Internet Appendix for Protection of trade secrets and capital structure decisions

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A.1. Two legal cases applying the IDD to protect firms' trade secrets

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

A.1.1. 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 in 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.

A.1.2. 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, who was employed in Pennsylvania, 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 in California 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 for 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's 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.

A.2. The determinants of a state court's decision to adopt the IDD

In Table A1, we use a Cox proportional hazard model to examine whether state-level factors affect the likelihood that a state court adopts the IDD. All models include year fixed effects and cluster standard errors by state. These analyses are helpful in assessing the validity of the assumption that state courts' decisions to adopt the IDD are exogenous events.

In model 1, we include variables related to labor and trade secrets laws and labor unionization. These are an index for the enforcement in a state of covenants not to compete (Strength of CNCs), an index for the number of wrongful discharge laws the state has adopted (Wrongful Discharge), an indicator for if the state has passed right-to-work laws (Right-to-

Work), an indicator for if the state has adopted legal principles based on the UTSA (State UTSA), and the fraction of workers in a state that are covered by a collective bargaining agreement (Union Membership). In model 2, we add proxies for the education and age of the workers in a state. Log P.C. Enrollment and Log P.C. Colleges measure enrollment in institutions of higher education and the number of institutions of higher education in a state per thousand residents, respectively. Bachelor's Degree is the fraction of workers in the labor force with at least a bachelor's degree, and Age of Workers is the average age of the workers in the labor force. In model 3, we add proxies for the economic and political conditions in the state. State GDP Growth is the one-year growth rate of state GDP. Log P.C. GDP is the natural logarithm of per capita GDP. Unemployment Rate is the fraction of workers in the state labor force that are unemployed. *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. In model 4, we add State M/B and Change in State M/B, the median annual value of market-to-book assets for the publicly-traded firms in a state and the median annual change to this ratio, to proxy for shocks to the growth opportunities of the firms in a state. Finally, to proxy for the arrival of a new large firm in a state, which could lead to a shock to the legal and business environment in the state, in model 5 we include Large Establishment Entry Rate. This variable is constructed by the U.S. Census and it is measured as the number of establishments with 1000+ employees that are created or arrive in a state within the last year divided by the average number of establishments with 1000+ employees in the state over years t and t-1.

We find a positive association between the strength of the enforcement of covenants not to compete in a state and the likelihood that courts in that state will adopt the IDD. This suggests state courts that more strictly enforce covenants not to compete may also be more

¹ Strength of CNCs is from Bird and Knopf (2014); Wrongful Discharge is from Autor, Donohue, and Schwab (2006); Right-to-Work is from the Department of Labor; State UTSA is from Malsberger (2011); Union Membership is from Unionstats (Hirsch and Macpherson (2003)); Enrollment and Colleges is from the Statistical Abstract of the United States; Bachelor's Degree and Age of Workers is from the Current Population Survey; State GDP Growth and P.C. GDP are from the Bureau of Economic Analysis; Unemployment Rate is from the Bureau of Labor

likely to seek stronger protection of firms' trade secrets by recognizing the IDD. But, none of the other variables in the Table A1 models are associated with the likelihood courts in the state will adopt the IDD. Hence, the overall evidence from these state-level analyses supports the notion that the adoption of the IDD by a state court is an exogenous event.

A.3. Expanded discussion of the results reported in Section 6

A.3.1. Recognition of the IDD and changes in firms' cost of debt

To further investigate whether the recognition of the IDD reduces the competitive risk a firm faces, we examine if it affects the firm's cost of debt. Following Valta (2012), who shows that credit markets price a firm's competitive risk into its cost of debt, we focus on the cost of bank debt because bank debt is the key source of debt financing for most firms and data are available for a large sample of firms. We explore this issue using data for the period 1987-2011 provided by Tobias Berg on a firm's *total* cost of bank debt, which includes the expected credit spread and loan contract fees (see Berg, Saunders, and Steffen (2016)). In the cost of bank debt models we include loan type and state fixed effects, as well as industry-year fixed effects. We do not include firm fixed effects in these models due to a lack of enough annual observations per firm.

The results reported in Table A12 show that the recognition of the IDD reduces a firm's total cost of bank debt, although this is only the case in the models that include control variables. The estimated coefficients imply that subsequent to the recognition of the IDD in a given state, the average total cost of bank debt for the firms in the state decreases by 3.1% relative to that of these firms' rivals in non-recognizing states.² This is additional evidence that the recognition of the IDD lowers the competitive risks a firm faces.

A.3.2. Announcement returns surrounding a state court's decision to adopt the IDD

We also examine firms' abnormal stock returns around the date when a state court adopts the IDD. The sample includes firms headquartered in the 16 states that adopt the IDD over

² The results in models 2 and 4 are similar whether book leverage is included as a control variable or not.

our sample period with complete data for our main capital structure tests. We estimate cumulative abnormal returns (CARs) around the adoption date (day 0) using both the market model and the four-factor model to estimate beta/factor parameters. The estimation window is the [-280, -61] trading days before day 0. We then calculate CARs over the event window ([-1, +3] trading days) and the pre-event window ([-31, -2] trading days). Because an IDD ruling in a state simultaneously affects all firms headquartered in the state and this can bias the standard errors downward, we correct the standard errors for cross-sectional correlation following the methodology used in Kolari and Pynnönen (2010).

The results reported in the first two columns of Table A13 show that affected firms experience significant positive abnormal returns over the days surrounding a state court's final decision to adopt 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, and both are statistically significant. These results are consistent with the view that market participants believe the adoption of the IDD increases the protection of the trade secrets of firms in adopting states and thereby 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 those firms that had earnings or distribution announcements during the ±5 trading days around a state court's final decision adopting the IDD.

A.3.3. Do existing product market competition measures capture the effects of IDD rulings?

Our main tests include industry-year fixed effects and thus our results cannot be driven by a correlation of IDD rulings with changes in industry-level measures of product market competition (e.g., industry concentration). However, the change in a firm's competitive risk resulting from IDD rulings could be captured by firm-level measures of this risk. We investigate this issue and first consider the Hoberg et al. (2014) measure of product fluidity, which measures the competitive threats a firm faces when its rivals are more actively

changing the wording they use in their 10-Ks to describe their products that compete with the firm's products. If the product fluidity measure also captures competitive threats arising from an imperfect protection of a firm's intellectual property, then we might expect a reduction in product fluidity following the recognition of the IDD.

In Table A14, we run difference-in-differences tests to gauge the impact of the recognition of the IDD on product fluidity, employing specifications with firm and industry-year fixed effects. A limitation of these tests is that the product fluidity measure is only available starting in 1997 and thus our analyses are confined to the period 1997-2011. This reduces the power of these tests because although in the tests we are still able to use the three IDD rejection events, we are left with only three of the sixteen IDD adoption events. In all specifications, we find no impact of IDD rulings on product fluidity. This suggests that product fluidity and the recognition of the IDD capture competitive threats from different sources. Specifically, IDD rulings capture changes in the competitive threats a firm faces that are directly associated with the loss of trade secrets to rivals through the labor mobility channel, while product fluidity likely better captures other sources of competitive threats, such as those related to improvements in competitors' products. Of course, the results in Table A14 might also be due to weak statistical power of the empirical tests.

We also examine if changes in competitive risk after IDD rulings are captured by two other measures of this risk. Following MacKay and Phillips (2005), Haushalter et al. (2007), Frésard (2010), and Valta (2012) we considered the similarity of operations between a firm and its rivals, measured for each year by the absolute difference between its capital-labor ratio and the median capital-labor ratio in its three-digit SIC industry. A smaller difference (more similar operations) implies that the firm faces a greater risk that its rivals will try to steal some of its market share. As in Haushalter et al. (2007) and Frésard (2010), we also considered the covariance between a firm's stock returns and the returns of its three-digit SIC industry rivals. A higher covariance implies that a firm's growth opportunities are more interdependent with those of its rivals, and therefore that it faces a greater risk that its rivals will try to steal some of its market share.

