Protection of trade secrets and capital structure decisions*

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Abstract

We investigate whether a firm's capital structure decisions are affected by the risk that its competitors could gain access to its "trade secrets." Our tests exploit the staggered recognition of the Inevitable Disclosure Doctrine (IDD) by U.S. state courts as an exogenous event that increases the protection of a firm's trade secrets by preventing the firm's workers who know its trade secrets from working for a rival firm. We first show that indeed the recognition of the IDD in a firm's state lowers the risk that its rivals could obtain its trade secrets and decreases the competitive threats the firm faces. Next, we document that after the recognition of the IDD firms rebalance their capital structures and increase financial leverage, especially firms in more competitive industries, with more workers who know trade secrets, or that face a greater ex-ante risk of losing key employees to rivals. Our results imply that the risk of losing intellectual property to rivals is an important competitive threat that leads firms to choose more conservative capital structures.

Keywords: capital structure; trade secrets; intellectual property; competitive threats.

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1. Introduction

Financial economists generally agree that risks stemming from a firm's competitive environment, such as the risk of predation by rivals, can affect its capital structure decisions. Surprisingly, little is known about the relevance for capital structure choices of competitive risks that originate from a firm's inability to fully protect its intellectual property. Yet, intellectual property, which accounts for roughly one-third of the aggregate market equity value of U.S. publicly traded firms, is among the critical revenue-generating assets that determine a firm's competitive position and performance in its product market.[1]

We study how a firm's capital structure decisions are affected by the risk that its industry rivals could gain access to its intellectual property in the form of trade secrets. These secrets consist of sensitive information that a firm would not want its rivals to obtain that is not easily ascertainable by outside parties, such as detailed information regarding a firm's customers, price lists, cost information, information about future business plans (e.g., future products and services), and also formulas, practices, processes, or designs. Trade secrets are pervasive in all industry sectors and are very valuable because they provide firms with competitive advantages over their rivals. A recent survey conducted by Marsh & McLennan Companies and Liberty International Underwriters reports that firms' trade secrets are the most important form of revenue-generating intellectual property, followed by trademarks and patents.[2]

Trade secrets are protected by their secrecy but not by patents, either because they are not patentable (e.g., financial information) or because patenting them is too costly (e.g., it requires the firm to publicly reveal its confidential information). In consequence, trade secrets are an important source of risk because the divulgence of such secrets can erode a firm's competitive advantages over its rivals and cause the firm significant economic harm. Highlighting the importance and nature of this risk, a survey conducted by ASIS International, PricewaterhouseCoopers, and the U.S. Chamber of Commerce estimates that

[1] See Shapiro and Hassett (2005) for a discussion of the economic value of intellectual property in the U.S.
[2] Available at http://usa.marsh.com/NewsInsights/FeaturedContent/The2011IntellectualPropertySurveyReport.aspx.

U.S. firms lose over $50 billion annually due to the divulgence of their trade secrets. It also reports that the most frequent types of trade secrets lost to rivals are secrets related to a firm's customers, strategic plans, and financial data.[3]

We hypothesize that a firm maintains a lower debt ratio when it faces a greater risk that its rivals could harm its competitive position by gaining access to its trade secrets. Our hypothesis follows from the "deep pockets" argument advanced by Telser (1966) and further studied in Bolton and Scharfstein (1990), which suggests that a firm benefits more from having financial slack in the form of unused debt capacity when it faces greater competitive threats in its product market. Importantly, if a firm has more unused debt capacity, then upon the divulgence of its trade secrets to rivals it can more easily raise the funds it needs to avoid further harm to its competitive position and value. For instance, the firm could use these funds to react more aggressively to protect its competitive position, and also ensure that, in spite of the adverse effects resulting from the loss of its trade secrets to rivals, it can continue to fully invest in its growth opportunities and make its debt payments.

The main challenge in estimating the causal effect of a higher risk of losing trade secrets to rivals on a firm's capital structure decisions is to identify exogenous variation in this risk. To this end, we focus on a key channel through which a firm's trade secrets are divulged to rivals: the mobility of key employees with knowledge of the trade secrets. Noteworthy, existing evidence shows that the mobility of employees with knowledge of trade secrets is the main source of the risk that a firm's trade secrets will be divulged to its rivals. For example, in the survey conducted by ASIS International, PricewaterhouseCoopers, and the U.S. Chamber of Commerce noted earlier, CEOs report that former employees are the greatest source of risk associated with the loss of proprietary information. Also, Almeling et al. (2010) report that in most legal cases involving trade secrets, the misappropriator of a firm's trade secrets is one of its former employees.

Our empirical tests use a difference-in-differences approach based on the staggered adoption, and in a few cases the subsequent rejection, of the Inevitable Disclosure Doctrine

[3] Available at https://www.uschamber.com/sites/default/files/legacy/issues/technology/files/informationloss2.pdf.

(IDD) by U.S. state courts over the 1977-2011 period. As explained in Section 3, the staggered adoption (rejection) of the IDD by U.S. state courts provides exogenous variation in the protection of firms' trade secrets and allows us to estimate the causal effect of changes in the protection of a firm's trade secrets on its capital structure decisions. The IDD is a legal doctrine which states that a firm's former employee can be prevented from working for a rival firm if this would "inevitably" lead the employee to divulge the firm's trade secrets to the rival. It is applicable even if the employee did not sign a non-compete or non-disclosure agreement with the firm, there is no evidence of bad faith or actual wrongdoing, and the rival is located in another state. Hence, by increasing a firm's ability to prevent its employees who know its trade secrets from working for rivals, the adoption of the IDD reduces the firm's risk that these employees will disclose its secrets to rivals.

To measure changes in the protection of trade secrets resulting from the recognition of the IDD in a given state, we create an IDD indicator variable by relying on state-by-state analyses of case law involving trade secrets to identify the timing of changes in state courts' positions regarding the IDD. For each state, the IDD indicator equals one starting the year a state court adopts the IDD in a precedent-setting case and, if in another precedent-setting case in the same state a state court subsequently rejects the IDD, the indicator reverts to zero beginning the year it is rejected; the indicator equals zero in all other years. Our identification relies on 16 adoptions of the IDD and three rejections that reversed prior adoptions. For simplicity, throughout the paper we refer to the impact of changes in the IDD indicator on the dependent variables in our tests as the impact of the "recognition" of the IDD on these variables.

We first report evidence that suggests the recognition of the IDD provides important protection for the trade secrets of firms located in recognizing states and consequently reduces the competitive threats these firms face, ultimately boosting their performance in their product markets. Specifically, we show that the recognition of the IDD markedly lowers the mobility to rival firms of workers who are likely to know their firm's trade secrets, that firms in recognizing states experience positive abnormal stock returns over the

days surrounding a state court's decision to recognize the IDD, and that the recognition of the IDD leads to market share gains for firms in recognizing states.

The paper's key result is that, on average, the recognition of the IDD leads to an economically significant increase of approximately 5.6% in the book and market leverage ratios of firms headquartered in affected states.[4] This finding holds after the inclusion of standard controls used in capital structure tests, controls for the economic and political conditions prevailing in a state, as well as firm and year fixed effects that control for time-invariant firm-level factors and for secular trends in financial leverage. We also find that firms increase both net debt issues and net stock repurchases after the recognition of the IDD, suggesting that they actively rebalance their capital structures to increase their financial leverage.[5] We further distinguish between the 16 adoptions of the IDD and the three cases in which state courts rejected the IDD after adopting it in prior years. We find that firms increase their leverage following the adoption of the IDD in their state and decrease it following the rejection of the previously adopted IDD by a similar amount. We also show that the increases (decreases) in financial leverage occur after the adoption (rejection) of the IDD, but not before. Overall, these results suggest that a lower (higher) risk of losing trade secrets to rivals leads firms to rebalance their capital structures and increase (decrease) their financial leverage, and that the effect is indeed causal.

To further increase confidence in our interpretation of these results, we next study the cross-sectional variation in the impact of the recognition of the IDD on capital structure. First, firms in more competitive industries typically have lower operating margins and survival rates. Consequently, they are likely to benefit more from having unused debt capacity to endure the adversity resulting from the divulgence of their trade secrets to

[4] The applicability of the IDD is typically determined by the state where the employee works, and we assume that most workers who know a firm's trade secrets work in the firm's state of headquarters. In Section 5.10, we show that our results are not affected by potential measurement error resulting from changes in a firm's state of headquarters or the possibility that some firms might employ a significant number of workers with access to their trade secrets outside their state of headquarters.

[5] In Section 5.7, we report that the recognition of the IDD does not affect capital expenditures, acquisition activity, R&D expenses, or advertising expenses. Hence, the changes in leverage we document are unlikely to be due to an increase in the marginal benefit of investment that raises firms' demand for external financing.

rivals. Thus, the recognition of the IDD should have a stronger impact on the capital structure decisions of firms in more competitive industries. Using industry concentration ratios and barriers to entry in an industry to proxy for the intensity of competition in the industry, we find evidence consistent with this prediction.

Second, workers in managerial occupations and more educated workers have a higher likelihood of knowing their firm's trade secrets. Hence, firms that employ a larger fraction of these workers are more exposed to the risk that their rivals could gain access to their trade secrets by poaching some of their employees, and would therefore benefit more from having unused debt capacity. This implies that the recognition of the IDD should have a larger effect on the capital structures of firms that employ more of these workers. Supporting this prediction, we document that the effect of the IDD on leverage is most prevalent when a firm operates in an industry that employs a larger fraction of workers in managerial occupations or with at least a bachelor's degree.

Third, unused debt capacity should be more valuable for firms that face a greater ex-ante risk that their workers will join rival firms, and thus the recognition of the IDD should have a larger impact on the capital structure choices of these firms. This ex-ante risk is smaller for firms with defined benefit pension plans as the benefits from these plans are less portable and induce workers to remain with the firm. In contrast, this ex-ante risk is greater if a firm faces geographically close rivals that are large employers compared to the firm, because the firm's workers can then more easily find employment at a rival firm that is close to their current job and hence have a smaller cost of switching employers. Consistent with expectations, we find that the positive impact of the recognition of the IDD on a firm's debt ratio is strongest if the firm does not have a defined benefit pension plan or the firm faces rivals in its state who employ a large number of workers relative to it.

Finally, we document that credit markets price the risk that a firm could lose its trade secrets to its rivals into the firm's cost of debt. This provides further support to our interpretation of our results that the recognition of the IDD in a firm's state leads the firm to raise its financial leverage because the associated increase in the protection of its trade

secrets reduces the competitive threats the firm faces in its product market. Specifically, we find that the recognition of the IDD in a firm's state decreases the credit spreads it pays on its bank loans by 5.7%. Further, we show that credit spreads decrease following the adoption of the IDD and increase following rejections to a similar degree, and that these effects occur only after state courts change their views on the IDD.

Our paper is closely related to prior work showing that competitive threats resulting from the ability of financially strong firms to prey on financially weak firms shape financial policies (e.g., Phillips (1995), Chevalier (1995), Khanna and Tice (2000, 2005), Campello (2003, 2006), MacKay and Phillips (2005), Lyandres (2006), Haushalter, Klasa, and Maxwell (2007), Frésard (2010), Valta (2012), and Hoberg, Phillips, and Prabhala (2014)). Our main contribution is to highlight that losing intellectual property in the form of trade secrets to rivals is a major competitive threat for many firms and that this threat affects their capital structure decisions. As such, our paper also contributes more broadly by increasing the understanding of capital structure choices (see Leary and Roberts (2005) and Lemmon, Roberts, and Zender (2008) for recent papers and Harris and Raviv (1991) and Frank and Goyal (2007) for comprehensive surveys of the literature).

Our paper is also related to recent work that shows how frictions emanating from labor markets affect capital structure decisions (e.g., Matsa (2010), Agrawal and Matsa (2013), and Simintzi, Vig, and Volpin (2015)). These studies show that financial leverage can depend on strategic issues that arise in bargaining with labor unions, employee unemployment risk and the rigidity of labor costs. Although our focus – the protection of trade secrets – is different, our work is related to these studies because the recognition of the IDD increases the protection of a firm's trade secrets by reducing the mobility of the firm's key workers to rival firms. Since workers with knowledge of trade secrets do not typically account for a large fraction of a firm's total labor costs, their mobility is unlikely to affect capital structure solely through the labor-related mechanisms outlined above. Still, our evidence suggests that the mobility of such workers can impact a firm's capital structure by affecting the protection of its trade secrets.

The rest of the paper is organized as follows. Section 2 discusses our conceptual framework and develops our empirical predictions. Section 3 discusses the legal environment surrounding the IDD and how we identify the recognition of the IDD by state courts. Section 4 describes our data and empirical methodology. Section 5 reports our empirical results. Section 6 concludes.

2. Conceptual framework and development of empirical predictions

The theoretical literature on the interaction between capital structure decisions and product market competition highlights the importance of having "deep pockets". The deep pockets argument, which was first made in Telser (1966) and later formalized in Bolton and Scharfstein (1990), is that firms with a large debt load and little unused debt capacity will find it difficult to raise the additional capital they need to protect their competitive positions in response to various kinds of opportunistic behavior by their industry rivals. Thus, such firms are more vulnerable to attempts by their rivals to hurt their businesses.

Consistent with the notion that when a firm does not have deep pockets this curtails its ability to successfully compete in its product market, Zingales (1998) shows that subsequent to the deregulation of the trucking industry and the resulting intensification of competition in this industry that more leveraged trucking firms were more likely to be driven out of business. Likewise, Campello (2003) documents that during recessions the market shares of more leveraged firms shrink, while Khanna and Tice (2005) find that highly leveraged incumbent discount department stores were unable to aggressively respond to the entry of Walmart into their markets.

Prior empirical work further shows that when deciding on their financial policies firms take into account the competitive threats they face. For instance, Mackay and Phillips (2005) find that a firm's capital structure decisions are a function of the intensity of competition in its industry, the extent to which strategic interactions in its industry are strong, and whether the firm is an incumbent or an entrant. Haushalter, Klasa, and Maxwell (2007) document that when a firm's investment opportunities are more

interdependent with those of its rivals, the firm is more likely to both hold large cash reserves and use derivatives so it can reduce the risk it would underinvest during industry or market-wide downturns. Finally, Hoberg, Phillips and Prabhala (2014) show that the extent to which a firm faces important product market threats (measured with product fluidity) also impacts its dividend and share repurchasing decisions.

Our paper's main insight is that a key competitive threat a firm faces that affects its capital structure decisions is the risk that its industry rivals could obtain its intellectual property in the form of trade secrets and in doing so hurt its competitive position. As discussed in our introduction, trade secrets are pervasive in industrial activity and are the most important form of revenue-generating intellectual property. Also, as discussed earlier, trade secrets most commonly lost to rivals are related to customers, strategic plans, and financial data, and the loss of these secrets to rivals often leads to a significant erosion of a firm's competitive advantages and causes the firm important economic harm. Hence, the risk of losing trade secrets to rivals is economically relevant for most firms.

The discussion above suggests that higher financial leverage hampers a firm's ability to rapidly take actions to protect its competitive position if its trade secrets are divulged to rivals and that a firm will take such competitive threats into account when deciding on its capital structure. This leads to our main hypothesis that because when a firm faces a greater risk that its rivals could gain access to its trade secrets this reduces the net benefits of debt financing, a firm maintains a lower debt ratio when this risk is greater. Hence, the empirical prediction we take to the data is that a firm raises (lowers) its financial leverage when the risk that its rivals could obtain its trade secrets decreases (increases). The next section discusses our empirical approach to measuring exogenous changes in this risk.

3. The inevitable disclosure doctrine

3.1. Legal background

The legal protection of trade secrets is largely governed by state law. The IDD can be traced back at least to 1919, when it was recognized by the state of New York (see *Eastman*

Kodak Co. v. Powers Film Prod., 189 A.D. 556 (N.Y.A.D. 1919)), and it has developed more recently in the broader context of trade secrets law. Trade secrets law developed as common law, and it did not follow universally applicable principles until 1979. In that year, the Uniform Trade Secrets Act (UTSA) codified the existing common law and sought to promote uniformity of the legal treatment of these cases across states (the Act was amended in 1985 with some clarifications). States were recommended but not required to comply with the UTSA. However, since the issuance of the UTSA, 47 states and the District of Columbia have adopted laws based on its main principles, but at different points in time. North Carolina and New York have not yet enacted laws based on the UTSA, and Massachusetts will reconsider such laws in the 2015 legislative session. Thus, these three states continue to rely only on case law when considering the legal protection of trade secrets.

It is important to note that the recognition of the IDD by a state's court and the state's adoption of laws based on the UTSA are related but different legal events. A state's adoption of the UTSA is not a prerequisite for courts in that state to recognize the IDD. In fact, in several states courts have recognized the IDD well before the state's legislature adopted the UTSA and even if the state's legislature never subsequently adopted the UTSA.[6] Conversely, the adoption of the UTSA in a state does not necessarily imply that courts in the state will subsequently recognize the IDD. This is evident since to date most states have adopted the UTSA but courts in much fewer states have recognized the IDD.[7]

We now discuss the IDD in the context of trade secret law and rely on the definitions codified by the UTSA for clarity. A trade secret is any information that (i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy. Misappropriation occurs when the trade secret is

[6] These are Delaware, Florida, Massachusetts, Michigan, New Jersey, New York, North Carolina, Pennsylvania, and Texas).

[7] We note that in Section 5.6, we report that the recognition of the IDD by state courts significantly affects firms' capital structures but the states' adoption of the UTSA does not.

acquired by (i) improper means (e.g., theft or breach of a duty to maintain secrecy) or (ii) disclosure without express or implied consent by a person who acquired the trade secret under circumstances giving rise to a duty to maintain its secrecy or limit its use.

The legal term "threatened misappropriation" is key to understanding the applicability of the IDD, because trade secrets law allows courts to provide injunctive relief for "actual or threatened misappropriation" of trade secrets. Specifically, the issue of threatened misappropriation occurs when an employee who has acquired knowledge of a firm's trade secrets goes to work for a direct competitor in a similar position. The IDD is a legal doctrine based on a strong interpretation of the legal concept of threatened misappropriation which does not immediately follow from the general principles in trade secrets law (e.g., as codified in the UTSA). It maintains that, if the new employment would *inevitably* lead to the disclosure of the firm's trade secrets to a competitor and cause the firm irreparable harm, then upon the firm's request state courts can prevent the employee from working for the firm's competitor or can allow it but limit the responsibilities the worker can undertake.

The adoption of the IDD by state courts enhances the protection of trade secrets for firms located in the state by reducing the risk that departing employees will reveal a firm's trade secrets to rivals (in any state). Under the IDD, a firm's suit can rest on the mere *threat* of irreparable harm. To obtain an injunction, the firm must only establish that (i) the employee had access to its trade secrets, (ii) the employee's duties at the new employer would be so similar to those she had at the firm that in performing them she will inevitably use or disclose the trade secrets, and (iii) the disclosure of the trade secrets would produce irreparable economic harm to its business. However, the firm need not establish actual wrongdoing by the employee (disclosure, misappropriation, or bad faith) or disclose the actual details of the underlying trade secrets in the lawsuit. Noteworthy, lawsuits related to employment contracts are filed in the context of employment law, and thus the relevant jurisdiction for a lawsuit seeking to protect a firm's trade secrets when employees switch employers is typically the state where the former employee worked (e.g., Malsberger (2004)

and Garmaise (2011)). As a result, the IDD protects a firm's trade secrets even if the new employer of a firm's former worker is in a state whose courts have not adopted the IDD.

The duration of the court injunction preventing a firm's former employee from working for a rival firm depends on the nature of the trade secrets involved as well as on the particular circumstances of the case. For instance, if the trade secret consists of details about a new product a firm is planning to launch, the injunction would typically last until the firm brings the product to market. Alternatively, if the trade secret consists of a unique proprietary production process that rivals are unlikely to be able to replicate on their own in the near future, then the injunction could last for a longer period of time.

