rivals could seek to obtain a firm's trade secrets and, thus, harm its business, the firm's strategic benefits of maintaining unused debt capacity increases leading to lower debt ratio. However, after IDD adoption, the firm moves from an equilibrium of weak trade secrets protection and lower *Leverage* to a new equilibrium with stronger trade secrets protection and higher *Leverage*.

[8] While we initially focus on the same outcome variable and the same IDD treatment that Klasa et al. (2018) use, they ignored the intensified agency conflicts associated with IDD, which we carefully study to better understand the major effects of IDD adoption on firm decisions.

Our empirical findings are consistent with our conjecture. While on the one hand, in founder CEO firms, IDD adoption leads to an increase in *Leverage* of 17.4% (through the trade secrets protection channel), consistent with the findings of Klasa et al. (2018). On the other hand, over the same period, IDD adoption leads to a reduction in *Leverage* of 16.9% for professional CEO firms relative to founder CEO peers (through the exacerbated career concerns channel). This adverse effect on *Leverage* from the exacerbated career concerns channel, on average, appear to offsets the positive effect of the trade secret protection. Thus, for professional CEO firms, IDD adoption leads to a net effect that is statistically and economically indistinguishable from zero. In our empirical specifications, we control for unobserved, time-invariant differences across firms and unobserved, time-varying differences across states and industries. Thus, by using high dimensional fixed effects, we show that our estimates of the observed IDD effects in professional CEO firms are robust to many types of unobservable omitted variables that could otherwise potentially confound this type of analysis (see Gormley and Matsa 2014). In the post-IDD period, we also find that while founder CEO firms tend to issue new debt, professional CEO firms are reluctant to do so. Importantly, the apparent under-utilization of unused debt capacity by professional CEO firms occurs in an environment of lower trade secrets risk when issuing more debt is optimal from firms' perspective (see Klasa et al., 2018).

As further support for the above interpretation, we rule out any residual concern that founder CEO firms are not comparable to professional CEO firms. Specifically, we study plausibly *exogenous* founder CEO turnovers shortly *after* the adoption of IDD, representing an *exogenous* transition in managerial style (from a founder CEO to a professional CEO) following an *exogenous* reduction in CEO mobility.[9] Employing a Difference-in-Differences Matching Estimator (DiD ME) methodology (Abadie and Imbens 2006, 2011), we show that when firms exogenously transition from founder to professional CEOs (treated firms), they exhibit a significant decline in *Leverage* relative to a carefully matched set of founder CEO firms (control firms) that undergo no CEO transition. More importantly, this decline in average *Leverage* is only observed among treated firms in IDD adopting states. In a falsification test, we do not find

[9] This approach is methodologically similar to that utilized in Islam and Zein (2020).

any such differential response by treated firms in states that *do not* adopt IDD. These sharply contrasting findings suggest that exacerbated career concerns of professional CEOs after IDD passage primarily drive the observed effect of lower debt utilization.

We also conduct various auxiliary tests to rule out plausible alternative scenarios about our evidence on firms' *Leverage* decisions. These tests include exploration of whether the existence of influential debtholders or increases in the cost of debt after IDD adoption can explain our baseline evidence. None of these alternative scenarios are able to explain our findings. In a further cross-sectional test, we show that lower utilization of *Leverage* is discernible *only* among a subset of firms led by professional CEOs with greater career concerns, either because the CEO is a Specialist (as opposed to Generalist) or is relatively far from retirement age. Moreover, we find that such debt-aversion is more discernible in firms where managers are entrenched, or managers are less exposed to blockholder monitoring.

Next, we explore corporate acquisition decisions as a laboratory to gain further insights into the underlying sources of these agency conflicts. Investigating acquisition activity in the post-IDD period is critical for two main reasons. First, corporate acquisitions reflect managerial preferences, and the corporate finance literature has studied acquisition activity in the context of risk-related agency conflicts (Amihud and Lev 1981). Thus, we explore acquisition activity after IDD adoption to disentangle the importance of managers' "playing it safe" preference from that for "a quiet life" preference that posits that managers seek to minimize effort. We find that professional CEO firms do not significantly reduce acquisition offers in the post-IDD period compared to founder CEO firms. Since acquisition activity requires significant managerial time and effort, our evidence is inconsistent with managers seeking to expend less effort to enjoy "a quiet life".

Second, the extant literature suggests that risk-related agency conflicts generally lead to more diversifying acquisitions that destroy shareholders' value. The choice of acquisition types can be motivated by both manager risk-aversion and career concerns, which are the two primary channels of risk-related agency conflicts (Gormley and Matsa 2016). We investigate if there are plausible changes in a firm's "acquisition style" in the post-IDD periods to understand better

which channel is leading to a shareholder-manager conflict of interest. In our quasi-experimental setting, following IDD adoption, a diversifying acquisition would mechanically increase the scope of an executive's mobility restrictions in a post-merger firm by expanding the industries where IDD would apply. Specifically, the strategy of acquiring disproportionately more firms from the same industry (focused or non-diversifying acquisitions) minimizes the span of industries over which IDD's post-employment restrictions would apply. Thus, the exacerbated career concerns hypothesis predicts more within industry acquisition activity by professional CEO firms in the post-IDD period.

Conversely, firms derive strategic benefits from within-industry acquisitions (focused or non-diversifying), especially when competitive threats are intense. Such acquisitions are arguably less appealing when within-industry competitive threats decline after IDD adoption (due to greater trade secrets protection). Indeed, conditional on having an acquisition, we find that IDD adoption leads to fewer within-industry acquisitions (trade secrets protection channel) by founder CEO firms. However, for professional CEO firms, where CEOs experience exacerbated career concerns, IDD adoption leads to more acquisitions within the main industry of operation relative to their founder CEO counterparts (exacerbated career concern channel). The effect of the exacerbated career concerns channel, on average, offsets the effect of trade secrets protection channel and leads to a net effect of IDD adoption on within industry acquisitions that is statistically and economically indistinguishable from zero for professional CEO firms. Overall, our evidence suggests CEO career concerns (not their risk-aversion *per se*) are the main drivers of risk-related agency conflicts in acquisition decisions.

We also investigate the market reactions to acquisition decisions in the post-IDD period to illustrate the value implications of risk-related agency conflicts. In the post-IDD period, the stock market views the acquisition announcements by professional CEO firms negatively (negative announcement cumulative abnormal return (CAR)). Such negative market reactions to acquisitions provide direct evidence that after stricter enforceability of post-employment restrictions, professional CEO firms sub-optimally select acquisition targets from a shareholder perspective. Moreover, the negative market reactions after IDD adoption to acquisitions by

professional CEO firms are observed only among the set of acquisitions where target firms operate in the same industry as acquirer firms. Our findings again point to the notion that aggravated managerial career concerns trigger a suboptimal acquisition strategy in professional CEO firms and that the stock market participants are aware of these potentially serious conflicts in the risk preferences among shareholders and managers.

In a final set of tests, we analyze the managerial responses from the other side of the corporate control market: the likelihood of being an acquisition target. Jenter and Lewellen (2015) argue that target CEOs play a key role in their firm's response to and negotiations with potential bidders and that their career concerns can be at odds with shareholder wealth maximization and, thus, can adversely affect the outcome of takeover bids. We find that the probability of being taken over declines for firms where increased mobility restrictions after IDD adoption exacerbate managerial career concerns. Since a target CEO's career can be at risk after a takeover (Agrawal and Walkling 1994), our evidence suggests that professional CEOs exert greater effort to avoid takeover attempts by a potential bidder in the post-IDD period. More importantly, after IDD adoption, shareholders of professional CEO led target firms experience positive CARs around the announcements of ultimately successful takeover bids. This post-IDD positive market reaction to news of a professional CEO firm's takeover provides *direct* evidence that friction in the labor market that exacerbates risk-related agency conflicts can destroy shareholder value by discouraging profitable M&A transactions.

As further evidence on the effects of managerial risk aversion, we show that after IDD adoption, professional CEO firms exhibit an increased reluctance to invest in high-risk strategic projects, e.g., research and development expenses (*R&D*) and firm-specific intangible investments, e.g., advertising expenditure, compared to founder CEO firms. But, after IDD adoption, we do not detect any such differential response by professional CEO firms versus founder CEO firms regarding arguably less risky investments (capital expenditures). So, after IDD adoption, professional CEO firms exhibit greater risk aversion towards more risky investment opportunities than do founder CEO firms, but the difference is insignificant for less risky investment opportunities. Thus, our evidence further supports the conclusion that the

managerial effort aversion hypothesis, which is independent of an investment's riskiness, appears unable to explain our findings.

We conduct various additional tests to exclude alternative interpretations of our baseline evidence. First, utilizing the reversal of several state IDD adoptions that should also reverse managerial risk incentives, we find additional evidence supporting the exacerbated career concerns hypothesis. Second, excluding firms managed by non-founder family members or firms headquartered in California or that experience CEO turnovers around IDD adoption dates does not alter our findings. Additionally, controlling for other state-level legal statutes aimed at protecting trade secrets, e.g., Uniform Trade Secrets Act (UTSA) and non-compete clauses (NCC), leaves our estimates virtually unaltered. Finally, turning to the pre-treatment period, we do not observe any divergent trends with respect to changes in *Leverage* or acquisition activity between our two subsamples of firms. Overall, we show that strict enforceability of post-employment restrictions on senior managers trades off the benefits of greater trade secrets protection against the increased costs of risk-related agency conflicts at firms where managers rely more heavily on outside employment options.

Our study makes several contributions to the literature. First, we highlight the importance of an accommodating, competitive, and flexible labor market that facilitates the assortative matching of employees across firms of varying quality and size (Arrow 1962, Becker 1962, Gabaix and Landier 2008) to ensure adequate risk-taking by corporate managers (Hirshleifer and Thakor 1992). Prior research suggests that managers' exposure to career risk may help reduce their extraction of private benefits and shirking as well as provide incentives for them to work harder and that this sends credible signals of their efficiency and productivity to the managerial labor market (Grossman and Hart 1982). However, when restrictions on managerial mobility prevent managers from selling their skills and expertise to the highest bidder, one natural response is increased managerial risk-aversion or policy conservatism. These issues are also important to policymakers who are concerned with the adverse effects of restrictions on employee mobility (Office of Economic Policy, U.S. Dept. of Treasury 2016, White House 2016). Since a majority of large publicly listed U.S. firms are led by professional CEOs, who presumably have a higher

degree of reliance on outside employment opportunities, our findings suggest that employer-friendly (as opposed to employee-friendly) state-level policies can dampen manager risk-taking attitudes and thus, dampen aggregate risk-taking in the broader economy.

Our study adds to the growing literature that illustrates the significance of risk-related agency conflicts. However, the literature, so far, examines this problem in settings where both firms (shareholders) and their managers experience a *unidirectional* increase in risk (Gormley and Matsa 2011). An unexplored question in the literature is whether risk-related agency conflicts are attenuated when a firm's *ex-ante* risk does not increase. We investigate this aspect of the literature by examining a fundamentally different setting where firms' shareholders and managers face directionally opposite changes in risk exposure, leading to intensified conflicts of interest due to their differing risk-preferences. Accounting for both the unintended effect (aggravated risk-related conflicts) and the intended effect (trade secrets protection) associated with the quasi-natural experiments studied here, we show risk-related agency conflicts are not just pervasive, but they can affect a firm's critical strategic decisions systematically, even when the firm's *ex-ante* risk measures do not increase. This study is also related to the literature that investigates how a CEO's characteristics and experience influence a firm's investment and financing policies (see Berk et al., 2010, Malmendier et al., 2011, Cain and McKeon 2016, Bernile et al., 2017).

Finally, our study demonstrates the importance of managerial career concerns, which is the primary driver of risk-related agency conflicts between managers and shareholders (Hölmstrom and Ricart I Costa 1986). Empirically disentangling managerial career concerns from managers' risk-aversion is notoriously difficult. The extant literature focuses on risk-related agency conflicts arising from both these channels (Gormley and Matsa 2016). Since, in our quasi-experimental setup, a firm's cashflows exogenously become safer (due to greater trade secrets protection afforded by IDD adoption), while managerial career concerns are exacerbated, general risk aversion would appear unlikely to motivate managers to reduce firm-risk taking. Thus, while Gormley and Matsa (2016) shed light on both risk aversion and career concerns as underlying sources of risk-related agency conflict, they do not take a position about the relative strength of these two sources of agency conflicts. Our quasi-experimental setup allows us to identify that

managerial career concerns are the dominant source of risk-related agency conflicts. Thus, we contribute to the risk-related agency conflicts literature by further disentangling the influences of the conventional channels explaining risk-based shareholder-manager conflicts of interest.

In a related study, Klasa et al. (2018) utilize the IDD shock to study a firm's capital structure decision. However, Klasa et al. (2018) assume a fundamental alignment of interests between shareholders and managers. In contrast, we focus on and provide an in-depth analysis of the underlying shareholder-managers conflict in the context of both capital structure and acquisition decisions (besides other important corporate decisions), which allows us to advance the literature further. Specifically, we distinguish firms based on underlying CEO-shareholder agency conflicts and highlight the subsample of firms where the beneficial aspects of IDD appear to be negated if not dominated by the exacerbated career concerns of managers. Utilizing the same empirical setup as Klasa et al. (2018), we provide novel evidence that the aggravated managerial career concerns due to reduced job mobility (unintended effect of IDD) on, average, negate the firm's benefits from enhanced trade secrets protection (intended effect of IDD).

2. Legal Background, Identification Strategy and Empirical Design

2.1 Legal Background

U.S. firms widely use non-compete clauses (NCC). Bishara et al. (2015) document that 79% of CEO employment contracts at S&P1500 firms over the 1993-2010 period include NCCs. 70% of those CEO contracts impose direct post-employment restrictions. IDD imposes a strict constraint on employee mobility in the presence of a valid employee-signed employment contract. Notably, IDD is applicable even in the absence of an NCC, and IDD increases its enforceability when an employee has signed an NCC. If the employer can prove legitimate business interest for enjoining the employee, an NCC imposes mobility restrictions for a limited duration (most commonly, for two years) and over a limited geographic scope (e.g., within the state). Courts also appear to take into consideration the financial hardship to the employee when enforcing an NCC. Without a valid concern, an NCC is not enforceable. Furthermore, the employee must receive some benefit in exchange for this restriction (see Rowe 2005, Garmaise 2011, Wiesner 2012). Conversely, an

IDD mobility constraint typically favors employers (Lowry 1988). Anecdotal evidence suggests that former employers in IDD adopting states can enjoin a former manager, even after employment contract termination or if the manager wants to join a firm in a non-IDD state.

Courts can enjoin an employee under an NDA when there is clear evidence of misappropriation, and the employee has already caused irreparable harm to the former employer. In contrast, firms are not required to establish actual wrongdoing by an employee or disclose the exact details of the underlying trade secrets in lawsuits involving the application of IDD. A plaintiff can sue a former employee based on the mere threat that misappropriation and irreparable harm could occur (often termed "Threatened Misappropriation"). Moreover, IDD does not entail any geographic restrictions. Matheson (1998) highlights how the adoption of IDD causes *irreparable* damage to employees, stating that "*The adoption of IDD may leave the employee without recourse, except to find work in a job or industry unrelated to the former employer's business. Consequently, the worker's skills and marketability are devalued*".

2.2 Exogeneity of IDD

Judicial decisions in precedent-setting cases involving IDD adoption can significantly extend employer rights in protecting trade secrets (Harris 2000, Godfrey 2004). We use IDD adoption as a quasi-natural experiment since outcomes of precedent-setting cases rely on judges who are relatively immune to political pressure and are expected to act independently. Moreover, in contrast to other state or federal laws (e.g., Business Combination Laws or Sarbanes-Oxley Acts), there is no evidence of lobbying or anticipation by the affected parties around IDD adoption dates by individual states. Stock prices also do not react differently before the adoption of IDD, suggesting that IDD is unanticipated by the market (see Klasa et al., 2018).

Finally, if a shock is "as good as random", then treated and control groups should have balanced covariates with a good overlap in the pre-shock period. One credible way of attaining reasonable balance in the covariates of treated and control groups is to use multiple shocks that create multiple control groups (Atanasov and Black 2016, pp: 241). Similarly, the reversal of the original shock with the expectation of an observed sign reversal improves the credibility of shock-based inference and rules out many plausible alternative explanations (see Atanasov and Black

2016). Thus, IDD adoptions offer a sharper shock-based experimental design due to both the staggered IDD adoption across states and years, and in few cases, recisions of the original shocks.[10] The study includes 21 IDD adopting and 3 IDD recision states (see Graph A1).

3. Sample and Data

The primary dataset includes ExecuComp (S&P1500) firms after excluding regulated utilities and financial sector firms and firms headquartered outside the United States. We collect financial data from Compustat and executive-level data from ExecuComp. The sample period starts in 1992, which is the first year of ExecuComp data coverage. Following Klasa et al. (2018), we extend our analysis through 2011, which is five years after Kansas, the last state in our sample adopted IDD in 2006.

3.1 Variable Construction

We identify CEOs from Execucomp and then track CEOs' biographical information, firms' origins, founding history, and identify founders from the Funding Universe database. Funding Universe explicitly identifies key members of firms' founding management teams, and we classify all those executives as founders. When information on firms' founders is unavailable from the Funding Universe, we collect biographies of CEOs in our sample from other relevant sources including Bloomberg's Business Week website, LinkedIn pages, Notable Names Data Base (NNDB), company websites, and internet resources including Forbes, Wikipedia, and Crunchbase.com among others. We construct an indicator variable "Professional CEOs" that

[10] Heath, Ringgenberg, Samadi, and Werner (2020) raise a potential concern in reusing natural experiments. However, in our context, the usage of IDD does not naturally lead to a "reuse" of natural experiment or a multiple testing problem since we utilize IDD to explore a new exacerbated career concerns hypothesis, initially for the same firm leverage decision that Klasa et al. (2018) explore, although their trade secret protection hypothesis predicts a leverage change in the opposite direction and our hypothesis primarily applies to subsample of professional CEO firms. Importantly, in the most of our tests, the t-statistics we observe are above the threshold needed for significance that Heath et al. (2020) suggest as a rule of thumb for re-using natural experiments. Of course, as note earlier, our use of the IDD natural experiment is not equivalent to the multiple testing problem. Moreover, while other studies have used this IDD shock to study a variety of other hypotheses, this does not fit the description of the multiple testing problem (see Dmitrienko, Tamhane, and Bretz 2010 for an extensive review of this issue for pharmacological statistical analysis and Romano, Shaikh and Wolf 2008 for a related discussion based on a formalized data snooping model used in economics).

equals one if the CEO is neither one of the firm's founders, nor the firm's CEO in its year of incorporation and zero otherwise.