The results of our difference-in-differences regressions over our full 1977-2011 sample period reported in Table A15 show that IDD rulings have no impact on either of the firm-level measures of product market competition discussed above. These results are further evidence that IDD rulings capture changes in the competitive risk a firm faces that are not captured by other product market competition measures.

A.3.4. Impact of the IDD on litigation involving trade secrets

We also examine whether IDD rulings affect the number of legal cases involving trade secrets litigated in the recognizing state, but note there are two opposite forces at play. On one hand, the recognition of the IDD discourages workers who know their employers' trade secrets from seeking employment at rival firms and thus reduces employers' needs to sue departing employees to protect their trade secrets. On the other hand, this recognition makes it easier for firms to obtain injunctions to prevent their workers who know trade secrets from working for rivals, thus increasing firms' propensities to sue to protect their trade secrets.

To this end, we compile a dataset containing the number of trade secrets cases filed in each state during every year over the period 1977-2011 using an approach similar to that in in Almeling et al. (2011). Specifically, we search LexisNexis for trade secrets cases litigated in state courts, district courts, and federal courts of appeals in the circuit to which each state belongs. We identify as trade secrets cases those in which the strings "trade secret(s)" appears at least three times in the whole document, which yields a total of 11,120 trade secrets cases across all states. We next identify the state in which each case was litigated and the resulting dataset with the number of cases by state contains a total of 1,750 state-year observations.

In Table A16, we regress the natural logarithm of one plus the total number of trade secrets cases in a state on the IDD indicator and include state and year fixed effects. We consider specifications with and without the following control variables: *Strength of CNCs*, *State GDP Growth*, and *Political Balance*. We find that the recognition of the IDD in a state increases the number of trade secrets cases litigated in that state. This implies that, in spite of reducing the ex-ante mobility to rival firms of workers who know their employers' trade

secrets, the recognition of the IDD increases firms' propensities to litigate to protect their trade secrets, possibly because they expect more favorable outcomes after this recognition.

A.3.5. The effect of IDD rulings on capital structure controlling for corporate governance

In Bolton and Scharfstein (1990), the optimal debt contract balances the benefits of deterring predation by reducing a firm's financial constraints against the cost of exacerbating managerial agency problems. Thus, to investigate whether the study's findings are robust to keeping a firm's corporate governance constant we examined if the impact of the recognition of the IDD on a firm's capital structure is affected by whether we control for its corporate governance. To proxy for a firm's corporate governance environment, we first consider whether the firm is incorporated in a state that has passed business combination laws which reduce the fear for managers of a hostile takeover, and consequently weaken the firm's corporate governance (e.g., Bertrand and Mullainathan (2003)). Second, we consider the concentration of the ownership of the firm's equity shares by institutional investors given that when this ownership concentration is higher institutional investors are expected to monitor a firm more intensely (e.g., Hartzell and Starks (2003)).

In Table A17, we report the results of the analysis described above. In models 1 and 4 we report the results when we add the indicator for whether a firm is incorporated in a state that has passed business combination laws as a control variable to our baseline capital structure specification that includes control variables, and firm and industry-year fixed effects. The results show that this control variable has no impact on the effect of the recognition of the IDD in a firm's state on its net leverage. Next, in models 2-3 and 5-6 we control for corporate governance with institutional ownership concentration. In models 2 and 5, it is measured as the fraction of total institutional ownership accounted for by the five largest institutional investors, while in models 3 and 6 it is measured as the Herfindahl-Hirschman Index based on the percentages of institutional holdings by all institutional investors. The findings for models 2-3 and 5-6 show that controlling for institutional ownership concentration does not have an impact on the effect of the recognition of the IDD

on a firm's net leverage.³ Put together, the Table A17 findings suggest that the effect of the recognition of the IDD in a firm's state on its capital structure decisions is robust to keeping its corporate governance constant.

A.3.6. Measurement error in the IDD indicator

In Table A18, we examine whether measurement error in the protection of trade secrets afforded by the IDD indicator variable affects our results. First, in our main capital structure tests we use firms' most recent state of headquarters from Compustat to determine the applicability of the IDD, but firms may relocate their headquarters across states during our sample period. Hence, we collect data on the historical state of location of firms' headquarters from their 10-K filings available on EDGAR. Our results are unchanged if we use historical addresses obtained from 10-K filings to update a firm's state of headquarters when available or if we discard from the sample those firms that could have relocated headquarters due to major restructuring events (measured by sales or asset growth in excess of 100% in any year from 1977-2011). Second, the recognition of the IDD in a firm's state of headquarters could be a noisy proxy for the protection of its trade secrets if the firm has employees in foreign countries or it has a geographically dispersed workforce. Discarding from the sample firmyears in which a firm reports foreign activities or firms in industries with geographically dispersed workforces does not affect our results.

A.3.7. Propensity-score matching

In Table A19, we re-estimate the effect of the adoption of the IDD on financial leverage using propensity-score matching to ensure that the treatment and control firms have similar

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³ Although not tabulated, we also tried including total institutional ownership as an additional control variable in models 2-3 and 5-6 and find this has little impact on the results for these models. Likewise, if we control for both the indicator for whether a firm is incorporated in a state that has passed business combination laws and the concentration of institutional ownership this does not affect the result that controlling for a firm's corporate governance does not impact the effect of the recognition of the IDD in a firm's state on its capital structure.

⁴ We obtain the historical address for most firms from 1996-2011 and for some since 1992. Relocations of headquarters across states are infrequent. Of the 8,637 firms for which we obtain the historical location of headquarters over the 1992-2011 period, only 9% of these firms relocated headquarters from one state to another. ⁵ Pirinsky and Wang (2006) argue that major restructuring events are the main trigger of headquarter relocations and Almeida, Campello, and Weisbach (2004) highlight that such events are usually associated with large increases in sales or assets.

observable characteristics before the onset of the treatment. We match each treatment firm (in an adopting state) to at least one and at most two control firms (in never adopting states) in the year before the adoption (with replacement), first exactly on year and two-digit SIC and then on the closest propensity score arising from a logistic regression using Log Book Assets, Market-to-Book Assets, and Return on Assets as predictors of treatment. The treatment and matched control groups do not differ in any of the three matching characteristics or propensity scores. We continue to find that the recognition of the IDD has a positive impact on financial leverage and that firms increase their leverage following the adoption of the IDD in their state (but not before).

A.3.8. Litigation involving trade secrets and debt issuance

In our paper we argue that having unused debt capacity is strategically useful for a firm that faces a higher risk of losing its trade secrets to rivals. A key reason is that unused debt capacity allows the firm to increase its borrowing and use the funds to protect its competitive position when it loses trade secrets to rivals. In Table A20 we examine whether firms significantly increase the level of their outstanding debt during years when they litigate to protect their trade secrets, relative to firms that do not engage in such litigation during those years. Evidence that over such years firms indeed raise their outstanding debt would support the argument that having unused debt capacity is incrementally beneficial when a firm faces a higher likelihood that its competitors will try to obtain its trade secrets.