Employment contracts often contain a non-disclosure agreement (NDA) and/or a covenant not to compete (CNC). By signing an NDA the employee agrees not to use or disseminate the firm's confidential information. Under a CNC the employee agrees not to enter into or start a similar trade in competition with the firm. Both clauses are designed to protect the firm's trade secrets in cases in which employees wish to switch jobs or start competing firms. With these agreements in place, it can be easier for the firm to seek injunctive relief as it can bolster its suit by including a claim of breach of contract.

However, the protection offered by NDAs is somewhat limited, since violations must be detected and proved before the firm can initiate any legal action against the employee. Also, even if the firm is able to detect that a former employee has disclosed its trade secrets to a rival, by that time the (potentially irreparable) harm has already been done.

As noted by Garmaise (2011), CNCs are most effective when workers seek to switch jobs within a state. On the other hand, CNCs are much less effective when workers try to switch to a new job in another state because courts usually only enforce CNCs when there are "reasonable" limitations as to the geographical area in which a firm's employee may not compete. The scope of enforceable CNCs is often a state or a part of a state, e.g., a county, or city, or 10 or 50 mile radius around the place of business (Malsberger (2004)).

The IDD arguably provides significant additional protection of a firm's trade secrets even in cases in which the firm's employees sign NDAs and CNCs. First, it does not entail

specific geographic restrictions and thus it can often be more far reaching than CNCs. Second, it increases the enforceability of NDAs and CNCs. For instance, the IDD allows courts to prohibit an individual's employment at a rival firm if this would inevitably lead to a future violation of an NDA (i.e., before the irreparable harm occurs). This is important because detecting and proving (ex-post) violations of an NDA is difficult and can take a significant amount of time. The IDD is also a powerful means of establishing a key element in any legal action to enforce a CNC, namely, that there is a significant likelihood of irreparable harm to the firm if the employee is allowed to work for the rival. Finally, we note that the IDD allows courts to grant an injunction even if the former employee did not sign an NDA or CNC with the former employer, i.e., solely on the basis that disclosure of the trade secrets is inevitable.

3.2. Examples of the application of the IDD

We now discuss two legal cases involving trade secrets in which state courts applied the IDD. In the first case the IDD was used to enforce a CNC. In the second case the IDD was used to protect trade secrets when a CNC did not exist. The complete court rulings are available from Google Scholar.

3.2.1. Procter & Gamble Co. v. Stoneham, 747 N.E.2d 268 (Ohio Ct. App. 2000)

Stoneham was in charge of international marketing at the Haircare Division of Procter & Gamble (P&G) and knew confidential information about its global business goals and strategies (e.g., market research, financial data, new products, and technological developments). He had signed a CNC with P&G, but he accepted a job offer to work for Alberto-Culver (AC), who competed with P&G in the market for haircare products, to run AC International. P&G then sued Stoneham for breach of his CNC, alleging that his employment at AC would pose an immediate threat that P&G's trade secrets would be disclosed to AC. Reversing a prior decision, the Court of Appeals of Ohio enforced the CNC and prohibited Stoneham from working at AC's haircare department for three years.

The Court stated that the CNC was reasonable and invoked the IDD to establish the existence of a threat of irreparable harm warranting injunctive relief, noting that Stoneham knew P&G's trade secrets, AC was P&G's competitor, and his job at AC would be similar to his prior job at P&G. The ruling also highlighted how the harm was likely to take place. First, the evidence indicated that after joining AC Stoneham would use his knowledge of P&G's trade secrets to increase AC's competition with P&G on the same line of products he was responsible for while employed at P&G. Second, the testimonies of P&G's managers indicated that AC could use Stoneham's knowledge to obtain a financial advantage, exploit any weakness of P&G's products, easily replicate its pipeline of products without any research or testing, or pre-empt P&G's entry into the market for new products.

3.2.2. Air Products & Chemical Inc. v. Johnson, 442 A.2d 1114 (Pa. Super. Ct. 1982)

Air Products & Chemical (APC) and Liquid Air Corporation (LAC) were large manufacturers and distributors of industrial gases. Johnson was in charge of APC's on-site gas delivery business and knew confidential information, such as technical data on the methods of delivery, the status of negotiations with customers, marketing strategies, and market opportunities. He had not signed a CNC with APC and took a job at LAC that involved all of its industrial gas operations, including on-site delivery. APC feared that Johnson might disclose its trade secrets to LAC and filed a lawsuit seeking an injunction to prevent Johnson from working at LAC for two years. The Superior Court of Pennsylvania affirmed a prior injunction issued by a trial court that prohibited Johnson from working in LAC's on-site operations and from disclosing APC's trade secrets.

In establishing a threat of irreparable harm and thus the need of injunctive relief, the trial court concluded that Johnson did know APC's trade secrets and that "It would be impossible [for Johnson] to perform his managerial functions in on-site work without drawing on the knowledge he possesses of Air Product's confidential information." The ruling also discussed how the harm was likely to occur. First, it noted that knowledge of APC's plans for pipeline delivery of gases in the domestic market could allow a competitor

to thwart APC' plans or to compete without the burden of testing and market analysis born by APC. Second, it noted that Johnson knew APC's costs and pricing methods and in some cases its capital investment, which would be of great interest and benefit to a competitor.

3.3. Adoption and Rejection of the Inevitable Disclosure Doctrine by State Courts

Our identification strategy requires that we identify the dates of changes in U.S. state courts' positions regarding the IDD over time. Specifically, it necessitates that we find all precedent-setting cases involving trade secrets in which state courts' adopt the IDD as well as any subsequent cases in which they reverse their position and explicitly reject it.

To this end, we create a list of the main legal cases addressing the IDD in each state based on historical accounts in prior legal studies that discuss the IDD for most states. These studies include Kahnke, Bundy, and Liebman (2008) and Waldref (2012) (studies by legal experts at law firms), Wiesner (2012) (an article published in a law review), and Malsberger (2011) (a book surveying trade secrets law in U.S. states).

Using this list of main cases as the starting point, we first obtain and read the entire court rulings of these cases. Next, we identify the precedent-setting case *adopting* the IDD as the earliest case in which the court's decision clearly (i) acknowledges that the IDD can be used to prevent a firm's former employee from working at a rival firm[8] and (ii) does not justify the use of the IDD by referring to an earlier case in the same state that used the IDD. To identify the precedent-setting cases *rejecting* the IDD in a state that had previously adopted it, we carefully examine the legal cases that the studies above flag as reversals of courts' prior adoptions of the IDD and confirm that (i) the IDD was indeed rejected in these cases and (ii) the case decision entails the first rejection of the IDD in the state.

For all but one state, the precedent-setting cases we identify using the above procedure come from the original list. In the case of Massachusetts, we find that the earliest case recognizing the applicability of the IDD contained in our initial list (*Marcam Corp. v.*

[8] Some of the cases do not explicitly refer to the "Inevitable Disclosure Doctrine", but as in prior legal work we interpret them as adoptions of the IDD because the rulings are based on identical principles. We also note that in some of the cases the court rulings explicitly recognized the general applicability of the IDD but did not use it due to special circumstances (e.g., the plaintiff failed to establish the existence of a trade secret).

Orchard, 885 F. Supp. 294 (D. Mass. 1995)), in fact, clearly refers to a ruling the year before (*Bard v. Intoccia,* 1994 U.S. Dist. LEXIS 15368 (D. Mass. 1994)) in which a Massachusetts' court invoked the IDD to sustain a similar injunction. Our examination of the earlier case shows that it satisfies conditions (i) and (ii) for the identification of adoptions, and thus we choose this case as the precedent-setting case adopting the IDD in Massachusetts.

Table 1 lists the 21 precedent-setting cases in which state courts adopt the IDD and the three cases in which state courts subsequently reject the IDD. The events span a significant number of years. The earliest adoption was in New York in 1919, followed by three adoptions in the 1960's, one in the 1970's, four in the 1980's, nine in the 1990's, and three in the 2000's, with the latest adoption in Kansas in 2006. Three states (Florida in 2001, Michigan in 2002, and Texas in 2003) reject the IDD after recognizing it in prior years.

3.4. Construction of the IDD indicator

A precedent-setting case recognizing the IDD becomes case law, and courts in the state will subsequently follow its ruling on the applicability of the IDD in protecting firms' trade secrets. Likewise, if a subsequent court ruling rejects the IDD, courts in the state will follow its ruling for whether the IDD is applicable in protecting firms' trade secrets. Hence, we use the dates of the precedent-setting cases to construct our indicator variable for whether state courts are likely to protect firms' trade secrets by invoking the IDD in any given year. To this end, we assume that these cases change courts' positions regarding the IDD – and thus the legal protection of firms' trade secrets – in the year they are decided. Specifically, for the 21 states whose courts adopted the IDD, we set the IDD indicator equal to zero in all years preceding the date of the precedent-setting case, and equal to one afterwards. We allow the value of the IDD indicator to revert to zero in the three cases in which a subsequent court decision reverses the state's position regarding the IDD and explicitly rejects the IDD. For the 29 states whose case law did not explicitly consider or considered but rejected IDD, we set the IDD indicator equal to zero in every year.

3.5. Exogeneity of changes in state courts' positions regarding the IDD

Changes in state courts' positions regarding the IDD over time provide an arguably exogenous source of variation in the protection of firms' trade secrets in the context of our capital structure tests. Put differently, for the reasons explained below, changes in capital structure following the adoption or rejection of the IDD are likely to be unintended consequences of these changes in the legal protection of a firm's trade secrets.

First, in changing their views on the applicability of the IDD, state courts do not directly aim to affect firms' capital structure choices. Instead, the judicial decisions in the precedent-setting cases involving the IDD are mainly aimed at striking a balance between employers' interests in protecting their trade secrets and public policy concerns related to employee mobility and freedom of employment (see Godfrey (2004) and Harris (2000)).

Second, we note that our natural experiment is not based on state laws whose passage could be influenced by the lobbying of affected parties with clout in the state, such as organizations representing workers or companies. Instead, the experiment is based on judicial decisions that are typically driven by only the merits of the specific case. The reason is that the judges serving in state courts are deemed to be independent of both the state and federal government, and thus largely immune to political pressure.[9]

Third, changes in state courts' position regarding the IDD are unlikely to be anticipated by corporations. In the context of state courts' decisions on legal cases related to the protection of trade secrets, a court's issuance of a new precedent is typically an idiosyncratic function of the particular case and the disposition of the justices. As a result, the timing of changes to case law in the state should be for the most part unanticipated.

4. Sample selection and methodology

4.1. Sample selection

Our sample consists of all industrial firms in the merged CRSP-Compustat database

[9] To deal with residual endogeneity concerns, our tests include proxies for a state's political climate and economic situation. This further decreases the likelihood that our results are driven by a correlation of these factors with both changes in courts' positions regarding the IDD and changes in firms' capital structures (see Section 5.2).

(excluding utilities and financials) that are incorporated and headquartered in the U.S. and for which we are able to construct the variables required in our main capital structure tests. The sample period is 1977-2011, and it starts five years before Pennsylvania adopted the IDD in 1982 and ends five years after Kansas adopted the IDD in 2006.[10] During our sample period, courts in 16 states adopt the IDD and courts in three states reject the IDD they had adopted in prior years. Our sample period excludes the events associated with the adoption of the IDD by a few states in earlier years because the coverage of earlier years in Compustat is sparser, especially in the 1960's when Delaware, Florida, and Michigan adopted the IDD (the data does not go back to 1919, when New York adopted the IDD). Hence, earlier recognition events do not affect a significant number of firms and have little power for identification.[11] The final sample contains 134,428 firm-year observations.

4.2. Discussion of our difference-in-differences methodology

We use a difference-in-differences approach to examine how the recognition of the IDD by state courts affects the financial leverage of firms headquartered in those states. As noted in Section 3.1, the IDD applies in the context of employment law, so the relevant jurisdiction is typically the state where the employee works (and not the firm's state of incorporation). Firms often operate and thus employ workers in several different states, but data restrictions allow us to only identify a firm's state of headquarters. Nevertheless, within our conceptual framework, only the employment location of workers with access to trade secrets matters for capital structure decisions. Hence, our tests assume that workers with access to the trade secrets of publicly traded firms are higher-level employees who are employed for the most part at firms' headquarters (see Section 5.10 for robustness tests).

For our main specification, we estimate the following pooled OLS regression model:

$$Leverage_{ist} = \alpha\ Inevitable\ Disclosure_{st} + X_{ist}\beta + \omega_i + \mu_t + \varepsilon_{ist}\,, \tag{1}$$

[10] Including up to five years of data preceding the first event and following the last event helps in properly identifying the capital structure changes associated with these events.

[11] Our results are similar if we extend the sample back to 1971 and include the recognition of the IDD in North Carolina in 1976, which affects only 38 firms in that state and occurred before the issuance of the UTSA.

where i denotes firm i, s denotes the state of a firm's headquarters, and t denotes year. *Leverage* is a measure of financial leverage, *Inevitable Disclosure* is a binary indicator for whether courts recognized the IDD in the firm's state of headquarters by year t, X is a vector of control variables, ω_i is a firm fixed effect, and μ_t is a year fixed effect. The firm fixed effects control for time-invariant omitted firm characteristics and ensure that the estimates of α reflect actual changes in the inevitable disclosure indicator and financial leverage over time rather than simple cross-sectional correlations. The year fixed effects account for changes in economy-wide factors, such as macroeconomic conditions, that could possibly affect both financial leverage and state courts' decisions to recognize the IDD.

The coefficient α is the difference-in-differences estimate that gauges the effect of the IDD on firms' capital structures. Intuitively, α captures the change in the leverage of firms in adopting or rejecting states in excess of the contemporaneous change in the leverage of firms in unaffected states. We note that an advantage of our identification strategy is that the staggered adoptions (rejections) of the IDD over time can allow a firm in a given state to belong to both the "treatment" and "control" groups at different points in time. The estimated standard errors in all our regressions are clustered at the state of headquarters level, which assumes that observations are independent across states but not necessarily independent within states. This is appropriate because *Inevitable Disclosure* is a state-level variable and thus the regression errors may be correlated within state groupings. In addition to accounting for heteroskedasticity, clustering at the state level addresses the concerns that the residuals may be (i) serially correlated within a firm and (ii) correlated across firms within the same state (in the same or different periods of time). Hence, this clustering method accounts for the fact that firms headquartered in the same state are all simultaneously affected by the same shock (the recognition of the IDD by a state court) and for any serial correlation induced by the small time-series variation in the IDD indicator. See Bertrand, Duflo, and Mullainathan (2004) for a discussion of these issues in the context of difference-in-differences estimation.

5. Results

5.1. Recognition of the IDD and competitive threats

We first report evidence on whether the recognition of the IDD in a firm's state results in an important increase in the protection of its trade secrets and thus a significant reduction in the competitive threats the firm faces. To do so, we investigate (i) whether the recognition of the IDD in a state affects the mobility to rival firms of workers who are likely to know their employers' trade secrets, (ii) whether a state court's decision to recognize the IDD is associated with abnormal stock returns for firms in recognizing states, and (ii) whether the recognition of the IDD affects the product market performance of firms in recognizing states. The results discussed in detail below suggest that the recognition of the IDD in a firm's state implies a substantial increase in the protection of its trade secrets.

5.1.1. The recognition of the IDD and the mobility of workers who know trade secrets

We argue that the recognition of the IDD in a firm's state increases the protection of its trade secrets as it reduces the mobility of its workers who know its secrets to rival firms. We empirically examine if the recognition of the IDD affects the mobility of such workers to rival firms using data from the Survey of Income and Participation Program (SIPP).

The U.S. Census Bureau's SIPP is a nationally representative sample of individuals interviewed over 8-16 consecutive periods that are in most cases four months apart. For each survey period, the data contains an identifier for a worker's employer, the employer's 3-digit Census Industry Classification (CIC) industry, and the Integrated Public Use Microdata Series (IPUMS) code describing the worker's occupation. We focus on individuals who are 18+ years old and are employed in "management and related occupations", i.e., in occupations that typically entail knowledge of an employer's trade secrets. We exclude individuals observed in only one survey period and those employed in the financial and utility industries. We identify individuals who left their firms to work for rival (non-rival) firms as those who switched between employers in the same (different) three-digit CIC code from the prior to the current survey period.

Models 1 and 2 of Table 2 report the results from Linear Probability Models in which the dependent variable equals one if an individual becomes employed at a rival of her former employer, and zero otherwise. The sample includes individuals that become employed at rival firms and those that do not switch employers, a total of 26,513 individuals and 129,688 observations over the 1983-2011 period. The key independent variable of interest is *Inevitable Disclosure*, which equals one if the individual is employed in a state that recognizes the IDD, and zero otherwise. We include individual fixed effects in our models to control for time-invariant characteristics of an individual that could affect her mobility, e.g., ability, gender, or ethnicity. Because the data is at the monthly frequency, we also include year-month fixed effects to control for changes in economy wide factors that could coincide with labor mobility or state courts' decisions regarding the IDD. We also include dummy variables for the number of months between the two interviews we use to detect job switches.[12] Finally, in the second model of Table 2, we also control for an individual's average income during a month and average hours worked per week during the prior interview period (in logs) using *Log(Income)* and *Log(Hours)*, as they could be correlated with her knowledge of the firm's trade secrets and also with the likelihood she would seek to change employers. The standard errors in our models are clustered by state. Table A1 in the internet appendix reports summary statistics for the dependent and independent variables used in the Table 2 models, as well as the other models in the paper.

For both the first and second models in Table 2, the results of our difference-in-differences estimations show that the recognition of the IDD in the state where an individual in a management and related occupation is employed leads to a statistically significant reduction in her mobility to rivals firms. This result is economically important. The estimated coefficient on *Inevitable Disclosure* indicates that the recognition of the IDD

[12] In the vast majority of cases the time interval between the two interviews we use to detect an individual's job switches is four months, but in some cases it is shorter or longer. The inclusion of these dummies for the number of months between surveys avoids any mechanical effects on the likelihood of switching jobs this might have (e.g., an individual is more likely to have switched employers over an eight-month period than over a four-month period). Our results are also robust to discarding from the sample those job switches identified using surveys that are more or less than fourth months apart.

decreases the probability that the worker will become employed at a rival firm by 1.4 percentage points. Relative to the 3.2% of workers in our sample that move to rival firms in states that have not adopted the IDD, this represents a 44.0% decrease in labor mobility.[13]

In the third and fourth models of Table 2 we conduct a falsification test in which the dependent variable equals one if an individual becomes employed at a *non-rival* of her former employer, and zero if the individual does not change employers. The sample used for these two models consists of individuals who become employed at non-rival firms and those that do not switch employers, a total of 26,515 individuals and 130,379 observations over the 1983-2011 period. By design, the recognition of the IDD should affect the mobility of workers to rival firms, but not their mobility to non-rival firms. Supporting this notion, we find that the recognition of the IDD has no effect on the probability that an individual who knows her employer's trade secrets leaves this employer to work for a non-rival firm. This suggests that the effect of the recognition of the IDD on the mobility of workers who know trade secrets to rival firms is not somehow driven by general trends in labor mobility.

5.1.2. Announcement returns surrounding a state court's decision to recognize the IDD

We next examine the market reaction around the date when a state court renders its final decision recognizing the IDD for firms in the recognizing state. Here, we restrict the sample to firms headquartered in the 16 states that recognize the IDD during our sample period for which we have all required data for our main capital structure tests. We estimate cumulative abnormal returns (CARs) around the dates when a state court recognizes the IDD using both the market model and the 4-factor model to estimate beta/factor parameters. The parameters are estimated over the [-280, -61] trading days before the day when a court makes a final decision recognizing the IDD (day t=0). We then calculate CARs over the event window ([-1, +3] trading days) and the pre-event window ([-31, -2] trading days). Because all firms in a state are subject to the same IDD decision date (i.e., event-date clustering), these events are correlated across firms in the same state, which can bias the

[13] See PNG and Samila (2015) for some additional evidence that the recognition of the IDD in a firm's state reduces the labor mobility of workers who are likely to know their firm's trade secrets.

standard errors downward. To account for this problem, we correct the standard errors for cross-sectional correlation following the methodology used in Kolari and Pynnonen (2010).