Once a precedent-setting ruling becomes case law, the state courts subsequently base their rulings on the validity of IDD. Thus, these dates identify the first year of the state courts' IDD adoption. "$\text{IDD}_{\text{Adoption}}$" is an indicator variable that equals one if the firm's headquarter state recognizes IDD by year t and is zero otherwise. "$\text{IDD}_{\text{Rescission}}$" is an indicator that equals one if the state court in the firm's headquarter state reverses its prior recognition of IDD by year t and is zero otherwise. In our empirical analysis, we control for *Firm Size*, *Market to Book*, *Profitability,* and *Asset Tangibility*, and an indicator for firms that pay dividends. We also control for relevant CEO characteristics, e.g., *Overconfidence* and *Tenure*, since these CEO features influence managers' incentives and firms' corporate policies. Since macroeconomic factors can affect managerial decisions and stock market performance, we include state *GDP Growth Rate* as a measure of general economic conditions. We also include the size of the state's Congressional delegation to the size of the U.S. House of Representatives as a measure of the state's political influence. Other variables are defined in Table A1.

3.2 Descriptive Statistics

Panels A and B of Table 1 presents the distributions of professional and founder CEOs by individual industry sectors. The sizable proportion of founder CEO firms in both IDD adopting (16.84%) and non-adopting states (19.53%) allows us to employ headquarter state-year fixed effects while examining the heterogeneous responses of founders and professional CEOs to IDD adoption (Panel B). Table 1 Panel C presents the distributional properties (mean, median, 75^{th} percentile, and standard deviation) of the variables used in the baseline analysis. Of all the firm-year observations in our sample, 82% are led by professional CEOs.

3.3 Validity Test

3.3.1 Strength of IDD

Managers/CEOs typically gain a broad knowledge of employer trade secrets. Thus, CEOs often face strict enforcement of post-employment restrictions (Rowe 2005). The prior literature also

provides evidence that IDD's court recognition reduces managers' mobility relative to individuals in other professions (Marx, Singh, and Fleming 2015, Png and Samila 2015, Klasa et al., 2018).[11] In this study, we first test whether IDD adoption affects CEO mobility (see Table 2 column 1). Contrary to the popular notion that CEOs are generally mobile, we find that CEO mobility, on average, declines sharply in states that adopt IDD compared to non-IDD states (by around 24%, mean 0.10). We find consistent evidence, even after controlling for NCC (columns 2 and 4).

Nevertheless, career concerns are not unequivocally strong for all executives (see Gibbons and Murphy 1992). In an ideal setup, one would like to have a measure of career concerns that would produce an apparent dichotomy with either the presence or absence of career concerns affecting CEOs. In reality, finding such a measure can be challenging. This study uses the managerial labor market as a laboratory where strict enforceability of post-employment restrictions through IDD adoption intensifies managerial career concerns (Ali, Li, and Zhang 2019). Crucially, we argue that IDD would aggravate career concerns disproportionately more in professional CEO firms since founder CEOs are less likely to consider employment at a direct rival seriously. We find 188 instances where a professional CEO moves to another firm in our sample. In contrast, we find only 2 such instances involving founder CEOs. In these 2 instances, the founder CEO becomes an interim CEO of another firm for a short period of time. We also collect biographical information on defendants of the precedent-setting legal cases documented by Klasa et al. (2018) and find no cases where a defendant employee is a firm's founder CEO. Moreover, we provide direct evidence that the reduction in CEO mobility due to IDD adoption is only discernible in the professional CEO subsample (see Table 2 columns 3-5).

Second, we also test the "career concerns hypothesis" of Aghion et al. (2013) to provide further evidence that professional CEOs have stronger career concerns. Aghion et al. (2013) argue that institutional owners insulate managers from being fired in the face of failed innovation. Thus, institutional owners can reduce a manager's career concerns and thereby, increase firm innovation. Since they do not explicitly consider whether CEOs are professionals or founders, we hand-collect data to identify founder CEOs in their sample. We find that out of 803 firms in

[11] Agarwal, Lin, Zhang, and Zhang (2020) find a negative and significant effect of IDD adoption on loan officer interfirm mobility.

their sample, 151 are founder CEO firms. In Table A2 Panel A, we first replicate Table 1 of Aghion et al. (2013), where we add a control for a CEO's founder status. Then, we reproduce the results for the founder (professional) CEO sub-sample. We find that the results hold for the professional CEO subsample only. This result provides suggestive evidence that institutional owners can reduce the career concerns of professional CEOs. Since such an effect of institutional shareholdings is absent for the founder CEO firm sample, this result constitutes a piece of indirect evidence (an *external validity test*) that the "career concerns hypothesis" is less likely to be operative, if relevant at all for founder CEOs.

Lastly, the literature suggests that the risk of being fired exacerbates CEO career concerns (Kaplan and Minton 2006). Using data from Eisfeldt and Kuhnen (2013) during 1992-2005, we find 1,489 instances where a professional CEO replaces a founder CEO or another professional CEO in our sample. Column 4 in Table A2 panel B indicates that professional CEOs have a higher frequency of experiencing forced turnover (see the forced turnover rows) relative to that of founder CEOs (statistically significantly different).[12]

3.3.2 Adoption of IDD and Founder/Professional CEO Status

Since IDD adoption affects outside employment opportunities, one may argue that IDD, through its effects on employment opportunities, can alter the available pool of managers and, thus, can affect founder/professional CEO status (Lee, Thorburn, and Xu 2020). However, this doctrine does preclude a former employee from starting up the same line of business (Rowe 2005). Moreover, the sample under investigation includes large established firms in the S&P1500. Founder CEO status of these large firms is unlikely to be measurably sensitive to a resulting change in managers' employment opportunities over our sample period. Nevertheless, to address any residual concern, we assess whether the treatment (IDD) significantly affects the professional/founder CEO status of our sample firms using an OLS regression framework. We find that the effect of IDD adoption on the frequency of founder/professional CEO status is

[12] "*If you have control of the company - like I do at Facebook and an increasing number of founders do -- then it is very difficult for investors to fire you. This means you don't need to worry about losing your job over a couple of bad quarters or controversial short-term decisions, and that makes it easier for you to make the decisions you think are correct as well.*"- Mark Zuckerberg, Founder CEO, Facebook.

statistically indistinguishable from zero (untabulated). In Graph A2, we plot the estimates from a fully-saturated model for the 5 years before to the 5 years after IDD adoption with 95% confidence intervals, where t=0 is the reference shock period. The graph shows that IDD adoption does not affect the proportion of founder/professional CEOs surrounding IDD adoptions by state courts, consistent with our experiment's underlying assumptions.

3.4 Empirical Design

To test the potential trade-off of "trade secrets protection" and "exacerbated career concerns" hypotheses, we estimate the following model:

$$Y_{i,j,s,t+1} = \alpha_i + \alpha_{j,t} + \alpha_{s,t} + \beta_1 \, IDD\ Adoption_{i,t} + \beta_2 \, Professional\ CEOs_{i,t} + \beta_3 \, Professional\ CEOs_{i,t} x\ IDD\ Adoption_{i,t} + \delta' Controls_{i,t} + \epsilon_{i,t} \quad (1)$$

where Y is a dependent variable indicating a specific corporate policy, i indexes firms; j indexes industries; s indexes a firm's headquarter-state; t indexes time; and α_i, $\alpha_{j,t}$, and $\alpha_{s,t}$ are respectively the firm, industry-year, and state-year fixed effects. Here, firm-fixed effects control for time-invariant differences between firms in treated and control groups. Year fixed effects capture time-related factors, e.g., macroeconomic conditions, that can affect corporate policies. We include industry-year fixed effects to mitigate identification concerns caused by differential time trends across industries. Finally, for robustness, we introduce state-year fixed effects to moderate any potential sources of bias related to the changing local business environment. Of course, headquarter state-year fixed effects will absorb the independent impact of IDD adoption. However, since we are mainly interested in the interaction of IDD with the professional CEOs, the interaction term with state-year fixed effects captures the marginal effect of IDD on professional CEO firms. We also correct the standard errors for heteroskedasticity and cluster at the firm's headquarter state-level. We winsorize observations at the 1 percent level to minimize the effect of outliers.

This specification in equation (1) is equivalent to a triple-differences approach in which the coefficient β_1 captures the effect of IDD adoption in firms that are *not* led by professional CEOs. β_2 captures the association between professional CEOs and corporate policies. However, β_2 cannot be interpreted causally since the 'professional CEO' indicator is likely to suffer from

endogenous matching (self-selection) problem. The coefficient on the interaction term β_3 captures the *additional* impact of IDD adoption in professional CEO firms relative to founder CEO firms. To deal with plausibly endogenous controls, we estimate the baseline specification both with and without control variables.

4. Main Results

4.1 Cashflow Volatility

We first investigate whether strict enforceability of post-employment restrictions following IDD adoption influences a firm's *Cashflow Volatility*. Jensen and Meckling (1976) argue that managers have incentives to avoid taking actions that raise a firm's risk or its probability of bankruptcy, even when doing so would be in shareholders' best interests. In particular, professional CEOs experience heightened career concerns after IDD adoption, and their personal risk preferences are likely to affect a firm's risk-taking decisions. Thus, we expect a decline in firm risk-taking post-IDD due to the exacerbated career concerns channel.

In columns 1 -3 of Table A3, we exclude time-varying firm-level controls to avoid the "bad controls" problem. However, we do incorporate a variety of fixed effects. We find that IDD adoption leads to an increase in *Cashflow Volatility* for founder CEO firms (due trade secrets protection effect). Exploring the exacerbated career concerns hypothesis, we find that for professional CEO firms, IDD adoption significantly reduces *Cashflow Volatility* by 0.3 percentage points compared to founder CEO peers (column 1). Thus, this negative effect of IDD adoption on *Cashflow Volatility* offsets almost two-thirds of positive effects from the trade secrets protection channel. The net effect of IDD adoption on *Cashflow Volatility* of professional CEO firms is statistically indistinguishable from zero. We find similar evidence when we use alternative fixed effects (columns 2 and 3) and include control variables (columns 4-6). Overall, our results for this *Cashflow Volatility* measure provides preliminary evidence that professional CEO firms, where managerial career concerns intensify after IDD adoption, adopt a *play it safe* approach and do not raise firm risk significantly. However, given that it may take time for CEOs to change a firm's business risk, these results, which use a backward-looking firm risk measure, may not

fully capture a CEO risk-preferences or long-term influence. Thus, next, we provide an in-depth analysis of major corporate policies where managers have significant influence, e.g., financing decisions and investment decisions (Graham et al., 2013).

4.2 Leverage

One common approach to measuring CEO risk-taking incentives is to examine a firm's *Leverage* decisions. Thus, we study how *Leverage* decisions change around IDD adoption periods, which is plotted in Figure 1 (Graph 1). To obtain a more precise pattern of how *Leverage* changes for our two types of firms in response to IDD adoption, we restrict the plots to states that adopt IDD during our sample period. We compare *Leverage* changes with reference to the *Leverage* level in the year of IDD adoption (t=0) for subsamples of founder CEO and professional CEO firms. For example, t=-2 shows the difference between *Leverage* in event years t=-2 and t=0. Thus, the *y*-axis values can be interpreted as the growth rates in *Leverage* relative to the IDD adoption year. Figure 1 (Graph 1) highlights the difference in the mean changes in *Leverage* between these two types of firms (plotted in Figure 1) with the 5% confidence interval around these mean changes.[13]

This graph serves two purposes. First and more importantly, it shows that although leverage levels can differ, there is no divergence in the differences (or changes) in *Leverage* of these two types of firms before IDD adoption relative to the IDD adoption year (t=0). This pattern visually supports the parallel trends assumption, which is a key identifying assumption in our difference-in-difference (DiD) framework. Second, a clear divergence is apparent in the change in *Leverage* between these firm types *after* IDD adoption. More precisely, compared to professional CEO firms, founder CEO firms increase *Leverage* significantly after IDD adoption. Hence, the plot visually confirms the differential responses of professional CEO firms, compared to founder CEO firms, just *after* IDD adoption that arguably reflects professional managers' heightened career concerns.

We also formally test for parallel trends in a regression framework (Table A4). The main variables of interest in this test are timing indicators leading up to IDD adoption and following

[13] This approach is methodologically similar to Khwaja and Mian (2008).

it and their respective interaction terms with the firm type indicators. For example, Professional CEOs x $IDD_{Adoption}^{-2}$ is an indicator variable that equals one if a professional CEO firm is headquartered in a state that adopts IDD in two years. Similar timing indicators and their respective interaction terms are analogously defined. Supporting the key economic mechanism for explaining observed heterogeneities in managerial responses predicted by the exacerbated career concerns hypothesis, we find in pre-IDD periods that the timing indicators and their respective interactions terms are statistically indistinguishable from zero. For example, in column 1, the coefficient on Professional CEOs x $IDD_{Adoption}^{-1}$ is -0.008 (t-stat=-0.406). However, post-IDD the coefficient on Professional CEOs x $IDD_{Adoption}^{+2}$ is -0.060 (t-stat=-2.895). When we control for the baseline firm-, CEO- and state-level characteristics, these patterns are virtually unaffected.

4.2.1 Baseline Results

Next, we investigate the effect of the IDD adoption shock on the *Leverage* decisions of the two types of firms using the regression framework shown in Table 3. Column 1 provides support for the "trade secrets protection channel". More specifically, when state courts adopt IDD, firms in the affected states, on average, increase *Leverage* compared to unaffected firms in other states that did not recognize IDD in the same calendar year. However, since the main objective of the study is to disentangle the relative importance of the trade secrets protection channel and the exacerbated career concerns channel, we focus on the interaction terms "IDD x Professional CEO".

In columns 1 through 3, we do not include any time-varying firm-level controls. In column 1, we use firm and year fixed effects. In column 2, we employ firm and industry x year fixed effects. Column 3 includes headquarter state x year fixed effects in addition to the same set of fixed effects used in column 2. No matter what level of fixed effects are imposed, we find that the interaction term "IDD x Professional CEO" loads negatively and is statistically significant. The career concerns channel (column 1) suggests that relative to founder CEO firms, professional CEO firms decrease *Leverage* by 16.9% (relative to a mean *Leverage* ratio of 0.213). Since the IDD coefficient in column 1 is 0.037, the positive effect of the trade secrets protection channel

is, on average, fully offset by the exacerbated career concerns channel. The net impact of IDD adoption on the *Leverage* decision of professional CEO firms, captured by the sum of the *IDD* and *IDD x Professional CEO* coefficients, is insignificantly different from zero (t-statistic 0.743). We observe very similar results in columns 2 and 3.

To assess the robustness of our baseline findings, we add control variables for other firm and CEO characteristics and some specific state-level variables in columns 4 through 9. In columns 7 through 9, we add interactions of all other control variables with the IDD indicator variable. In untabulated tests, we also control for lagged values of *Leverage* since this measure can be sticky, and current *Leverage* may depend on prior *Leverage* levels. Our results remain unaltered in all these additional tests. Our empirical results support the view that professional managers are reluctant to increase firm *Leverage* when they face aggravated career concerns since increases in *Leverage* raise the likelihood of creditor intervention and manager termination (Grossman and Hart 1982, DeMarzo and Fishman 2007).[14]

4.2.2 Issuance of New Debt: Channel Test

If a firm's *Leverage* ratio is changing because CEOs are actively pursuing different firm risk-taking levels, then we should observe this in a firm's current financing decisions. Specifically, we explore whether managers' differential risk-preferences after IDD adoption lead professional CEO firms to make more conservative financing decisions than founder CEO firms. For this purpose, we examine the *Net Debt Issuance* of firms after IDD adoption. We first report our results without using control variables (Table 4). Next, following Malmendier et al. (2011) and Bernile et al. (2017), we use the control variables from Frank and Goyal (2003): specifically, changes in profitability, tangible asset intensity, market to book ratio, the logarithm of sales as well as lagged *Leverage*.

We find that debt-aversion by professional CEO firms after IDD adoption is reflected in a reluctance to issue *net* debt. In contrast, IDD adoption has a significant positive influence on *Net Debt Issuance* in founder CEO firms (our benchmark firms). Consistent with the dynamic

[14] Our baseline results are similar if we utilize alternative definitions of *Leverage*, e.g., *Market Leverage*, *Net Book Leverage*, and *Net* Market Leverage (see Table A5 Columns 1-6) or cluster standard errors at firm-level (see Table A5 Columns 7-10).

rebalancing of capital structure, we also find that *Net Equity Issuance* follows the opposite pattern to *Net Debt Issuance* (Table 4). Overall, the tests in this section suggest that after IDD adoption, benchmark firms have incentives to increase new debt issuance (trade secrets protection channel). However, the exacerbated career concerns of professional CEOs negate their incentives to raise new debt. Thus, by exploiting frictions in the managerial labor market, our findings support the insights of Berk et al. (2010), who suggest that a perceived loss of managerial human capital due to corporate bankruptcy can limit a firm's use of debt.

4.2.3 Concern for Non-Comparability: Identification Using Exogenous CEO Turnovers

Since we explore the heterogeneity in managers' relative dependence on outside career options, one could argue that firm-fixed effects may not fully capture differences between professional CEO firms and their founder CEO counterparts. To address this concern, we design an experiment that includes only a subsample of founder CEO firms, where some of these firms experience *exogenous* CEO turnovers in the post-IDD period. We define an exogenous CEO turnover as a non-forced departure announced at least six months before the anticipated succession date or a departure caused by a well-specified health problem or sudden death following Eisfeldt and Kuhnen (2013). This framework allows us to compare almost identical founder CEO firms until the turnover date.