To build the sample for these analyses, we first consider all trade secrets cases litigated in state, district, and federal courts over the 1992-2011 period (which is the last twenty years of the sample period we use in our main tests). We follow Almeling et al. (2011) and identify trade secrets cases from LexisNexis, defining a case as a trade secrets case if the strings "trade secret(s)" appears at least three times in the whole legal case document. This yields a total of 9,459 trade secrets cases over the 1992-2011 period. For each of these cases, we next

⁶ This is analogous to what we did in our analyses of the effect of the recognition of the IDD on the number of trade secrets cases in a state (also discussed in this Internet Appendix).

manually identify who is the plaintiff in the case and also manually verify whether the plaintiff is a publicly traded firm that is included in the Compustat database. Finally, we also require that the plaintiff firm is included in the main sample used in the paper. Having imposed these requirements we are left with 511 trade secrets cases in which the plaintiff is a publicly traded firm included in our main sample. The overall sample we use in our Table A20 tests contains those firms that acted as plaintiffs in trade secrets cases as well as all other firms that did not, for a total of 71,191 firm-year observations.

In the first four models of Table A20, we regress the change in a firm's net debt over a given year scaled by lagged book or market assets on indicators for whether the firm was the plaintiff in a trade secrets case during the prior year, the current year, or the next year. We report the results of models without or with control variables, where the control variables are the firm-level controls included in our Table 3 models, but lagged one year. In all models we include firm and three-digit SIC industry-year fixed effects.

The results for the first four models of Table A20 show that across all four specifications, a firm significantly increases its net debt during the year when it is the plaintiff in a trade secret's case. In models 5-8 of Table A20, we change the dependent variable to be the one-year change in total debt over a given year scaled by lagged book or market assets. This allows us to directly examine whether a firm increases the level of its outstanding debt during the year when it is a plaintiff in a trade secrets case. Across all four specifications, we find that firms significantly increase their outstanding debt during the year when they are a plaintiff in a trade secrets case.

The estimated coefficients in models 6 and 8 of Table A20, which include control variables and firm and three-digit SIC industry-year fixed effects, imply that during the year when a firm is a plaintiff in a trade secrets case it increases its outstanding debt per dollar of book (market) assets by 1.8 (1.1) cents relative to that of its industry rivals who are not the plaintiff in a trade secrets case that year. This represents an 8.2% (7.1%) increase in book (market)

⁷ The results of the Table A20 regression models that include control variables are very similar if we use the one-year changes in the control variables instead of their levels, or if we include the control variables both in levels and in changes.

leverage relative to the mean values for the sample used in the Table A20 tests for book (market) leverage of 0.219 (0.156).8

In sum, the Table A20 findings show that firms significantly increase their outstanding debt during years when they litigate to protect their trade secrets. These findings provide support to our argument that having unused debt capacity is strategically useful for firms that face a greater risk of losing their trade secrets to rivals, because it allows such firms to rapidly raise the funds they need to protect their competitive position in the event their rivals actually obtain some of these secrets.

⁸ The results for models 5-8 in Table A20 are very similar if we consider only the increase in long-term borrowing during the year when a firm litigates to protect its trade secrets.

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Table A1

Determinants of the adoption of the IDD by state courts.

This table reports results from Cox proportional hazard models analyzing the hazard of a state court adopting the IDD. The sample period is from 1977 to 2011. A "failure event" is the adoption of the IDD in a given state. States are excluded from the sample once they adopt the IDD. Independent variables are measured at the state level as of year t-1 and include: Strength of CNCs, an index of the strength of the enforcement of covenants not to compete (CNCs) by courts in a state (higher values imply stronger enforcement); Wrongful Discharge, the number of wrongful discharge laws (i.e., good faith, implied contract, and public policy exceptions) a state has adopted; Right-to-Work, an indicator variable set to one if the state has passed right-towork laws, and zero otherwise; State UTSA, an indicator variable set to one if the state has adopted legal principles based on the Uniform Trade Secrets Act, and zero otherwise; Union Membership, the fraction of nonagricultural wage and salary employees covered by collective bargaining agreements; Log P.C. Enrollment, the natural logarithm of enrollment in institutions of higher education in a state per thousand residents; Log P.C. Colleges, the natural logarithm of the number of degree-granting institutions of higher education (colleges) in a state per thousand residents; Bachelor's Degree, the percentage of individuals in the labor force with at least a bachelor's degree; Age of Workers, the average age of individuals in the labor force; State GDP Growth, the annual GDP growth rate in the state; Log P.C. GDP, the natural logarithm of per capita GDP in thousands; Unemployment Rate, the fraction of workers in the labor force that are unemployed; 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; State M/B, the median value of Market-to-Book Assets across all firms in a state during a given year, where Market-to-Book Assets is the market value of assets (prcc f*csho + at - ceq) divided by the book value of assets (at); Change in State M/B, the median value of the one-year change in Market-to-Book Assets across all firms in a state during a given year; and Large Establishment Entry Rate, the number of establishments with 1000+ employees that are created or arrive in a state within the last year divided by the average number of establishments with 1000+ employees in the state over years t and t-1. Data on establishments are from the Census' Business Dynamic Statistics Database. In models 4 and 5 the number of observations drops because for a few state-years there are no firms included in Compustat. All independent variables, except indicator variables, are standardized to have a mean of zero and a standard deviation of one. Dollar values are expressed in 2009 dollars. Standard errors in parentheses are clustered by state. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table A1 Continued.

	(1)	(2)	(3)	(4)	(5)
Strength of CNCs	1.064***	1.111***	1.352***	1.380***	1.392***
	(4.10)	(4.16)	(3.38)	(3.45)	(3.48)
Wrongful Discharge	-0.036	-0.052	-0.297	-0.316	-0.305
	(-0.10)	(-0.16)	(-0.81)	(-0.88)	(-0.86)
Right-to-Work	-0.431	-0.303	-0.714	-0.713	-0.732
G TIMGA	(-0.65)	(-0.34)	(-0.75)	(-0.75)	(-0.78)
State UTSA	0.279 (0.31)	0.176 (0.19)	0.195 (0.20)	0.178 (0.19)	0.238 (0.25)
Union Membership	0.456	0.501	0.381	0.19	0.23
Union Membership	(1.06)	(1.00)	(0.58)	(0.55)	(0.546)
Log P.C. Enrollment	(1.00)	-0.097	-0.103	-0.119	-0.123
Log 1.0. Dinomicit		(-0.26)	(-0.21)	(-0.25)	(-0.26)
Log P.C. Colleges		-0.180	-0.309	-0.274	-0.284
		(-0.63)	(-1.07)	(-0.91)	(-0.98)
Bachelor's Degree		0.754	0.413	0.363	0.324
		(0.88)	(0.43)	(0.37)	(0.33)
Age of Workers		-0.737	-0.573	-0.632	-0.608
		(-1.12)	(-0.77)	(-0.78)	(-0.76)
State GDP Growth			-0.197	-0.266	-0.273
			(-0.95)	(-1.13)	(-1.15)
Log P.C. GDP			0.449 (1.15)	0.576	0.573 (1.46)
II. and large out Data			-0.357	(1.45)	
Unemployment Rate			-0.357 (-0.58)	-0.350 (-0.56)	-0.357 (-0.57)
Political Balance			-0.303	-0.295	-0.290
Tontical Balance			(-0.85)	(-0.82)	(-0.81)
State M/B			, ,	0.089	0.106
				(0.36)	(0.48)
Change in State M/B				0.283	0.271
				(0.94)	(0.91)
Large Establishment Entry Rate					-0.177
					(-0.63)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1,297	1,297	1,297	1,293	1,293
Pseudo R ²	0.215	0.228	0.237	0.240	0.240

Table A2
Summary statistics for variables in main capital structure tests (Table 3).

This table reports summary statistics for the variables used in our main capital structure tests in Table 3. All variable definitions are in Tables 3 and A1.