The results reported in the first two columns of Table 3 show that affected firms experience significant positive abnormal returns over the days surrounding a state court's final decision to recognize the IDD. Specifically, the average CARs over the event window [-1, +3] are 0.70% based on the market model and 0.55% based on the 4-factor model, respectively, and both are statistically significant. These results are consistent with the view that market participants believe the recognition of the IDD increases the protection of the trade secrets for firms in recognizing states and decreases the competitive risks they face. Supporting the notion that the changes in state courts' positions regarding the IDD are unlikely to be anticipated events, we find that the CARs are not significantly different from zero over the pre-event window [-31, -2]. The last two columns show that the results are unaffected if we exclude from the sample firms that had earnings or distribution announcements during the ±5 trading days around a state court's final decision on the IDD.

5.1.3. Recognition of the IDD and changes in a firm's product market performance

If the recognition of the IDD reduces the likelihood that a firm's rivals would obtain its trade secrets and harm its competitive position then we should observe that, on average, a firm's product market performance relative to its industry rivals situated in another state improves after the recognition of the IDD in its state.[14] In Table 4 we provide evidence on this prediction. We examine the impact of the recognition of the IDD on firms' performance using a methodology similar to that in Opler and Titman (1994), Campello (2006), and Frésard (2010). The models in this table regress a firm's one-year sales growth rate minus the average corresponding rate for its out-of-state rivals on the IDD indicator and control variables. The control variables include the natural logarithm of book assets, return on

[14] It is important to note that the recognition of the IDD in a firm's state also reduces the firm's ability to obtain the trade secrets of rivals in its state. However, while this recognition only reduces the firm's ability to obtain the trade secrets of rivals in its *own* state, it lowers the probability that it will lose trade secrets to rivals in *any* state. Hence, overall, the recognition of the IDD should improve a firm's competitive position relative to its product market rivals.

assets, market-to-book assets, investment expenses (capital expenditures scaled by assets, R&D expense scaled by sales, and advertising expenses scaled by sales), and book leverage. Finally, as in our leverage regressions we also include year and firm fixed effects.

We report specifications including and excluding financial leverage among the control variables to account for the finding in prior studies that capital structure might affect performance in product markets. We also use alternative product market definitions based on 3-digit and 4-digit SIC codes, but this does not have a material effect on our results. All specifications that we consider provide statistically significant evidence that firms perform better within their product markets following the recognition of the IDD in their state. The results from the four models in Table 4 suggest that, on average, after the recognition of the IDD in a firm's state, its annual sales growth relative to the sales growth of its out-of-state industry rivals increases by about two percentage points. Over a five- to ten-year period, this could lead to economically important gains in market share for firms in recognizing states at the expense of the market shares of out-of-state industry rivals.[15]

5.2. Recognition of the inevitable disclosure doctrine and capital structure

We next move to our capital structure tests and investigate the impact of the recognition of the IDD in a firm's state on its leverage ratio. Our regression model, already discussed in Section 4.2, includes standard control variables used in capital structure tests (e.g., Lemmon, Roberts, and Zender (2008)), such as the natural logarithm of book assets (a measure of firm size), the market-to-book assets ratio (a proxy for growth opportunities), return on assets (a proxy for profitability and the availability of internal funds), the proportion of assets that are fixed (a proxy for potential collateral), industry cash flow volatility (a proxy for the likelihood of financial distress), and an indicator variable for whether the firm pays common dividends (a proxy for financial constraints). We also include two state-level control variables. The first, *State GDP Growth*, is the one-year

[15] In our tests that examine the impact of the recognition of the IDD on firms' capital structures, we include control variables in our models that proxy for economic conditions in a firm's state and the state's political leaning. The inclusion of these variables in the Table 2 or 4 models has little effect on the results in these tables.

growth rate of the GDP in the firm's state, which captures business conditions in the state. The second, *Political Balance*, is the fraction of a state's congress members representing their state in the U.S. House of Representatives that belong to the Democratic Party, which captures the political leaning in the state.[16] Including these state-level variables addresses residual concerns that business conditions in the state or the state's political leaning might affect both the recognition of the IDD and financing decisions and thus cause a spurious association between financial leverage and the recognition of the IDD.

There is some debate on whether capital structure tests should be based on book or market leverage ratios, and prior work often uses one or the other. Market leverage is arguably more appealing from a theoretical point of view, but many managers report that they base financing decisions on book leverage (Graham and Harvey (2002)). Further, a substantial portion of the variation in market leverage stems from variation in the market value of a firm rather than changes in debt policies (Welch (2004)). Given this, throughout the paper, we measure a firm's capital structure using both book leverage and market leverage, but our results are similar. Table A1 in the internet appendix shows that our data looks similar to that used in prior research on capital structure.

Table 5 reports the difference-in-differences estimates of the impact of the recognition of the IDD by state courts on the capital structures of firms in the recognizing state. We note that the estimates reflect the adoption of the IDD in 16 states and the rejection of the IDD in 3 states, but for simplicity we generally interpret the estimates as the impact of the "recognition" of the IDD on capital structure. In models 1-3 of Panel A we report the results for book leverage, while in models 4-6 we report the results for market leverage. For each dependent variable, we start with a specification including *Inevitable Disclosure*, firm fixed effects, and year fixed effects. Next, we include the typical firm-level control variables used in capital structure tests. Finally, we add the two state-level control variables (*State GDP Growth* and *Political Balance*).

[16] We obtain congress profile data on house representatives from the *History, Art & Archives, U.S. House of Representatives* available at http://history.house.gov/Congressional-Overview/Profiles/1st/.

The Table 5, Panel A results show that the recognition of the IDD has a positive and statistically significant impact on the financial leverage of firms in the recognizing state, and that this effect holds for both book and market leverage measures and across all specifications. This effect is economically significant: the estimated coefficients in model 3 (model 6) imply that following the recognition of the IDD firms increase their debt ratios by 1.3 (1.0) cents of additional debt per dollar of book (market) assets, which represents a 5.6% (5.6%) increase relative to the sample mean for book (market) leverage of 0.232 (0.178).

In Panel B, we examine whether our findings are robust to using alternative measures of financial leverage. First, in models 1 and 2, we measure book and market leverage net of cash holdings, i.e., for both measures we calculate the numerators as the book value of long-term debt plus debt in current liabilities less the book value of cash and short-term investments. We find that the recognition of the IDD is also associated with an increase in net leverage. Net book leverage increases by 1.6 cents for every dollar of book assets, which is equivalent to a 28.1% increase relative to its sample mean of 0.057. Similarly, net market leverage increases by 1.4 cents for every dollar of market assets, which is equivalent to an 18.2% increase relative to its sample mean of 0.077.[17]

Second, in models 3 and 4, we consider whether our results are robust to measuring financial leverage using only the long-term debt portion of firms' total debt, which includes both the current portion of long-term debt and the portion of long-term debt maturing in more than one year. The results show that firms increase their book and market long-term debt ratios following the recognition of the IDD and that the impact is economically important. Specifically, the coefficient estimates on the IDD indicator in models 3 and 4 imply that following the recognition of the IDD firms increase their long-term book leverage ratios by 5.6% relative to the sample mean of 0.197, and their long-term market leverage ratios by 5.9% relative to the sample mean of 0.152.

[17] The greater economic effect of the recognition of the IDD on net leverage compared to that for total leverage principally reflects the fact that although the increases in these ratios are similar (e.g., an increase of 1.3 cents of additional debt per dollar of book assets for total book leverage and an increase of 1.6 cents of additional net leverage per dollar of book assets for net book leverage), the sample means for net book leverage and net market leverage are 0.057 and 0.077, while those for book leverage and market leverage are 0.232 and 0.178.

Next, in Table 6 we investigate whether the leverage increases that we observe subsequent to the recognition of the IDD are due to firms' actively rebalancing their capital structures. To do so, we examine whether the recognition of the IDD in a firm's state affects the firm's net debt issues (models 1 and 2) and net share repurchases (models 3 and 4). We measure a firm's net debt issuance using both the one-year change in total debt scaled by lagged assets and current year debt issues minus debt retirements scaled by lagged total assets. Similarly, we measure a firm's net share repurchases using the negative of the one-year change in total shareholders' equity scaled by lagged assets and current year equity repurchases minus current year equity issues scaled by lagged assets.

The main independent variables of interest in the Table 6 models are ΔIDD_{t-1}, ΔIDD_{t}, ΔIDD_{t+1}, and ΔIDD_{t+2}, which are equal to +1 (-1) if a firm is headquartered in a state that will adopt (reject) the IDD in one year, adopts (rejects) the IDD in the current year, adopted (rejected) the IDD one year ago, and adopted (rejected) the IDD two years ago, respectively, and zero otherwise. These variables allow us to examine whether the leverage increases (decreases) following the adoption (rejection) of the IDD are due to firms rebalancing their capital structures, and if so, what is the timing of this rebalancing activity relative to the year when the state court's position regarding the IDD changes. To ensure that the estimated effect of changes in state courts' positions regarding the IDD on firms' capital structure rebalancing activity is not spuriously driven by contemporaneous changes in known determinants of firms' debt ratios, we also include the one-year changes of the same predictors of financial leverage we use in our main specification reported in Table 5. We further include the lagged levels of the same variables to control for any effects that these firm characteristics might have on a firm's propensity to issue debt or repurchase shares.[18]

We find that firms increase both net debt issues and net share repurchases during the first year following the recognition of the IDD in their state (the coefficients on the ΔIDD_{t+1} variable are positive and statistically and economically significant across all four specifications we consider). The coefficients on ΔIDD_{t-1}, ΔIDD_{t}, and ΔIDD_{t+2} are not

[18] Excluding the control variables in levels from our empirical model does not affect our results.

statistically significant. This suggests that the increase in financial leverage after the recognition of the IDD we document in Table 5 is largely due to firms actively rebalancing their capital structures during the year immediately after the recognition of the IDD.

5.3. Further evidence of causality and validity of difference-in-differences approach

Our *Inevitable Disclosure* indicator captures both the sixteen adoptions of the IDD by state courts and the three rejections of the IDD by state courts that had previously recognized the IDD. To further examine if the changes in firms' legal protection of trade secrets afforded by state courts drive the changes in capital structure that we observe, in Table 7 we conduct our difference-in-differences tests examining separately events associated with adoptions and rejections of the IDD. In models 1 and 2, we simultaneously estimate the impact of adoptions and rejections of the IDD on capital structure. In these models *IDD Adoption*, equals one if the state where the firm is headquartered has adopted the IDD by year *t*, and zero otherwise. Similarly, *IDD Rejection*, equals one if the state where the firm is headquartered has rejected the previously adopted IDD by year *t*, and zero otherwise. For both book and market leverage, we find that firms raise their financial leverage when state courts adopt the IDD and increase the legal protection of their trade secrets; conversely, firms reduce their financial leverage when state courts reverse their support for the IDD and decrease the legal protection of their trade secrets. These results provide further support for a causal interpretation of the association between courts' positions regarding the IDD and capital structure that we document.

In the third and fourth models of Table 7, we use the approach of Bertrand and Mullainathan (2003) to study the *timing* of changes in capital structure relative to the timing of adoptions or rejections of the IDD. This test addresses potential concerns about the interpretation of our results and the validity of our empirical methodology. If reverse causality drives our results, we should observe an increasing (decreasing) trend in the leverage of firms in affected states prior to the adoption (rejection) of the IDD. Further, observing such trends would cast doubt on the validity of our differences-in-differences

approach, as it would imply a violation of the "parallel trends" assumption that the trends in the financial leverage of treatment firms (in adopting or rejecting states) and control firms (in non-adopting or non-rejecting states) are parallel prior to the adoption (rejection) of the IDD. Specifically, a violation of this assumption would imply that the estimated effect of the adoption or rejection of the IDD on financial leverage is biased in an unknown direction, because the change in the capital structure of the control firms does not correctly gauge the change in capital structure that treated firms would have experienced in the absence of treatment.

The first set of key variables of interest in the third and fourth models of Table 7 are $IDD\ Adoption^{-1}$, $IDD\ Adoption^{0}$, $IDD\ Adoption^{+1}$, and $IDD\ Adoption^{2+}$, which are equal to one if the firm is headquartered in a state that will adopt the IDD in one year, adopts the IDD in the current year, adopted the IDD one year ago, and adopted the IDD two or more years ago, respectively, and zero otherwise. The second set of key variables of interest are $IDD\ Rejection^{-1}$, $IDD\ Rejection^{0}$, $IDD\ Rejection^{+1}$, and IDD^{2+}, which are equal to one if the firm is headquartered in a state that will reject the previously adopted IDD in one year, rejects the IDD in the current year, rejected the IDD one year ago, and rejected the IDD two or more years ago, respectively, and zero otherwise.

The coefficients on $IDD\ Adoption^{-1}$ and $IDD\ Rejection^{-1}$ shed light on both the possibility of reverse causality and the validity of the parallel trends assumption. In particular, a statistically significant positive (negative) coefficient on the former (latter) variable would suggest that reverse causality may explain our results. More generally, a statistically significant coefficient of any sign on either of these variables would indicate that the parallel trends assumption is violated, and thus that the difference-in-differences estimates we report in Table 5 are biased.

For the adoption events, our results are similar regardless of if we consider book or market leverage. The coefficients on $IDD\ Adoption^{-1}$ and $IDD\ Adoption^{0}$ are close to zero and statistically insignificant, while the coefficients on $IDD\ Adoption^{+1}$ and $IDD\ Adoption^{2+}$ are positive and significant. For the reversal events, the results are also similar for book and

market leverage. The coefficients on *IDD Rejection*$^{-1}$, *IDD Rejection*^{0}, and *IDD Rejection*$^{+1}$ are generally close to zero and statistically insignificant for both book and market leverage. However, the coefficient on *IDD Rejection*$^{2+}$ is large and statistically significant.

Overall, these results show that financial leverage increases (decreases) only after the adoption (rejection) of the IDD, but not before. Hence, reverse causality or a violation of the parallel trends assumption do not explain our key result that changes in state courts' positions regarding the IDD are associated with changes in financial leverage.

5.4. Cross-sectional variation in the effect of the recognition of the IDD on capital structure

Next, we study the cross-sectional variation in the impact of increased protection of trade secrets on capital structure. To this end, we split the sample in two groups based on whether the value of a particular characteristic is above or below the sample median of the characteristic, estimate our main specification within each group, and compare the estimated coefficients on *Inevitable Disclosure* across groups.

These tests shed light on the economic mechanism behind our main results and provide further evidence whether our results have a causal interpretation. Specifically, we examine if the effect of the recognition of the IDD on financing decisions varies predictably with the degree of competition in an industry, the type of workers employed by the firm, and the risk that workers will become employed at rival firms. We note that if a variable omitted from our benchmark regression models were to drive the results in Table 5, then such a variable would have to be uncorrelated with all of the control variables we include in the models in this table, and it would also have to explain the cross-sectional findings for the effect of the recognition of the IDD on capital structure we report in this section.

In Table 8, we examine how competition in a firm's industry affects the impact of better protection of trade secrets on the firm's capital structure. Risks stemming from a firm's intellectual property are likely a more important concern for firms in more competitive industries. The reason for this is that firms in these industries typically have less stable market positions because they face the threat of entry by new firms and thus have lower

operating margins and survival rates (Porter (1980)). Consequently, these firms should benefit more from having unused debt capacity to endure the adversity associated with the divulgence of their trade secrets to rivals. Thus, we predict that the recognition of the IDD has a stronger impact on the capital structures of firms in more competitive industries.

Panel A in Table 8 focuses on book leverage and Panel B focuses on market leverage, but both panels have the same structure. We first gauge the extent of competition in an industry using the four-firm concentration ratio compiled by the U.S. Economic Census for the majority of 5-digit NAICS industries. This measure captures the fraction of an industry's sales accounted for by the top four firms in the industry.[19] In models 1 and 2, we split the sample according to whether the four-firm industry concentration ratio is above the sample median (less competitive industries) or below the sample median (more competitive industries).[20] Supporting our prediction, the results for both book and market leverage indicate that the positive effect of the recognition of the IDD on firms' debt ratios only exists for firms that operate in more competitive industries.

Next, we gauge competition in an industry using a proxy for the magnitude of barriers to entry, since fewer barriers to entry increase competition by facilitating the entry of new firms into the industry. Following Valta (2012), we use the 3-digit SIC industry-average value of R&D and advertising expenditures divided by sales to measure barriers to entry. This measure is motivated by Shaked and Sutton (1987) and Sutton (1991) who argue that firms use R&D and advertising to differentiate their products from those of their competitors and make it more difficult for new firms to enter the market. Also, Hoberg and Phillips (2013) show that firms spending more on R&D and advertising experience reductions in competition. In models 3 and 4 of Panels A and B, we split the sample into industries with barriers to entry above the sample median (less competitive industries) and

[19] Concentration ratios are only available for the years 1997, 2002, and 2007, but they are stable from year to year. Hence, following prior work (e.g., Campello (2006) and Haushalter, Klasa, and Maxwell (2007)), we assume that the ratios for a given U.S. Census year are valid for a window of years surrounding that year. Specifically, we assume that the ratios for 1997, 2002, and 2007 are valid for the 1977-1999, 2000-2004, and 2005-2011 periods, respectively.

[20] The sample for these tests excludes four industries for which the Census does not compile the four-firm ratio (Agriculture, forestry, fishing, and hunting, Mining, Construction, and Management of company enterprises).

below the sample median (more competitive industries). In both panels, we find that the positive effect of the recognition of the IDD on firms' debt ratios only exists for firms in industries with lower barriers to entry. This is further evidence that in more competitive industries the recognition of the IDD has a larger impact on capital structure decisions.

In Table 9, we examine how the occupational structure in a firm's industry affects the impact of better protection of trade secrets on the firm's capital structure decisions. Firms employing a larger fraction of workers who know their trade secrets face a greater risk that their rivals could poach some of these workers and obtain their secrets. Consequently, it follows that such firms should benefit more from maintaining unused debt capacity that they can use to react to the divulgence of their trade secrets to rivals. Hence, we predict that better protection of trade secrets has a larger impact on the capital structures of firms that employ more workers with knowledge of their trade secrets.

To this end, we assume that more of a firm's workers are likely to know its trade secrets if it is an industry that employs a larger fraction of educated workers (such workers should be more likely to know their firm's trade secrets). Given that the skills and occupations of workers in an industry are likely to vary by state, we consider the occupational structure and education level of the workers in a firm's industry that are employed in the firm's state. The data for these tests is from the Integrated Public Use Microdata Series (IPUMS-USA) database, which reports the characteristics of workers by 3-digit NAICS industry and state.[21]

We repeat our main regression using subsamples which result from splitting our full sample in two alternative ways, namely, according to whether the fraction of the workers employed in a firm's state and industry that are in managerial occupations (codes 3-22 in IPUMS), or that have at least a bachelor's degree is below or above the sample median for these fractions, respectively. Our results in Panel A (book leverage) and Panel B (market leverage) of Table 9 are qualitatively similar and suggest that the recognition of the IDD

[21] The IPUMS database is compiled from the American population federal censuses conducted every 10 years and is available for the years 1980, 1990, and 2000 (Ruggles et al. (2010)). We assume that the data from the 1980, 1990, and 2000 censuses are valid for the periods 1977-1985, 1986-1995, and 1996-2011, respectively.

indeed has a larger impact on financial leverage when a firm's workers are more likely to know its trade secrets. Specifically, the positive effect of the recognition of the IDD on corporate debt ratios is significant only in subsamples in which the fraction of workers in a firm's industry and state that are in managerial occupations or with at least a bachelor's degree is above the sample median for these fractions.