In this setup, all founder CEO firms in a particular year are part of a *cohort* if these firms are headquartered in states that adopted IDD by this calendar year, ensuring that the trade secrets protection hypothesis is "switched on" for firms in this sample. Within a cohort, *treated* firms experience an exogenous CEO turnover where a professional CEO replaces a founder CEO, constituting a change in "management style".[15] The assignment of firms to the treatment group is *as good as random* since the decision to replace a founder CEO by professional CEO is, by construction, not a choice and thus, is not affected by the "selected style hypothesis" discussed in Fee, Hadlock, and Pierce (2013). The experiment excludes states that adopt IDD before the start of our sample period (1992). *Untreated* firms are those remaining founder CEO firms that

[15] This test does not include any firms where co-founders replace founders. It is unlikely that a firm can replace a founder CEO by another founder CEO following the exogenous CEO turnover, given the available number of active founders is few to non-existent.

do not experience any CEO turnover (thus, holding "management style" constant) in the same *cohort* year.[16] The changes in the applicability of the hypotheses are depicted in the figure below.

Firm Assignment	Pre-CEO Turnover	Post-CEO Turnover	Post-Pre Turnover
Treated Firms	(1) Trade secrets protection (YES) + Exacerbated career concerns (NO)	(2) Trade secrets protection (YES) + Exacerbated career concerns (YES)	(2)-(1): Exacerbated career concerns
Control Firms	(3) Trade secrets protection (YES) + Exacerbated career concerns (NO)	(4) Trade secrets protection (YES) + Exacerbated career concerns (NO)	(4)-(3): No Change
Difference	(1)-(3): No Difference	(2)-(4): Exacerbated career concerns	Exacerbated career concerns (DiD)

Figure 1: Career Concerns and Trade Secrets Protection Channel for Treated and Control Firms

We use the Abadie and Imbens (2006), (2011) estimator to find the nearest matches which minimize the distance between the vectors of quantitative variables. We conduct a "design-based" test using a Difference in Differences Matching Estimator (DiDME) that incorporates both observable firm characteristics and accounts for unobservable, idiosyncratic time-invariant firm fixed effects. We compare *changes* in *Leverage* across groups, rather than *Leverage* levels per se since *Leverage* levels can differ across groups in the pre-shock period (which is exogenous to CEO turnover). We match treated firms with counterfactual control firms from a pool of untreated firms based on exact matching of cohort variables, i.e. industry, and firm size (and by construction the same calendar year). We use the Fama-French 10 industry classification to ensure that we have a reasonable number of matched firms since this is by its nature a small sample study.[17] This matching without replacement process provides us with 29 matched pairs of treated and control firms.

Table A6 panel A shows that in the pre-treatment period (defined as *t-1*), treated and untreated firms exhibit no statistically significant differences in median values across the reported observable dimensions, except for firm size. However, the Kolmogorov-Smirnov tests in panel C (*Treated v. Non-Treated* and *Treated v. Control*), suggest that in the pre-treatment period, both *Treated* v. *Non-Treated* firms and *Treated* v. *Control* firms have reasonably good distributional

[16] For example, in the year 1998, a founder CEO firm where a professional CEO exogenously replaces the founder CEO in the state of Arkansas (which adopted the IDD in the year 1997) would be classified as a treated firm. All other remaining founder CEO firms headquartered in states that adopt IDD by year 1998, but do not experience a founder CEO turnover in 1998, are in the untreated group of the 1998 cohort.

[17] Using a more narrowly defined industry classification would seriously reduce the number of matches. However, results are robust to using other conventional industry classification such as two-digit SIC.

overlap, including on firm size. Panel B shows that in the pre-treatment period after matching, the treated and control firms do not have any statistically significant differences in median values across these observable dimensions.

Table 5 panel A shows the average *Leverage* of treated firms declines by 4% (-0.04) after a founder CEO turnover, suggesting that the "exacerbated career concerns channel" dominates the trade secrets protection channel (column post-pre). For non-treated founder CEO firms, there is an increase of 0.8% in the average *Leverage* level. This increase appears to operate through the trade secrets protection channel activated after IDD adoption. Overall, panel A shows a net decline of 19.59% from the pre-CEO turnover average *Leverage* of the treated firms.[18] There is also a pre-CEO turnover difference in *Leverage* levels between the treated and control firms of 0.065 with t-statistics=1.72 (column 1), and this is most likely due to differences in firm size across the two samples.

Table 5 panel B presents the results of estimating the Abadie-Imbens DiDME, where we compare firms in the treatment group with their closest matched counterfactuals. Specifically, the average *Leverage* ratio declines by 6.5% more for treated firms relative to otherwise similar founder CEO firms not experiencing a CEO turnover, but also incorporated in states enforcing IDD. The average difference in the treatment effect on the treated sample (ATT) (see the last cell in the last column of Panel B) indicates that the average *Leverage* ratio of the treated firms after an exogenous CEO turnover declines by 6.2% (statistically significant at the 1% level).[19] We find a similar effect when we match firms with replacement. Given the *similarity* of the treated and control firms, the panel B results indicate a causal effect from the exacerbated career concerns channel on professional CEO firms' post-IDD *Leverage* decisions.

In a falsification test, we re-run the exogenous CEO turnover experiment for firms in states that do *not* adopt IDD (Table 5 panel C). Hence, the exacerbated career concerns channel and trade secrets protection channel are both "switched off". In this falsification test, we find no statistically significant difference in the leverage decisions of the treated and control firms in the post-CEO turnover period, despite changes in management style following exogenous CEO

[18] (-0.048/0.245) = -0.1959 or 19.59% net decline in the levels of *Leverage* for the treated firms.
[19] 0.062/0.245= .253 or 25.3% decline from the pre-turnover levels of 24.5%.

turnovers in the treated firms. This evidence further supports the conclusion that after IDD adoption, professional CEOs respond differently, reflecting their exacerbated career concerns.

4.3 Risky Investment Decisions

Although the *Leverage* decision is one major corporate decision, managerial career concerns that exacerbate risk-related agency conflicts are also likely to be reflected in major corporate investment decisions. Thus, we next examine whether a firm's major risky investments decline when risk-related agency conflicts intensify due to IDD adoption.

First, we explore *R&D* investment, which is known to be highly risky, particularly failure-prone investments with very distant and highly skewed payoffs (Nelson and Winter 1982). Firms in IDD adopting states should be more active in making risky *R&D* investments since IDD adoption acts to reduce the risk of losing key human capital (Eisfeldt and Papanikolaou 2013, Qiu and Wang 2018) and protects the value of its trade secrets (trade secrets protection channel). On the other hand, the failure of such strategic investments can jeopardize a manager's career outcomes. Such concerns should be much greater in a legal environment that enforces post-employment restrictions on managers' outside employment options. Thus, the exacerbated career concerns hypothesis predicts lower investment levels in such risky projects.

Before testing our hypothesis formally, we first test the parallel trend assumptions in a regression framework. We find that pre-IDD adoption, there is no statistically significant divergence in *R&D* changes between the two sets of firms (untabulated). Next, using a rigorous regression framework, we find (see Table A7 column 1) that founder CEO firms raise *R&D* by 22.22% after IDD adoption (mean value of *R&D* is 0.036). Yet, in professional CEO firms over the post-IDD period, there is a 25% reduction in *R&D* relative to that in founder CEO firms. Thus, the net effect of IDD adoption on *R&D* investment by professional CEO firms is statistically indistinguishable from zero[20].

As an additional robustness test, we focus on a firm's strategic investments in product differentiation activities, measured by advertising expenditures (*ADV*). *ADV* represents a firm-specific intangible investment that is often used in the literature to measure risky investment in

[20] Table A12 includes additional robustness tests exploring the effect of exacerbated career concerns on *R&D*.

organizational capital (Eisfeldt and Papanikolaou 2013). Similar to our *R&D* findings, we find no significant difference in pre-IDD changes in *ADV* at professional CEO firms compared to founder CEO firms consistent with a parallel trend assumption (untabulated). Next, in a regression framework, we find that professional CEO firms reduce *ADV* by 14.29% (mean value of *ADV* is 0.014) after IDD adoption (Table A7).

Our evidence on differential investment raises an intriguing question: do post-IDD adoption underinvestments in *R&D* and *ADV* by professional CEO firms mirror the underutilization of debt following IDD adoption? To rule out this concern, we re-estimate the baseline evidence regarding the effect of IDD adoption on *Leverage* after including lagged, contemporaneous, and future *R&D* and *ADV*. We find that our baseline evidence on *Leverage* remains unchanged when we control for firms' contemporaneous and future investments. Our evidence suggests that differential investment in *R&D* and advertising in the post-IDD period does not drive our findings of the underutilization of debt by professional CEO firms when stricter enforceability of post-employment restrictions is imposed (untabulated).

We also explore a firm's *CAPX*, which is a *relatively* less risky investment that could be attractive to empire-building managers (Table A7). The extant literature documents that managerial risk-taking incentives raise *R&D* and *Leverage*, but lower capital expenditures (*CAPX*) (Coles et al., 2006). We also fail to find any evidence that professional CEO firms change *CAPX* when manager career concerns are exacerbated by IDD adoption. The results highlight that the effects of managerial career concerns appear to be particularly observable for more risky investments (and do not necessarily extend to all investment types).

4.4. Acquisitions

4.4.1 Effort Aversion or Risk-Related Agency Conflicts?

Our evidence on a firm's strategic risky investments after IDD adoption implies that risk-related agency conflicts triggered by labor market rigidity, distort risky corporate investment. However, one can argue that a professional manager's reluctance to exert efforts could also explain such underinvestment. Arguably, when outside employment options are more limited, rational managers are likely to exert more effort. Our evidence regarding the effect of IDD adoption on

CAPX goes to some length to address this concern. If effort aversion rather than risk-related agency conflict explains our baseline evidence, then we should observe lower investment regardless of a project's riskiness. Nevertheless, to eliminate any residual concerns, we investigate the implications of career concerns vis-à-vis effort-aversion utilizing evidence from the M&A market.

Managers exert significant influence over a firm's acquisition decisions, and acquisitions are inherently riskier than to organic growth (Graham et al., 2013, Bernile et al., 2017). Since a firm's acquisition activity requires significant time and attention from its managers and requires substantial firm resources, either an increase or no change in acquisition activity would be inconsistent with the CEO effort aversion-based explanation. Thus, we study a firm's acquisition activity to disentangle effort aversion from risk-related agency conflicts.[21] We find that strict enforcement of post-employment restrictions does not have any differential impact on firm-level acquisition activity where managers experience heightened career concerns (Table 6 columns 1-2). These results are not altered if we exclude control variables. Since professional CEO firms do not reduce acquisition significantly after IDD adoption, our evidence suggests that simple effort aversion cannot explain our findings.

4.4.2 Risk Aversion or Career Concerns?

Risk-related agency conflicts become apparent through two distinct channels: managerial risk aversion and managerial career concerns (Gormley and Matsa 2016). To distinguish between these two plausible channels, we investigate the type of target firms (conditional on an acquisition) that professional CEO firms acquire after IDD adoption.

Firms exposed to competitive threats where rivals can gain access to their trade secrets and cause irreparable harm to their competitive advantage can benefit more from focused industry

[21] We exclude buyback, exchange offer, recapitalization, deals where the bidder already owns more than 50% of the target's equity, deals where the bidder does not own 100% of the target's equity after transactions, deal value is less than $1 million, deals are not complete, the ratio of the deal size to the market value of the acquirer's assets is less than 1%, either the acquirer or the target is a financial firm, and missing information in CRSP for this analysis (see Masulis, Wang, and Xie 2007, Custódio and Metzger 2013, Gormley and Matsa 2016).

acquisitions.[22] Such strategically focused industry acquisitions create combined firm benefits by mitigating concerns about competitive attacks from rivals. When firms' trade secrets are protected, and thus, the competitive threats from rivals are low, firms' strategic benefits from focused acquisitions are relatively low. Thus, after IDD adoption, the trade secrets protection hypothesis predicts fewer focused acquisitions. However, IDD also reduces executives' ability to join rival firms or firms in a related industry. Thus, the specific nature of our experiment suggests that acquisitions that diversify a firm's operation would mechanically increase the scope of IDD applicability across multiple industries. Such diversifying acquisitions under IDD further restrict CEO mobility across multiple industries, which would intensify career concerns of managers who derive more utility from outside employment options. Thus, if managerial preferences influence acquisition activity, then diversifying acquisitions in the post-IDD period are expected to be less prevalent for professional CEO firms.

We find, after conditioning on positive firm acquisition activity, that founder CEO firms, where only the trade secrets channel is operative, annually undertake 0.212 fewer focused acquisitions in related industries. On the other hand, after IDD adoption, professional CEO firms annually undertake 0.225 more focused acquisitions (significant at the 5% level), as shown in Table 6 columns 3 (exacerbated career concerns channel). The net effect of IDD adoption on focused acquisitions by professional CEO firms is statistically indistinguishable from zero. By showing that even related industry acquisitions can be motivated by manager career concerns, our study adds a new dimension to the risk-related agency conflict literature. This empirical evidence shows that managerial career concerns are primarily driving risk-related agency conflicts in our study.

We also find some evidence that in the post-IDD period, professional CEO firms are more likely to finance their acquisitions with stocks (columns 5-6). Since swapping cash or low-risk debt for illiquid target assets can be risky (Gormley and Matsa 2016), our finding that acquisitions are financed disproportionately more with stocks is further corroborating evidence

[22] Following Custódio and Metzger (2013), we identify focused acquisition when both acquirer and target firms belong to the same Fama-French 12 industry classification scheme.

that managers adopt a *play safe* strategy in post-IDD periods. We find similar evidence if we exclude control variables or interact control variables with the treatment period indicator-IDD.

Additional tests suggest that the parallel trend assumptions are not violated in this acquisition analysis (Table A8). More precisely, we find that before IDD adoption, there is no statistically significant divergence in the changes in acquisition frequency in related industries by professional CEO firms compared to founder CEO firms (columns 1-2). A similar pattern is revealed for stock-financed acquisitions (columns 3-4). After IDD adoption, we observe a divergence in the acquisition style between these two types of CEO led firms (columns 1-2). However, a differential pattern in stock financed deals between these two types of firms only becomes apparent in the third year after IDD adoption (columns 3-4).

4.4.3 Acquisitions: Value Implications

We also want to investigate whether after IDD adoption, the acquisition style of professional CEO firms has any value implications for shareholders. If the acquisition activity in the post-IDD period of professional CEO firms where managers experience aggravated career concerns is suboptimal for shareholders, then we expect that such acquisitions will reduce shareholder value. In this context, we study the average post-IDD market response to acquisition announcements by professional CEO firms.

Our results provide direct evidence that after IDD adoption, when managers experience heightened career concerns, the market assesses acquisition announcements by professional CEO firms, on average, to be bad news (Table 6 column 7). Specifically, the post-IDD average 5-day acquisition announcement CAR [-2,2] of professional CEO firms is negative (-0.9%) and statistically significant (t=2.5) (exacerbated career concerns channel). Importantly, the market primarily responds negatively in the post-IDD period to announcements of within-industry acquisitions by professional CEO firms (column 8). In contrast, the announcement CAR [-2,2] for diversifying acquisitions by professional CEO firms is insignificant (untabulated). Turning to founder CEO firms, we find in the post-IDD period that the market greets acquisition

announcements positively (0.7% with t=1.8) (through trade secrets protection channel)[23]. In an untabulated analysis, we find in the post-IDD period that the market responds negatively to all-stock-financed deal announcements by the professional CEO firms. However, the evidence is not statistically significant at the conventional level (t=1.29).

4.5 Likelihood of a Firm Being Taken Over

We also examine the effects of aggravated risk-related agency conflicts from the perspective of target firms: specifically, examining a firm's likelihood of being taken over. Firms with trade secrets protection coupled with stable human capital are attractive targets and thus, can be exposed to more takeover threats (see Chen, Gao, Ma 2020). Thus, the trade secrets protection hypothesis predicts that firms have a higher likelihood of being taken over in the post-IDD period. However, target CEOs often lose their jobs post-merger, and they generally fail to find another senior executive position in any public corporation within 3 years of a takeover (Agrawal and Walkling 1994). Since executives suffer a non-trivial devaluation of their human capital after a job loss, post-employment restrictions that are enforced through IDD adoption make this human capital devaluation risk even more dramatic. Thus, we expect professional CEOs in the post-IDD period to exert more effort to avoid being acquired (career concerns channel). Nevertheless, such post-IDD acquisitions can be even more desirable from a target shareholder perspective. Conversely, founder CEOs' entrepreneurial spirit may make these executives more willing to be taken over. Jenter and Lewellen (2015) argue that founders often prefer selling their firms rather than passing them on to a successor, for psychological or liquidity reasons.

Consistent with the trade secrets protection channel, we find that IDD adoption increases founder CEO firms' likelihood of being taken over by 2.4%. However, consistent with the career concerns hypothesis, we find that IDD adoption decreases professional CEO firms' likelihood of being taken over by 2.4% (column 1 Table 7). Thus, the net impact of IDD adoption on a professional CEO firms' likelihood of being taken over is statistically indistinguishable from zero.

[23] In our empirical analysis, we control for firm-level (Firm Size, Market-to-Book, Profitability, and Cash), state-level (State GDP Growth, and Political Balance), and deal-level characteristics (Relative Size, Private Deal, Friendly Deal, Mixed Deal, Deal Value, and Focused Acquisitions). In an untabulated robustness test, we find that our results remain unchanged if we additionally control for Cross-border Deals, Bankruptcy Risk, Strength of NCC, CEO overconfidence, and CEO tenure.

Also, in the post-IDD period, we find suggestive evidence that founder CEO firms leave anti-takeover provisions unchanged (e.g., poison pills, fair price, limited ability to act by written consent, and to call a special meeting), while professional CEO firms often add to these provisions (untabulated).