	Obs.	Mean	Std. Dev.	P25	Median	P75
Net Book Leverage	125,895	0.068	0.349	-0.140	0.110	0.303
Net Market Leverage	125,895	0.082	0.250	-0.066	0.070	0.242
Book Leverage	125,895	0.234	0.213	0.044	0.200	0.359
Market Leverage	125,895	0.182	0.180	0.022	0.134	0.291
IDD	125,895	0.421	0.494	0.000	0.000	1.000
Book Assets (millions)	125,895	1397	4208	42.04	163.0	704.7
Market-to-Book Assets	125,895	1.921	1.667	1.031	1.369	2.087
Return on Assets	125,895	0.062	0.226	0.032	0.113	0.175
Fixed Assets	125,895	0.287	0.221	0.110	0.232	0.409
Cash Flow Volatility	125,895	0.094	0.138	0.026	0.049	0.099
Dividend Payer	125,895	0.338	0.473	0.000	0.000	1.000
State GDP Growth	125,895	0.064	0.036	0.042	0.062	0.087
Political Balance	125,895	0.568	0.184	0.500	0.578	0.644
Strength of CNCs	125,895	3.805	2.167	3.000	4.000	5.000

Table A3Recognition of the IDD and capital structure.

This table reports results from OLS regressions of financial leverage on the indicator for the recognition of the IDD. The sample spans the 1977-2011 period. The dependent variables are *Net Book Leverage* (models 1 and 2), *Net Market Leverage* (models 3 and 4), *Book Leverage* (models 5 and 6), and *Market Leverage* (models 7 and 8). *Net Book Leverage* is the book value of long-term debt (*dltt*) plus debt in current liabilities (*dlc*) minus cash holdings (*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*) minus cash holdings (*che*) divided by market value of assets (*prcc_f*csho + at - ceq*). *Book Leverage* and *Market Leverage* are analogously defined, except that cash holdings are not subtracted in the numerator. *IDD* is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. The control variables are defined in Tables 2 and 3. Dollar values are expressed in 2009 dollars. Continuous variables, except state-level 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% levels, respectively.

	Net Book	Leverage	Net Marke	et Leverage	Book L	Book Leverage		Leverage
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IDD	0.015** (2.56)	0.018*** (3.30)	0.012*** (2.60)	0.016*** (3.63)	0.013*** (3.08)	0.015*** (3.91)	0.009** (2.27)	0.012*** (3.59)
Log Book Assets		0.039*** (8.87)		0.045*** (11.25)		0.030*** (8.85)		0.034*** (11.00)
Market-to-Book Assets		-0.014*** (-16.39)		0.007** (2.18)		-0.004*** (-5.01)		-0.019*** (-8.27)
Return on Assets		-0.180*** (-16.88)		-0.102*** (-6.27)		-0.163*** (-15.66)		-0.134*** (-8.62)
Fixed Assets		0.642*** (15.85)		0.430*** (27.67)		0.230*** (14.73)		0.183*** (17.51)
Cash Flow Volatility		-0.025 (-1.50)		-0.019* (-1.85)		0.042*** (3.81)		-0.001 (-0.12)
Dividend Payer		-0.062*** (-14.76)		-0.052*** (-14.19)		-0.051*** (-12.37)		-0.045*** (-13.10)
Strength of CNCs		0.003 (0.67)		0.003 (0.73)		0.001 (0.33)		0.002 (0.44)
State GDP Growth		-0.062 (-1.43)		-0.190*** (-3.91)		-0.043 (-1.28)		-0.188*** (-4.33)
Political Balance		-0.005 (-0.33)		-0.015 (-1.43)		0.003 (0.28)		-0.008 (-1.18)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	125,895	125,895	125,895	125,895	125,895	125,895	125,895	125,895
Adjusted R ²	0.691	0.729	0.655	0.690	0.609	0.637	0.636	0.685

Table A4Recognition of the IDD and financial leverage measured using only long-term debt.

This table reports results from OLS regressions of financial leverage on the indicator for the recognition of the IDD. The sample spans the 1977-2011 period. The dependent variables are Long-Term Book Leverage (models 1 and 2) and Long-Term Market Leverage (models 3 and 4). 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 (dd1) divided by market value of assets (prcc_f*csho + at - ceq). IDD is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. The control variables are defined in Tables 2 and 3 and include Log Book Assets, Market-to-Book Assets, Return on Assets, Fixed Assets, Cash Flow Volatility, Dividend Payer, Strength of CNCs, State GDP Growth, and Political Balance. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively.

	Long-Term B	Book Leverage	Long-Term Market Leverag	
	(1)	(2)	(3)	(4)
IDD	0.008***	0.009***	0.005**	0.008***
	(2.74)	(2.82)	(2.03)	(2.76)
Control Variables	No	Yes	No	Yes
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	125,895	125,895	125,895	125,895
Adjusted R ²	0.626	0.648	0.657	0.694

Table A5 Adoption of the IDD vs. rejection of the IDD after adoption.

This table reports results from OLS regressions of *Net Book Leverage* and *Net Market Leverage* on indicators for the adoption or rejection of the (previously adopted) IDD in the state where a firm is headquartered. The sample spans the 1977-2011 period. *IDD Adoption* is an indicator variable set to one beginning the year when the state where the firm is headquartered adopts the IDD (it remains equal to one for all subsequent years), and zero otherwise. *IDD Rejection* is an indicator variable set to one beginning the year when the state where the firm is headquartered rejects the previously adopted IDD, and zero otherwise. The control variables are defined in Tables 2 and 3 and include *Log Book Assets, Market-to-Book Assets, Return on Assets, Fixed Assets, Cash Flow Volatility, Dividend Payer, Strength of CNCs, State GDP Growth*, and *Political Balance*. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively.

	Net Book Leverage		Net Marke	et Leverage
	(1)	(2)	(3)	(4)
IDD Adoption	0.017** (2.56)	0.016** (2.54)	0.014*** (3.02)	0.013*** (2.97)
IDD Rejection	0.005 (0.56)	-0.003 (-0.30)	-0.002 (-0.22)	-0.008 (-1.05)
Control Variables	No	Yes	No	Yes
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	125,895	125,895	125,895	125,895
Adjusted R ²	0.702	0.739	0.674	0.707

Table A6The timing of changes in firms' capital structures around adoptions of the IDD.

This table reports results from OLS regressions of *Net Book Leverage* and *Net Market Leverage* on indicators for the timing of state courts' adoptions of the IDD. The sample spans the 1977-2011 period. *IDD Adoption-4, IDD Adoption-3, IDD Adoption-2, IDD Adoption-1, I*

	Net Book Leverage		Net Marke	et Leverage
	(1)	(2)	(3)	(4)
IDD Adoption -4	-0.005	-0.003	-0.006	-0.004
	(-0.64)	(-0.40)	(-1.07)	(-0.77)
IDD Adoption -3	-0.009	-0.005	-0.008	-0.005
	(-1.25)	(-0.79)	(-1.32)	(-0.97)
IDD Adoption -2	-0.001	0.004	-0.003	-0.001
	(-0.15)	(0.59)	(-0.60)	(-0.11)
IDD Adoption -1	0.003	0.007	-0.001	0.002
	(0.36)	(0.98)	(-0.18)	(0.25)
${ m IDD\ Adoption}\ ^0$	0.005	0.008	0.003	0.005
	(0.69)	(1.16)	(0.46)	(0.83)
IDD Adoption +1	0.017**	0.018**	0.011*	0.012**
	(2.32)	(2.54)	(1.82)	(2.13)
IDD Adoption +2	0.018**	0.019**	0.015**	0.015***
	(2.08)	(2.27)	(2.44)	(2.67)
IDD Adoption +3	0.017*	0.019**	0.011	0.013*
	(1.83)	(2.11)	(1.51)	(1.90)
IDD Adoption 4+	0.019	0.020*	0.014	0.015*
	(1.64)	(1.69)	(1.56)	(1.76)
IDD Rejection	0.005	-0.003	-0.002	-0.008
	(0.58)	(-0.31)	(-0.22)	(-1.07)
Control Variables	No	Yes	No	Yes
$Industry \times Year\ Fixed\ Effects$	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	125,895	125,895	125,895	125,895
Adjusted R ²	0.702	0.739	0.674	0.707

Table A7Recognition of the IDD and profitability.