Last, in Table 10, we test the prediction that better protection of trade secrets has a larger impact on the capital structure of firms that face a greater ex-ante risk that their employees who know their trade secrets would accept a job with a rival firm. The intuition behind this prediction is that when this ex-ante risk is greater, firms should benefit more from maintaining unused debt capacity that they can use to react to the divulgence of their trade secrets to rival firms. To test this prediction, we conduct two related tests based on sample splits analogous to those in our prior analyses: one based on pure switching costs and another based on the extent of competition among rival firms in local labor markets.

First, the cost of switching employers is higher for workers in firms with defined benefit pension plans because retirement benefits from these plans are less portable (Ippolito (1985)).[22] Hence, firms with defined benefit pension plans face a lower ex-ante risk of losing key employees to rival firms, and thus the recognition of the IDD should have a smaller impact on the leverage of these firms. To test this prediction, we identify firms with defined benefit pension plans as those that report positive net pension benefit assets or accumulated pension benefit obligations. Because pension data are available in Compustat only since 1980, in these tests we restrict our sample to the years 1980-2011. Supporting our prediction, models 1 and 2 in Panels A and B of Table 10 show that the recognition of the IDD only affects the debt ratios of firms without defined benefit pension plans.

[22] Because the payments from defined benefit pension plans are increasing in the years of service at a given firm and the final wage at the firm, the total pension benefits of workers who remain with the same employer during their entire career are larger than those of workers who switched employers, but had an otherwise identical career path. For workers who remained at one firm, pension benefits are based on the number of years of service and their earnings just prior to retirement, which are usually the highest over their career. For workers who switch jobs, total pension benefits come from several employers. Such workers have accumulated less years of service at each employer and, because their wages typically increase over time, the pension benefits provided by earlier employers are based on lower earnings and those provided by the later employers are based on higher earnings.

Second, a firm's ex-ante risk that its employees who know its trade secrets might accept a position with a rival firm is greater when the firm faces more intense competition in local labor markets due to the presence of geographically close rivals. The reason for this is that such rivals provide the firm's workers with more outside job opportunities and, due to the proximity between workers' current and prospective jobs, it reduces workers' cost of switching employers. Hence, the recognition of the IDD should have a larger impact on the debt ratios of firms facing stronger competition from industry rivals in local labor markets. We gauge the extent of competition in local labor markets a firm faces from its rivals using the firm's share in its 2-digit SIC industry's employment located in its state (based on Compustat data). A lower value for this variable indicates that the firm's rivals account for a larger fraction of the industry's employment in the state, and thus the firm is likely to face more intense competition from its rivals in local labor markets. Supporting our prediction, the results in models 3 and 4 of Panels A and B of Table 10 indicate that the recognition of the IDD only impacts the debt ratios of firms whose share in their industry's employment in their state is below the sample median.

Overall, the results in Tables 8-10 are consistent with our hypothesis that a firm increases its financial leverage when the risk that its rivals might gain access to its trade secrets and damage its competitive position is reduced. Likewise, these results provide further evidence that the positive impact of the recognition of the IDD on corporate debt ratios is unlikely spuriously driven by unobserved heterogeneity.

5.5. Recognition of the IDD and changes in firms' cost of debt

To further shed light on the validity of our interpretation of the Table 5 results, that they are driven by firms raising financial leverage when their trade secrets become better protected, and as a result, the competitive threats they face decrease, we examine the effect of the recognition of the IDD on a firm's cost of debt. Following Valta (2012), we focus on credit spreads on bank debt because bank debt is the key source of debt financing for most firms (Faulkender and Petersen (2006)) and data are available for a large sample of firms.

We explore this issue using data for the period 1987-2011 obtained from the Dealscan database on U.S. originated and U.S. dollar denominated loans to firms in our sample.[23] In Table 11, we report the results of regressions in which the dependent variable is the natural logarithm of a firm's credit spread, defined as the spread between the interest rate on a bank loan and the LIBOR rate.[24] Because Dealscan only contains data on new loans in the year they are granted and thus most firms appear in the data sporadically (and not every year), we do not include firm fixed effects in the cost of debt models due to a lack of enough annual observations per firm. Instead, in addition to year fixed effects, we include both 3-digit SIC industry and state of headquarters fixed effects. Hence, the coefficient on *Inevitable Disclosure* indicates the average impact the recognition of the IDD has on the credit spread of those firms in an industry that are headquartered in recognizing states.

In the first three models of Table 11, we regress the natural logarithm of a firm's credit spreads on its bank loans on *Inevitable Disclosure* and control variables. In model 1, we include the control variables from our Table 5 models and leverage.[25] In model 2, we follow the approach used in typical cost of debt models and also include the natural logarithms of loan maturity (in months) and loan size (in $ millions), and loan-type fixed effects (as in Campello, Lin, and Zou (2011), the categories are term loan, revolver greater than one year, revolver shorter than one year, and 364-day facility). In model 3, we additionally control for the state GDP growth and political balance variables. Supporting our prediction, all three specifications consistently indicate that the recognition of the IDD is associated with a decrease in the average credit spreads of firms headquartered in the recognizing state. In terms of economic significance, the results from model 3 imply that the recognition of the IDD decreases the credit spread that firms pay over LIBOR by approximately 5.7%.

In model 4 of Table 11, we separately examine the effect of adoptions and rejections of the IDD. We find that firms' credit spreads decrease by 4.7% following the adoption of the

[23] We thank Michael Roberts for making the updated Dealscan-Compustat link table used in Chava and Roberts (2008) publicly available.
[24] The credit spread is measured as the *all-in-spread drawn* in Dealscan, defined as the amount the borrower pays in basis points over LIBOR for each dollar drawn down (including annual fees paid to the bank group).
[25] The results are very similar if we do not include leverage as a control variable in the regression.

IDD and increase by 7.0% following the rejection of the previously adopted IDD. These findings provide support for a causal link from courts' positions regarding the IDD and firms' credit spreads on their bank loans.

Finally, in model 5 of Table 11 we report the results of timing tests analogous to those reported in the third and fourth models of Table 7, in which we replace *Inevitable Disclosure* with the eight dummy variables previously defined in Section 5.3: *IDD Adoption*$^{-1}$, *IDD Adoption*^{0}, *IDD Adoption*$^{+1}$, and *IDD Adoption*$^{2+}$, and also *IDD Rejection*$^{-1}$, *IDD Rejection*^{0}, *IDD Rejection*$^{+1}$, and *IDD Rejection*$^{2+}$. Supporting a causal interpretation of the effect of the adoption (rejection) of the IDD on firms' credit spreads, the results show that firms' credit spreads decrease (increase) only after and not before the adoption (rejection) of the IDD. In addition, the coefficients on *IDD Adoption*$^{-1}$ and *IDD Rejection*$^{-1}$ are not statistically different from zero. These results validate our difference-in-differences approach in the context of the credit spread regressions, as they suggest that the time trends in the borrowing costs of firms in adopting (rejecting) states and those in non-adopting (non-rejecting) states before the adoption (rejection) of the IDD are parallel.

5.6. Adoption of state laws based on the UTSA and changes in the strength of non-competes

In our main tests we use the recognition of the IDD by state courts to identify an increase in the protection of firms' trade secrets. However, firms' trade secrets are also protected by a slowly evolving legislation and enforcement of employment contracts in their states. Hence, we further examine whether changes in the legal protection of trade secrets in a firm's state other than the recognition of the IDD affect capital structure decisions and, more importantly, whether the recognition of the IDD has an impact on capital structure decisions that is distinct from any impact other legal changes in the state might have.

To this end, in models 1 and 4 of Table 12 we first augment our main empirical specification and include *State UTSA*, a state-level indicator variable which switches from zero to one in the year a state formally adopts legal principles based on the Uniform Trade Secrets Act (UTSA). The coefficient on *State UTSA* can be interpreted as the difference-in-

differences estimate the state's adoption of the UTSA has on the capital structures of firms headquartered in the state. In both the book and market leverage specifications, we find that the coefficient on *State UTSA* is statistically insignificant and the coefficient on *Inevitable Disclosure* remains unaffected. Hence, our evidence suggests that the recognition of the IDD affects firms' capital structures, but the adoption of the UTSA does not.[26]

In models 2 and 5 we include Bird and Knopf's (2014) extension of the Garmaise (2011) index which measures the extent to which covenants not to compete are enforced in a state (*Strength of CNCs*).[27] The estimated coefficient on this variable is not statistically significant, and its inclusion does not affect the estimated coefficient on *Inevitable Disclosure*. Because Garmaise (2011) argues that covenants not to compete are especially effective in protecting trade secrets when employees seek to join rivals within the same state, in models 3 and 6 we follows his approach and further interact *Strength of CNCs* with the fraction of total industry sales (excluding those of the firm itself) generated by in-state rivals in the same three-digit SIC industry (*In-State Competition*). The coefficient on this interaction is 0.011 and statistically significant for both book and market leverage specifications. It suggests that an increase in the enforceability of CNCs leads firms to increase their financial leverage when they face strong in-state competition from rivals. The estimated impact of the recognition of the IDD on leverage again remains unaffected.

Large changes in the enforceability of CNCs are rare during our sample period, but a large one occurred for Michigan in 1985 in which *Strength of CNCs* increased from 0 to 5, the minimum to the maximum value of this index (See Marx (2009) for a discussion of this event). Our estimates imply that, for firms with a value of *In-State Competition* in the 75% percentile of the sample distribution, such an increase in the enforceability of CNCs would lead to an increase of 2.7% in book leverage and of 3.4% in market leverage relative to their sample means. Hence, the results based on the enforceability of CNCs are consistent with the evidence based on the recognition of the IDD and reinforce the view that better legal

[26] If we drop *Inevitable Disclosure* from models 1 and 4 the coefficient on *State UTSA* remains insignificant.
[27] The index covers the period 1976-2004 but changes in the index are infrequent, so we use the 2004 values to fill in the period 2005-2011. Our results are similar if we only examine the period 1977-2004 for this analysis.

protection of firms' trade secrets through a restriction in the mobility of workers who know trade secrets leads firms to increase their financial leverage.[28]

5.7. Recognition of the IDD and investment policy

We also consider if the recognition of the IDD affects firms' investment, which serves to shed light on two related issues. First, by increasing the protection of trade secrets, the recognition of the IDD might increase the marginal benefit of investment and thus raise firms' demand for external financing to fund additional investment.[29] In this case, the observed increase in financial leverage could be caused by increased financing needs rather than by a lower benefit for unused debt capacity as implied by our main hypothesis.

Second, the recognition of the IDD might coincide with time-varying unobserved heterogeneity in firms' investment opportunities that is not captured by firm fixed effects and our control variables. If the recognition of the IDD coincides with increases in the investment opportunities of firms in a state, then one would expect to see increases in investment expenses following the recognition of the IDD. In turn, such investment could require debt financing and cause the increase in leverage we observe.

In Table A2 in the internet appendix, we tabulate the results of regressions that provide evidence on the impact of the recognition of the IDD on six investment policy variables: capital expenditures/book assets, R&D expenses/sales, acquisition expenses/book assets, advertising expenses/sales, and the sum of the capital expenditures, R&D expenses, acquisition expenses, and advertising expenditures scaled by either book assets or sales. We include the same control variables as in our main leverage model: the natural logarithm of

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[28] In untabulated tests we also expanded models 1 and 4 of Table 12 to include an interaction between *Inevitable Disclosure* and *State UTSA* and found that the estimated coefficient on *Inevitable Disclosure* × *State UTSA* is small and statistically insignificant in both models. Further, we expanded models 3 and 6 to include a triple interaction, *Inevitable Disclosure* × *Strength of CNCs* × *In-State Competition* (while also including the three component double interaction variables). The estimated coefficient on *Inevitable Disclosure* × *Strength of CNCs* × *In-State Competition* is small and statistically insignificant in both models. The results of these two tests suggest that a state's adoption of the UTSA and changes in the extent to which covenants not to compete are enforced in a state do not interact with the IDD in shaping capital structure decisions.

[29] As noted by Png (2012), the impact of trade secret protection on innovation is a priori ambiguous, because better protection increases the firm's ability to appropriate the benefits of its investment, but it reduces its ability to benefit from spillovers associated with using the trade secrets of other firms. He finds that better trade secret protection increases R&D spending in some cases and decreases it in other cases.

book assets, the market-to-book assets ratio, return on assets, fixed assets/total assets, industry cash flow volatility, dividend payer dummy, state GDP growth, the state's political balance, and firm and year fixed effects. We find that the recognition of the IDD has no effect on any of the investment variables we consider, which implies that increases in investment needs are not the driver of the observed increase in financial leverage.

5.8. Effect of the recognition of the IDD in the states of a firm's rivals on its leverage

The recognition of the IDD in states where a firm's rivals are located could potentially drive the firm to decrease its financial leverage in response to its rivals' enhanced ability to compete in their product market. To examine this issue, we re-estimate our Table 5, Panel A models after replacing the IDD indicator with a variable that is the weighted-average IDD of a firm's out-of-state industry rivals, with weights equal to each firm's share in the total assets of all out-of-state industry rivals (See Table A3 in the internet appendix).

When we define industry using 4-digit SIC codes we find no evidence that a firm's book or market leverage is significantly related to the extent to which its out-of-state rivals are located in states where the IDD has been recognized. If we define industry using 3-digit SIC codes we find similar results for book leverage. However, defining industry in this way we document a negative association (at the 10% significance level) between a firm's market leverage and the degree to which its out-of-state rivals are located in states that have recognized the IDD. The coefficient estimates from this regression imply that if a firm goes from having none of its out-of-state rivals being in states where the IDD has been recognized to having all of these rivals being from such states that the firm would reduce its market leverage by 0.6 cents of additional debt per dollar or market assets.

Thus, in comparison to the results for the effect of the recognition of the IDD in a firm's own state on its leverage, there is only weak evidence that the recognition of the IDD in the states of a firm's rivals affects its leverage decisions. However, this is potentially not surprising. When the IDD is recognized in a firm's own state this strengthens the protection of its trade secrets against all of its rivals in *any* state and the IDD indicator

variable shifts from a value of 0 to 1. However, it rarely happens that over our sample period all or most of a firm's out-of-state rivals go from the IDD not being recognized to it being recognized in their state. For instance, defining industry with 3-digit (4-digit) SIC codes it only happens for 1.1% (4.0%) of firms that the weighted-average IDD of a firm's out-of-state rivals goes from 0 to 1 over our sample period, while for only 4.6% (8.5%) and 9.4% (13.4) of firms does this measure increase by 0.9 or 0.75 over our sample period.

5.9. Discussion: Protection of trade secrets or labor-related mechanisms?

The recognition of the IDD increases the protection of firms' trade secrets by reducing the mobility of workers with access to trade secrets to rival firms. This raises the question of whether reduced mobility of workers with access to trade secrets to rival firms could have an impact on capital structure through pure labor mechanisms that are unrelated to better protection of trade secrets and drive our results. In our empirical tests based on the recognition of the IDD, we are unable to separate the effect on capital structure caused by increased protection of trade secrets from any additional effects that might operate independently through a reduced mobility of workers with access to trade secrets to rival firms. However, below we discuss why pure labor mobility effects that are unrelated to the protection of trade secrets do not seem likely to explain our findings.

Most arguments linking the recognition of the IDD to capital structure solely through labor mobility hinge on this event having a large effect on firms' total labor costs. However, the IDD only affects the mobility of a small number of workers – those who know the firm's trade secrets – and not the mobility of most of the workers. Although workers with access to trade secrets are usually paid a higher salary, the total wage bill associated with the compensation of such workers is likely to be small relative to a firm's total wage bill. This suggests that labor-related stories based on how a firm's total labor costs affects its capital structure choices (e.g., along the lines of the ideas in Agrawal and Matsa (2013), Kim (2013), or Simintzi, Vig, and Volpin (2014)) are unlikely to explain our results that the recognition of the IDD has a large effect on a firm's capital structure decisions.

Other purely labor-related explanations of our results could rely on the observation that the recognition of the IDD might help a firm retain its workers who know its trade secrets. This, in turn, could increase the firm's debt capacity if it reduces the risk of a loss of key talent that could hurt firm performance, aside from any issues associated with trade secrets. However, it can alternatively be argued that, by constraining the mobility of its key workers who know its trade secrets, the recognition of the IDD could, in fact, lower a firm's performance and reduce its debt capacity. For instance, extant work shows that reduced labor mobility can discourage workers from exerting effort and lower their incentives to invest in their human capital (e.g., Garmaise (2011)). Likewise, if the mobility of a firm's workers who knowledge its trade secrets is reduced, this could hamper the firm's ability to recruit new high quality workers who are averse to job lock. In sum, pure labor mobility effects unrelated to better protection of trade secrets seem unlikely to drive our results.

5.10. Robustness tests

5.10.1. Measurement error due to relocation of firms' headquarters from one state to another

We study how the recognition of the IDD in a firm's state of headquarters affects its capital structure decisions. To this end, we identify a firm's state of headquarters using the most recent address of a firm's headquarters because this is the only information provided in the Compustat database. This assumes that firms are headquartered in their most recent state of headquarters during the entire sample period, namely, that firms never relocated their headquarters from one state to another. However, if many firms relocate their headquarters to other states during our sample period, then measurement error in the state of headquarters – and thus in *Inevitable Disclosure* – could bias our results.

To address this concern, we use the programming language PHP to search the 10-K filings available on the SEC's website and collect the historical state of location of each firm's headquarters. Given data availability, we are able to obtain the information for most firms between 1996 and 2011 and for some as early as 1992 (but not for our entire sample which spans 1977-2011). Of the 8,852 firms for which we obtain the historical location of

headquarters during the 1992-2011 period, only 826 (or 9.3%) relocated headquarters from one state to another. These findings imply that relocations of corporate headquarters across states are relatively infrequent and affect a small fraction of the firms we study, which is consistent with the results reported in Pirinsky and Wang (2006), who similarly show that corporate headquarter relocations are rare events. Given the low incidence of headquarter relocations, it seems unlikely that these events could have a large impact on our results.

Nevertheless, we examine whether relocations of firms' headquarters could affect our main results for both book and market leverage. First, we use the location of headquarters that we collect from the 10-Ks to reduce the measurement error in *Inevitable Disclosure*, while retaining our full sample. Specifically, we use the information from the 10-Ks when it is available, and when it is not available we assume there were no relocations prior to the earliest date it is available.[30] Second, we only use the subsample of firm-years for which the information on the location of headquarters that we collect from the 10-Ks is available. This subsample is much smaller and spans only the period 1992-2011, but in this subsample *Inevitable Disclosure* is measured without any error caused by headquarter relocations. Third, we exclude from the sample those firms that are likely to have experienced major restructuring events (those which Pirinsky and Wang (2006) argue are the main trigger of headquarter relocations) during the sample period. We identify such firms as those with sales or assets growth in excess of 100% in *any* year during 1977-2011, because Almeida, Campello, and Weisbach (2004) highlight that major corporate events are usually associated with large increases in sales or assets.

In all three tests discussed above, *Inevitable Disclosure* continues to have a positive and statistically significant impact on both book and market leverage that is generally similar in magnitude to that reported in Table 5. Hence, we conclude that our inferences based on *Inevitable Disclosure* are unlikely biased due to changes in firms' state of headquarters.

5.10.2. Other potential sources of measurement error

[30] This approach removes the measurement error for firm-years with available historical 10-Ks and reduces it for earlier years in the sample by using the closest in time information available instead of the most recent one.

We also examine if our main capital structure results are robust to the imposition of further constraints to our sample that arguably reduce the potential measurement error in *Inevitable Disclosure* due to foreign operations and geographical dispersion of employment. First, the recognition of the IDD affects firms to the extent that their workers who know their trade secrets are employed in the U.S. If firms have substantial operations in foreign countries, the recognition of the IDD by U.S. state courts could be less effective in increasing the protection of a firm's trade secrets. We report in Table A4 that the impact of *Inevitable Disclosure* on leverage is similar if we exclude firms which report foreign income or taxes from the sample. Second, our tests rely on the recognition of the IDD in a firm's state of headquarters, where arguably most of the firm's employees with access to trade secrets are employed. However, we are likely to measure changes in trade secret protection with error for firms that have a geographically dispersed workforce. Using an approach similar to that in Agrawal and Matsa (2013), we address this concern by dropping sample firms that operate in industries whose workforce is likely more geographically dispersed, namely, retail, wholesale, and transportation. As shown in Table A4, this has little effect on the impact of the recognition of the IDD on financial leverage. In sum, we find results that suggest measurement error in *Inevitable Disclosure* caused by foreign operations and geographical dispersion of employment is unlikely to lead to biases in our results.