4.5.1 Likelihood of Being Taken Over: Value Implications

We also examine the post-IDD shareholder wealth implications of a reduced takeover likelihood in professional CEO firms. If the stock market perceives the post-IDD reduced takeover likelihood as shareholder value-destroying, then one would expect a positive market response to announcements of successful takeover bids targeting professional CEOs firms, both because these takeovers are value-creating with large takeover premiums and because they are unexpected. To test this conjecture, we follow Jenter and Lewellen (2015) and calculate the announcement CAR for target firms using a 22-day event window around the announcement day 0, CAR [-20, +1].[24] Indeed, we find after IDD adoption that professional CEO firm shareholders experience positive CARs from announcements of completed takeover bids (Table 7 column 7). This positive market reaction to announcements of professional CEO firm takeovers constitute an important piece of empirical evidence that frictions in the managerial labor market that trigger risk-related agency conflicts can destroy shareholder value, if not overcome by a determined bidder.

5. Alternative Interpretation and Robustness Tests

Several alternative explanations for managers' differing responses following heightened career risk deserve careful consideration. This section provides some additional tests to assess the plausibility of several alternative explanations and to explore the cross-sectional heterogeneities in our baseline evidence.

5.1 Career Concerns or the Influence of Debtholders?

Revisiting the evidence on *Leverage* decisions in professional CEO firms, one can question whether underutilization of debt capacity is driven by a manager's career concerns or by debtholder influence over a firm's capital structure decisions. To judge the plausibility of this

[24] Our results are robust to using a shorter even window of 5 days (-2, +2) that we utilize in earlier tests.

alternative explanation, we analyze firms' concentration of long-term debtholders. A low *Leverage* ratio should be prevalent in firms with concentrated debtholders if debtholders' influence dominates manager career concerns when determining firm capital structure decisions.

To test this alternative hypothesis, we split the professional CEO firm sample into high and low debtholder concentration subsamples. We find in the post-IDD period that our baseline results of lower *Leverage* hold in both professional CEO firm subsamples. Furthermore, the difference in leverage ratios for the two subsamples is not statistically significant (Table 8 panel A columns 1-2). These results provide corroborating evidence that the exacerbated career concerns channel arguably explains the *playing it safe* strategies of professional CEO firms better. To further examine whether such underutilization of debt capacity could be value-enhancing for debtholders, we explore the frequency of debt covenant violations for these firms (column 3). The insignificant point estimate suggests that the post-IDD increased labor market rigidity does not affect the risk of debt covenant violations in professional CEO firms.

While there is no obvious economic argument for why professional CEO firms should have a higher cost of debt financing after IDD adoption, if this occurs, then it could help explain manager reluctance to raise a firm's post-IDD *Leverage* ratio, without needing risk-related agency conflicts. To explore this alternative debt cost of capital hypothesis, we investigate firms' bank loan spreads around IDD adoption, where we again split our sample into professional CEO firms and founder CEO firms. Table 8 panel A column 4 shows that the cost of debt financing does not significantly change for professional CEO firms in the post-IDD period. This evidence suggests that post-IDD underutilization of debt capacity is not explained by professional CEO firms facing a higher cost of debt capital compared to founder CEO firms.

5.2 State-level Heterogeneous Effects

In an augmented test, we conduct a subsample analysis where we compare corporate policies of professional (founder) CEO firms in IDD states against those of professional (founder) CEO firms in non-IDD states (Table 8 Panel B). Consistent with the trade secrets protection hypothesis, we find that IDD adoption increases *Leverage* and debt issuance only in founder CEO firms. Founder CEO firms in the post-IDD period also undertake more value-enhancing diversifying

acquisitions when they face weaker competitive threats of losing trade secrets. Finally, consistent with our baseline findings, we document that the likelihood of founder CEO firms' being taken over in IDD states is greater than in non-IDD states. On the other hand, the likelihood of professional CEO firms' being taken over in IDD states compared to in non-IDD states is statistically indistinguishable from zero. This last result suggests that the positive impact on the takeover likelihood stemming from the trade secrets channel is offset by the exacerbated career concerns channel. The differential response observed in founder versus professional CEO firms is statistically significant in the post-IDD period.

5.3 CEO Style or Career Concerns?

If CEOs are replaced in the post-IDD period, one could argue that it is the different "style" of the incoming CEO relative to the current CEO, rather than CEO career concern that drives our results. To address this concern, we study the *same* firm with the *same* professional CEO before and after IDD adoption, thus holding the CEO fixed. More precisely, to meaningfully relate the observed corporate policy heterogeneity to the relevant CEOs, we re-estimate our baseline models after *excluding* any firms that experience a change of CEO in the 7 years around the state's IDD adoption (i.e., over event years t-3 through t+3). Our baseline results on the effect of managerial career concerns on corporate policies (*Leverage*, acquisitions, and the *Likelihood of being taken over*) remain unchanged (Table 8 panel C columns 1-4). Given that we follow the same CEOs before and after IDD adoption over a reasonably long time period (7 years), this experiment leads us to conclude that CEO style is not driving our main results.[25]

5.4 Other Robustness Tests

We briefly discuss some additional robustness tests of our baseline results. First, the rescission of IDD in some states raises managers' mobility in these affected states and offsets their prior heightened CEO career concerns. To test whether professional CEO firms reverse corporate policies following an IDD rescission, we rerun our baseline tests replacing the $IDD_{Adoption}$ indicator with an $IDD_{Rescission}$ indicator. We find professional CEO firms respond to the changes in labor

[25] The average fixed-term contract length decreases over time: from 3.88 years for contracts signed in 1993 to 2.75 years for 2008 (González-Uribe and Groen-Xu 2017).

market flexibility by readjusting their financing and acquisition policies in opposite directions. Moreover, following IDD rescission, professional CEO firms' likelihood of being taken over significantly rises (Table 8 panel C columns 5-8).

Second, California, as a leader in the start-up firm world, aggressively promotes labor market competition, and its courts do not recognize IDD. Since firms headquartered in California are in the control group of this study, one could worry that including them would introduce non-typical control firms into our analysis. To address this concern, we examine whether our results are robust to the exclusion of all California headquartered firms from our analysis. The evidence in Table A9 columns 1-4 suggests that a "California effect" does not explain our baseline results.[26]

Third, CEOs who are not founders can still be founding family members. As a consequence, they may also rely less on outside employment options similar to founders. Accordingly, we re-estimate our baseline results for major corporate policies, after excluding firms with founder family member CEOs (henceforth family CEO). The exclusion of these firms does not alter our baseline interpretation regarding the effect of career concerns on corporate policies (Table A9 columns 5-8).

Fourth, in a contemporaneous study, Guernsey, John, and Litov (2020) show that the UTSA, codified legal protection of trade secrets, which was enacted in 46 U.S. states between 1980 and 2013, is associated with firms *reducing Leverage*. Guernsey et al. (2020) argue that sparse markets for trade secrets make it challenging for bondholders and banks to recover their investment in defaulting firms. Thus, when firms raise their reliance on trade secrets after UTSA adoption, which leaves their employees' mobility *unchanged*, the net effect of UTSA on firm borrowing is negative.

In contrast, Klasa et al. (2020) argue that firms maintaining their pre-IDD level of trade secrets should raise *Leverage* after improved trade secret protection of IDD adoption since there is a reduced ex-ante competitive threat of losing trade secrets via the *labor channel* (restricting human capital). Our key findings, which are based on exogenous variations in managerial career concerns, are derived from the changing restrictions on executive mobility. We conjecture that

[26] We find consistent evidence when we exclude other non-adjacent non-IDD adopting states besides California (e.g., Montana and Maine).

since UTSA is *not* a shock to executive mobility, it will not alter our basic findings. Empirically we find that in the post-IDD period, the impact of the career concerns channel on major corporate decisions of profession CEO firms is robust to including controls for *UTSA* (Table A10 columns 1-4).

Garmaise (2011) finds that state courts vary in their enforcement of NCCs. This suggests that as the strength of state court enforcement of NCC rises, we would expect to observe a weaker effect of IDD. However, following Garmaise's approach, we find that our baseline results hold after controlling for the strength of state court enforcement of NCC (Table A10 columns 1-4).[27]

Fifth, since we use firm fixed effects alongside relevant firm-level control variables, other potentially omitted firm-level variables are unlikely to bias our observed effects. Nonetheless, we include additional firm characteristics (e.g., *Cash*, *Bankruptcy Risk*, and *Firm Age*) for added robustness and find results consistent with our baseline evidence (untabulated). In additional untabulated robustness tests, we find that our results are robust to controlling for CEO-level control variables (CEOs' risk-taking incentives in the compensation structure[28] and CEO ownership) and to the exclusion of firms that change headquarters during our sample period.

5.5 Cross-Sectional Heterogeneities in Managerial Career Concerns

Next, we further explore the nature of the intensified career concerns channel from the perspective of managerial incentives (see Table A11 panel A columns 1-6). First, Jensen and Meckling (1976) argue that agency conflicts should be observed if managers have substantial firm-specific human capital. This is precisely the situation that occurs when IDD adoption restricts the mobility of specialist professional CEOs (CEOs who possess high levels of firm-specific knowledge) to join competing firms where the knowledge they gain at their current employers is directly applicable or relevant (Custódio, Ferreira, and Matos 2013). We find evidence that risk-related agency conflicts are indeed more pronounced in specialist professional

[27] This may reflect the fact that the strength of state court enforcement of NCCs does not change very much over our sample period.
[28] Our baseline results remain unchanged when we re-estimate the baseline models after including contemporaneous and future (up to two years) risk-taking incentives in compensation structure. Our findings support Amihud and Lev (1981), who suggest that even the adjustment in compensation structure to motivate CEOs' risk-taking incentives cannot completely eliminate their career concerns.

CEO firms (Table A11 panel A columns 1-2) than in firms led by professional CEOs with general managerial skills.[29]

Similarly, we next test whether professional managers further away from retirement age respond more strongly to IDD. The argument is that managers with a longer career horizon should be more sensitive to restrictions in their job mobility. The results in Table A11 panel A columns 3-4 suggest that the lower *Leverage* ratios observed after IDD adoption are more pronounced in firms where professional managers are further away from retirement age. Furthermore, consistent with the above CEO specialized human capital and retirement-aged findings, the results in columns 5-6 show that such career concern effects are stronger at professional CEO firms with specialist CEOs who are far from retirement age. These subsample differences are statistically significant.

5.6 The Role of Governance

The theory also suggests that CEOs are less likely to pursue sub-optimal decisions in firms with better governance (Jensen and Meckling 1976). To test this conjecture, we pursue a sub-sample analysis based on widely used governance metrics, e.g., institutional ownership concentration, entrenchment (E)-Index (see Bebchuk, Cohen, and Ferrell 2009), and co-opted boards.[30] One potential concern with this subsample analysis is that these added control variables, namely institutional ownership, E-Index, and board co-option, could be affected by IDD adoption. To address this concern, we first check whether these governance variables show any impacts of IDD adoption. Our findings do not support this concern (untabulated).

Next, we test whether a differential response exists for professional CEO firms in the post-IDD period when we split the sample into weak versus strong corporate governance firms. We find a significantly stronger career concern response in firms either without concentrated institutional ownership or with high takeover protection, i.e., high E-Index levels (Table A11 panel A columns 7-10). We also find that our baseline results for professional CEO firms are

[29] We use Cláudia Custódio's dataset (collected from her website: https://sites.google.com/site/claudiapcustodio/research) to identify generalists or specialist CEOs.

[30] We collect data on board co-option from Lalitha Naveen's database.

stronger when these firms have weaker board monitoring due to co-opted independent directors (Table A11 panel A columns 11-12).

6. Conclusion

In this study, we explore how managers' exacerbated career concerns aggravate risk-related shareholder-manager agency conflicts and, thus, affect major corporate decisions. We exploit the staggered state court adoption of IDD as a quasi-natural experiment that creates a tangible increase in the frictions existing in the managerial labor market. The IDD legal doctrine protects a firm's trade secrets by restricting the mobility of key employees with access to the firm's valuable proprietary information from joining competing firms. Since a competitive labor market creates incentives for executives to signal their ability to potential employers and to sell their expertise to the highest bidder, IDD adoption exogenously heightens an executive's career concerns. Using a difference-in-differences approach and a unique hand-collected dataset of founder CEOs, we highlight managers' responses to heightened career concerns following reduced labor market mobility.

This study finds that professional CEO firms (as opposed to founder CEO firms) experience acute risk-related agency conflicts in the post-IDD period as lucrative outside employment options are arguably foreclosed to these professional CEOs. Using *Leverage* as one measure of firms' risk-taking, we find that founder CEO firms capture the benefit of trade secret protection through the use of greater *Leverage*. Since founder CEOs derive less utility from outside employment options, they respond to IDD adoption, which lowers their trade secret risk by utilizing more of their unused debt capacity, which is manifested in higher debt issuance following IDD adoption. However, for professional CEO firms, where this legal shock heightens CEOs' career concerns, we observe no increase in *Leverage*. Furthermore, using a matched sample of exogenously triggered founder CEO turnovers, we find robust evidence supporting our baseline findings. Moreover, we show that career concerns that induce risk-related agency conflicts are more apparent in firms where CEOs are less exposed to stronger corporate governance and closer monitoring.

We also find that aggravated managerial career concerns after IDD adoption significantly distort the riskier investment decisions of professional CEO firms. But, we do not find any discernible effect of IDD adoption on the less risky investments of professional CEO firms. Finally, we show that aggravated career concerns lead to value-destroying acquisitions. On the other side, managers with exacerbated career concerns in the post-IDD period reduce the likelihood of their firms being acquired. In addition, the market reacts positively to post-IDD announcements of successful takeover bids that target professional CEO firms.

Our findings are consistent with corporate theories (Holmström 1999), suggesting that career concerns induce manager-shareholder risk-related agency conflicts. We explore a unique experimental setup to track manager career concerns where firms and managers experience opposite directional changes in risk-exposure due to exogenous legal shocks at the state level. Firm profitability becomes safer as a result of stricter enforceability of post-employment restrictions on manager mobility that lowers trade secrets expropriation risk. However, such exogenous changes in the legal environment have an unintended consequence of intensifying manager-shareholder risk-related agency conflicts. Our study supports the predictions of neo-classical theories of human capital (Becker 1962, Gabaix and Landier 2008) and emphasizes the importance of an efficient and flexible labor market that rewards managers' risk-taking in part by offering external promotion opportunities.

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Table 1: Sample Distribution and Summary Statistics

Panels A and B present distributions of professional and founder CEO firms by industry groups and status of IDD adoption by state courts, respectively. Panel C reports summary statistics for the various firm, CEO, and state-level characteristics. All the variables are defined in Table A1.

Panel A: Distribution of Professional CEO and Founder CEO Firms in the Fama-French 10 Industry Groups

Industry Distribution	Founder CEO Firms	Professional CEO Firms
Consumer Nondurables	8.570%	91.430%
Consumer Durables	14.048%	85.952%
Manufacturing	8.096%	91.904%
Oil, Gas, and Coal Extraction and Products	15.226%	84.774%
Business Equipment	26.644%	73.356%
Telephone and Television Transmission	23.628%	76.372%
Wholesale, Retail, and Some Services	20.473%	79.527%
Healthcare, Medical Equipment and Drugs	23.190%	76.810%
Others	19.817%	80.183%

Panel B: Firm-Year Distribution of Professional CEO and Founder CEO Firms with Respect to IDD Adoption

States	Founder CEO	Professional CEO
IDD Adoption=0	19.531%	80.469%
IDD Adoption=1	16.839%	83.161%

Panel C: Summary Statistics

Variables	Mean	Median	P75	SD
		Firm Features		
Firm Size	7.085	7.001	8.110	1.640
Market-to-Book	2.108	1.637	2.379	1.498
Profitability	0.070	0.082	0.134	0.153
Tangibility	0.284	0.227	0.401	0.215
Dividend Payer	0.492	0.000	1.000	0.500
		CEO Features		
Professional CEOs	0.819	1.000	1.000	0.385
CEO Overconfidence	0.644	1.000	1.000	0.479
CEO Tenure	2.007	1.946	2.565	0.742
		State Features		
State GDP Growth	0.048	0.049	0.068	0.031
Political Balance	0.535	0.545	0.625	0.189

Table 2: Strict Enforceability of Post-Employment Restrictions and CEO Mobility: Validity Test

This table reports estimates from OLS regressions exploring the effect of strict enforceability of post-employment restrictions (IDD adoption) on CEOs' mobility using the following model:

$$Y_{i,j,s,t+1} = \alpha_i + \alpha_{j,t} + \alpha_e + \beta_1 IDD\ Adoption_{i,t} + \beta_2 \delta' Controls_{i,t} + \epsilon_{i,t}$$

Where Y indicates CEO mobility, i indexes firms/a firms' headquarter-states, j indexes industries, e indicates executives, t indexes time, and α_i, $\alpha_{j,t}$, and α_e are respectively the firm/headquarter-state, industry-year, and executive fixed effects. The coefficient β_1 captures the effect of IDD adoption on CEO mobility. Control variables are Firm Size, Market-to-Book, Profitability, Tangibility, Dividend Payer, CEO Overconfidence, CEO Tenure, State GDP Growth, and Political Balance. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. t-statistics are in parentheses. $*$, $**$, and $***$ denote significance at the 10%, 5%, and 1% levels, respectively.

Variable	CEO Mobility				
Models	Full Sample		Professional CEO Sample		
	(1)	(2)	(3)	(4)	(5)
$IDD_{Adoption}$	-0.024**	-0.025**	-0.033**	-0.033**	-0.037***
	(-2.348)	(-2.350)	(-2.493)	(-2.483)	(-2.783)
Strength of NCC		-0.003		-0.006	
		(-0.446)		(-0.897)	
Control Variables	N	N	N	N	Y
Firm FE	Y	Y	Y	Y	Y
Industry-Year FE	Y	Y	Y	Y	Y
CEO FE	Y	Y	Y	Y	Y
Observations	22,875	22,875	18,767	18,767	18,767
R-squared	0.317	0.317	0.334	0.334	0.343

Graph 1: Heterogeneous Financing Decisions in Response to IDD Adoption

These figures plot estimates to present the heterogeneous financing decisions of firms for three years before and after IDD adoption only for states that adopted IDD during our sample period. Each data point in figure 1 presents the difference between *Leverage* in the relevant year before or after IDD adoption (t=0). For example, at *t*= -2, figure 1 shows the difference between *Leverage* at *t*= -2 and *t*=0. Figure 2 shows the difference in the change in *Leverage* (from figure 1) between the professional and founder CEO firms within 5% confidence intervals (Lower Bound/Upper Bound: LB/UB) with standard errors clustered at state-level. For example, at *t*=-2, figure 2 shows the difference of changes in *Leverage* at *t*= -2 and *t*=0 between founder and professional CEO firms (the difference between the solid line and the dotted line of figure 1 at *t*=-2).