This table reports results from OLS regressions of profitability on the indicator for the recognition of the IDD. The sample spans the 1977-2011 period. The two alternative dependent variables are as follows: Profit Margin is the sum of pre-tax income, interest expense, and depreciation and amortization (pi+xint+dp), all divided by sales (sale); and Return on Assets is operating income before depreciation (oibdp) divided by book value of assets (at). IDD is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. The control variables are defined in Tables 2 and 3. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively.

	Profit	Margin	Return	on Assets
	(1)	(2)	(3)	(4)
IDD	-0.012 (-0.46)	-0.002 (-0.07)	-0.005 (-1.02)	-0.001 (-0.16)
Log Book Assets		0.138*** (7.49)		0.047*** (6.73)
Fixed Assets		0.086 (0.54)		-0.120*** (-4.15)
Cash Flow Volatility		-2.092*** (-10.26)		-0.433*** (-14.56)
Strength of CNCs		-0.007 (-0.97)		-0.000 (-0.37)
State GDP Growth		-0.205 (-1.00)		0.036 (1.63)
Political Balance		0.059 (0.92)		-0.003 (-0.33)
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	125,895	125,895	125,895	125,895
Adjusted R ²	0.567	0.575	0.647	0.689

Table A8Recognition of the IDD and capital structure: Effect of tax benefits of debt.

This table reports results from OLS regressions of net financial leverage (Net Book Leverage in Panel A and Net Market Leverage in Panel B) on the indicator for the recognition of the IDD. The sample period spans the 1980-2011 period for model 1 and the 1977-2011 period for models 2-4. IDD is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. Marginal Tax Rate is a firm's marginal tax rate before interest deductions estimated by Blouin, Core, and Guay (2010). Depreciation is depreciation and amortization divided by book value of assets (dp/at). Tax Loss Carry Forward is the value of tax loss carry forwards divided by book value of assets (tlcf/at). Investment Tax Credit is the accumulated tax deferrals of investment tax credits divided by book value of assets (itcb/at). Marginal Tax Rate, Depreciation, Tax Loss Carry Forward, and Investment Tax Credit are demeaned to ease the interpretation of coefficient estimates on the interaction term. Industry fixed effects are defined at the three-digit SIC level. 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% levels, respectively.

	Net Book Leverage						
	(1)	(2)	(3)	(4)			
IDD	0.009* (1.95)	0.011** (2.30)	0.010** (2.37)	0.012** (2.46)			
IDD × Marginal Tax Rate	0.024 (0.79)						
Marginal Tax Rate	-0.343*** (-12.70)						
$\operatorname{IDD} \times \operatorname{Depreciation}$		0.082 (0.56)					
Depreciation		1.864*** (10.00)					
$\operatorname{IDD} \times \operatorname{Tax} \operatorname{Loss} \operatorname{Carry} \operatorname{Forward}$			0.002 (0.43)				
Гах Loss Carry Forward			0.037*** (14.18)				
$IDD \times Investment Tax Credit$				3.019 (0.40)			
Investment Tax Credit				-8.005* (-1.70)			
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes			
Firm Fixed Effects	Yes	Yes	Yes	Yes			
Observations	116,312	125,881	93,822	124,698			
Adjusted R^2	0.705	0.717	0.716	0.693			

Table A8 Continued.

	Net Market Leverage							
	(1)	(2)	(3)	(4)				
IDD	0.009** (2.53)	0.011*** (2.67)	0.008** (2.34)	0.011*** (2.82)				
IDD × Marginal Tax Rate	0.026 (0.86)							
Marginal Tax Rate	-0.162*** (-7.17)							
$\mathrm{IDD} \times \mathrm{Depreciation}$		0.023 (0.37)						
Depreciation		0.859*** (16.79)						
IDD × Tax Loss Carry Forward			-0.001 (-0.22)					
Tax Loss Carry Forward			0.012*** (6.24)					
$\operatorname{IDD} \times \operatorname{Investment} \operatorname{Tax} \operatorname{Credit}$				1.856 (0.28)				
Investment Tax Credit				-6.038* (-1.66)				
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes				
Firm Fixed Effects	Yes	Yes	Yes	Yes				
Observations	116,312	125,881	93,822	124,698				
Adjusted R ²	0.674	0.662	0.688	0.673				

Table A9Recognition of the IDD and unlevered stock return volatility.

This table reports results from OLS regressions of a firm's unlevered stock return volatility on the indicator for the recognition of the IDD. The sample spans the 1977-2011 period. The dependent variable *Unlevered Return Volatility* is the annualized standard deviation of a firm's stock returns over a fiscal year (we require the firm to have at least 180 observations during the fiscal year) multiplied by the ratio of the firm's market value of equity to its market value of assets ((csho*prcc_f)/(at-ceq+csho*prcc_f)). *IDD* is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. The control variables are defined in Tables 2 and 3. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively.

	Unlevered Retu	rn Volatility × 100
	(1)	(2)
IDD	0.167 (0.26)	-0.148 (-0.26)
Log Book Assets	(C. 7)	-6.018*** (-23.01)
Fixed Assets		-9.533*** (-5.16)
Strength of CNCs		-0.015 (-0.08)
State GDP Growth		10.321*** (3.14)
Political Balance		0.692 (0.80)
Industry × Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	122,170	122,170
$ m Adjusted~R^2$	0.708	0.724

Table A10Recognition of the IDD and spending in the development of trade secrets.

This table reports the results from OLS regressions of expenditures related to the development of trade secrets on the indicator for the recognition of the IDD. The sample spans the 1977-2011 period. The dependent variables are as follows: R&D/Sales is research and development expenditures scaled by sales (xrd/sale); (R&D + Capex)/Sales is research and development expenditures plus capital expenditures scaled by sales ((xrd+capx)/sale); (R&D + Capex + Adv)/Sales is the sum of research and development expenditures, capital expenditures, and advertising expenditures scaled by sales ((xrd+capx+xad)/sale). xrd and xad are set to zero if the value is missing in Compustat. The control variables are defined in Tables 2 and 3. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively.

	R&D	/ Sales	(R&D + Ca	ipex) / Sales	(R&D + Capex + Adv) / Sales	
	(1)	(2)	(3)	(4)	(5)	(6)
IDD	0.009 (0.82)	0.006 (0.54)	0.017 (1.29)	0.014 (1.12)	0.018 (1.37)	0.014 (1.17)
Log Book Assets		0.024*** (2.81)		0.059*** (5.22)		0.062*** (5.44)
Market-to-Book Assets		0.018*** (4.40)		0.030*** (3.69)		0.031*** (3.72)
Return on Assets		-0.864*** (-8.14)		-1.185*** (-10.26)		-1.233*** (-10.55)
Fixed Assets		-0.154** (-2.38)		0.128 (1.25)		0.114 (1.08)
Cash Flow Volatility		0.084 (1.39)		0.084 (0.90)		0.093 (1.00)
Dividend Payer		0.009** (2.03)		0.005 (0.79)		0.005 (0.79)
Strength of CNCs		0.003 (0.77)		0.004 (0.82)		0.004 (0.82)
State GDP Growth		0.047 (0.65)		0.181 (1.32)		0.208 (1.50)
Political Balance		0.003 (0.14)		-0.008 (-0.26)		-0.008 (-0.27)
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	125,895	125,895	124,674	124,674	124,674	124,674
Adjusted R ²	0.683	0.706	0.618	0.638	0.614	0.635

Table A11Recognition of the IDD and capital structure: Controlling for spending in the development of trade secrets.