5.10.3 Propensity matched score analysis

Ideally, treatment and control firms should be similar along observable characteristics. To explicitly ensure similarity across the two groups, we create a propensity score matched sample and re-estimate the effect of the IDD on financial leverage (See Table A4 in the online appendix). The results of this analysis provide additional support for the notion that firms increase (decrease) their leverage ratios subsequent to the adoption (rejection) of the IDD in their state and that these leverage increases (decreases) occur only after the adoptions (rejections).

6. Conclusion

Our main message is that the risk that a firm's rivals might gain access to its intellectual property in the form of trade secrets influences capital structure decisions. In particular, we hypothesize that firms facing a greater risk that their product market rivals will gain access to their trade secrets and hurt their competitive positions hold less debt. We test our hypothesis using a difference-in-differences research design that exploits the staggered recognition of the Inevitable Disclosure Doctrine (IDD) by state courts over the 1977-2011 period. The recognition of this doctrine causes an exogenous decrease in the risk that industry rivals might gain access to a firm's trade secrets, because it increases a firm's ability to prevent its workers who know its trade secrets from working for rival firms and conveying the trade secrets to their new employers. Consistent with the notion that the recognition of the IDD in a firm's state increases the protection of its trade secrets and reduces the competitive threats it faces, we show (i) that the recognition of the IDD significantly reduces the mobility to rival firms of workers who are likely to know their firm's trade secrets, (ii) that firms in recognizing states experience positive abnormal stock returns over the days surrounding a state court's decision to recognize the IDD, and (iii) that the recognition of the IDD in a firm's state results in improvements in the firm's product market performance.

Supporting our hypothesis, we find that firms rebalance their capital structure and significantly increase their leverage following the recognition of the IDD by courts in their states of headquarters. We further show that the adoptions of the IDD that dominate our sample and the reversals in the positions of state courts regarding the previously adopted IDD have opposite effects on firms' capital structure that are of similar magnitudes. In further support of a causal interpretation of our results, we document that firms adjust their leverage after the adoption or rejection of the IDD but not before.

The cross-sectional variation in the impact of the recognition of the IDD on capital structure choices supports the economic mechanism we describe in the paper. The impact is particularly strong for firms in more competitive industries, for firms whose workers are

more likely to know trade secrets, and for firms that face a greater ex-ante risk of losing employees who have knowledge of trade secrets to competitors. We further show that a firm's credit spreads on its bank loans decrease following the adoption of the IDD and increase following a subsequent rejection of the IDD, which suggests that credit markets price the risk that a firm's rivals could obtain its trade secrets.

Our paper emphasizes the interplay of firms in product and labor markets, and that rivalry in both of those markets creates important competitive threats that shape firms' financial decisions. In particular, our paper calls to attention competitive threats stemming from a firm's inability to fully protect its intellectual property, and highlights the issue that the mobility of a firm's key employees to jobs at rival firms exacerbates these threats.

References

Agrawal, A.K., and D.A. Matsa, 2013. Labor unemployment risk and corporate financing decisions, Journal of Financial Economics 108, 449-470.

Almeida, H., M. Campello, and M.S. Weisbach, 2004. The cash flow sensitivity of cash, Journal of Finance 59, 1777-1804.

Almeling, D.S., D.W. Snyder, M. Sapoznikow, W.E. McCollum, and J. Weader, 2010. A statistical analysis of trade secret litigation in federal courts, Gonzaga Law Review 45, 291-334.

Bertrand, M., E. Duflo, and S. Mullainathan, 2004. How much should we trust differences-in-differences estimates? Quarterly Journal of Economics 119, 249-275.

Bertrand, M., and S. Mullainathan, 2003. Enjoying the quiet life? Corporate governance and managerial preferences, Journal of Political Economy 111, 1043-1075.

Bird, R.C., and J. D. Knopf, 2014. The impact of labor mobility on bank performance, Working paper, University of Connecticut.

Bolton, P., and D.S. Scharfstein, 1990. A theory of predation based on agency problems in financial contracting, American Economic Review 80, 93-106.

Campello, M., 2003. Capital structure and product markets interactions: Evidence from business cycles, Journal of Financial Economics 68, 353-378.

Campello, M., 2006. Debt financing: Does it boost or hurt firm performance in product markets? Journal of Financial Economics 82, 135-172.

Campello, M., C. Lin, Y. Ma, and H. Zou, 2011. The real and financial implications of corporate hedging, Journal of Finance 66, 1615-1647.

Chava, S., and M.R. Roberts, 2008. How does financing impact investment? The role of debt covenants, Journal of Finance 63, 2085-2121.

Chevalier, J., 1995. Do LBO supermarkets charge more? An empirical analysis of the effects of LBOs on supermarkets' pricing, Journal of Finance 50, 1095-1112.

Faulkender, M., and M.A. Petersen, 2006. Does the source of capital affect capital structure? Review of Financial Studies 19, 45-79.

Frank, M.Z., and V.K. Goyal, 2007. Trade-off and pecking order theories of debt, in B. Espen Eckbo, ed.: *Handbook of Empirical Corporate Finance*, *Vol. 2, Chapter 12, 135-202,* (Elsevier, North-Holland).

Frésard, L., 2010. Financial strength and product market behavior: The real effects of corporate cash holdings, Journal of Finance 65, 1097-1122.

Garmaise, M.J., 2011. Ties that truly bind: Noncompetition agreements, executive compensation, and firm investment, Journal of Law, Economics, and Organization 27, 376-425.

Godfrey, E.R., 2004. Inevitable disclosure of trade secrets: Employee mobility v. employer's rights, Journal of High Technology Law 3, 161-179.

Graham, J., and C. Harvey, 2002. How do CFOs make capital budgeting and capital structure decisions? Journal of Applied Corporate Finance 15, 8-23.

Harris, J.O., 2000. The doctrine of inevitable disclosure: A proposal to balance employer and employee interests, Washington University Law Review 78, 325-345.

Harris, M., and A. Raviv, 1991. The theory of capital structure, Journal of Finance 46, 297-355.

Haushalter, D., S. Klasa, and W.F. Maxwell, 2007. The influence of product market dynamics on a firm's cash holdings and hedging behavior, Journal of Financial Economics 84, 797-825.

Hoberg, G., and G. Phillips, 2013. Text-based network industries and endogenous product differentiation, Working paper, University of Maryland.

Hoberg, G., G. Phillips, and N. Prabhala, 2014. Product market threats, payouts, and financial flexibility, Journal of Finance 69, 293-324.

Ippolito, R.A., 1985. The economic function of underfunded pension plans, Journal of Law and Economics 28, 611-651.

Kahnke, R.E., K.L. Bundy, and K.A. Liebman, 2008. Doctrine of inevitable disclosure, *Faegre and Benson LLP*.

Khanna, N., and S. Tice, 2000. Strategic responses of incumbents to new entry: The effect of ownership structure, capital structure, and focus, Review of Financial Studies 13, 749-779.

Khanna, N., and S. Tice, 2005. Pricing, exit, and location decisions of firms: Evidence on the role of debt and operating efficiency, Journal of Financial Economics 75, 397-427.

Kim, H., 2013. Labor market size and firm capital structure: Evidence from large plant openings, Working paper, Cornell University.

Kolari, J.W., and S. Pynnönen, 2010. Event study testing with cross-sectional correlation of abnormal returns, Review of Financial Studies 23, 3996-4025.

Leary, M.T., and M.R. Roberts, 2005. Do firms rebalance their capital structures? Journal of Finance 60, 2575-2619.

Lemmon, M.L., M.R. Roberts, and J.F. Zender, 2008. Back to the beginning: Persistence and the cross-section of corporate capital structure, Journal of Finance 63, 1575-1608.

Lyandres, E., 2006. Capital structure and interaction among firms in output markets: Theory and evidence, Journal of Business 79, 2381-2421.

MacKay, P., and G. Phillips, 2005. How does industry affect firm financial structure? Review of Financial Studies 18, 1433-1466.

Malsberger, B.M., 2004. *Covenants Not to Compete: A State-by-State Survey* (BNA Books, Arlington, VA).

Malsberger, B.M., 2011. *Trade Secrets: A State-by-State Survey, 4th ed.* (BNA Books, Arlington, VA).

Marx, M., D. Strumsky, and L. Fleming, 2009. Mobility, skills, and the Michigan non-compete experiment, Management Science 55, 875-889.

Matsa, D.A., 2010. Capital structure as a strategic variable: Evidence from collective bargaining, Journal of Finance 65, 1197-1232.

Opler, T., and S. Titman, 1994. Financial distress and corporate performance, Journal of Finance 49, 1015-1040.

Phillips, G., 1995. Increased debt and industry product markets: An empirical analysis, Journal of Financial Economics 37, 189-238.

Pirinsky, C.A., and Q. Wang, 2006. Does corporate headquarters location matter for stock returns? Journal of Finance 61, 1991-2015.

Png, I.P.L., 2012. Law and innovation: Evidence from state trade secrets laws, Working paper, National University of Singapore.

Png, I.P.L, and S. Samila, 2015. Trade secrets law and mobility: Evidence from "Inevitable Disclosure", Working paper, National University of Singapore.

Porter, M., 1980. *Competitive Strategy*. (New York: Free Press, NY).

Ruggles, S., J.T. Alexander, K. Genadek, R. Goeken, M.B. Schroeder, and M. Sobek. *Integrated Public Use Microdata Series: Version 5.0*, 2010. (Minnesota Population Center, Minneapolis, MN).

Shaked, A., and J. Sutton, 1987. Product differentiation and industrial structure, Journal of Industrial Economics 26, 131-146.

Shapiro, R.J., and K. A. Hassett, 2005. *The Economic Value of Intellectual Property* (USA for Innovation, Washington, D.C.).

Simintzi, E., V. Vig, and P. Volpin, 2014. Labor protection and leverage, Review of Financial Studies 28, 561-591.

Sutton, J., 1991. *Sunk costs and market structure* (MIT Press, Cambridge, MA).

Telser, L.G., 1966. Cutthroat competition and the long purse, Journal of Law and Economics 9, 259-277.

Valta, P., 2012. Competition and the cost of debt, Journal of Financial Economics 105, 661-682.

Waldref, V., 2012. Inevitable Disclosure Doctrine & protection from the threat of trade secret misappropriation: State law overview & analysis, *Lee & Hayes, PLLC*.

Welch, I., 2004. Capital structure and stock returns, Journal of Political Economy 112, 106-132.

Wiesner, R.M., 2012. A state-by-state analysis of inevitable disclosure: A need for uniformity and a workable standard, *Marquette Intellectual Property Law Review* 16, 211-231.

Zingales, L., 1998. Survival of the fittest or the fattest? Exit and financing in the trucking industry, Journal of Finance 53, 905-938.

Table 1
Precedent-setting legal cases adopting or rejecting the Inevitable Disclosure Doctrine

The table lists the precedent-setting legal cases in which state courts adopted the Inevitable Disclosure Doctrine (IDD) or rejected it after adopting it. The states omitted from the table did not consider or considered but rejected the IDD. The text of all court decisions is available from Google Scholar.

State	Precedent-Setting Case(s)	Date	Decision
AR	*Southwestern Energy Co. v. Eickenhorst,* 955 F. Supp. 1078 (W.D. Ark. 1997)	3/18/1997	Adopt
CT	*Branson Ultrasonics Corp. v. Stratman,* 921 F. Supp. 909 (D. Conn. 1996)	2/28/1996	Adopt
DE	*E.I. duPont de Nemours & Co. v. American Potash & Chem. Corp.,* 200 A.2d 428 (Del. Ch. 1964)	5/5/1964	Adopt
FL	*Fountain v. Hudson Cush-N-Foam Corp.,* 122 So. 2d 232 (Fla. Dist. Ct. App. 1960) *Del Monte Fresh Produce Co. v. Dole Food Co. Inc.,* 148 F. Supp. 2d 1326 (S.D. Fla. 2001)	7/11/1960 5/21/2001	Adopt Reject
GA	*Essex Group Inc. v. Southwire Co.,* 501 S.E.2d 501 (Ga. 1998)	6/29/1998	Adopt
IL	*Teradyne Inc. v. Clear Communications Corp.,* 707 F. Supp. 353 (N.D. 111. 1989)	2/9/1989	Adopt
IN	*Ackerman v. Kimball Int'l Inc.,* 652 N.E.2d 507 (Ind. 1995)	7/12/1995	Adopt
IA	*Uncle B's Bakery v. O'Rourke,* 920 F. Supp. 1405 (N.D. Iowa 1996)	4/1/1996	Adopt
KS	*Bradbury Co. v. Teissier-duCros,* 413 F. Supp. 2d 1203 (D. Kan. 2006)	2/2/2006	Adopt
MA	*Bard v. Intoccia,* 1994 U.S. Dist. LEXIS 15368 (D. Mass. 1994)	10/13/1994	Adopt
MI	*Allis-Chalmers Manuf. Co. v. Continental Aviation & Eng. Corp.,* 255 F. Supp. 645 (E.D. Mich. 1966) *CMI Int'l, Inc. v. Intermet Int'l Corp.,* 649 N.W.2d 808 (Mich. Ct. App. 2002)	2/17/1966 4/30/2002	Adopt Reject
MN	*Surgidev Corp. v. Eye Technology Inc.,* 648 F. Supp. 661 (D. Minn. 1986)	10/10/1986	Adopt
MO	*H&R Block Eastern Tax Servs. Inc. v. Enchura,* 122 F. Supp. 2d 1067 (W.D. Mo. 2000)	11/2/2000	Adopt
NJ	*Nat'l Starch & Chem. Corp. v. Parker Chem. Corp.,* 530 A.2d 31 (N.J. Super. Ct. 1987)	4/27/1987	Adopt
NY	*Eastman Kodak Co. v. Powers Film Prod.,* 189 A.D. 556 (N.Y.A.D. 1919)	12/5/1919	Adopt
NC	*Travenol Laboratories Inc. v. Turner,* 228 S.E.2d 478 (N.C. Ct. App. 1976)	6/17/1976	Adopt
OH	*Procter & Gamble Co. v. Stoneham,* 747 N.E.2d 268 (Ohio Ct. App. 2000)	9/29/2000	Adopt
PA	*Air Products & Chemical Inc. v. Johnson,* 442 A.2d 1114 (Pa. Super. Ct. 1982)	2/19/1982	Adopt
TX	*Rugen v. Interactive Business Systems Inc.,* 864 S.W.2d 548 (Tex. App. 1993) *Cardinal Health Staffing Network Inc. v. Bowen,* 106 S.W.3d 230 (Tex. App. 2003)	5/28/1993 4/3/2003	Adopt Reject
UT	*Novell Inc. v. Timpanogos Research Group Inc.,* 46 U.S.P.Q.2d 1197 (Utah D.C. 1998)	1/30/1998	Adopt
WA	*Solutec Corp. Inc. v. Agnew,* 88 Wash. App. 1067 (Wash. Ct. App. 1997)	12/30/1997	Adopt

Table 2
Inevitable Disclosure Doctrine and mobility to rival firms

This table reports the results from Linear Probability Models which estimate the impact of the recognition of the Inevitable Disclosure Doctrine (IDD) on the probability that an individual employed in a "management and related occupation" (as defined by the Integrated Public Use Microdata Series occupation codes) hast left her employer recorded in the preceding survey period to join a new (either rival or non-rival) employer in the current survey period (survey periods are four months apart in the vast majority of cases, but the time between surveys varies between one and twenty-four months). The data comes from the U.S. Census' Survey of Income and Program Participation (SIPP). The sample includes 26,521 individuals who are 18+ years old and 125,788 monthly observations during the period 1983-2011. Individuals observed only once during the sample period and those employed in the financial and utility industries are excluded from the sample. In models 1 and 2, the dependent variable is equal to one if the individual left her prior employer to work for a rival employer (in the same three-digit Census Industry Classification industry as the prior one) and zero otherwise. The sample includes workers who move to rival employers and those who remain at the current employers. In models 3 and 4, the dependent variable is equal to one if the individual left her prior employer to work for a non-rival employer (in a different three-digit Census Industry Classification industry as the prior one) and zero otherwise. The sample includes workers who move to non-rival employers and those who remain at the current employers. The key independent variable of interest are *Inevitable Disclosure*, which is equal to one if the individual's employer is located in a state that recognizes the Inevitable Disclosure Doctrine (IDD) and zero otherwise. The control variables are as follows: *Log(Income)* is the natural logarithm of the individual's average income per month recorded in the previous wave of the survey (in $); *Log(Hours)* is the natural logarithm of the average number of hours the individual works per week recorded in the previous wave of the survey. We also include twenty-four dummy variables indicating whether the current and the prior survey records for an individual are 1,2,...,24 months apart (but in most cases they are four months apart). The empirical model includes individual fixed effects and year-month fixed effects. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Mobility to Rival Firms		Mobility to Non-Rival Firms	
	(1)	(2)	(3)	(4)
Inevitable Disclosure	-0.014**	-0.014**	-0.005	-0.004
	(-2.38)	(-2.34)	(-1.01)	(-0.85)
Log(Income)		-0.007***		-0.020***
		(-4.00)		(-7.99)
Log(Hours)		-0.008***		-0.036***
		(-2.69)		(-8.85)
Year-Month Fixed Effects	Yes	Yes		Yes
Individual Fixed Effects	Yes	Yes		Yes
Observations	129,688	129,688	130,379	130,379
Adjusted R^2	0.330	0.330	0.250	0.260

Table 3
CARs to announcement of the adoption of the IDD

This table reports the cumulative abnormal returns (CARs) surrounding the announcement that a state court adopts the Inevitable Disclosure Doctrine (IDD) for firms located in the recognizing states. The CARs are calculated over the event window [-1,3] and pre-event window [-31,-2], where t=0 is the date the court adopts the IDD. The sample used in columns 1 and 2 includes all available observations and the sample used in columns 3 and 4 excludes all firms with an earnings or distribution announcement during the ±5 trading days around the announcement of the adoption of the IDD. In models 1 and 3, CARs are calculated from the market model using CRSP value-weighted market returns. In models 2 and 4, CARs are calculated from the 4-factor model, in which firm returns are regressed on value-weighted market returns as well as the returns to zero-investment long-short portfolios formed from small cap stocks minus large cap stocks, high book-to-market stocks minus low book-to-market stocks, and high momentum stocks minus low momentum stocks. The parameters for the market and 4-factor models are estimated over the window [-280, -61] relative to the announcement date. CARs are winsorized at their 1st and 99th percentiles. T-statistics reported in parentheses are corrected for cross-sectional correlation (i.e., event-day clustering) following Kolari and Pynnönen (2010). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Sample Includes All Firms (Obs. = 1,877)		Sample Excludes Confounding Events (Obs. = 1,549)	
CAR Window	Market Model CARs	4-Factor CARs	Market Model CARs	4-Factor CARs
	(1)	(2)	(3)	(4)
[-1,3]	0.702%**	0.551%**	0.704%**	0.524%**
	(2.54)	(2.48)	(2.41)	(2.20)
[-31,-2]	-0.435%	0.156%	-0.733%	0.067%
	(-0.80)	(0.38)	(-1.24)	(0.20)