Figure 1: Changes in Leverage of Founder and Professional CEO Firms

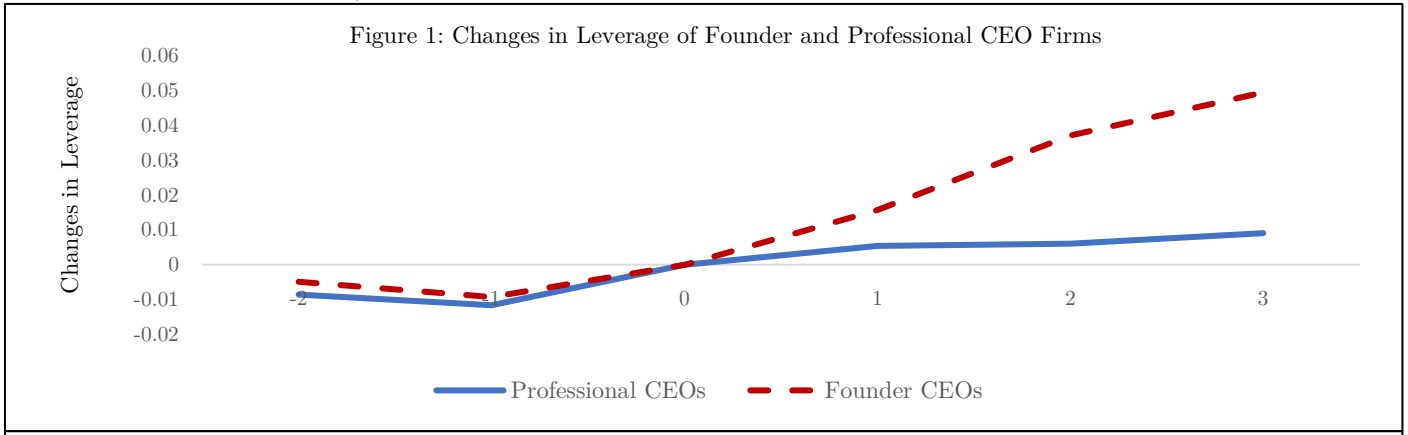

Figure 2: Difference in Changes in Leverage of Founder and Porfessional CEO Firms

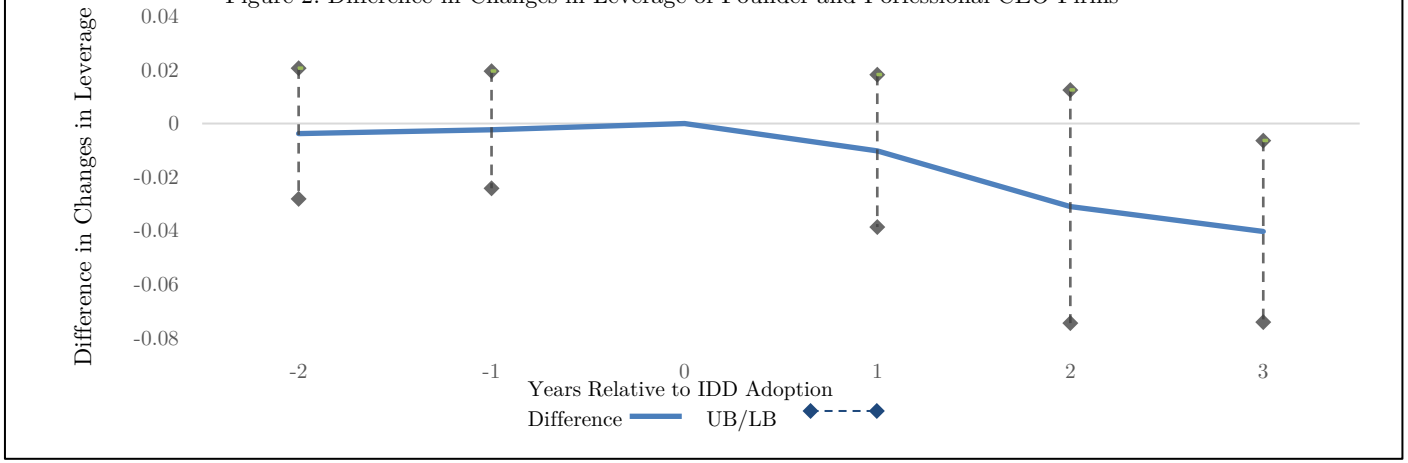

Table 3: Strict Enforceability of Post-Employment Restrictions, Risk-Related Agency Conflicts, and Financing Decisions

This table reports estimates from OLS regressions exploring the net effect of strict enforceability of post-employment restrictions (IDD adoption) on *Leverage* of firms using the model:

$$Y_{i,j,s,t+1} = \alpha_i + \alpha_{j,t} + \alpha_{s,t} + \beta_1\, IDD\ Adoption_{i,t} + \beta_2\, Professional\ CEOs_{i,t} + \beta_3\, Professional\ CEOs_{i,t} x\ IDD\ Adoption_{i,t} + \delta' Controls_{i,t} + \epsilon_{i,t},$$

where Y indicates *Leverage*, i indexes firms, j indexes industries, s indexes a firm's headquarter-state, t indexes time, and α_i, $\alpha_{j,t}$, and $\alpha_{s,t}$ are respectively the firm, industry-year, and state-year fixed effects. β_1 captures the effect of IDD adoption on firms that are *not* led by professional CEOs. β_3 captures the additional effect of IDD adoption on professional CEO firms. Control variables include Firm Size, Market-to-Book, Profitability, Tangibility, Dividend Payer, CEO Overconfidence, CEO Tenure, State GDP Growth, and Political Balance. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variable	$Leverage_{t+1}$								
Models	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$IDD_{Adoption}$ (β_1)	0.037***	0.033**		0.035***	0.032***		0.054*	0.069**	
	(2.922)	(2.634)		(2.897)	(2.745)		(1.869)	(2.170)	
Professional CEOs	0.031***	0.025**	0.024*	0.026**	0.022*	0.023*	0.027**	0.022*	0.024*
	(2.732)	(2.069)	(1.905)	(2.209)	(1.759)	(1.754)	(2.379)	(1.865)	(1.937)
Professional CEOs x $IDD_{Adoption}$ (β_3)	-0.036**	-0.037**	-0.032**	-0.036***	-0.038***	-0.034**	-0.037**	-0.038**	-0.038***
	(-2.569)	(-2.585)	(-2.197)	(-2.708)	(-2.814)	(-2.492)	(-2.557)	(-2.611)	(-2.724)
Control Variables	N	N	N	Y	Y	Y	Y	Y	Y
Controls X $IDD_{Adoption}$	N	N	N	N	N	N	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	N	N	Y	N	N	Y	N	N
Industry-Year FE	N	Y	Y	N	Y	Y	N	Y	Y
State-Year FE	N	N	Y	N	N	Y	N	N	Y
Joint Hypothesis: $\beta_1 + \beta_3 = 0$	0.743	0.307	N/A	0.806	0.165	N/A	0.420	0.218	N/A
Observations	21,806	21,806	21,806	21,806	21,806	21,806	21,806	21,806	21,806
R-squared	0.727	0.748	0.760	0.735	0.754	0.766	0.735	0.755	0.766

Table 4: Strict Enforceability of Post-Employment Restrictions, Risk-Related Agency Conflicts, Debt Issuance, and Equity Issuance

This table reports estimates from OLS regressions exploring the net effect of strict enforceability of post-employment restrictions (IDD adoption) on debt issuance and equity issuance decisions using the model:

$$Y_{i,j,s,t+1} = \alpha_i + \alpha_{j,t} + \alpha_{s,t} + \beta_1\, IDD\ Adoption_{i,t} + \beta_2\, Professional\ CEOs_{i,t} + \beta_3\, Professional\ CEOs_{i,t} x\ IDD\ Adoption_{i,t} + \delta' Controls_{i,t} x\ IDD\ Adoption_{i,t} + \epsilon_{i,t},$$

Where Y indicates *Net Debt Issuance* or *Net Equity Issuance*, i indexes firms, j indexes industries, s indexes a firm's headquarter-state, t indexes time, and α_i, $\alpha_{j,t}$, and $\alpha_{s,t}$ are respectively the firm, industry-year, and state-year fixed effects. The coefficient β_1 captures the effect of IDD adoption on firms that are *not* led by professional CEOs. The coefficient β_3 captures the additional effect of IDD adoption on professional CEO firms. Frank and Goyal (2003) control variables include changes in profitability, in tangibility, in the logarithm of sales, in the market to book, and lagged leverage. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. t-statistics are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Variables	Net Debt Issuance$_{(t+1)}$								
Models	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
IDD$_{Adoption}$	0.018**	0.023***		0.022**	0.025***		0.017*	0.022***	
	(2.669)	(3.838)		(2.381)	(3.127)		(1.980)	(2.837)	
Professional CEOs	0.003	0.005	0.006	0.013	0.012	0.014	0.013	0.012	0.014
	(0.563)	(0.783)	(0.759)	(1.564)	(1.406)	(1.445)	(1.502)	(1.360)	(1.423)
Professional CEOs x IDD$_{Adoption}$	-0.018***	-0.024***	-0.019***	-0.022***	-0.028***	-0.026***	-0.022**	-0.028***	-0.026**
	(-3.046)	(-4.251)	(-2.738)	(-2.709)	(-3.340)	(-2.748)	(-2.493)	(-3.135)	(-2.622)
Joint Hypothesis: $\beta_1 + \beta_3 = 0$	0.980	0.630	N/A	0.944	0.192	N/A	0.504	0.337	N/A
Observations	21,805	21,805	21,805	20,900	20,900	20,900	20,900	20,900	20,900
R-squared	0.154	0.193	0.225	0.212	0.248	0.279	0.212	0.249	0.280
	Net Equity Issuance$_{(t+1)}$								
IDD$_{Adoption}$	-0.002**	-0.001**		-0.002**	-0.002**		-0.000	-0.000	
	(-2.166)	(-2.021)		(-2.411)	(-2.220)		(-0.435)	(-0.257)	
Professional CEOs	-0.003***	-0.002*	-0.002*	-0.004***	-0.002**	-0.002*	-0.004***	-0.002**	-0.002**
	(-3.069)	(-1.760)	(-1.819)	(-3.506)	(-2.419)	(-1.963)	(-3.632)	(-2.533)	(-2.122)
Professional CEOs x IDD$_{Adoption}$	0.002**	0.002*	0.001*	0.003**	0.002**	0.002**	0.002***	0.002***	0.002**
	(2.121)	(1.973)	(1.813)	(2.630)	(2.590)	(2.035)	(2.791)	(2.729)	(2.249)
Joint Hypothesis: $\beta_1 + \beta_3 = 0$	0.549	0.707	N/A	0.212	0.131	N/A	0.001	0.001	N/A
Observations	21,805	21,805	21,805	20,900	20,900	20,900	20,900	20,900	20,900
R-squared	0.266	0.301	0.363	0.327	0.364	0.384	0.328	0.366	0.385
Frank and Goyal (2003) Control Variables	N	N	N	Y	Y	Y	Y	Y	Y
Frank and Goyal (2003) Control Variables X IDD$_{Adoption}$	N	N	N	N	N	N	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	N	N	Y	N	N	Y	N	N
Industry-Year FE	N	Y	Y	N	Y	Y	N	Y	Y
State-Year FE	N	N	Y	N	N	Y	N	N	Y

Table 5: Difference-in-Differences Matching Estimator (DiD-ME) Analysis of Exogenous Founder CEO Turnovers

This table presents estimates based on a matching estimator analysis of exogenous CEO turnovers in founder CEO firms. In panels A and B, all founder CEO firms in a particular year are part of a cohort if these firms are headquartered in states that previously have adopted IDD by that calendar year. Within a cohort, *Treated* firms are founder CEO firms where founder CEOs are exogenously replaced by professional CEOs constituting a change in "management style". *Non-Treated* firms are founder CEO firms that do not experience any CEO turnover. *Control* firms are a subset of the *Non-Treated* firms from the same cohort and by definition, from the same calendar year, and are selected as the closest match to the *Treated* firms based on firm size, and from the same Fama-French-10 industry using Abadie and Imbens (2006, 2011) matching estimator methodology. Panel A (B) includes an analysis of the change in *Leverage* from the *pre-turnover* to the *post-turnover period* (the difference-in-difference) for *Treated* and *Non-Treated* (*Control*) firms. Panel C includes a falsification test where *Treated* and *Control* firms are headquartered in states that *do not* recognize IDD before the exogenous CEO turnover. All the other variables are defined in Table A1. Standard errors are corrected for heteroskedasticity. *t*-statistics are in parentheses. $*$, $**$, and $***$ denote significance at the 10%, 5%, and 1% levels, respectively.

	Pre-Turnover	Post-Turnover	Post-Pre
Types of Firms	Panel A: Leverage Before and After Exogenous CEO Turnovers in the IDD Adopting States (Treated v. Non-Treated)		
Treated Firms	0.245***	0.205***	-0.040**
	(6.38)	(5.27)	(2.39)
Non-Treated Firms	0.180***	0.188***	0.008**
	(28.46)	(29.28)	(2.05)
Difference	0.065*	0.017	-0.048**
(*t*-statistic)	(1.72)	(0.47)	(-2.14)
	Panel B: Leverage Before and After Exogenous CEO Turnovers in the IDD Adopting States (Treated v. Control)		
Treated Firms	0.245***	0.205***	-0.040**
	(6.38)	(5.27)	(2.39)
Control Firms	0.197***	0.222***	0.025
	(4.69)	(5.16)	(1.13)
Difference	0.048	-0.017	-0.065*
(*t*-statistic)	(0.76)	(-0.25)	(-2.02)
Matching Estimator (ATT)			-0.062***
			(-2.67)
Panel C: Falsification Test on Leverage Before and After Exogenous CEO Turnovers in the IDD NON-Adopting States (Treated v. Control)			
Treated Firms	0.166***	0.182***	0.016
	(5.36)	(6.02)	(1.48)
Control Firms	0.210***	0.197***	-0.013
	(5.25)	(5.08)	(-0.69)
Difference	-0.044	-0.015	0.029
(*t*-statistic)	(-0.97)	(-0.34)	(1.52)
Matching Estimator (ATT)			0.030
			(1.50)

Table 6: Strict Enforceability of Post-Employment Restrictions, Risk-Related Agency Conflicts, and Acquisitions

This table reports estimates from OLS regressions exploring the effect of strict enforceability of post-employment restrictions (IDD adoption) on a firm's acquisition activity and market reactions to acquisition announcements using the model:

$$Y_{i,j,s,t+1} = \alpha_i + \alpha_{j,t} + \alpha_{s,t} + \beta_1\, IDD\ Adoption_{i,t} + \beta_2\, Professional\ CEOs_{i,t} + \beta_3\, Professional\ CEOs_{i,t} x\ IDD\ Adoption_{i,t} + \delta' Controls_{i,t} + \epsilon_{i,t},$$

where Y indicates *Acquisitiveness* or *Number of Focused Acquisition* or *Number of Stock Deals or CAR*, i indexes firms, j indexes industries, s indexes a firm's headquarter-state, t indexes time, and α_i, $\alpha_{j,t}$, and $\alpha_{s,t}$ are respectively the firm, industry-year, and state-year fixed effects. The coefficient β_1 captures the effect of IDD adoption on firms that are *not* led by professional CEOs. The coefficient β_3 captures the additional effect of IDD adoption on professional CEO firms. The firm-level analysis includes control variables: Firm Size, Market-to-Book, Profitability, Cash, State GDP Growth, and Political Balance. The deal-level analysis includes deal-level variables: Relative Size, Private Deal, Friendly Deal, Mixed Deal, Deal Value, and Focused Acquisitions in addition to the firm and state-level control variables. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variables	Acquisitiveness$_{(t+1)}$		Number of Focused Acquisition$_{(t+1)}$		Number of Stock Deals$_{(t+1)}$		CAR[-2,2]	
Models	Full Sample		Conditional on Acquisition				All Acquisitions	Focused Acquisitions
	Firm-level Analysis						Deal-level Analysis	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$IDD_{Adoption}$	0.012		-0.212**		-0.231**		0.007*	0.009*
	(0.758)		(-2.325)		(-2.669)		(1.820)	(1.908)
Professional CEOs	-0.002	-0.002	-0.189*	-0.229	-0.247***	-0.244***	0.012***	0.013***
	(-0.147)	(-0.124)	(-1.736)	(-1.664)	(-5.140)	(-3.069)	(5.196)	(4.145)
Professional CEOs x $IDD_{Adoption}$	0.013	0.012	0.225**	0.279**	0.216**	0.242**	-0.009**	-0.009*
	(0.670)	(0.539)	(2.071)	(2.333)	(2.634)	(2.645)	(-2.508)	(-1.901)
Control Variables	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	N	N
Industry-Year FE	Y	Y	N	Y	N	Y	N	N
State-Year FE	N	Y	Y	Y	Y	Y	N	N
Industry FE	N	N	N	N	N	N	Y	Y
Year FE	N	N	N	N	N	N	Y	Y
Joint Hypothesis: $\beta_1 + \beta_3 = 0$	0.111	N/A	0.841	N/A	0.816	N/A	0.342	0.941
Observations	23,719	23,719	4,011	4,011	4,011	4,011	5,634	4,298
R-squared	0.281	0.307	0.496	0.586	0.546	0.639	0.031	0.042

Table 7: Strict Enforceability of Post-Employment Restrictions and Risk-Related Agency Conflicts: Likelihood of Being Taken Over and Market Reactions

This table reports estimates from OLS regressions exploring the effect of strict enforceability of post-employment restrictions (IDD adoption) on a firm's Likelihood of being taken over (columns 1-4) using the model:

$$Y_{i,j,s,t+1} = \alpha_i + \alpha_{j,t} + \alpha_{s,t} + \beta_1\, IDD\ Adoption_{i,t} + \beta_2\, Professional\ CEOs_{i,t} + \beta_3\, Professional\ CEOs_{i,t} x\ IDD\ Adoption_{i,t} + \delta' Controls_{i,t} + \epsilon_{i,t},$$