This table reports results from OLS regressions of net financial leverage ($Net\ Book\ Leverage$ in models 1-3 and $Net\ Market\ Leverage$ in models 4-6) on the indicator for the recognition of the IDD. The sample spans the 1977-2011 period. IDD is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. R&D/Sales is research and development expenditures scaled by sales (xrd/sale). (R&D+Capex)/Sales is research and development expenditures plus capital expenditures scaled by sales ((xrd+capx)/sale). (R&D+Capex+Adv)/Sales is the sum of research and development expenditures, capital expenditures, and advertising expenditures scaled by sales ((xrd+capx+xad)/sale). xrd and xad are set to zero if the value is missing in Compustat. The other control variables are defined in Tables 2 and 3. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively.

	Ne	t Book Lever	age	Net	Market Leve	rage
	(1)	(2)	(3)	(4)	(5)	(6)
IDD	0.013*** (2.58)	0.012** (2.42)	0.012** (2.42)	0.012*** (3.14)	0.012*** (3.09)	0.012*** (3.10)
Log Book Assets	0.040*** (9.55)	0.040*** (9.46)	0.040*** (9.50)	0.047*** (11.17)	0.047*** (11.14)	0.047*** (11.16)
Market-to-Book Assets	-0.011*** (-13.34)	-0.011*** (-12.45)	-0.011*** (-12.46)	0.009*** (2.89)	0.010*** (2.95)	0.010*** (2.96)
Return on Assets	-0.215*** (-21.90)	-0.212*** (-19.93)	-0.213*** (-20.19)	-0.113*** (-7.63)	-0.114*** (-7.25)	-0.115*** (-7.31)
Fixed Assets	0.665*** (17.18)	0.677*** (17.66)	0.677*** (17.68)	0.429*** (27.32)	0.435*** (27.37)	0.435*** (27.35)
Cash Flow Volatility	0.004 (0.24)	-0.001 (-0.03)	-0.000 (-0.02)	0.004 (0.40)	0.002 (0.24)	0.003 (0.26)
Dividend Payer	-0.056*** (-12.96)	-0.057*** (-13.36)	-0.057*** (-13.37)	-0.049*** (-12.63)	-0.049*** (-12.84)	-0.049*** (-12.85)
Strength of CNCs	0.002 (0.75)	0.002 (0.68)	0.002 (0.69)	0.002 (0.77)	0.002 (0.74)	0.002 (0.74)
State GDP Growth	-0.019 (-0.45)	-0.023 (-0.57)	-0.023 (-0.55)	-0.088** (-2.54)	-0.092*** (-2.71)	-0.092*** (-2.70)
Political Balance	-0.012 (-0.87)	-0.011 (-0.81)	-0.011 (-0.81)	-0.017* (-1.86)	-0.017* (-1.87)	-0.017* (-1.87)
R&D / Sales	-0.040*** (-13.32)			-0.017*** (-9.91)		
(R&D + Capex) / Sales		-0.026*** (-10.18)			-0.013*** (-12.37)	
(R&D + Capex + Adv) / Sales			-0.026*** (-10.25)			-0.014*** (-12.65)
$Industry \times Year\ Fixed\ Effects$	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	125,895	124,674	124,674	125,895	124,674	124,674
Adjusted R ²	0.742	0.742	0.742	0.707	0.708	0.708

Table A12Recognition of the IDD and the cost of bank debt.

The sample used in the cost of bank debt tests includes all firms with non-missing data for the period 1987-2011. Models 1 and 2 report the results from OLS regressions of Log Total Cost of Borrowing on the indicator for the recognition of the IDD. Log Total Cost of Borrowing is from Berg, Saunders, and Steffen (2016) and is the natural logarithm of a measure of total borrowing costs (in basis points) that accounts for the expected credit spread and loan contract fees. IDD is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. Log Loan Maturity is the natural logarithm of the number of months until the loan matures. Log Loan Size is the natural logarithm of the loan amount (in millions). Other control variables are defined in Tables 2 and 3. All models 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. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively

	Log Total Coa	st of Borrowing
	(1)	(2)
IDD	0.014	-0.031**
	(0.61)	(-2.27)
Log Book Assets		-0.142***
		(-15.99)
Market-to-Book Assets		-0.098***
		(-11.16)
Return on Assets		-1.051***
		(-8.93)
Fixed Assets		-0.126**
		(-2.44)
Cash Flow Volatility		0.778***
		(5.02)
Dividend Payer		-0.287***
		(-22.00)
Book Leverage		1.085***
		(39.33)
Log Loan Maturity		-0.140***
.		(-14.83)
Log Loan Size		-0.049*** (-7.29)
Character CONC		-0.024**
Strength of CNCs		(-2.14)
State GDP Growth		0.005
State GDT Growth		(0.02)
Political Balance		0.061
Tollitical Dalalice		(0.96)
Industry × Year Fixed Effects	Yes	Yes
State Fixed Effects	Yes	Yes
Loan-Type Fixed Effects	Yes	Yes
Observations	18,262	18,262
Adjusted R ²	0.575	0.771

Table A13 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 IDD for firms headquartered in adopting states. The sample spans the 1977-2011 period. 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 their state. In columns 1 and 3, CARs are calculated from the market model using CRSP value-weighted market returns. In columns 2 and 4, CARs are calculated using the 4-factor model, in which firm returns are regressed on CRSP 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% levels, 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%** (2.54)	0.551%** (2.48)	0.704%** (2.41)	0.524%** (2.20)	
[-31,-2]	-0.435% (-0.80)	0.156% (0.38)	-0.733% (-1.24)	0.067% (0.20)	

Table A14Recognition of the IDD and product fluidity.

This table reports results from OLS regressions of product fluidity on the indicator for the recognition of the IDD. The dependent variable is the product fluidity measure of Hoberg, Phillips, and Prabhala (2014). The sample spans the 1997-2011 period. *IDD* is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. The control variables are defined in Tables 2 and 3. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively.

	Produc	t Fluidity
	(1)	(2)
IDD	0.087	0.095
	(1.35)	(1.46)
Log Book Assets		0.410***
		(11.35)
Market-to-Book Assets		0.034***
		(2.76)
Return on Assets		-0.657***
		(-8.80)
Fixed Assets		0.328
		(1.52)
Cash Flow Volatility		0.603***
		(3.59)
Dividend Payer		-0.206***
		(-3.59)
Strength of CNCs		-0.034
		(-1.22)
State GDP Growth		0.287
		(0.55)
Political Balance		-0.096
		(-0.62)
Industry × Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	55,579	55,579
Adjusted R ²	0.813	0.817

Table A15Recognition of the IDD and other firm-level measures of competitive risk.