Table 4
Inevitable Disclosure Doctrine and sales growth

This table reports the results from OLS regressions examining the effect of the recognition of the IDD in the state where a firm is headquartered on the firm's market share. The dependent variable in models 1-4 is the firm's sales growth rate (($Sales_t$ / $Sales_{t-1}$) - 1) less the average (mean) sales growth rate of all the firm's out-of-state rivals. In models 1 and 2 (3 and 4), rivals are defined as firms in the same 3-digit (4-digit) SIC industry. Firms must have at least one out-of-state rival to enter the sample. *Capital Expenditures* is capital expenditures (*capex*) divided by book assets (*at*). *R&D Expenditures* is R&D expenses (*xrd*) divided by sales (*sale*). *Advertising Expenditures* is advertising expenses (*xad*) divided by sales (*sale*). All other variables are defined in Table 5. The sample spans the 1977-2011 period. Continuous variables are winsorized at their 1st and 99th percentiles. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Out-of-State Rival Ind. Adj. (3-Digit SIC) Sales Growth		Out-of-State Rival Ind. Adj. (4-Digit SIC) Sales Growth	
	(1)	(2)	(3)	(4)
Inevitable Disclosure	0.020**	0.020**	0.022**	0.023**
	(2.35)	(2.36)	(2.56)	(2.56)
Log Book Assets	0.043***	0.044***	0.046***	0.047***
	(12.35)	(13.55)	(11.70)	(12.78)
Return on Assets	0.454***	0.449***	0.444***	0.440***
	(28.99)	(31.19)	(29.49)	(32.47)
Market-to-Book Assets	0.046***	0.046***	0.044***	0.044***
	(14.00)	(14.21)	(12.98)	(13.21)
Capital Expenditures	0.559***	0.558***	0.540***	0.539***
	(15.69)	(15.62)	(15.27)	(15.18)
R&D Expenditures	-0.088***	-0.089***	-0.089***	-0.089***
	(-16.78)	(-16.60)	(-16.84)	(-16.60)
Advertising Expenditures	0.423***	0.419***	0.446***	0.443***
	(3.44)	(3.46)	(3.01)	(3.03)
Book Leverage		-0.026		-0.021
		(-1.54)		(-1.11)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	129,491	129,491	121,333	121,333
Adjusted R^2	0.200	0.200	0.184	0.184

Table 5
Inevitable Disclosure Doctrine and financial leverage

This table reports the results from OLS regressions of financial leverage on the indicator for the recognition of the IDD in the state where a firm is headquartered and control variables. In Panel A, financial leverage is measured by *Book Leverage* in models 1-3 and *Market Leverage* in models 4-6. In Panel B, financial leverage is alternatively measured by *Net Book Leverage*, *Net Market Leverage*, *Long-Term Book Leverage*, and *Long-Term Market Leverage*. *Net Book Leverage* is the book value of long-term debt (*dltt*) plus debt in current liabilities (*dlc*) less book value of cash and short-term investments (*che*) divided by book value of assets (*at*). *Net Market Leverage* is the book value of long-term debt (*dltt*) plus debt in current liabilities (*dlc*) less book value of cash and short-term investments (*che*) divided by market value of assets (*prcc_f*csho + at - ceq*). *Long-Term Book Leverage* is the book value of long-term debt (*dltt*) plus the current portion of long-term debt (*dd1*) divided by book value of assets (*at*). *Long-Term Market Leverage* is the book value of long-term debt (*dltt*) plus the current portion of long-term debt (*dd1*) divided by market value of assets (*prcc_f*csho + at - ceq*). All other variables are defined in Table 5. Continuous variables, except *State GDP Growth* and *Political Balance*, are winsorized at their 1st and 99th percentiles. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Inevitable disclosure and financial leverage

	Book Leverage			Market Leverage		
	(1)	(2)	(3)	(4)	(5)	(6)
Inevitable Disclosure	0.012***	0.013***	0.013***	0.007**	0.010***	0.010***
	(3.23)	(3.44)	(3.41)	(2.16)	(2.81)	(3.03)
Log Book Assets		0.030***	0.030***		0.035***	0.035***
		(10.03)	(10.00)		(12.15)	(12.09)
Market-to-Book Assets		-0.004***	-0.004***		-0.019***	-0.019***
		(-6.10)	(-6.08)		(-9.15)	(-9.21)
Return on Assets		-0.164***	-0.164***		-0.130***	-0.129***
		(-15.42)	(-15.53)		(-9.22)	(-9.37)
Fixed Assets		0.244***	0.244***		0.187***	0.187***
		(18.38)	(18.35)		(21.52)	(21.52)
Industry Cash Flow Volatility		-0.097	-0.098		-0.153***	-0.156***
		(-1.60)	(-1.59)		(-3.06)	(-3.04)
Dividend Payer		-0.050***	-0.050***		-0.045***	-0.045***
		(-13.47)	(-13.45)		(-14.84)	(-14.79)
State GDP Growth			-0.048			-0.197***
			(-1.54)			(-5.35)
Political Balance			-0.000			-0.010*
			(-0.02)			(-1.77)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	134,428	134,428	134,428	134,428	134,428	134,428
Adjusted R^2	0.597	0.628	0.628	0.623	0.677	0.678

Table 5 – *(Continued)*

Panel B: Alternative measures of financial leverage				
	Net Book Leverage	Net Market Leverage	Long-Term Book Leverage	Long-Term Market Leverage
	(1)	(2)	(3)	(4)
Inevitable Disclosure	0.016***	0.014***	0.011***	0.009***
	(3.13)	(3.27)	(3.18)	(2.90)
Log Book Assets	0.042***	0.047***	0.030***	0.032***
	(10.87)	(12.67)	(10.10)	(11.51)
Market-to-Book Assets	-0.016***	0.007**	-0.004***	-0.015***
	(-19.75)	(2.41)	(-6.17)	(-8.79)
Return on Assets	-0.179***	-0.096***	-0.105***	-0.091***
	(-15.54)	(-6.22)	(-11.60)	(-8.57)
Fixed Assets	0.707***	0.444***	0.237***	0.184***
	(18.75)	(32.86)	(21.67)	(21.93)
Industry Cash Flow Volatility	-0.138	-0.320***	-0.089	-0.141***
	(-1.57)	(-4.50)	(-1.32)	(-2.70)
Dividend Payer	-0.061***	-0.053***	-0.047***	-0.042***
	(-16.18)	(-15.91)	(-13.21)	(-14.53)
State GDP Growth	-0.071	-0.202***	-0.032	-0.166***
	(-1.64)	(-4.88)	(-1.24)	(-5.32)
Political Balance	-0.006	-0.018*	-0.002	-0.011*
	(-0.46)	(-1.98)	(-0.34)	(-1.94)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	134,428	134,428	134,428	134,428
Adjusted R^2	0.723	0.681	0.627	0.664

Table 6
IDD and net debt issuances and net equity repurchases

This table reports the results from OLS regressions of net debt issues and equity repurchases on indicators for the adoption of the (or rejection of the previously adopted) IDD in the state where a firm is headquartered and control variables. The dependent variables in models 1-4 are as follows: $(\Delta \text{ Total Debt})_t/Assets_{t-1}$ is the change in book value of total debt scaled by lagged book value of assets $[(dltt+dlc)_t-(dltt+dlc)_{t-1}]/at_{t-1}$; $(\text{Debt Issues}–\text{Retirements})_t/Assets_{t-1}$ is the value of long-term debt issuances less long-term debt reductions scaled by lagged book value of assets $(dltis-dltr)_t/at_{t-1}$; $(-\Delta \text{ Shareholder Equity})_t/Assets_{t-1}$ is the change in the book value of shareholder equity times minus one scaled by lagged book value of assets $[(re-ceq)_t-(re-ceq)_{t-1}]/at_{t-1}$; $(\text{Equity Purchases}–\text{Issues})_t/Assets_{t-1}$ is the value of common and preferred stock purchases less common and preferred stock sales scaled by lagged book value of assets $(prstkc-sstk)_t/at_{t-1}$. ΔIDD_{t-1}, ΔIDD_t, ΔIDD_{t+1}, $\Delta IDDe_{t+2}$ are equal to +1 (-1) if the firm is headquartered in a state that will adopt (reject) the IDD in one year, adopts (rejects) the IDD in the current year, adopted (rejected) the IDD one year ago, and adopted (rejected) the IDD two years ago, respectively, and zero otherwise. $\Delta X_t/Assets_{t-1}$ is the change in variable *X* from year *t-1* to $t\ (X_t-X_{t-1})$ scaled by lagged book value of assets. All other variables are defined in Table 5. Continuous variables, except *State GDP Growth*, *Political Balance*, and their corresponding one-year changes, are winsorized at their 1st and 99th percentiles. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Table 6 – *(Continued)*

	(Δ Total Debt)$_t$ / Assets$_{t-1}$	(Debt Issues – Retirements)$_t$ / Assets$_{t-1}$	– (Δ Shareholder Equity)$_t$ / Assets$_{t-1}$	(Equity Purchases - Issues)$_t$ / Assets$_{t-1}$
	(1)	(2)	(3)	(4)
ΔIDD_{t-1}	0.003	0.001	-0.004	-0.002
	(0.90)	(0.34)	(-0.51)	(-0.30)
ΔIDD_t	-0.001	-0.000	0.005	0.001
	(-0.42)	(-0.16)	(0.69)	(0.33)
ΔIDD_{t+1}	0.006**	0.004**	0.014**	0.012**
	(2.04)	(2.03)	(2.33)	(2.33)
ΔIDD_{t+2}	-0.002	-0.001	0.007	-0.001
	(-0.54)	(-0.44)	(1.20)	(-0.15)
Δ Log Book Assets$_t$	0.279***	0.154***	-0.750***	-0.489***
	(11.34)	(11.29)	(-16.10)	(-15.40)
Log Book Assets$_{t-1}$	0.002***	0.003***	0.007***	0.006***
	(4.74)	(6.56)	(11.74)	(8.74)
Δ Market Value of Assets$_t$ / Assets$_{t-1}$	-0.012***	-0.008***	-0.050***	-0.041***
	(-8.41)	(-7.92)	(-12.07)	(-15.44)
Market Value of Assets$_{t-1}$ / Assets$_{t-1}$	-0.014***	-0.006***	-0.049***	-0.034***
	(-12.52)	(-8.55)	(-22.67)	(-17.42)
Δ Operating Income$_t$ / Assets$_{t-1}$	-0.119***	-0.075***	0.952***	0.667***
	(-8.92)	(-8.11)	(36.56)	(30.53)
Operating Income$_{t-1}$ / Assets$_{t-1}$	-0.121***	-0.084***	0.981***	0.715***
	(-14.50)	(-12.41)	(60.90)	(32.97)
Δ Fixed Assets$_t$ / Assets$_{t-1}$	0.484***	0.288***	0.273***	0.230***
	(18.38)	(29.49)	(9.96)	(10.02)
Fixed Assets$_{t-1}$ / Assets$_{t-1}$	-0.007*	0.007***	-0.080***	-0.080***
	(-1.94)	(2.85)	(-14.93)	(-15.33)
Δ Industry Cash Flow Volatility$_t$	-0.136*	-0.133	-0.622**	-0.200
	(-1.78)	(-1.57)	(-2.44)	(-1.36)
Industry Cash Flow Volatility$_{t-1}$	-0.083***	0.017	-0.446***	-0.116***
	(-3.69)	(0.68)	(-8.10)	(-3.01)
Δ Dividend Payer$_t$	-0.002	-0.003	0.007**	0.007***
	(-0.95)	(-1.42)	(2.39)	(3.16)
Dividend Payer$_{t-1}$	-0.007***	-0.002	-0.038***	-0.023***
	(-4.33)	(-1.45)	(-12.02)	(-9.81)
Δ State GDP Growth$_t$	-0.087***	-0.007	0.153***	0.032
	(-3.61)	(-0.42)	(3.10)	(1.02)
State GDP Growth$_{t-1}$	-0.033	0.036*	0.171***	0.061
	(-1.30)	(1.81)	(3.63)	(1.59)
Δ Political Balance$_t$	0.000	0.007**	0.003	0.003
	(0.06)	(2.27)	(0.22)	(0.32)
Political Balance$_{t-1}$	-0.005	-0.001	0.003	-0.001
	(-1.47)	(-0.41)	(0.40)	(-0.14)
Total Debt$_{t-1}$ / Assets$_{t-1}$	-0.054***	-0.010***	-0.165***	-0.098***
	(-12.95)	(-3.24)	(-18.20)	(-14.48)
Year Fixed Effects	Yes	Yes	Yes	Yes
Observations	123,573	123,573	123,573	123,573
Adjusted R^2	0.421	0.246	0.611	0.550

Table 7
Adoption of the IDD vs. rejection of the IDD after adoption

This table reports the results from OLS regressions of financial leverage (*Book Leverage* in models 1 and 3 and *Market Leverage* in models 2 and 4) on indicators for the adoption or rejection of the (previously adopted) IDD in the state where a firm is headquartered, indicators for the timing of changes in state courts' position regarding the IDD, and control variables. In models 1 and 2, we estimate the effect of the adoption and rejection of the IDD by state courts on firms' capital structures. In models 3 and 4, we examine the timing of changes in firms' capital structures around adoptions and rejections of the IDD. *IDD Adoption* is equal to one if the state where the firm is headquartered has adopted the IDD by year *t*, and zero otherwise. *IDD Rejection* is equal to one if the state where the firm is headquartered has rejected the (previously adopted) IDD by year *t*, and zero otherwise. *IDD Adoption*$^{-1}$, *IDD Adoption*^{0}, *IDD Adoption*$^{+1}$, and *IDD Adoption*$^{2+}$ are equal to one if the firm is headquartered in a state that will adopt the IDD in one year, adopts the IDD in the current year, adopted the IDD one year ago, and adopted the IDD two or more years ago, respectively, and zero otherwise. *IDD Rejection*$^{-1}$, *IDD Rejection*^{0}, *IDD Rejection*$^{+1}$, and *IDD Rejection*$^{2+}$ are equal to one if the firm is headquartered in a state that will reject the (previously adopted) IDD in one year, rejects the IDD in the current year, rejected the IDD one year ago, and rejected the IDD two or more years ago, respectively, and zero otherwise. All other variables are defined in Table 5. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Book Leverage (1)	Market Leverage (2)	Book Leverage (3)	Market Leverage (4)
IDD Adoption	0.012***	0.009**		
	(2.75)	(2.45)		
IDD Rejection	-0.018***	-0.013*		
	(-2.69)	(-1.87)		
IDD Adoption $^{-1}$			0.006	0.003
			(1.41)	(0.56)
IDD Adoption ^{0}			0.004	0.004
			(0.93)	(0.73)
IDD Adoption $^{+1}$			0.014***	0.011***
			(3.23)	(2.69)
IDD Adoption $^{2+}$			0.015***	0.011**
			(2.79)	(2.35)
IDD Rejection $^{-1}$			-0.008	0.002
			(-0.86)	(0.26)
IDD Rejection ^{0}			-0.014	-0.007
			(-1.57)	(-0.91)
IDD Rejection $^{+1}$			-0.009	-0.008
			(-1.19)	(-1.16)
IDD Rejection $^{2+}$			-0.023***	-0.016*
			(-2.82)	(-1.90)
Log Book Assets	0.030***	0.035***	0.030***	0.035***
	(9.99)	(12.06)	(10.00)	(12.06)
Market-to-Book Assets	-0.004***	-0.019***	-0.004***	-0.019***
	(-6.09)	(-9.23)	(-6.04)	(-9.23)
Return on Assets	-0.164***	-0.129***	-0.164***	-0.129***
	(-15.52)	(-9.37)	(-15.56)	(-9.38)
Fixed Assets	0.244***	0.187***	0.244***	0.187***
	(18.33)	(21.36)	(18.42)	(21.56)
Industry Cash Flow Volatility	-0.098	-0.156***	-0.098	-0.155***
	(-1.60)	(-3.05)	(-1.60)	(-3.04)

Dividend Payer	-0.050***	-0.045***	-0.050***	-0.045***
	(-13.46)	(-14.82)	(-13.44)	(-14.77)
State GDP Growth	-0.046	-0.195***	-0.047	-0.195***
	(-1.49)	(-5.59)	(-1.57)	(-5.74)
Political Balance	-0.002	-0.011**	-0.003	-0.012**
	(-0.23)	(-2.09)	(-0.42)	(-2.30)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	134,428	134,428	134,428	134,428
Adjusted R^2	0.628	0.678	0.628	0.678

Table 8
Effect of competition in product markets

This table reports the results from OLS regressions of financial leverage (*Book Leverage* in Panel A and *Market Leverage* in Panel B) on the indicator for the recognition of the IDD in the state where a firm is headquartered and control variables. In both panels, we split the sample according to whether the values of selected industry characteristics are below or above the sample median. The first characteristic is the *Four-Firm Concentration Ratio,* defined as the fraction of total industry sales captured by the four largest firms in a 5-digit NAICS industry as reported by the U.S. Economic Census. The second characteristic is *Barriers to Entry*, defined as the average value of firms' R&D expenses (*xrd*) plus advertising expenses (*xad*) divided by sales (*sale*) across all firms in a 3-digit SIC industry. All other variables are defined in Table 5. In models 1 and 2, the sample excludes four industries for which the Census concentration data is not available (Agriculture, forestry, fishing, and hunting, Mining, Construction, and Management of company enterprises). Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Dependent variable is book leverage

	Four-Firm Concentration Ratio		Barriers to Entry	
	Below Median	Above Median	Below Median	Above Median
	(1)	(2)	(3)	(4)
Inevitable Disclosure	0.014*	0.004	0.017***	0.004
	(1.89)	(0.62)	(2.97)	(0.62)
Log Book Assets	0.037***	0.021***	0.040***	0.022***
	(6.87)	(4.41)	(14.58)	(4.69)
Market-to-Book Assets	-0.005***	-0.003**	-0.005***	-0.003***
	(-3.66)	(-2.21)	(-3.46)	(-4.61)
Return on Assets	-0.208***	-0.165***	-0.195***	-0.144***
	(-21.83)	(-10.83)	(-20.12)	(-12.61)
Fixed Assets	0.235***	0.209***	0.232***	0.263***
	(10.27)	(9.07)	(12.47)	(16.79)
Industry Cash Flow Volatility	-0.429***	0.101	-0.146	0.045
	(-4.35)	(0.60)	(-1.59)	(0.54)
Dividend Payer	-0.052***	-0.048***	-0.057***	-0.040***
	(-9.18)	(-10.98)	(-11.50)	(-8.87)
State GDP Growth	-0.035	-0.005	-0.105***	0.031
	(-1.17)	(-0.07)	(-3.01)	(0.80)
Political Balance	0.001	0.015	0.013	-0.016
	(0.12)	(1.50)	(1.05)	(-1.50)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	41,826	39,571	67,215	67,213
Adjusted R^2	0.686	0.630	0.660	0.597

Table 8 - (*Continued*)

Panel B: Dependent variable is market leverage

	Four-Firm Concentration Ratio		Barriers to Entry	
	Below Median	Above Median	Below Median	Above Median
	(1)	(2)	(3)	(4)
Inevitable Disclosure	0.014**	0.006	0.014**	0.004
	(2.23)	(1.40)	(2.59)	(0.81)
Log Book Assets	0.045***	0.029***	0.044***	0.025***
	(10.72)	(8.41)	(20.92)	(6.43)
Market-to-Book Assets	-0.025***	-0.017***	-0.030***	-0.014***
	(-11.39)	(-9.87)	(-14.33)	(-10.60)
Return on Assets	-0.188***	-0.135***	-0.183***	-0.097***
	(-12.93)	(-7.62)	(-14.97)	(-8.64)
Fixed Assets	0.202***	0.150***	0.192***	0.173***
	(11.84)	(10.63)	(14.68)	(15.32)
Industry Cash Flow Volatility	-0.311***	-0.117	-0.098	-0.084
	(-2.94)	(-0.89)	(-1.22)	(-1.34)
Dividend Payer	-0.047***	-0.044***	-0.051***	-0.034***
	(-11.20)	(-13.60)	(-13.88)	(-10.44)
State GDP Growth	-0.148***	-0.127**	-0.245***	-0.085***
	(-5.53)	(-2.23)	(-5.76)	(-2.89)
Political Balance	-0.008	0.001	-0.000	-0.013*
	(-0.79)	(0.13)	(-0.03)	(-1.79)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	41,826	39,571	67,215	67,213
Adjusted R^2	0.720	0.698	0.685	0.668