Where Y indicates *Likelihood of Being Taken Over*, i indexes firms, j indexes industries, s indexes a firm's headquarter-state, t indexes time, and α_i, $\alpha_{j,t}$, and $\alpha_{s,t}$ are respectively the firm, industry-year, and state-year fixed effects. The coefficient β_1 captures the effect of IDD adoption on firms that are *not* led by professional CEOs. The coefficient β_3 captures the additional effect of IDD adoption on professional CEO firms. Firm-level analysis includes control variables: Firm Size, Market-to-Book, Profitability, Tangibility, Dividend Payer, CEO Overconfidence, CEO Tenure, State GDP Growth, and Political Balance. Column 5 includes a deal-level analysis, deal, and firm-level control variables, industry, and year fixed effects. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Variables	Likelihood of Being Taken Over				CAR[-20,1]
Models	Full Sample				Completed Deals
	(1)	(2)	(3)	(4)	(5)
$IDD_{Adoption}$ (β_1)	0.024***		0.024***		-0.098
	(3.024)		(3.041)		(-1.584)
Professional CEOs	0.014**	0.012*	0.022***	0.020***	-0.040
	(2.519)	(1.974)	(4.127)	(3.618)	(-1.103)
Professional CEOs x $IDD_{Adoption}$ (β_3)	-0.024***	-0.021***	-0.023***	-0.020***	0.118**
	(-3.748)	(-3.017)	(-3.689)	(-2.994)	(2.028)
Control Variables	N	N	Y	Y	Y
Firm FE	Y	Y	Y	Y	N
Industry FE	N	N	N	N	Y
Year FE	N	N	N	N	Y
Industry-Year FE	Y	Y	Y	Y	N
State-Year FE	N	Y	N	Y	N
Joint Hypothesis: $\beta_1+\beta_3=0$	0.964	N/A	0.862	N/A	0.326
Observations	24,367	24,367	24,367	24,367	639
R-squared	0.262	0.289	0.263	0.290	0.314

Table 8: Strict Enforceability of Post-Employment Restrictions and Risk-Related Agency Conflicts: Robustness Tests

Panel A reports estimates exploring whether debt holders' influence drives a firm's financing decisions after IDD adoption. Model 4 of panel A includes industry-year fixed effects, state fixed effects, and loan type fixed effects, but does not include firm fixed effects due to lack of observations per firm over the period. Models 3 and 4 of panel A additionally includes "Lagged Leverage" since a firm's existing level of debt influences its future debt repayment capacity and bank loan spread. Panel B reports the heterogeneous effects of strict enforceability of post-employment restrictions on a firm's corporate policies. All models in panel B include interaction terms of all control variables with sample split indicator, "Professional CEOs". Panel C columns 1-4 report baseline results after excluding firms where CEOs of the pre-event period (t=-3) are not the same as CEOs of the post-event period (t=3) (that is, no CEO turnover events within these 7 years). Panel C columns 5-8 report the net effect of non-enforceability of post-employment restrictions (IDD rescission) on a firm's corporate policies. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. t-statistics are in parentheses. $*$, $**$, and $***$ denote significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Career Concerns (Risk-related Agency Conflicts) or Influence of Debt Holders?

Variables	$Leverage_{(t+1)}$		Debt Covenant Violation	Loan Spread
Models	(1)	(2)		
	High Debt Herfindahl-Hirschman Index	Concentrated Debt	(3)	(4)
Subsample 1	YES	YES		
$IDD_{Adoption}$	0.032**	0.033**	0.004	-0.067
	(2.342)	(2.428)	(0.951)	(-1.570)
Professional CEOs	0.021*	0.019*	0.001	-0.085***
	(1.912)	(1.758)	(0.215)	(-4.371)
Professional CEOs x $IDD_{Adoption}$	-0.047***	-0.045***	-0.005	0.041
	(-3.113)	(-2.929)	(-1.059)	(1.043)
Observations	12,080	12,935	21,806	9,012
R-squared	0.749	0.749	0.263	0.764
Subsample 2	NO	NO	N/A	N/A
$IDD_{Adoption}$	0.034*	0.038*		
	(1.722)	(1.815)		
Professional CEOs	0.038*	0.040*		
	(1.771)	(1.744)		
Professional CEOs x $IDD_{Adoption}$	-0.045**	-0.049**		
	(-2.452)	(-2.555)		
Observations	9,726	8,871		
R-squared	0.794	0.802		
Baseline Control Variables	Y	Y	Y	Y
Firm FE	Y	Y	Y	N
Industry-Year FE	Y	Y	Y	Y
State FE	N	N	N	Y
Loan Type FE	N	N	N	Y
p-Value Difference	0.848	0.913	N/A	N/A

Panel B: Heterogenous Effects on Corporate Policies

Variables	Leverage$_{(t+1)}$	Net Debt Issuance$_{(t+1)}$	Number of Focused Acquisition$_{(t+1)}$	CAR[-2,2] of Acquisition	Likelihood of Being Taken Over	CAR[-20, +1] of Completed Takeover Deals
Models	(1)	(2)	(3)	(4)	(5)	(6)
Founder CEOs x IDDAdoption (γ)	0.027**	0.025***	-0.244***	0.007**	0.024***	-0.096*
	(2.211)	(2.927)	(-2.712)	(2.201)	(2.818)	(-1.782)
Professional CEOs x IDDAdoption (δ)	-0.005	-0.003	0.022	-0.002	0.001	0.019
	(-1.196)	(-1.441)	(0.355)	(-0.693)	(0.152)	(0.886)
Professional CEOs	0.021	0.013	0.252	0.035	0.013	0.475**
	(0.356)	(0.938)	(0.789)	(0.901)	(0.395)	(2.141)
Baseline Control Variables	Y	Y	Y	Y	Y	Y
Baseline Control Variables x Professional CEOs	Y	Y	Y	Y	Y	Y
Joint Hypothesis: $\gamma - \delta = 0$	0.030	0.003	0.021	0.039	0.003	0.037
Firm FE	Y	Y	Y	N	Y	N
Industry FE	N	N	N	Y	N	Y
Year FE	N	N	N	Y	N	Y
Industry-Year FE	Y	Y	Y	N	Y	N
Observations	21,806	20,900	4,011	5,634	24,367	639
R-squared	0.755	0.250	0.499	0.035	0.263	0.329

Panel C: Excluding Firms Experiencing CEO Turnover around IDD Adoption and Non-enforceability of Post-employment Restrictions

Variables	Leverage$_{(t+1)}$	Net Debt Issuance$_{(t+1)}$	Number of Focused Acquisition$_{(t+1)}$	Likelihood of Being Taken Over	Leverage$_{(t+1)}$	Net Debt Issuance$_{(t+1)}$	Number of Focused Acquisition$_{(t+1)}$	Likelihood of Being Taken Over
	Excluding Firms Experiencing CEO Turnover				Non-enforceability of Post-employment Restrictions			
Models	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IDD$_{Adoption}$	0.026	0.017	-0.284**	0.024**				
	(1.584)	(1.567)	(-2.162)	(2.079)				
Professional CEOs	0.033**	0.015	-0.160	0.026***				
	(2.483)	(1.443)	(-1.184)	(4.141)				
Professional CEOs x IDD$_{Adoption}$	-0.043**	-0.031**	0.284*	-0.020**				
	(-2.314)	(-2.542)	(1.941)	(-2.287)				
IDD$_{Rescission}$					-0.019***	-0.030***	-0.050	-0.025*
					(-2.737)	(-6.495)	(-0.242)	(-1.780)
Professional CEOs					0.003	-0.003	-0.085	0.010
					(0.199)	(-0.500)	(-0.702)	(1.656)
Professional CEOs x IDD$_{Rescission}$					0.020***	0.031***	0.129	0.025**
					(3.628)	(9.257)	(0.447)	(2.554)
Baseline Control Variables	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry-Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	18,384	17,555	3,410	20,659	21,806	20,900	4,011	24,367
R-squared	0.764	0.268	0.506	0.282	0.754	0.248	0.496	0.263

Appendix

Table A1: Variable Definitions

This table provides the definition and data source for variables used in our analysis. All continuous variables are winsorized at 1% levels.

Variables	Definitions
	CEO Variables
CEO-Chair Duality	An indicator variable equal to one if the CEO is also the chair of the board and zero otherwise. Source: Execucomp
CEO Mobility	An indicator variable equal to one if the CEO leaves the focal firm and/or the focal firm continues with a new CEO. Source: Execucomp
CEO Overconfidence	An indicator variable equal to one if the CEO's vested stock options exceed 67% moneyness. Source: Execucomp
CEO Ownership	The proportion of stocks owned by the CEO of the firm. Source: Execucomp
CEO Tenure	The natural logarithm of one plus number of years the executive serves as the CEO in the firm. Source: Execucomp and hand-collected data
Exogenous Turnover	CEO turnover is exogenous if the CEO's departure was not forced and was announced at least six months before the anticipated succession date or was caused by a well-specified health problem or sudden death (Eisfeldt and Kuhnen 2013).
Family CEOs	An indicator variable equal to one if the CEO is a founding family member, but not the founder CEO of the firm. After identifying family firms in the sample, we identify the CEO who is not the founder of the firm, but a member of the founding family. Source: Family frim data from Ron Anderson's Personal Page and Hand-Collected data.
Forced Turnover	CEO turnover is identified as forced if the CEO was fired, or the corporate board or shareholders forced the CEO to resign/leave the company (Eisfeldt and Kuhnen 2013).
Professional CEOs	An indicator variable equal to one if the CEO is neither one of the founders of the firm nor the CEO of the firm at the year of incorporation and zero otherwise. Source: Hand-collected data
Retirement-Aged CEO	An indicator variable equal to one if the CEO is at least 64 years old and zero otherwise. Source: Execucomp
Specialist (Generalist) CEOs	An indicator variable equal to one if the CEO's GAI score is less than (at least equal to) the median of the GAI. Source: https://sites.google.com/site/claudiapcustodio/research
Unclassified Turnover	CEO turnover is identified as unclassified if the turnover is neither forced nor exogenous (Eisfeldt and Kuhnen 2013).
	Firm Variables
ADV	The advertising expenditure scaled by assets. Source: Compustat
Bankruptcy Risk	Measured by Altman Z-Score. Formula: (Working Capital x 1.2 + Retained Earnings x 1.4 + Operating Earnings x 3.3 + Sales x 0.999)/Total Assets + (Market Capitalization x 0.6 /Total Liabilities). Source: Compustat
CAPX	The capital expenditure scaled by assets. Source: Compustat
Cash	The total cash scaled by lagged assets. Source: Compustat

Cashflow Volatility	The Annual standard deviation of firms' quarterly ratio of cash flow to assets. Cashflow is operating income after depreciation less accruals (Gormley and Matsa 2016). Source: Compustat
Debt Covenant Violation	An indicator variable equal to one if a firm violates debt covenant (that is reported on the firm's annual and quarterly securities and exchange commission (SEC) filings) and zero otherwise (Roberts and Sufi 2009). Source: http://finance.wharton.upenn.edu/~mrrobert/styled-9/styled-11/index.html
Dividend Payer	An indicator variable equal to one if a firm pays common dividends, and zero otherwise. Source: Compustat
Firm Age	The natural logarithm of one plus firm age, which is the difference between the year of incorporation and the current fiscal year. Source: CRSP
Firm Size	The log of total sales. Source: Compustat
Concentrated Debt	An indicator variable equal to one for firms with at least 90% of long-term debt coming from a particular type of debt (convertible debt, subordinated debt, debentures, notes, capitalized lease obligations, or other long-term debt) (Colla, Ippolito, and Li 2013). Source: Compustat
High Debt Herfindahl-Hirschman Index Firm	An indicator variable equal to one for firms with above-average Debt Herfindahl-Hirschman Index (Colla et al., 2013). Source: Compustat
Leverage	The book value of long-term debt and current liabilities divided by the book value of assets. Source: Compustat
Loan Spread	The total cost of borrowing that includes fees, spreads, and the likelihood that they will have to be paid. We collect bank loan spread data from Berg, Saunders, and Steffen (2016) and exploit Chava and Roberts (2008) Dealscan-Compustat link table to merge loan spread data with our primary sample.
Market Leverage	The book value of long-term debt and current liabilities divided by the market value of assets. Source: Compustat
Market-to-Book	The market value of assets divided by the book value of assets. Source: Compustat
Net Book Leverage	The book value of long-term debt and current liabilities less cash divided by the book value of assets. Source: Compustat
Net Debt Issuance	The difference between long-term debt issuance and long-term debt reduction scaled by lagged assets (Malmendier et al., 2011). Source: Compustat
Net Equity Issuance	The difference between sales of common stocks and common stock repurchase scaled by lagged assets (Malmendier et al., 2011). Source: Compustat
Net Market Leverage	The book value of long-term debt and current liabilities less cash divided by market value of assets. Source: Compustat
Profitability	The pre-tax income divided by the book value of assets. Source: Compustat
R&D	The R&D expenditures scaled by assets. Source: Compustat
Tangibility	The book value of property, plant, and equipment divided by the book value of assets. Source: Compustat

M&A Variables	
Acquisitiveness	An indicator variable equal to one if the firm undertakes any acquisition and zero otherwise. Source: SDC Merger Acquisition Database
All Stock Deal	An indicator variable equal to one if the deal is funded entirely with stocks. Source: SDC Merger Acquisition Database
CAR [-2, +2]	Five-day (-2,2) cumulative abnormal return (in percentage points) calculated using the CRSP value-weighted market return model. Market model parameters are estimated using the return data for the period (-300, -46) (see MacKinlay 1997). Source: SDC Merger Acquisition Database and CRSP
CAR [-20, +1]	Twenty two-day (-20,1) cumulative abnormal return (in percentage points) calculated using the value-weighted market return model. Market model parameters are estimated using the return data for the period (—300, -46). Source: SDC Merger Acquisition Database and CRSP
Deal Value	An indicator equals one if the deal value is at least $50 million. Source: SDC Merger Acquisition Database
Focused Acquisitions	An acquisition is identified as focused acquisition if the acquirer and target firms belong to the same industry. Following Custódio and Metzger (2013), industries are identified using the Fama-French 12 industry classification scheme. Source: SDC Merger Acquisition Database
Friendly Deal	An indicator variable equal to one if the deal is friendly. Source: SDC Merger Acquisition Database
Mixed Deal	An indicator variable equal to one if the deal is not funded entirely with cash. Source: SDC Merger Acquisition Database
Number of All Stock Deals	The total number of acquisitions that a firm undertakes where the deals are funded entirely with stocks. Source: SDC Merger Acquisition Database
Number of Focused Acquisitions	The total number of yearly acquisitions that a firm undertakes where the target firm operates in the same Fama-French 12 industry as the acquirer firm. Source: SDC Merger Acquisition Database
Private Deal	An indicator variable equal to one if the target firm is a private firm. Source: SDC Merger Acquisition Database
Relative Size	The ratio of deal value to the acquirer's market capitalization on the eleventh trading day prior to the deal announcement. Source: SDC Merger Acquisition Database
Likelihood of Being Taken Over	An indicator variable equal to one if the firm receives a successful takeover bid, and after the deal completion, the control of the target firm is transferred to the acquirer, and the target firm discontinues its operation. Source: SDC Merger Acquisition Database
Governance Variables	
High (Low) Co-Opted Board Firms	An indicator variable equals to one if a firm's two-thirds of total directors are co-opted (Coles, Daniel, and Naveen 2014). Source: https://sites.temple.edu/lnaveen/data/
Low (High) E-Index	An indicator variable equal to one for firms with E-Index value less than (at least, equal to) 3. 'E-Index' is the entrenchment index consists of six of the governance/shareholder rights provisions, e.g., classified boards, poison pills, golden parachutes,

	supermajority voting requirements for the amendment of charters, and by-laws (Bebchuk et al., 2009). Source: ISS Governance
Low (High) Institutional Ownership	An indicator variable equal to one for firms with below (above) median institutional ownership Herfindahl-Hirschman Index. Source: Thomson Reuters Institutional (13f) Holdings
	State Variables
$IDD_{Adoption}$	An indicator variable equal to one if the focal firm is headquartered in a state whose courts recognize the IDD and zero otherwise.
$IDD_{Adoption}^{-t}$	An indicator variable equal to one if the firm is headquartered in a state that will adopt IDD in t year and zero otherwise.
$IDD_{Adoption}^{t}$	An indicator variable equal to one if the firm is headquartered in a state that adopted IDD t year ago and zero otherwise.
$IDD_{Adoption}^{t+}$	An indicator variable equal to one if the firm is headquartered in a state that adopted IDD t or more year ago and zero otherwise.
$IDD_{Rescission}$	An indicator variable equal to one if the focal firm is headquartered in a state whose courts reject the previously adopted IDD and zero otherwise.
Political Balance	The fraction of a state Congress members representing their state in the U.S. House of Representatives. Source: Klasa et al. (2018)
UTSA	An indicator variable equal to one if a firm is located in a state that has adopted the Uniform Trade Secrets Act (UTSA), and equal to zero otherwise (Guernsey et al., 2020).
State GDP Growth	The annual GDP growth rate in the state. Source: Klasa et al. (2018)
Strength of NCC	An index of the strength of NCC enforcement by state courts (Garmaise 2011).

Internet Appendix

A1. Examples of Restrictions on Mobility and Effects of IDD

In 2010, after five and half years of outstanding performance, Hewlett-Packard (HP) sued Mark Hurd, its former professional CEO and Charmain, one day after Oracle announced his appointment as the CEO of the firm. The lawsuit accused Hurd of breach of contract and threatened misappropriation of trade secrets. During Hurd's employment with HP, he executed several NDAs and NCCs. HP raised concerns since while employed by HP, Hurd had contact with HP's customers, vendors, and trade secrets. Since Hurd had access to HP's confidential information (e.g., pricing, margins, customer initiatives, allocation of resources, product development, multi-year product, business, talent planning, and strategies), his position at Oracle would give Oracle an unfair advantage in soliciting customers, utilizing vendors, and developing products. However, HP failed in its effort to enjoin Hurd in California state court, which is known as an employee-friendly state that does not recognize IDD and where NCC runs afoul of California law. Following this precedent-setting HP case, Google, another Californian tech firm did not even sue Marissa Mayer, a long-time Google executive, who had walked straight across to one of Google's fiercest rivals, Yahoo to become its new CEO.