This table reports the results from OLS regressions of firm-level measures of competitive risk on the indicator for the recognition of the IDD. The sample spans the 1977-2011 period. The dependent variable in models 1 and 2 is $abs(K-L\ Ratio\ Deviation)$, which is the absolute value of the difference between a firm's capital-labor ratio and the industry-year median capital-labor ratio of all other firms in its three-digit SIC industry. This measure is scaled by the industry-year range of the capital-labor ratio. The dependent variable in models 3 and 4 is $Industry\ Beta$, which is a measure that captures the correlation of a firm's stock returns with its industry stock returns. To calculate this measure, we regress a firm's daily stock return on the daily CRSP equally weighted market return and the daily equally weighted return for the index of all other firms in the same three-digit SIC industry as the firm. We use daily returns over a firm's fiscal year and require the firm to have at least 180 observations during the fiscal year. $Industry\ Beta$ is the regression coefficient on the industry return index. The control variables are defined in Tables 2 and 3. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively.

	abs(K-L Rat	tio Deviation)	Indust	ry Beta
	(1)	(2)	(3)	(4)
IDD	0.001 (0.14)	0.001 (0.24)	0.002 (0.18)	0.002 (0.23)
Log Book Assets		0.009*** (4.29)		0.068*** (9.48)
Market-to-Book Assets		-0.000 (-0.47)		0.018*** (10.20)
Return on Assets		-0.007 (-0.92)		-0.011 (-0.60)
Fixed Assets		0.320*** (12.33)		0.013 (0.60)
Cash Flow Volatility		0.006 (0.56)		0.105*** (3.18)
Dividend Payer		-0.000 (-0.11)		-0.029*** (-6.77)
Strength of CNCs		0.000 (0.06)		-0.004 (-1.17)
State GDP Growth		-0.046 (-1.35)		0.060 (0.76)
Political Balance		-0.007 (-0.68)		-0.001 (-0.06)
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	121,488	121,488	120,738	120,738
Adjusted R ²	0.738	0.749	0.336	0.340

Table A16Recognition of the IDD and the number of trade secrets legal cases.

This table reports results from OLS regressions of the number of legal cases involving trade secrets litigated in a state on the indicator for the recognition of the IDD. The sample spans the 1977-2011 period and contains a total of 1,750 state-year observations. As in Almeling et al. (2011), for each state, the number of cases includes all cases litigated in state courts, district courts, and in the federal court of appeals in the circuit to which the state belongs for which the text of the legal ruling available in LexisNexis contains the phrase "trade secret(s)" at least three times. *IDD* is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. The control variables are defined in Table 2. 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% levels, respectively.

	Log(# of Trade Secrets Cases)			
	(1)	(2)		
IDD	0.200** (2.20)	0.215** (2.41)		
Strength of CNCs		0.031 (0.70)		
State GDP Growth		-0.322 (-1.00)		
Political Balance		-0.099 (-1.08)		
Year Fixed Effects	Yes	Yes		
State Fixed Effects	Yes	Yes		
Observations	1,750	1,750		
Adjusted R ²	0.797	0.797		

Table A17Recognition of the IDD and capital structure: Controlling for governance.

This table reports results from OLS regressions of net financial leverage (*Net Book Leverage* in models 1-3 and *Net Market Leverage* in models 4-6) on the indicator for the recognition of the IDD. The sample spans the 1977-2011 period in models 1 and 4 and the 1980-2011 period in models 2-3 and 5-6. *IDD* is an indicator variable equal to one if the firm is headquartered in a state whose courts recognize the IDD, and zero otherwise. *Business Combination Laws* is an indicator variable equal to one if the firm is incorporated in a state that has passed business combination laws, and zero otherwise. *Inst. Ownership Top 5* is the number of a firm's shares held by the five largest institutional investors divided by the firm's total institutional ownership. *Inst. Ownership HHI* is the Herfindahl-Hirschman Index based on the percentages of institutional holdings by all institutional investors. The other control variables are defined in Tables 2 and 3. Industry fixed effects are defined at the three-digit SIC level. Continuous variables, except state-level 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% levels, respectively.

	Ne	t Book Levera	age	Net Market Leverage			
	(1)	(2)	(3)	(4)	(5)	(6)	
IDD	0.013***	0.011**	0.011**	0.013***	0.011***	0.011***	
	(2.78)	(2.29)	(2.34)	(3.36)	(3.06)	(3.08)	
Log Book Assets	0.039***	0.046***	0.045***	0.046***	0.052***	0.051***	
	(8.92)	(9.54)	(9.74)	(10.90)	(10.85)	(10.89)	
Market-to-Book Assets	-0.012***	-0.010***	-0.011***	0.009***	0.011***	0.010***	
	(-14.14)	(-11.22)	(-12.14)	(2.80)	(3.45)	(3.21)	
Return on Assets	-0.176***	-0.171***	-0.173***	-0.095***	-0.088***	-0.090***	
	(-15.60)	(-15.49)	(-15.77)	(-6.12)	(-5.84)	(-5.99)	
Fixed Assets	0.667***	0.679***	0.680***	0.425***	0.429***	0.430***	
	(16.03)	(15.67)	(15.66)	(26.54)	(24.87)	(24.85)	
Cash Flow Volatility	0.001	-0.002	-0.005	0.002	0.004	0.002	
	(0.06)	(-0.10)	(-0.27)	(0.17)	(0.38)	(0.16)	
Dividend Payer	-0.056***	-0.053***	-0.053***	-0.049***	-0.045***	-0.045***	
	(-11.61)	(-11.82)	(-11.64)	(-10.92)	(-11.55)	(-11.34)	
Strength of CNCs	0.003	0.002	0.002	0.002	0.001	0.001	
	(0.83)	(0.58)	(0.56)	(0.81)	(0.40)	(0.35)	
State GDP Growth	-0.016	-0.034	-0.039	-0.080**	-0.097***	-0.102***	
	(-0.38)	(-0.81)	(-0.92)	(-2.26)	(-2.86)	(-3.12)	
Political Balance	-0.010	-0.009	-0.009	-0.017*	-0.016*	-0.017*	
	(-0.76)	(-0.64)	(-0.70)	(-1.77)	(-1.78)	(-1.87)	
Business Combination Laws	0.018** (2.45)			0.006 (0.96)			
Inst. Ownership Top 5		0.075*** (7.19)			0.066*** (7.44)		
Inst. Ownership HHI			0.078*** (10.52)			0.060*** (10.31)	
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	119,270	118,262	118,262	119,270	118,262	118,262	
Adjusted R ²	0.736	0.743	0.792	0.701	0.710	0.710	

Table A18
The effect of measurement error in the IDD indicator.

This table reports results from OLS regressions of *Net Book Leverage* and *Net Market Leverage* on the indicator for the recognition of the IDD in the state where a firm is headquartered defined in Table 3. In model 1, we correct the location of headquarters (HQ) over the 1992-2011 period to reduce measurement error in the IDD indicator. 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 not available, we assume there were no relocations prior to the earliest date when headquarters information is available. For models 2-4, the sample spans the 1977-2011 period. In model 2, we exclude firms whose annual sales or book asset growth exceeded 100% in any year during the sample period. In model 3, we exclude all firm years with positive foreign income (*pifo*) or foreign taxes (*txfo*). In model 4, we exclude firms in geographically dispersed industries. Following Agrawal and Matsa (2013), we define geographically dispersed industries as the retail, wholesale, and transportation industries. Industry fixed effects are defined at the three-digit SIC level. 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% levels, respectively.

Panel A.	Dependent	variable is	net hook	loverage
ranei A.	Debendent	variable is	net oook i	leverage

	Corrected location of HLI		Exclude if firm reports foreign income or taxes	Exclude if firm is in dispersed industry	
	(1)	(2)	(3)	(4)	
IDD	0.013*** (4.26)	0.015** (2.26)	0.018** (2.29)	0.011* (1.92)	
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes	
Firm Fixed Effects	Yes	Yes	Yes	Yes	
Observations	125,895	60,497	77,944	101,746	
Adjusted R ²	0.702	0.712	0.703	0.698	

Panel B: Dependent variable is net market leverage

	Corrected location of HQ	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)
IDD	0.012*** (3.80)	0.013** (2.32)	0.016*** (3.19)	0.010** (2.40)
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	125,895	60,497	77,944	101,746
Adjusted R^2	0.702	0.712	0.703	0.698

Table A19

IDD and net financial leverage using a propensity score matched sample.