Table 9
Effect of employee characteristics

This table reports the results from OLS regressions of financial leverage (*Book Leverage* in Panel A and *Market Leverage* in Panel B) on the indicator for the recognition of the IDD in the state where a firm is headquartered and control variables. In both panels, we split the sample according to whether the values of selected industry characteristics are below or above the sample median. The first characteristic is the *Fraction of Workers in Managerial Occupations*, defined as the fraction of workers employed in managerial occupations in the firm's 3-digit NAICS industry and state. The second characteristic is the *Fraction of Workers with a Bachelor's Degree*, defined as the fraction of workers with at least a bachelor's degree that are employed in the firm's 3-digit NAICS industry and state. All other variables are defined in Table 5. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Dependent variable is book leverage

	Fraction of Workers in Managerial Occupations		Fraction of Workers with a Bachelor's Degree	
	Above Median	Below Median	Above Median	Below Median
	(1)	(2)	(3)	(4)
Inevitable Disclosure	0.018***	0.004	0.018***	0.006
	(4.60)	(0.53)	(3.86)	(0.84)
Log Book Assets	0.027***	0.037***	0.026***	0.038***
	(5.91)	(13.90)	(6.12)	(12.51)
Market-to-Book Assets	-0.004***	-0.005***	-0.003***	-0.006***
	(-4.65)	(-4.73)	(-4.08)	(-5.85)
Return on Assets	-0.136***	-0.217***	-0.138***	-0.215***
	(-13.08)	(-27.89)	(-13.17)	(-25.46)
Fixed Assets	0.286***	0.204***	0.299***	0.187***
	(19.04)	(12.84)	(30.87)	(11.73)
Industry Cash Flow Volatility	-0.022	-0.123	0.032	-0.210*
	(-0.22)	(-1.00)	(0.30)	(-1.93)
Dividend Payer	-0.029***	-0.056***	-0.033***	-0.055***
	(-7.01)	(-12.78)	(-8.94)	(-11.08)
State GDP Growth	0.011	-0.072**	-0.051	-0.038
	(0.22)	(-2.25)	(-1.29)	(-1.24)
Political Balance	-0.001	-0.004	-0.005	-0.006
	(-0.10)	(-0.32)	(-0.37)	(-0.54)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	65,643	65,674	65,654	65,663
Adjusted R^2	0.642	0.649	0.634	0.650

Table 9 - (*Continued*)

Panel B: Dependent variable is market leverage				
	Fraction of Worker in Managerial Occupations		Fraction of Workers with a Bachelor's Degree	
	Above Median	Below Median	Above Median	Below Median
	(1)	(2)	(3)	(4)
Inevitable Disclosure	0.012***	0.005	0.014***	0.007
	(3.69)	(0.81)	(3.83)	(1.23)
Log Book Assets	0.029***	0.043***	0.029***	0.044***
	(7.17)	(21.04)	(8.12)	(19.16)
Market-to-Book Assets	-0.015***	-0.027***	-0.014***	-0.027***
	(-8.79)	(-19.79)	(-9.57)	(-14.84)
Return on Assets	-0.088***	-0.210***	-0.087***	-0.211***
	(-9.20)	(-20.84)	(-10.16)	(-15.05)
Fixed Assets	0.195***	0.172***	0.210***	0.157***
	(18.78)	(14.01)	(20.00)	(12.72)
Industry Cash Flow Volatility	-0.109	-0.087	-0.078	-0.146
	(-1.42)	(-0.80)	(-1.04)	(-1.52)
Dividend Payer	-0.028***	-0.051***	-0.029***	-0.050***
	(-8.59)	(-15.53)	(-10.57)	(-13.81)
State GDP Growth	-0.136**	-0.190***	-0.199***	-0.139***
	(-2.25)	(-5.19)	(-3.42)	(-5.58)
Political Balance	-0.008	-0.008	-0.015*	-0.009
	(-0.85)	(-0.88)	(-1.94)	(-1.21)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	65,643	65,674	65,654	65,663
Adjusted R^2	0.690	0.687	0.677	0.691

Table 10
Effect of ex-ante employee mobility

This table reports the results from OLS regressions of financial leverage (*Book Leverage* in Panel A and *Market Leverage* in Panel B) on the indicator for the recognition of the IDD in the state where a firm is headquartered and control variables. In models 1 and 2 of both panels, we split the sample according to whether a firm has a *Defined Benefit Pension Plan* or not. We define a firm as having a defined benefit pension plan if it reports positive pension plan assets (*pbnna>0*) or accumulated obligations (*pbaco>0*). In models 3 and 4, we split the sample according to whether *Employee Market Share*, defined as the firm's share in the 2-digit SIC industry's employment located in the firm's state is below or above the sample median. All other variables are defined in Table 5. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Dependent variable is book leverage

	Defined Benefit Pension Plan		Employee Market Share	
	No	Yes	Below Median	Above Median
	(1)	(2)	(3)	(4)
Inevitable Disclosure	0.013***	0.006	0.016***	0.006
	(3.24)	(0.66)	(4.00)	(1.10)
Log Book Assets	0.031***	0.036***	0.028***	0.031***
	(8.82)	(6.61)	(5.01)	(14.42)
Market-to-Book Assets	-0.005***	0.003	-0.003***	-0.007***
	(-5.04)	(1.25)	(-4.33)	(-5.62)
Return on Assets	-0.151***	-0.352***	-0.135***	-0.237***
	(-15.03)	(-16.40)	(-11.85)	(-14.29)
Fixed Assets	0.275***	0.099***	0.307***	0.171***
	(19.96)	(3.54)	(18.18)	(8.25)
Industry Cash Flow Volatility	-0.138*	0.082	-0.058	-0.080
	(-1.92)	(0.70)	(-0.61)	(-1.00)
Dividend Payer	-0.040***	-0.057***	-0.041***	-0.051***
	(-11.99)	(-8.79)	(-7.95)	(-10.30)
State GDP Growth	-0.109***	0.015	-0.058	-0.016
	(-3.54)	(0.36)	(-0.95)	(-0.58)
Political Balance	-0.001	-0.002	-0.005	0.002
	(-0.10)	(-0.14)	(-0.49)	(0.19)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	98,124	28,157	65,850	65,851
Adjusted R^2	0.639	0.660	0.612	0.673

Table 10 - (*Continued*)

Panel B: Dependent variable is market leverage

	Defined Benefit Pension Plan		Employee Market Share	
	No	Yes	Below Median	Above Median
	(1)	(2)	(3)	(4)
Inevitable Disclosure	0.011***	0.005	0.012***	0.006
	(3.39)	(0.85)	(4.90)	(1.13)
Log Book Assets	0.032***	0.042***	0.031***	0.037***
	(10.42)	(9.23)	(5.58)	(23.65)
Market-to-Book Assets	-0.017***	-0.034***	-0.014***	-0.029***
	(-9.03)	(-11.06)	(-8.75)	(-18.76)
Return on Assets	-0.104***	-0.388***	-0.088***	-0.248***
	(-9.50)	(-18.15)	(-7.44)	(-16.09)
Fixed Assets	0.196***	0.115***	0.218***	0.151***
	(24.60)	(4.98)	(22.52)	(9.05)
Industry Cash Flow Volatility	-0.213***	0.015	-0.148*	-0.137*
	(-4.08)	(0.19)	(-1.88)	(-1.84)
Dividend Payer	-0.040***	-0.045***	-0.038***	-0.046***
	(-13.87)	(-10.39)	(-8.46)	(-11.20)
State GDP Growth	-0.237***	-0.117**	-0.271***	-0.101***
	(-6.37)	(-2.52)	(-4.21)	(-4.44)
Political Balance	-0.014**	-0.000	-0.013	-0.008
	(-2.26)	(-0.04)	(-1.54)	(-1.36)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	98,124	28,157	65,850	65,851
Adjusted R^2	0.682	0.715	0.668	0.710

Table 11
Inevitable disclosure doctrine and credit spreads

Models 1-4 of this table reports the results from OLS regressions of *Log Loan Spread*, defined as the natural logarithm of the amount the borrower pays over LIBOR for each dollar drawn down (in basis points) on the indicators for the recognition, adoption, or rejection of the IDD in the state where a firm is headquartered and control variables. Model 5 reports the results from OLS regressions of *Log Loan Spread* on indicators for the timing of changes in state courts' positions regarding the IDD and control variables. *IDD Adoption*$^{-1}$, *IDD Adoption*^{0}, *IDD Disclosure Adoption*$^{+1}$, *IDD Adoption*$^{2+}$, *IDD Rejection*$^{-1}$, *IDD Rejection*^{0}, *IDD Rejection*$^{+1}$, and *IDD Rejection*$^{2+}$ are defined in Table 5. *Log Loan Maturity* is defined as the natural logarithm of the number of months until the loan matures. *Log Loan Size* is defined as the natural logarithm of the loan amount (in millions). All specifications include state fixed effects, 3-digit SIC industry fixed effects, and year fixed effects. Except for model 1, all models further include loan-type fixed effects for each loan type (defined as in Campello, Lin, and Zou (2011), the categories are term loan, revolver greater than one year, revolver shorter than one year, and 364-day facility). All other variables are defined in Table 5. In models 1-5, the sample spans all firms with non-missing data for the period 1987-2011. Continuous variables, except *State GDP Growth* and *Political Balance*, are winsorized at their 1st and 99th percentiles. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Log Loan Spread				
	(1)	(2)	(3)	(4)	(5)
Inevitable Disclosure	-0.069***	-0.061***	-0.057**		
	(-2.94)	(-2.77)	(-2.38)		
IDD Adoption				-0.047*	
				(-1.77)	
IDD Rejection				0.070**	
				(2.02)	
IDD Adoption $^{-1}$					0.010
					(0.32)
IDD Adoption ^{0}					0.022
					(0.95)
IDD Adoption $^{+1}$					-0.027
					(-0.46)
IDD Adoption $^{2+}$					-0.060**
					(-2.25)
IDD Rejection $^{-1}$					0.004
					(0.17)
IDD Rejection ^{0}					0.060**
					(2.34)
IDD Rejection $^{+1}$					0.036
					(1.31)
IDD Rejection $^{2+}$					0.083*
					(1.96)
Log Book Assets	-0.220***	-0.145***	-0.145***	-0.145***	-0.145***
	(-33.64)	(-20.47)	(-20.39)	(-20.36)	(-20.47)
Market-to-Book Assets	-0.079***	-0.064***	-0.065***	-0.065***	-0.065***
	(-7.61)	(-8.29)	(-8.35)	(-8.34)	(-8.26)
Return on Assets	-1.216***	-1.106***	-1.107***	-1.107***	-1.106***
	(-10.36)	(-10.13)	(-10.16)	(-10.19)	(-10.16)
Fixed Assets	-0.235***	-0.202***	-0.202***	-0.203***	-0.201***
	(-4.28)	(-3.95)	(-3.96)	(-3.98)	(-3.96)
Industry Cash Flow Volatility	0.920**	1.193***	1.173***	1.166***	1.179***

	(2.23)	(3.29)	(3.25)	(3.22)	(3.26)
Dividend Payer	-0.376***	-0.325***	-0.324***	-0.324***	-0.325***
	(-18.87)	(-19.13)	(-18.93)	(-18.96)	(-18.89)
Book Leverage	1.105***	0.935***	0.935***	0.935***	0.935***
	(33.11)	(40.39)	(40.43)	(40.46)	(40.08)
Log Loan Maturity		0.001	0.001	0.001	0.001
		(0.13)	(0.12)	(0.13)	(0.09)
Log Loan Size		-0.068***	-0.068***	-0.068***	-0.068***
		(-11.91)	(-11.87)	(-11.87)	(-11.93)
State GDP Growth			0.355	0.348	0.339
			(1.11)	(1.08)	(1.04)
Political Balance			-0.039	-0.029	-0.015
			(-0.87)	(-0.61)	(-0.30)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes
Loan-Type Fixed Effects	No	Yes	Yes	Yes	Yes
Observations	25,017	25,017	25,017	25,017	25,017
Adjusted R^2	0.555	0.608	0.608	0.608	0.608

Table 12
Adoption of state laws based on the UTSA and strength of non-competes

This table reports the results from OLS regressions of financial leverage (*Book Leverage* in models 1-3 and *Market Leverage* in models 4-6) on the indicator for the recognition of the IDD in the state where a firm is headquartered and other state-level indicators of the legal protection of trade secrets in a firm's state that are not directly captured by the IDD indicator. *State UTSA* is an indicator variable that is set to one if the state where a firm is headquartered has adopted legal principles based on the Uniform Trade Secrets Act (UTSA) by year *t* and zero otherwise. The dates in which each state adopted laws based on the UTSA are from Malsberger (2011). *Strength of CNCs* is an index used in Bird and Knopf (2014) that takes a value between zero and twelve and that indicates the strength of the enforcement of covenants not to compete (CNCs) by courts in the state (higher values imply stronger enforcement). *In-State Competition* is the fraction of total industry sales (excluding those of the firm itself) generated by in-state competitors, where industries are based on 3-digit SIC codes. All other variables are defined in Table 5. Continuous variables, except for *Strength of CNCs, In-State Competition, State GDP Growth,* and *Political Balance*, are winsorized at their 1st and 99th percentiles. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Book Leverage			Market Leverage		
	(1)	(2)	(3)	(4)	(5)	(6)
Inevitable Disclosure	0.013***	0.014***	0.014***	0.010***	0.011***	0.011***
	(3.23)	(4.02)	(3.99)	(3.05)	(3.68)	(3.72)
State UTSA	-0.004			0.001		
	(-1.11)			(0.46)		
Strength of CNCs		0.001	-0.000		0.001	-0.000
		(0.38)	(-0.07)		(0.50)	(-0.02)
Strength of CNCs × In-State Competition			0.011***			0.011***
			(3.36)			(3.54)
In-State Competition			-0.023**			-0.026***
			(-2.23)			(-2.71)
Log Book Assets	0.030***	0.030***	0.030***	0.035***	0.035***	0.035***
	(10.01)	(10.01)	(9.70)	(12.09)	(12.09)	(11.84)
Market-to-Book Assets	-0.004***	-0.004***	-0.004***	-0.019***	-0.019***	-0.019***
	(-6.08)	(-6.04)	(-6.14)	(-9.21)	(-9.21)	(-9.16)
Return on Assets	-0.164***	-0.164***	-0.164***	-0.129***	-0.129***	-0.129***
	(-15.53)	(-15.54)	(-14.96)	(-9.37)	(-9.37)	(-9.19)
Fixed Assets	0.244***	0.244***	0.245***	0.187***	0.187***	0.187***
	(18.30)	(18.36)	(18.80)	(21.48)	(21.58)	(21.31)
Industry Cash Flow Volatility	-0.098	-0.098	-0.113	-0.156***	-0.155***	-0.160***
	(-1.59)	(-1.59)	(-1.65)	(-3.04)	(-3.06)	(-2.92)
Dividend Payer	-0.050***	-0.050***	-0.049***	-0.045***	-0.045***	-0.044***
	(-13.43)	(-13.43)	(-12.85)	(-14.79)	(-14.71)	(-13.82)
State GDP Growth	-0.048	-0.048	-0.045	-0.197***	-0.197***	-0.196***
	(-1.56)	(-1.54)	(-1.44)	(-5.35)	(-5.35)	(-5.14)
Political Balance	-0.001	-0.000	-0.001	-0.010*	-0.010*	-0.011**
	(-0.08)	(-0.03)	(-0.15)	(-1.76)	(-1.81)	(-2.13)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	134,428	134,428	132,321	134,428	134,428	132,321
Adjusted R^2	0.628	0.628	0.629	0.678	0.678	0.679

Protection of trade secrets and capital structure decisions

Internet appendix

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Table A1
Variable definitions and summary statistics

Panel A: Variable Definitions in Alphabetical Order

Variable	Definition (variable definitions in parentheses refer to Compustat data items where appropriate)
Advertising Expenditures	Advertising expenses (*xad*) divided by sales (*sale*)
Book Assets	Total assets (*at*, in $ millions)
Book Leverage	Book value of long-term debt (*dltt*) plus debt in current liabilities (*dlc*) divided by book value of assets (*at*)
Capital Expenditures	Capital expenditures (*capex*) divided by book assets (*at*)
Dividend Payer	An indicator variable equal to one if the firm pays a common dividend (*dvc*) during the fiscal year and zero otherwise
Fixed Assets	The ratio of the book value of property, plant, and equipment (*ppent*) to book value of assets (*at*)
Industry Cash Flow Volatility	The median of the standard deviations of the *Return on Assets* over the previous ten years for firms in the same 2-digit SIC industry (firms are required to have at least three years of data to enter the calculation)
Inevitable Disclosure	An index equal to one if the firm is headquartered in a state that recognizes the Inevitable Disclosure Doctrine (IDD) and zero otherwise (the indicator goes from zero to one when a state court adopts the IDD and reverts to zero in the few cases a state court rejects the IDD it had previously adopted)
Income	An individuals' average income per month recorded in the previous wave of the survey (in $)
Hours	The average number of hours the individual works per week recorded in the previous wave of the survey
Loan Maturity	The number of months until the loan matures
Loan Size	The loan amount (in millions $)
Loan Spread	The amount the borrower pays over LIBOR for each dollar drawn down (in basis points)
Market-to-Book Assets	Market value of assets (market value of equity (*prcc_f*csho*) plus book assets (*at*) minus book value of equity (*ceq*)) divided by book value of assets (*at*)
Market Leverage	Book value of long-term debt (*dltt*) plus debt in current liabilities (*dlc*) divided by market value of assets (market value of equity (*prcc_f*csho*) plus book assets (*at*) minus book value of equity (*ceq*))
Mobility to Rival (Non-Rival) Firms	An indicator variable set to one if an individual employed in a "management and related occupation" (as defined by the Integrated Public Use Microdata Series occupation codes) hast left her employer recorded in the preceding survey period to join a new rival (non-rival) employer in the current survey period
Out-of-State Rival Ind. Adj. Sales Growth	A firm's sales growth rate (($Sales_t$ / $Sales_{t-1}$) - 1) less the average (mean) sales growth rate of all the firm's out-of-state rivals. Rivals are defined as firms in the same 3- or 4-digit SIC industry. Firms must have at least one out-of-state rival to enter the sample.
Political Balance	The fraction of a state's congress members representing their state in the U.S. House of Representatives that belong to the Democratic Party in a given year
R&D Expenditures	R&D expenses (*xrd*) divided by sales (*sale*)
Return on Assets	Operating income before depreciation (*oibdp*) divided by book value of assets (*at*)
State GDP Growth	The state-level GDP growth rate over the year