These examples highlight that even at the presence of NCCs and NDAs, former employers may fail to successfully enjoin former executives from joining a rival if the state court does not recognize IDD. On the other hand, Motorola, based in Illinois, a state which adopted IDD in 1989, launched a successful lawsuit against its former CEO Mike Zafirovski in 2005, on the ground of Zafirovski's access to the trade secrets of Motorola, two days after Nortel announced the recruitment of Zafirovski as Nortel's new CEO. Motorola argued that Zafirovski breached a number of NCCs he had signed with Motorola and joined Motorola's 'direct competitor' Nortel. The suit tried to stop Zafirovski from working for Nortel for two years. While Nortel reimbursed Zafirovski for the $11.5 million US settlement amount, not many companies will go to such length to retain such restricted employees.

Graph A1: Geography of States Adopting and Rejecting IDD

Figure 1 highlights states where state courts adopted IDD. Figure 2 highlights states where state courts rejected previously adopted IDD.

Figure 1: IDD Adopting States

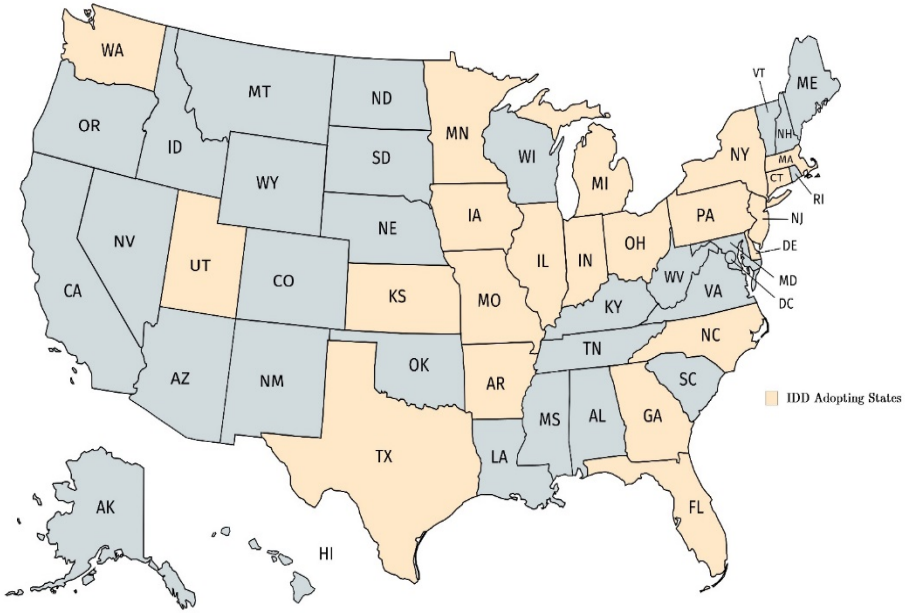

Figure 2: IDD Rejecting States

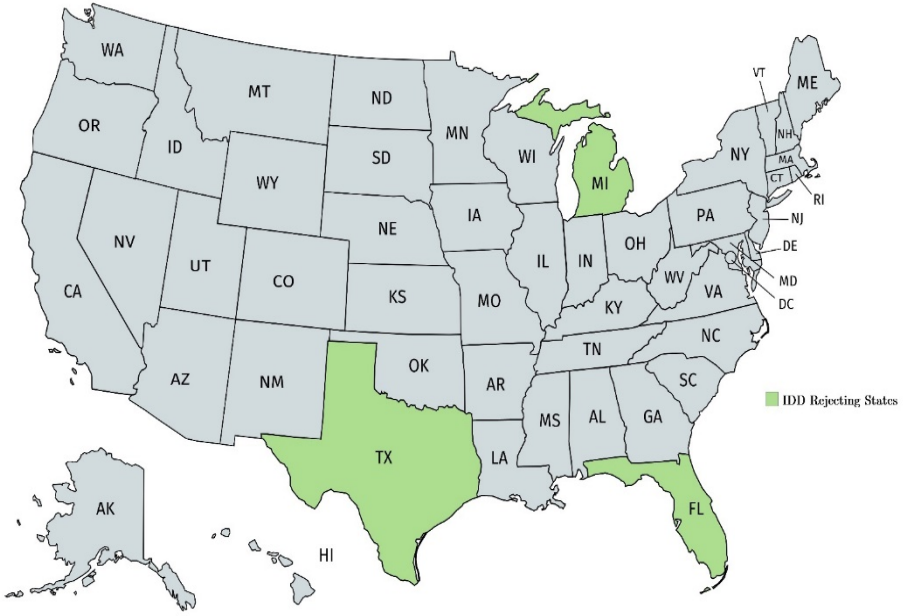

Table A2: Professional CEOs and Career Risk

Panel A: Testing Career Concerns Hypothesis of Aghion et al. (2013): Founder v. Professional CEOs

This table replicates table 1 of Aghion et al. (2013). Panel A reports the replication of main results (Table 1 of Aghion et al., 2013) controlling for "Founder CEOs". Panel B (C) reports results for founder (professional) CEO subsample. All the variables are defined in Table A1.

Full sample

Variables	ln (CITES)		CITES					
Models	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	OLS	OLS	Poisson	Poisson	Poisson	Negative binomial	Negative binomial	Negative binomial
Share of Institutions	0.006***	0.006***	0.009***	0.008***	0.007***	0.010***	0.009***	0.006***
	(3.172)	(3.052)	(3.829)	(3.577)	(3.089)	(4.654)	(4.682)	(3.688)
Ln(K/L)	0.428***	0.254***	0.449***	0.296*	0.363***	0.612***	0.335***	0.246***
	(4.592)	(3.035)	(3.250)	(1.715)	(2.895)	(5.759)	(3.832)	(3.240)
Ln(Sales)	0.580***	0.322***	0.838***	0.366***	0.219***	0.497***	0.233***	0.136***
	(15.425)	(7.094)	(18.214)	(3.134)	(3.668)	(10.263)	(3.855)	(3.271)
Ln(R&D stock)		0.339***		0.499***	0.002		0.454***	0.183***
		(8.471)		(3.437)	(0.017)		(11.558)	(6.213)
Founder CEO	0.288**	0.327***	0.311	0.334*	0.546***	0.217	0.370**	0.455***
	(2.225)	(2.815)	(1.560)	(1.776)	(3.673)	(1.113)	(2.399)	(3.727)
Fixed Effects	N	N	N	N	Y	N	N	Y
Observations	4,025	4,025	6,208	6,208	6,208	6,208	6,208	6,208

Founder CEO Subsample

Variables	ln (CITES)		CITES					
Models	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	OLS	OLS	Poisson	Poisson	Poisson	Negative binomial	Negative binomial	Negative binomial
Share of Institutions	0.005	0.005	-0.006	-0.007	-0.005	0.004	0.005	0.003
	(1.036)	(1.103)	(-1.101)	(-1.253)	(-1.135)	(0.729)	(1.182)	(0.594)
Ln(K/L)	0.777***	0.411	0.864***	0.645*	0.584**	1.047***	0.526**	0.335*
	(2.914)	(1.592)	(3.857)	(1.954)	(2.463)	(3.703)	(2.257)	(1.842)
Ln(Sales)	0.503***	0.187*	0.622***	0.420**	0.329**	0.403***	0.059	0.046
	(4.668)	(1.739)	(8.023)	(2.215)	(2.413)	(4.089)	(0.672)	(0.586)
Ln(R&D stock)		0.466***		0.249	-0.095		0.669***	0.322***
		(5.617)		(1.009)	(-0.486)		(8.605)	(4.235)
Fixed Effects	N	N	N	N	Y	N	N	Y
Observations	693	693	969	969	969	969	969	969

Professional CEO Subsample

Variables	ln (CITES)		CITES					
Models	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	OLS	OLS	Poisson	Poisson	Poisson	Negative binomial	Negative binomial	Negative binomial
Share of Institutions	0.007***	0.006***	0.012***	0.011***	0.008***	0.010***	0.009***	0.007***
	(3.223)	(2.975)	(5.967)	(5.582)	(3.451)	(4.466)	(4.566)	(4.019)
Ln(K/L)	0.365***	0.216**	0.381**	0.305	0.304*	0.559***	0.317***	0.183**
	(3.682)	(2.464)	(2.308)	(1.526)	(1.840)	(4.703)	(3.293)	(2.229)
Ln(Sales)	0.604***	0.358***	0.913***	0.422***	0.201***	0.534***	0.264***	0.153***
	(14.341)	(7.034)	(22.862)	(3.423)	(2.850)	(12.366)	(4.576)	(3.249)
Ln(R&D stock)		0.316***		0.493***	-0.008		0.429***	0.158***
		(7.132)		(3.694)	(-0.086)		(10.737)	(5.216)
Fixed Effects	N	N	N	N	Y	N	N	Y
Observations	3,332	3,332	5,239	5,239	5,239	5,239	5,239	5,239

Panel B: Features of CEO Turnover in Founder and Professional CEO Managed Firms

The following table summarizes the types of CEO turnover during 1992-2005, for which turnover data are available from Eisfeldt and Kuhnen (2013). CEO turnover type consists of exogenous turnover, forced turnover, and unclassified turnover. All variables are defined in Table A1. Panel A column 1 reports all turnovers, column 2 (3) reports CEO transition types for the "founder to professional" ("professional to professional"). Panel B includes turnovers only in IDD adopting states. column 4 includes the difference of means test for different types of CEO transition.

Panel A: Type of Turnover in All States	% of Total Turnover	% of Founder to Professional Turnover	% Professional to Professional Turnover	t-test (2) - (3)
	(1)	(2)	(3)	(4)
Exogenous Turnover	28%	31%	28%	1.133
Forced Turnover	14%	7%	15%	3.278***
Unclassified Turnover	58%	62%	57%	1.267
Panel B: Type of Departure in IDD Adopting States				
Exogenous Turnover	27%	33%	26%	1.507
Forced Turnover	15%	9%	16%	1.839*
Unclassified Turnover	58%	58%	58%	0.041

Graph A2: Professional CEOs and Adoption of IDD

The figure plots the estimates from a fully saturated panel regression model of "Professional CEO" indicators on the adoption of IDD. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. The effects of IDD adoption on professional CEOs vary from year to year. 95% confidence intervals are also plotted.

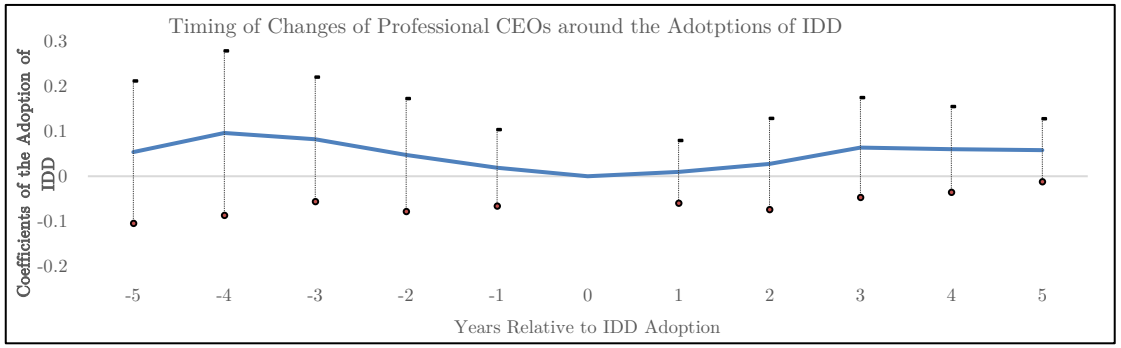

Table A3: Strict Enforceability of Post-Employment Restrictions, Risk-Related Agency Conflicts, and Cashflow Volatility

This table reports estimates from OLS regressions exploring the effect of strict enforceability of post-employment restrictions (IDD adoption) on *Cashflow Volatility*. Control variables are Firm Size, Market-to-Book, and Profitability. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variables	Cashflow Volatility					
Models	(1)	(2)	(3)	(4)	(5)	(6)
$IDD_{Adoption}$	0.005***	0.004**		0.005***	0.004**	
	(2.840)	(2.546)		(2.905)	(2.611)	
Professional CEOs	0.002*	0.003**	0.004***	0.003***	0.004***	0.005***
	(1.744)	(2.507)	(3.201)	(2.852)	(3.410)	(4.118)
Professional CEOs x $IDD_{Adoption}$	-0.003*	-0.002**	-0.004***	-0.003**	-0.002**	-0.004***
	(-1.989)	(-2.150)	(-3.172)	(-2.296)	(-2.362)	(-3.240)
Control Variables	N	N	N	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	N	N	Y	N	N
Industry-Year FE	N	Y	Y	N	Y	Y
State-Year FE	N	N	Y	N	N	Y
Joint Hypothesis: $\beta_1 + \beta_3 = 0$	0.265	0.295	N/A	0.255	0.279	N/A
Observations	21,748	21,748	21,748	21,748	21,748	21,748
R-squared	0.534	0.563	0.584	0.539	0.567	0.587

Table A4: Strict Enforceability of Post-Employment Restrictions and Financing Decisions-Parallel Trend Examination

This table reports estimates from OLS regressions exploring the pre and post-treatment trends of the net effect of strict enforceability of post-employment restrictions (IDD adoption) on a firm's financing decisions. Control variables include Firm Size, Market-to-Book, Profitability, Tangibility, Dividend Payer, CEO Overconfidence, CEO Tenure, State GDP Growth, and Political Balance. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variable	Leverage$_{(t+1)}$			
Models	(1)	(2)	(3)	(4)
$IDD_{Adoption}^{-2}$	0.023	0.021	0.023	0.020
	(1.108)	(1.091)	(1.122)	(1.022)
$IDD_{Adoption}^{-1}$	0.015	0.011	0.015	0.011
	(0.760)	(0.678)	(0.762)	(0.655)
$IDD_{Adoption}^{0}$	0.025	0.019	0.026	0.019
	(1.080)	(1.051)	(1.153)	(1.070)
$IDD_{Adoption}^{1}$	0.044*	0.045**	0.043*	0.043**
	(1.809)	(2.569)	(1.892)	(2.571)
$IDD_{Adoption}^{2}$	0.062***	0.062***	0.059***	0.059***
	(2.765)	(3.334)	(2.756)	(3.357)
$IDD_{Adoption}^{3+}$	0.039*	0.039*	0.036*	0.036*
	(1.763)	(1.786)	(1.770)	(1.756)
Professional CEOs	0.036**	0.030*	0.030*	0.027*
	(2.359)	(1.944)	(2.010)	(1.770)
Professional CEOs x $IDD_{Adoption}^{-2}$	-0.011	-0.010	-0.013	-0.012
	(-0.631)	(-0.502)	(-0.723)	(-0.602)
Professional CEOs x $IDD_{Adoption}^{-1}$	-0.008	-0.007	-0.013	-0.011
	(-0.406)	(-0.322)	(-0.619)	(-0.546)
Professional CEOs x $IDD_{Adoption}^{0}$	-0.016	-0.011	-0.020	-0.015
	(-0.737)	(-0.572)	(-0.928)	(-0.788)
Professional CEOs x $IDD_{Adoption}^{1}$	-0.040*	-0.043**	-0.040*	-0.044**
	(-1.774)	(-2.476)	(-1.901)	(-2.597)
Professional CEOs x $IDD_{Adoption}^{2}$	-0.060***	-0.061***	-0.058***	-0.060***
	(-2.895)	(-3.199)	(-2.853)	(-3.266)
Professional CEOs x $IDD_{Adoption}^{3+}$	-0.041*	-0.044**	-0.040*	-0.043**
	(-1.968)	(-2.013)	(-1.988)	(-2.100)
Baseline Control Variables	N	N	Y	Y
Firm FE	Y	Y	Y	Y
Year FE	Y	N	Y	N
Industry-Year FE	N	Y	N	Y
Observations	21,806	21,806	21,806	21,806
R-squared	0.727	0.748	0.735	0.754

Table A5: Strict Enforceability of Post-Employment Restrictions and Financing Decisions: Alternative Measures of Leverage

This table reports estimates from OLS regressions exploring the net effect of strict enforceability of post-employment restrictions (IDD adoption) on a firm's financing decisions. Control variables are Firm Size, Market-to-Book, Profitability, Tangibility, Dividend Payer, CEO Overconfidence, CEO Tenure, State GDP Growth, and Political Balance. Columns 2-10 include baseline control variables. Results remain unaltered if we do not include control variables. Our results are robust to alternative fixed effects. However, we only show results for Net Book Leverage and Net market Leverage with firm, industry-year, and state-year fixed effects. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level in columns (1)-(6) and firm-level in columns (7)-(10). *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

	Market Leverage$_{(t+1)}$			Net Book Leverage$_{(t+1)}$	Net Market Leverage$_{(t+1)}$	Leverage$_{(t+1)}$	Market Leverage$_{(t+1)}$	Net Book Leverage$_{(t+1)}$	Net Market Leverage$_{(t+1)}$
Models	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
IDD$_{Adoption}$ (β1)	0.047*	0.057**							
	(1.981)	(2.220)							
Professional CEOs	0.012*	0.008	0.012	0.031**	0.015	0.025*	0.013	0.032*	0.015
	(1.731)	(1.109)	(1.444)	(2.118)	(1.558)	(1.898)	(1.471)	(1.801)	(1.345)
Professional CEOs x IDD$_{Adoption}$ (β_3)	-0.022**	-0.022**	-0.024**	-0.040**	-0.025**	-0.032**	-0.024**	-0.040**	-0.026*
	(-2.492)	(-2.474)	(-2.575)	(-2.071)	(-2.181)	(-2.507)	(-2.289)	(-2.044)	(-1.859)
Baseline Control Variables	Y	Y	Y	Y	Y	Y	Y	Y	Y
Controls X IDD$_{Adoption}$	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	N	N	N	N	N	N	N	N
Industry-Year FE	N	Y	Y	Y	Y	Y	Y	Y	Y
State-Year FE	N	N	Y	Y	Y	Y	Y	Y	Y
Standard Errors Clustering	Headquarter State-level					Firm-level			
Joint Hypothesis: $\beta_1 + \beta_3 = 0$	0.199	0.146	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Observations	21,806	21,806	21,806	21,806	21,806	21,806	21,806	21,806	21,806
R-squared	0.748	0.775	0.786	0.830	0.805	0.766	0.786	0.830	0.805