This table examines the impact of adoptions of the IDD on firms' net financial leverage using a propensity score matched sample and using data over the window +/- 5 years around the adoption of the IDD. The sample spans the 1977-2011 period. The treatment group is firms headquartered in states that adopt the IDD, and the control group is firms headquartered in states that never adopt the IDD. 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 of the IDD). Using a probit regression and data in years t-1 before the adoption of the IDD, we estimate the probability (i.e., propensity score) of being in the treatment group using Log Book Assets, Market-to-Book Assets, and Return on Assets (defined in Table 3). We then match each treatment firm in year t-1 to at least one control firm and at most two control firms (with replacement), first matching exactly on year and two-digit SIC industry, and then on the closest propensity scores (with maximum difference between propensity scores of 0.01). Panel A tabulates the means of the matching variables and propensity scores for the treatment and control groups (the differences across the two groups are not statistically significant at the 10% significance level). Panel B presents results of tests examining the impact of the adoption of the IDD on firms' net financial leverage. In models 1 and 2, the dependent variable is Net Book Leverage. In models 3 and 4, the dependent variable is Net Market Leverage. IDD Adoption is defined in Table A5. IDD Adoption⁻³, IDD Adoption⁻³, IDD Adoption-1, IDD Adoption-0, IDD Adoption+1, IDD Adoption+2, IDD Adoption3+ are defined in Table 4. Industry fixed effects are defined at the three-digit SIC level. Standard errors in Panel B are corrected for heteroskedasticity and clustering at the state level (t-statistics are in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Comparison of means across matched samples in year t-1

	Matched Sample	e for Adoptions
	Treatment Group (Obs. = 1,552)	Control Group (Obs. = 3,030)
Propensity Score	0.114	0.114
Log Book Assets	5.254	5.164
Market-to-Book Assets	1.774	1.728
Return on Assets	0.101	0.103

Table A19 Continued.

Panel B: Adoption of the IDD and financial leverage

	Net Book	Leverage	Net Marke	et Leverage
	(1)	(2)	(3)	(4)
IDD Adoption	0.028***		0.020***	
	(3.83)		(3.73)	
IDD Adoption -3		-0.003		-0.002
		(-0.57)		(-0.52)
IDD Adoption -2		0.006		0.004
		(0.69)		(0.73)
IDD Adoption -1		0.011		
		(1.23)		(1.42)
IDD Adoption ⁰		0.015		0.012
		(1.36)		(1.47)
IDD Adoption +1		0.032***		0.024***
		(3.11)		(2.97)
IDD Adoption +2		0.034***		0.025***
		(2.70)		(3.29)
IDD Adoption 3+		0.042***		0.031***
		(2.94)		(3.23)
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	42,178	42,178	42,178	42,178
Adjusted R ²	0.751	0.751	0.724	0.724

Table A20Litigation involving trade secrets and debt issuance.

This table reports results from OLS regressions of changes in debt on dummy variables indicating whether a firm is a plaintiff in a trade secrets case during a given year. Trade secrets cases are identified from LexisNexis. The sample spans the 1992-2011 period and is made up of firms included in the study's main sample. The dependent variables are (\$\Delta\$ Net Debt)_t / Book Assets_{t-1}\$ (models 1 and 2), (\$\Delta\$ Net Debt)_t / Market Value Assets_{t-1}\$ (models 3 and 4), (\$\Delta\$ Total Debt)_t / Book Assets_{t-1}\$ (models 5 and 6), and (\$\Delta\$ Total Debt)_t / Market Value Assets_{t-1}\$ (models 7 and 8). (\$\Delta\$ Net Debt)_t / Book Assets_{t-1}\$ is the change in total debt minus cash holdings from year t-1 to t [(dltt_t+dlc_t-che_t) - (dltt_{t-1}+dlc_{t-1}-che_{t-1})] divided by book value of assets at the beginning of the year (at_{t-1}). (\$\Delta\$ Total Debt)_t / Market Value Assets_{t-1}\$ is the change in total debt minus cash holdings from year t-1 to t [(dltt_t+dlc_t-che_t) - (dltt_{t-1}+dlc_{t-1}-che_{t-1})] divided by market value of assets at the beginning of the year (prcc_f_{t-1}*csho_{t-1}+at_{t-1}-ceq_{t-1}). (\$\Delta\$ Total Debt)_t / Book Assets_{t-1}\$ is the change in total debt from year t-1 to t [(dltt_t+dlc_t) - (dltt_{t-1}+dlc_{t-1})] divided by market value of assets at the beginning of the year (prcc_f_{t-1}*csho_{t-1}+at_{t-1}-ceq_{t-1}). Trade Secret Case_{t-1}\$ is an indicator variable that is set to one if the firm will be a plaintiff in a trade secrets case in the following year and zero otherwise. Trade Secret Case_{t-1}\$ is an indicator variable that is set to one if the firm is the plaintiff in a trade secrets case in the prior year and zero otherwise. Trade Secret Case_{t-1}\$ is an indicator variable that is set to one if the firm was the plaintiff in a trade secrets case in the prior year and zero otherwise. Control variables are defined in Table 3. Industry fixed effects are defined at the three-digit SIC level. Continuous variables are winsorized at their 1st and 99th per

	•	Debt) _t /	,	ot) _t / Market	,	l Debt) _t /		bt) _t / Market
	Book A	$_{ m Assets_{t-1}}$	Value	Assets_{t-1}	$\operatorname{Book} \operatorname{Assets}_{\operatorname{t-1}}$		$ m Value~Assets_{t-1}$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trade Secret Case t-1	-0.010	-0.010	-0.001	0.000	-0.002	-0.001	0.001	0.002
	(-1.13)	(-1.03)	(-0.13)	(0.01)	(-0.32)	(-0.17)	(0.15)	(0.50)
Trade Secret Case t	0.023***	0.019**	0.008*	0.008*	0.013*	0.018***	0.008**	0.011***
	(2.69)	(2.17)	(1.77)	(1.66)	(1.91)	(2.66)	(2.07)	(2.77)
Trade Secret Case t+1	0.008	0.002	0.002	0.002	-0.005	0.001	-0.004	-0.001
	(0.99)	(0.30)	(0.51)	(0.35)	(-0.74)	(0.23)	(-1.23)	(-0.37)
Log Book Assets t-1		0.019***		-0.005***		-0.050***		-0.029***
		(6.14)		(-3.27)		(-24.08)		(-25.49)
Market-to-Book Assets t-1		-0.022***		-0.007***		0.009***		-0.000
		(-14.25)		(-12.96)		(11.27)		(-0.16)
Return on Assets t-1		0.052***		0.013**		0.049***		0.042***
		(3.68)		(2.18)		(6.19)		(11.24)
Fixed Assets t-1		-0.297***		-0.149***		-0.030**		-0.021***
		(-14.97)		(-14.63)		(-2.14)		(-2.69)
Cash Flow Volatility t-1		-0.066***		-0.020**		-0.019		-0.008
•		(-3.26)		(-2.33)		(-1.61)		(-1.42)
Dividend Payer t-1		0.031***		0.021***		0.027***		0.017***
•		(7.69)		(8.78)		(8.53)		(8.72)
Industry × Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	71,191	71,191	71,191	71,191	71,191	71,191	71,191	71,191
$ m Adjusted~R^2$	0.027	0.054	0.052	0.063	0.064	0.094	0.080	0.102