Table A1 - *(Continued)*

	Obs.	Mean	Std. Dev.	P25	Median	P75
Panel B: Summary Statistics for Mobility to Rival Firms Test (Table 2)						
Mobility to Rival Firms	129,688	0.030	0.171	0.000	0.000	0.000
Mobility to Non-Rival Firms	130,379	0.035	0.184	0.000	0.000	0.000
Inevitable Disclosure	130,379	0.444	0.497	0.000	0.000	1.000
Income	130,379	4,293.0	4,235.9	2,000.0	3,240.0	5,200.0
Hours	130,379	44.2	10.6	40.0	40.0	50.0
Panel C: Summary Statistics for Sales Growth Test (Table 4)						
Out-of-State Rival Ind. Adj. (3-Digit SIC) Sales Growth	129,491	0.001	0.394	-0.154	-0.019	0.121
Out-of-State Rival Ind. Adj. (4-Digit SIC) Sales Growth	121,333	0.001	0.409	-0.162	-0.014	0.135
Inevitable Disclosure	129,491	0.416	0.493	0.000	0.000	1.000
Book Assets	129,491	1351	4150	39.45	150.8	657.4
Return on Assets	129,491	0.060	0.228	0.029	0.113	0.175
Market-to-Book Assets	129,491	1.969	1.716	1.042	1.394	2.151
Capital Expenditures	129,491	0.068	0.073	0.022	0.045	0.086
R&D Expenditures	129,491	0.175	0.845	0.000	0.000	0.053
Book Leverage	129,491	0.013	0.032	0.000	0.000	0.012
Panel D: Summary Statistics for Financial Leverage Test (Table 5)						
Book Leverage	134,428	0.232	0.213	0.040	0.195	0.357
Market Leverage	134,428	0.178	0.179	0.019	0.128	0.285
Net Book Leverage	134,428	0.057	0.356	-0.157	0.102	0.299
Net Market Leverage	134,428	0.077	0.249	-0.071	0.063	0.236
Long-Term Book Leverage	134,428	0.197	0.200	0.017	0.150	0.309
Long-Term Market Leverage	134,428	0.152	0.166	0.008	0.097	0.243
Inevitable Disclosure	134,428	0.415	0.493	0.000	0.000	1.000
Book Assets	134,428	1322	4098	37.93	146.0	639.9
Market-to-Book Assets	134,428	1.994	1.754	1.044	1.401	2.176
Return on Assets	134,428	0.057	0.233	0.025	0.112	0.175
Fixed Assets	134,428	0.285	0.222	0.107	0.228	0.407
Industry Cash Flow Volatility	134,428	0.070	0.027	0.049	0.065	0.088
Dividend Payer	134,428	0.324	0.468	0.000	0.000	1.000
State GDP Growth	134,428	0.064	0.036	0.042	0.062	0.087
Political Balance	134,428	0.569	0.184	0.500	0.578	0.644
Panel E: Summary Statistics for Credit Spreads Test (Table 11)						
Loan Spread	25,017	176.4	120.5	75.00	162.5	250.0
Inevitable Disclosure	25,017	0.525	0.499	0.000	1.000	1.000
Book Assets	25,017	3635	6827	289.7	911.4	2993
Market-to-Book Assets	25,017	1.692	0.919	1.123	1.405	1.924
Return on Assets	25,017	0.128	0.088	0.083	0.125	0.172
Fixed Assets	25,017	0.313	0.229	0.129	0.257	0.446
Industry Cash Flow Volatility	25,017	0.067	0.028	0.046	0.060	0.084
Dividend Payer	25,017	0.376	0.484	0.000	0.000	1.000
Loan Maturity	25,017	47.64	24.62	31.00	49.00	60.00
Loan Size	25,017	370.5	903.9	44.06	134.6	357.9
State GDP Growth	25,017	0.055	0.027	0.040	0.054	0.073
Political Balance	25,017	0.517	0.182	0.400	0.526	0.615

Table A2
Inevitable Disclosure Doctrine and investment

This table reports the results from OLS regressions of investment on the indicator for the recognition of the IDD in the state where a firm is headquartered and control variables. The dependent variables in columns 1-6 are as follows: *Capex/Assets* is capital expenditures scaled by book assets (*capx/at*). *R&D/Sales* is research and development expenditures scaled by sales (*xrd/sale*). *Acquisition/Assets* is acquisition expenditures scaled by book assets (*aqc/at*). *Advertising/Sales* is advertising expenses scaled by sales (*xad/sale*). *xrd, aqc,* and *xad* are set to zero if the value is missing in Compustat. *Investment/Assets* is the sum of capital, R&D, acquisition, and advertising expenditures scaled by book assets (*[capx+xrd+aqc+xad]/at*). *Investment/Sales* is the sum of capital, R&D, acquisition, and advertising expenditures scaled by sales (*[capx+xrd+aqc+xad]/sale*). All other variables are defined in Table 5. Continuous variables, except *State GDP Growth* and *Political Balance*, are winsorized at their 1st and 99th percentiles. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Capex / Assets	R&D / Sales	Acquisition / Assets	Advertising / Sales	Investment / Assets	Investment / Sales
	(1)	(2)	(3)	(4)	(5)	(6)
Inevitable Disclosure	0.001	-0.001	0.001	-0.000	0.001	0.016
	(0.76)	(-0.15)	(1.16)	(-0.34)	(0.40)	(0.97)
Log Book Assets	0.001	0.023***	0.012***	0.001***	0.002	0.100***
	(1.45)	(3.42)	(19.89)	(3.67)	(0.58)	(8.75)
Market-to-Book Assets	0.005***	0.021***	-0.000	0.000***	0.009***	0.047***
	(7.41)	(4.42)	(-1.39)	(4.28)	(9.02)	(4.12)
Return on Assets	0.006***	-0.896***	-0.009***	-0.019***	-0.164***	-1.450***
	(2.70)	(-9.64)	(-8.55)	(-14.21)	(-13.71)	(-13.31)
Fixed Assets	0.197***	-0.192***	-0.021***	-0.003**	0.232***	-0.147
	(30.40)	(-2.80)	(-8.05)	(-2.65)	(17.19)	(-1.30)
Industry Cash Flow Volatility	-0.008	-0.786***	-0.030	-0.024**	0.002	-1.370***
	(-0.55)	(-3.09)	(-1.44)	(-2.28)	(0.04)	(-3.12)
Dividend Payer	0.005***	0.009**	-0.001	-0.000	0.010***	-0.014
	(5.52)	(2.64)	(-1.02)	(-0.74)	(5.29)	(-1.49)
State GDP Growth	0.138***	0.067	-0.002	0.011***	0.161***	0.698***
	(4.67)	(1.01)	(-0.21)	(4.78)	(3.56)	(2.88)
Political Balance	0.003	-0.020	0.005**	-0.001	0.010**	-0.003
	(0.98)	(-0.99)	(2.13)	(-1.05)	(2.08)	(-0.06)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	133,121	134,428	134,428	134,428	133,121	133,121
Adjusted R^2	0.579	0.688	0.166	0.693	0.563	0.586

Table A3
Out-of-state rivals' IDD and financial leverage

This table explores the impact of an increase in the protection of the trade secrets of a firm's out-of-state industry rivals the firm's financial leverage (*Book Leverage* in models 1-2 and *Market Leverage* in models 3-4). In models 1 and 3 (2 and 4), rivals are defined as firms in the same 3-digit (4-digit) SIC industry. Firms must have at least one out-of-state rival to enter the sample. *Out-of-State Rivals' Inevitable Disclosure* is defined as the weighted-average IDD of out-of-state industry rivals (with weights equal to each firm's share in the total assets of all out-of-state industry rivals). All other variables are defined in Table 5. Continuous variables, except *Out-of-State Rivals' IDD (3-digit SIC), Out-of-State Rivals' IDD (4-digit SIC), State GDP Growth* and *Political Balance*, are winsorized at their 1st and 99th percentiles. Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Book Leverage		Market Leverage	
	(1)	(2)	(3)	(4)
Out-of-State Rivals' IDD (3-digit SIC)	-0.001		-0.006*	
	(-0.30)		(-1.76)	
Out-of-State Rivals' IDD (4-digit SIC)		0.000		-0.001
		(0.05)		(-0.55)
Inevitable Disclosure	0.013***	0.013***	0.010***	0.010***
	(3.30)	(3.52)	(2.86)	(2.80)
Log Book Assets	0.030***	0.030***	0.035***	0.034***
	(9.64)	(9.28)	(11.73)	(11.14)
Market-to-Book Assets	-0.004***	-0.004***	-0.019***	-0.018***
	(-6.16)	(-6.50)	(-9.11)	(-9.23)
Return on Assets	-0.163***	-0.159***	-0.128***	-0.123***
	(-14.98)	(-13.02)	(-9.19)	(-8.81)
Fixed Assets	0.246***	0.246***	0.187***	0.185***
	(19.05)	(19.55)	(21.04)	(22.44)
Industry Cash Flow Volatility	-0.111	-0.096	-0.157***	-0.150**
	(-1.60)	(-1.31)	(-2.72)	(-2.45)
Dividend Payer	-0.049***	-0.048***	-0.044***	-0.043***
	(-12.74)	(-11.78)	(-13.93)	(-13.17)
State GDP Growth	-0.046	-0.039	-0.195***	-0.191***
	(-1.45)	(-1.24)	(-5.17)	(-5.37)
Political Balance	-0.002	-0.001	-0.012**	-0.012**
	(-0.28)	(-0.12)	(-2.23)	(-2.18)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	131,940	123,761	131,940	123,761
Adjusted R^2	0.630	0.631	0.679	0.681

Table A4
The effect of measurement error in the Inevitable Disclosure Doctrine indicator

This table reports the results from OLS regressions of financial leverage (*Book Leverage* in Panel A and *Market Leverage* in Panel B) on the indicator for the recognition of the IDD in the state where a firm is headquartered and control variables. All variables are defined in Table 5. In model 1, we correct the location of headquarters (HQ) over the 1992-2011 period to reduce measurement error in *Inevitable Disclosure*. To do so, we use the state of headquarters information from 10-K filings over the 1992-2011 period when it is available, and when it is not available we assume there were no relocations prior to the earliest date when headquarters information is available. In model 2, we only use the subsample of firm-years for which we can confirm the location of headquarters from 10-K documents. This subsample only spans the 1992-2011 period, but in this subsample *Inevitable Disclosure* is not measured with any error due to relocations of firms' headquarters. In model 3, we exclude all firms whose annual sales or book asset growth exceeded 100% in any year during the sample period. In model 4, we exclude all observations when a firm reports positive foreign income (*pifo*) or foreign taxes (*txfo*). In model 5, we exclude all observations when a firm is in a geographically dispersed industry (retail, wholesale, and transportation). Standard errors are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Dependent variable is book leverage

	Corrected location of HQ (1977-2011)	Corrected location of HQ (1992-2011)	Exclude if firm growth ever exceeds 100%	Exclude if firm reports foreign income or taxes	Exclude if firm is in dispersed industry
	(1)	(2)	(3)	(4)	(5)
Inevitable Disclosure	0.014***	0.015***	0.009**	0.015***	0.014***
	(3.99)	(3.12)	(2.10)	(3.65)	(3.21)
Log Book Assets	0.030***	0.026***	0.023***	0.033***	0.032***
	(11.38)	(5.47)	(5.50)	(11.89)	(9.55)
Market-to-Book Assets	-0.004***	-0.004***	-0.003**	-0.004***	-0.004***
	(-4.94)	(-4.38)	(-2.47)	(-3.61)	(-5.58)
Return on Assets	-0.164***	-0.138***	-0.249***	-0.158***	-0.165***
	(-15.58)	(-9.93)	(-12.24)	(-15.97)	(-14.80)
Fixed Assets	0.244***	0.212***	0.198***	0.272***	0.252***
	(19.21)	(14.66)	(12.78)	(17.61)	(18.04)
Industry Cash Flow Volatility	-0.098*	-0.100*	-0.106	-0.019	-0.188**
	(-1.76)	(-1.75)	(-1.14)	(-0.22)	(-2.66)
Dividend Payer	-0.050***	-0.031***	-0.050***	-0.052***	-0.047***
	(-15.38)	(-7.62)	(-13.23)	(-10.58)	(-11.65)
State GDP Growth	-0.049*	-0.046	-0.017	-0.046	-0.051
	(-1.74)	(-1.62)	(-0.63)	(-1.13)	(-1.63)
Political Balance	-0.000	0.005	-0.007	-0.004	-0.006
	(-0.01)	(0.53)	(-0.91)	(-0.46)	(-0.78)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	134,428	65,070	63,655	85,321	108,433
Adjusted R^2	0.628	0.694	0.689	0.637	0.612

Table A4 – *(Continued)*

Panel B: Dependent variable is market leverage

	Corrected location of HQ (1977-2011)	Corrected location of HQ (1992-2011)	Exclude if firm growth ever exceeds 100%	Exclude if firm reports foreign income or taxes	Exclude if firm is in dispersed industry
	(1)	(2)	(3)	(4)	(5)
Inevitable Disclosure	0.011***	0.014***	0.008**	0.011***	0.010***
	(3.34)	(3.20)	(2.10)	(3.62)	(2.78)
Log Book Assets	0.035***	0.032***	0.034***	0.037***	0.035***
	(12.87)	(7.06)	(10.77)	(17.03)	(10.85)
Market-to-Book Assets	-0.019***	-0.015***	-0.033***	-0.018***	-0.017***
	(-8.90)	(-7.41)	(-17.51)	(-10.12)	(-9.54)
Return on Assets	-0.129***	-0.104***	-0.247***	-0.117***	-0.125***
	(-9.30)	(-6.55)	(-11.24)	(-10.15)	(-9.26)
Fixed Assets	0.187***	0.154***	0.192***	0.199***	0.186***
	(19.41)	(14.90)	(17.38)	(22.90)	(20.03)
Industry Cash Flow Volatility	-0.156***	-0.203***	-0.049	-0.102*	-0.211***
	(-3.23)	(-4.38)	(-0.59)	(-1.85)	(-3.73)
Dividend Payer	-0.045***	-0.032***	-0.045***	-0.049***	-0.043***
	(-19.07)	(-9.67)	(-14.45)	(-13.08)	(-13.23)
State GDP Growth	-0.197***	-0.137***	-0.132***	-0.221***	-0.213***
	(-5.98)	(-3.91)	(-4.00)	(-5.31)	(-5.34)
Political Balance	-0.010	-0.004	-0.008	-0.009	-0.013**
	(-1.59)	(-0.55)	(-1.24)	(-1.31)	(-2.37)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	134,428	65,070	63,655	85,321	108,433
Adjusted R^2	0.678	0.725	0.719	0.686	0.673

Table A5
IDD and financial leverage using propensity score matched samples

This table explores the impact of adoptions and rejections of the IDD on firms' financial leverage using propensity score matched samples and the window +/- 5 years around the adoption and rejection of the IDD. For adoptions (rejections), the treatment group is firms headquartered in a states the adopt (reject) the IDD, and the control group is firms headquartered in states that never (have already) adopt(ed) the IDD. For both adoptions and rejections, we require firms in the treatment and control groups to have at least one observation in the pre and post period (5 years before and after the adoption or rejection of the IDD). Using a logistic regression and data in years *t-1* before the adoption/rejection of the IDD, we estimate the probability (i.e., propensity score) of being in the treatment group using the control variables *Log Book Assets, Market-to-Book Assets,* and *Return on Assets*. We then match each treatment firm in year *t-1* to at most two control firms (with replacement), matching on year, 2-digit SIC industry, and closest propensity score (with max difference between propensity scores of 0.01). Panel A tabulates the means of the matched variables and propensity scores for the treatment and control groups (the control variables are not statistically different across groups at the 10% significance level). Panel B presents the results examining the impact of the adoption (rejection) of the IDD on firms' financial leverage in models 1 and 2 (3 and 4). *Treatment* is an indicator variable set to one if the firm is headquartered in a state that adopts (rejects) the IDD. *Post* is an indicator variable set to one in the five years after the adoption/rejection of the IDD (same for matched control firms). $Post^{-1}$, $Post^{0}$, $Post^{+1}$, $Post^{2+}$ are indicator variables set to one in the year before, the year of, the year after, and two or more years after the adoption/rejection of the IDD, respectively (same for matched control firms). All other variables are defined in Table 5. Standard errors in Panels B and C are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Comparison of means across matched samples

	Matched Sample for Adoptions	
	Treatment Group (Obs. = 1,701)	Control Group (Obs. = 3,324)
Propensity Score	0.112	0.112
Log Book Assets	5.114	5.055
Market-to-Book Assets	1.864	1.819
Return on Assets	0.094	0.093

	Matched Sample for Rejections	
	Treatment Group (Obs. = 523)	Control Group (Obs. = 1,024)
Propensity Score	0.113	0.113
Log Book Assets	5.741	5.604
Market-to-Book Assets	1.559	1.533
Return on Assets	0.066	0.056

Table A5 – *(Continued)*

Panel B: Inevitable disclosure and financial leverage

	Matched Sample for Adoptions		Matched Sample for Rejections	
	Book Leverage	Market Leverage	Book Leverage	Market Leverage
	(1)	(2)	(3)	(4)
Treatment × Post	0.013***	0.011***	-0.023***	-0.018**
	(3.50)	(3.57)	(-3.03)	(-2.54)
Post	-0.000	0.001	0.019**	0.009*
	(-0.04)	(0.17)	(2.78)	(1.82)
Log Book Assets	0.040***	0.040***	0.034***	0.037***
	(4.81)	(6.59)	(8.14)	(10.25)
Market-to-Book Assets	-0.007***	-0.023***	-0.007**	-0.018***
	(-4.79)	(-7.36)	(-2.15)	(-7.30)
Return on Assets	-0.168***	-0.163***	-0.149***	-0.134***
	(-9.52)	(-7.45)	(-4.65)	(-5.35)
Fixed Assets	0.256***	0.198***	0.244***	0.212***
	(11.52)	(14.88)	(6.70)	(7.39)
Industry Cash Flow Volatility	0.146	-0.069	-0.319	-0.309*
	(0.86)	(-0.48)	(-1.23)	(-1.97)
Dividend Payer	-0.053***	-0.047***	-0.012	-0.011
	(-5.91)	(-8.14)	(-1.02)	(-1.60)
State GDP Growth	0.029	-0.078*	-0.144	-0.239**
	(0.54)	(-1.80)	(-1.51)	(-2.11)
Political Balance	-0.002	-0.019*	-0.029	-0.034
	(-0.19)	(-1.81)	(-0.81)	(-1.05)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	46,265	46,265	14,301	14,301
Adjusted R^2	0.693	0.718	0.725	0.747

Table A5 – *(Continued)*

Panel C: Inevitable disclosure and the timing of financial leverage changes

	Matched Sample for Adoptions		Matched Sample for Rejections	
	Book Leverage	Market Leverage	Book Leverage	Market Leverage
	(1)	(2)	(3)	(4)
Treatment × $Post^{-1}$	0.004	0.001	-0.003	-0.001
	(0.87)	(0.30)	(-0.52)	(-0.22)
Treatment × $Post^{0}$	0.005	0.003	-0.006	-0.005
	(1.11)	(0.74)	(-0.89)	(-0.77)
Treatment × $Post^{+1}$	0.011*	0.010**	-0.006	-0.006
	(1.91)	(2.41)	(-0.99)	(-1.00)
Treatment × $Post^{2+}$	0.016***	0.012***	-0.032***	-0.026**
	(3.60)	(3.28)	(-2.95)	(-2.46)
$Post^{-1}$	-0.002	0.001	0.003	0.000
	(-0.53)	(0.25)	(0.56)	(0.03)
$Post^{0}$	-0.002	0.003	0.011	-0.001
	(-0.29)	(0.78)	(1.02)	(-0.08)
$Post^{+1}$	0.001	0.004	0.021	0.003
	(0.16)	(0.73)	(1.41)	(0.21)
$Post^{2+}$	-0.002	0.001	0.032**	0.010
	(-0.26)	(0.16)	(2.33)	(0.94)
Log Book Assets	0.040***	0.040***	0.034***	0.038***
	(4.79)	(6.55)	(8.43)	(10.56)
Market-to-Book Assets	-0.007***	-0.023***	-0.007**	-0.018***
	(-4.70)	(-7.27)	(-2.15)	(-7.33)
Return on Assets	-0.168***	-0.162***	-0.148***	-0.134***
	(-9.48)	(-7.41)	(-4.67)	(-5.37)
Fixed Assets	0.256***	0.198***	0.244***	0.212***
	(11.67)	(14.85)	(6.68)	(7.36)
Industry Cash Flow Volatility	0.146	-0.065	-0.321	-0.309*
	(0.87)	(-0.46)	(-1.24)	(-1.97)
Dividend Payer	-0.053***	-0.047***	-0.012	-0.012
	(-5.91)	(-8.12)	(-1.06)	(-1.63)
State GDP Growth	0.030	-0.080*	-0.167	-0.247*
	(0.56)	(-1.84)	(-1.64)	(-2.04)
Political Balance	-0.002	-0.018*	-0.043	-0.047
	(-0.18)	(-1.74)	(-1.17)	(-1.38)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	46,265	46,265	14,301	14,301
Adjusted R^2	0.694	0.718	0.725	0.747