Table A6: Distributional Properties of Treated, Non-Treated, and Control Firms in the Exogenous Turnover Analysis following the Adoption of IDD

This table compares the distributional properties of *Treated*, *Non-Treated*, and *Control* firms in the exogenous turnover analysis following the adoption of IDD. In this setup, all founder CEO firms in a particular year are part of a cohort if these firms are headquartered in states that previously have adopted IDD by that calendar year. Within a cohort, *Treated* firms are founder CEO firms where founder CEOs are exogenously replaced by professional CEOs constituting a change in "management style". *Non-Treated* firms are founder CEO firms that do not experience any CEO turnover. *Control* firms are a subset of the *Non-Treated* firms from the same cohort and by definition, from the same calendar year, and are selected as the closest match to the *Treated* firms based on firm size, and from the same Fama-French-10 industry using Abadie and Imbens (2006, 2011) matching estimator methodology. Panel A and B report the test for a difference in the means of firm characteristics across both *Treated* and *Non-Treated* firms and *Treated* and *Control* Firms. Panel C presents the distributional properties of firm characteristics across these groups. All the variables are defined in Table A1. The Kolmogorov-Smirnov test conducts the test of differences in distribution across two comparison groups. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variables	Firm Size	Market to Book	Profitability	Tangibility	Cashflow Volatility
Panel A: Medians for Treated v. Non-Treated Firms in Pre-Exogenous Turnover Period					
Treated	6.307	1.648	0.082	0.219	0.035
Non-Treated	6.160	2.006	0.094	0.188	0.032
Difference	0.147	-0.358	-0.012	0.030	0.002
Median Test p-value	0.067*	0.217	0.806	0.989	0.842
Panel B: Medians for Treated v. Control Firms in Pre-Exogenous Turnover Period					
Treated	5.739	1.347	0.037	0.219	0.035
Control	5.569	1.403	0.017	0.188	0.023
Difference	0.170	-0.056	0.020	0.030	0.011
Median Test p-value	0.274	0.804	0.785	0.568	0.411

Panel C: Distributional Differences of Firm-Characteristics between Treated v. Non-treated and Treated v. Control Firms in the Pre-Turnover period

	Treated v. Non-Treated Firms					Treated v. Control Firms				
		25th %	Median	75th %	Kolmogorov-Simonov Test *p*-value		25th %	Median	75th %	Kolmogorov-Simonov Test *p*-value
Firm Size	Treated	5.739	6.307	7.598	0.358	Treated	5.739	6.307	7.598	0.564
	Non-Treated	5.243	6.160	7.127		Control	5.569	6.287	6.919	
Market to Book	Treated	1.347	1.648	2.697	0.405	Treated	1.347	1.648	2.697	0.782
	Non-Treated	1.406	2.006	3.293		Control	1.403	1.846	2.967	
Profitability	Treated	0.037	0.082	0.151	0.601	Treated	0.037	0.082	0.151	0.782
	Non-Treated	0.043	0.094	0.166		Control	0.017	0.089	0.136	
Tangibility	Treated	0.158	0.219	0.296	0.169	Treated	0.158	0.219	0.296	0.564
	Non-Treated	0.099	0.188	0.317		Control	0.103	0.188	0.256	
Cashflow Volatility	Treated	0.018	0.035	0.062	0.800	Treated	0.018	0.035	0.062	0.220
	Non-Treated	0.020	0.032	0.063		Control	0.019	0.023	0.055	

Table A7: Strict Enforceability of Post-Employment Restrictions, Risk-Related Agency Conflicts, and Risky Investments

This table reports estimates from OLS regressions exploring the net effect of strict enforceability of post-employment restrictions (IDD adoption) on strategic investments: *R&D*, *ADV* and *CAPX*. Control variables include Firm Size, Market-to-Book, Profitability, Tangibility, Dividend Payer, CEO Overconfidence, CEO Tenure, State GDP Growth, and Political Balance. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variable			R&$_{D(t+1)}$			
Models	(1)	(2)	(3)	(4)	(5)	(6)
$IDD_{Adoption}$ (β_1)	0.008**	0.008**		0.007**	0.008**	
	(2.286)	(2.298)		(2.166)	(2.187)	
Professional CEOs	0.008*	0.008*	0.007*	0.006*	0.006*	0.006
	(1.881)	(1.929)	(1.830)	(1.678)	(1.739)	(1.641)
Professional CEOs x $IDD_{Adoption}$ (β_3)	-0.009**	-0.009**	-0.009**	-0.009**	-0.010**	-0.009**
	(-2.164)	(-2.276)	(-2.201)	(-2.217)	(-2.278)	(-2.204)
Joint Hypothesis: $\beta_1+\beta_3=0$	0.214	0.284	N/A	0.104	0.130	N/A
Observations	21,805	21,805	21,805	21,805	21,805	21,805
R-squared	0.788	0.795	0.800	0.792	0.799	0.804
Variable			ADV$_{(t+1)}$			
$IDD_{Adoption}$ (β_1)	0.002	0.002		0.002	0.002	
	(1.193)	(1.374)		(1.116)	(1.235)	
Professional CEOs	0.003***	0.001*	0.001**	0.003***	0.002**	0.002**
	(3.357)	(1.792)	(2.085)	(3.777)	(2.596)	(2.403)
Professional CEOs x $IDD_{Adoption}$ (β_3)	-0.002*	-0.002**	-0.003***	-0.002*	-0.002**	-0.003***
	(-1.832)	(-2.062)	(-3.585)	(-1.750)	(-2.043)	(-3.541)
Joint Hypothesis: $\beta_1+\beta_3=0$	0.581	0.792	N/A	0.595	0.669	N/A
Observations	21,805	21,805	21,805	21,805	21,805	21,805
R-squared	0.810	0.826	0.831	0.811	0.826	0.832
			CAPX$_{(t+1)}$			
IDDAdoption (β1)	-0.000	-0.000		0.001	0.001	
	(-0.047)	(-0.028)		(0.092)	(0.093)	
Professional CEOs	-0.008***	-0.006**	-0.004*	-0.006*	-0.004	-0.003
	(-2.765)	(-2.311)	(-1.738)	(-1.748)	(-1.595)	(-1.108)
Professional CEOs x IDDAdoption (β_3)	0.001	-0.001	-0.003	0.001	-0.001	-0.002
	(0.153)	(-0.106)	(-0.354)	(0.115)	(-0.127)	(-0.325)
Joint Hypothesis: β1+β3=0	0.554	0.692	N/A	0.309	0.849	N/A
Observations	21,971	21,971	21,971	21,971	21,971	21,971
R-squared	0.687	0.726	0.743	0.699	0.735	0.750
Baseline Control Variables	N	N	N	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	N	N	Y	N	N
Industry-Year FE	N	Y	Y	N	Y	Y
State-Year FE	N	N	Y	N	N	Y

Table A8: Strict Enforceability of Post-Employment Restrictions and Acquisitions: Parallel Trend Examination

This table reports estimates from OLS regressions exploring the pre and post-treatment trends of the net effect of strict enforceability of post-employment restrictions (IDD adoption) on acquisitions activity. Baseline control variables include Firm Size, Market-to-Book, Profitability, Cash, State GDP Growth, and Political Balance. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variables	Number of Focused Acquisition$_{(t+1)}$		Number of Stock Deals$_{(t+1)}$	
Models	(1)	(2)	(3)	(4)
$IDD_{Adoption}^{-2}$	0.017	0.090	0.178	0.033
	(0.050)	(0.180)	(0.989)	(0.158)
$IDD_{Adoption}^{-1}$	-0.108	-0.225	0.348	0.318
	(-0.344)	(-0.737)	(1.412)	(1.044)
$IDD_{Adoption}^{0}$	-0.026	-0.019	0.047	-0.015
	(-0.131)	(-0.108)	(0.338)	(-0.140)
$IDD_{Adoption}^{1}$	-0.491	-0.673***	-0.011	0.037
	(-1.584)	(-2.756)	(-0.060)	(0.207)
$IDD_{Adoption}^{2}$	-0.644***	-0.895**	-0.104	0.039
	(-3.518)	(-2.668)	(-0.614)	(0.172)
$IDD_{Adoption}^{3+}$	-0.255**	-0.316**	-0.126	-0.084
	(-2.078)	(-2.560)	(-0.989)	(-0.594)
Professional CEOs	-0.259***	-0.255***	-0.268***	-0.277***
	(-3.735)	(-2.923)	(-5.631)	(-4.915)
Professional CEOs x $IDD_{Adoption}^{-2}$	-0.006	-0.218	-0.069	0.114
	(-0.017)	(-0.388)	(-0.474)	(0.570)
Professional CEOs x $IDD_{Adoption}^{-1}$	0.250	0.208	-0.258	-0.176
	(0.686)	(0.626)	(-1.167)	(-0.621)
Professional CEOs x $IDD_{Adoption}^{0}$	0.102	-0.070	0.079	0.237**
	(0.592)	(-0.336)	(0.548)	(2.041)
Professional CEOs x $IDD_{Adoption}^{1}$	0.594**	0.661***	0.029	0.015
	(2.619)	(3.271)	(0.172)	(0.091)
Professional CEOs x $IDD_{Adoption}^{2}$	0.679***	0.806***	0.226	0.178
	(4.659)	(2.764)	(1.566)	(1.022)
Professional CEOs x $IDD_{Adoption}^{3+}$	0.405***	0.367**	0.270***	0.281**
	(3.635)	(2.530)	(2.759)	(2.345)
Baseline Control Variables	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Year FE	Y	N	Y	N
Industry-Year FE	N	Y	N	Y
Observations	4,011	4,011	4,011	4,011
R-squared	0.416	0.499	0.479	0.548

Table A9: Enforceability of Post-Employment Restrictions and Corporate Policies: Exclusion of California Firms and Family CEO firms

This table reports estimates from OLS regressions exploring the net effect of strict enforceability of post-employment restrictions (IDD adoption) on corporate policies: Leverage, Net Debt Issuance, Number of Focused Acquisitions, and Likelihood of being taken over after excluding California firms and family CEO firms. In columns 1-4, we exclude firms headquartered in California. Columns 5-8 exclude all firms with family CEO from the sample. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variables	$Leverage_{(t+1)}$	$Net\ Debt\ Issuance_{(t+1)}$	$Number\ of\ Focused\ Acquisition_{(t+1)}$	Likelihood of Being Taken Over	$Leverage_{(t+1)}$	$Net\ Debt\ Issuance_{(t+1)}$	$Number\ of\ Focused\ Acquisition_{(t+1)}$	Likelihood of Being Taken Over
	Excluding California Firms				Excluding Non-founder Family CEO Firms			
Models	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$IDD_{Adoption}$ (β_1)	0.035**	0.031***	-0.228**	0.021**	0.033***	0.026***	-0.240**	0.024***
	(2.625)	(3.747)	(-2.063)	(2.487)	(2.782)	(3.289)	(-2.701)	(2.998)
Professional CEOs	0.024	0.020**	-0.126	0.020**	0.023*	0.013	-0.220*	0.021***
	(1.331)	(2.126)	(-1.068)	(2.574)	(1.858)	(1.496)	(-1.926)	(3.776)
Professional CEOs x $IDD_{Adoption}$ (β_3)	-0.039**	-0.034***	0.239**	-0.019***	-0.036***	-0.028***	0.240**	-0.022***
	(-2.514)	(-3.740)	(2.192)	(-2.729)	(-2.692)	(-3.239)	(2.217)	(-3.472)
Baseline Control Variables	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry-Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	18,369	17,595	3,401	20,482	21,375	20,507	3,935	23,930
R-squared	0.764	0.256	0.522	0.267	0.755	0.250	0.502	0.265

Table A10: Enforceability of Post-Employment Restrictions and Corporate Policies: Inclusion of Other State-level Control Variables

This table reports estimates from OLS regressions exploring the net effect of strict enforceability of post-employment restrictions (IDD adoption) on corporate policies: Leverage, Net Debt Issuance, Number of Focused Acquisitions, and Likelihood of being taken over after including additional state, CEO and firm-level control variables. We include UTSA and Strength of NCC as additional state-level control variables. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variables	$\text{Leverage}_{(t+1)}$	$\text{Net Debt Issuance}_{(t+1)}$	$\text{Number of Focused Acquisition}_{(t+1)}$	Likelihood of Being Taken Over
		Effects of UTSA and NCC		
Models	(1)	(2)	(3)	(4)
$\text{IDD}_{\text{Adoption}}$ (β_1)	0.031***	0.025***	-0.214**	0.023***
	(2.698)	(3.076)	(-2.293)	(2.831)
Professional CEOs	0.022*	0.012	-0.194*	0.022***
	(1.768)	(1.398)	(-1.825)	(4.105)
Professional CEOs x $\text{IDD}_{\text{Adoption}}$ (β_3)	-0.038***	-0.028***	0.225**	-0.023***
	(-2.819)	(-3.368)	(2.134)	(-3.546)
UTSA	0.001	0.004	0.012	-0.002
	(0.222)	(0.675)	(0.122)	(-0.211)
Strength of NCC	-0.001	-0.004	-0.067	-0.007***
	(-0.586)	(-0.943)	(-1.087)	(-3.625)
Baseline Controls	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Industry-Year FE	Y	Y	Y	Y
Observations	21,667	20,765	3,989	24,213
R-squared	0.754	0.249	0.499	0.263

Table A11: Enforceability of Post-Employment Restrictions and *Leverage*: Cross-sectional Heterogeneities in CEO Characteristics, Firm-level Governance, and Firm Characteristics

This table explores cross-sectional heterogeneities in the net effect of strict enforceability of post-employment restrictions (IDD adoption) on firms' Leverage. Columns 1-6, we report cross-sectional heterogeneities in CEO Characteristics. Columns 7-12 report cross-sectional heterogeneities in firms' governance. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variable	$Leverage_{(t+1)}$											
	CEO Heterogeneity						Role of Governance					
Models	Specialist CEOs	Generalist CEOs	Not Retirement-Aged CEOs	Retirement-Aged CEOs	Specialist Not Retirement-Aged CEOs	Generalist Retirement-Aged CEOs	Low Institutional Ownership HHI	High Institutional Ownership HHI	High E-Index	Low E-Index	High Co-Opted Board	Low Co-Opted Board
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Professional CEOs x $IDD_{Adoption}$	-0.028**	0.011	-0.033**	0.038	-0.028*	0.059	-0.052***	-0.012	-0.065***	-0.009	-0.082*	-0.023
	(-2.365)	(0.378)	(-2.212)	(0.773)	(-1.948)	(1.166)	(-3.381)	(-0.444)	(-3.139)	(-0.618)	(-1.885)	(-1.198)
Observations	7,539	7,736	18,862	2,745	6,653	983	7,245	6,469	7,563	7,211	3,414	9,694
R-squared	0.843	0.808	0.778	0.934	0.853	0.988	0.835	0.865	0.835	0.834	0.898	0.822
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry-Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
State-Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
p-Value of difference	0.214		0.090		0.023		0.045		0.033		0.244	

Table A12: Enforceability of Post-Employment Restrictions and *R&D*: Robustness Tests

This table reports estimates from OLS regressions exploring the net effect of strict enforceability of post-employment restrictions (IDD adoption) on *R&D* investments. We re-estimate our baseline results on *R&D* after excluding firms experiencing any CEO turnover in the 7 years around the adoption of IDD (same CEO from t=-3 to t=3) (column 1), firms headquartered in California (column 2), and firms with a founding family member CEO (column 3). In columns 4-5, our cross-sectional analysis suggests that such lower *R&D* investment after IDD adoption is discernible in firms with professional CEOs who are far from retirement age (p-value difference: 0.007). The negative effect of managerial career concerns on *R&D* becomes insignificant when state courts rescind IDD (column 6). Next, our results in column 7 suggest that our evidence is robust to the inclusion of additional control variables. All the variables are defined in Table A1. Standard errors are corrected for heteroskedasticity and clustered at the headquarter state-level. *t*-statistics are in parentheses. ∗, ∗∗, and ∗∗∗ denote significance at the 10%, 5%, and 1% levels, respectively.

Variable	$R\&D_{t+1}$						
Models	Excluding CEO Turnover	Excluding California Firms	Excluding Non-founder Family CEO Firms	Not Retirement-Aged CEOs	Retirement-Aged CEOs	Rescission of IDD	Omitted Variable Bias
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$IDD_{Adoption}$	0.007*	0.004*	0.008**	0.011**	-0.002		0.008**
	(1.775)	(1.698)	(2.147)	(2.298)	(-0.347)		(2.262)
Professional CEOs	0.007**	0.001	0.006*	0.007	0.006	0.001	0.005
	(2.033)	(0.361)	(1.721)	(1.565)	(0.980)	(0.385)	(1.581)
Professional CEOs x $IDD_{Adoption}$	-0.009**	-0.005*	-0.010**	-0.013**	-0.000		-0.009**
	(-2.366)	(-1.862)	(-2.269)	(-2.351)	(-0.020)		(-2.381)
$IDD_{Rescission}$						0.001	
						(0.322)	
Professional CEOs x $IDD_{Rescission}$						-0.001	
						(-0.272)	
CEO Tenure							-0.002**
							(-2.079)
CEO Overconfidence							0.000
							(0.443)
CEO-Chair Duality							-0.000
							(-0.416)
CEO Ownership							0.007
							(0.856)
Cash							0.013**
							(2.014)
Bankruptcy Risk							-0.000***
							(-14.728)
Firm Age							0.002
							(1.029)
Cashflow Volatility							-0.042***
							(-3.157)
Baseline Firm and State-level Control Variables	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y
Industry -Year FE	Y	Y	Y	Y	Y	Y	Y
Observations	18,383	18,368	21,374	19,005	2,757	21,805	20,806
R-squared	0.796	0.851	0.798	0.794	0.914	0.799	0.798
p-Value of difference				0.099			

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