Stakeholder Orientation and the Cost of Debt:

Evidence from a Natural Experiment[*]

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Abstract

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Abstract

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1. Introduction

There is a longstanding debate among legal scholars and economists on whether modern corporations should adopt stakeholder-oriented decision making, starting with seminal work by Berle (1931) and Dodd (1932) (also see the formal modeling of stakeholder society/corporation by Tirole, 2001; Magill, Quinzii, and Rochet, 2015). Under the stakeholder-oriented approach, instead of acting exclusively on behalf of shareholders, corporate leaders also consider other stakeholders (e.g., creditors, employees, customers, and suppliers) who similarly have legitimate interests in a company's business activities. In the wake of the recent financial crisis, criticism of the shareholder-oriented approach has increased (Porter and Kramer, 2011; Fox, 2013).[1] However, the relationship between stakeholder orientation and firm policy is insufficiently understood. In this paper, we fill a gap in the literature by establishing a causal effect of stakeholder orientation on (reducing) firms' costs of debt. We focus on the effect on creditors mainly because data are available about loan contracting terms for a large sample of firms while it is more challenging to empirically capture the effects on employees, customers, and suppliers.[2]

Our test exploits the staggered adoption of constituency statutes by various U.S. states, which allows corporate directors to consider stakeholders' interests when making business decisions. We hypothesize that a state's adoption of such statutes could decrease the cost of debt for firms incorporated in that state for the following reasons. First, from the perspective of creditors, a stakeholder-oriented firm (relative to a firm that exclusively serves its shareholders) is less likely to take advantage of its creditors to benefit shareholders and thus leading to a lower interest rate required by creditors (Becker and Stromberg, 2012). Second, from the perspective of

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[1] Since 1976, German firms have been structured in a way such that all corporate decisions take into account the interests of employees—the so-called "codetermination" system (see Kim, Maug, and Schneider (2016) for a recent study).

[2] Nonetheless, later in the paper, we show that there is a positive association between stakeholder orientation and a composite score of firm social performance with respect to its non-shareholding stakeholders.

employees, a stakeholder-oriented firm can better attract high-quality workforce, and improve job satisfaction, employee commitment and retention (Sheridan, 1992; Turban and Greening, 1997). This could help reduce risks associated with labor mobility and/or dispute and thus reducing the cost of debt (Zingales, 2000; Donangelo, 2014; Klasa, Ortiz-Molina, Serfling, and Srinivasan, 2017). Finally, from the perspective of customers and suppliers, stakeholder-friendly initiatives help establish a firm's reputation and its stable relations with customers and suppliers and reduce supply chain uncertainty, which in turn leads to a lower cost of debt (Biais and Gollier, 1997; Cen, Dasgupta, Elkamhi, and Pungaliya, 2016).

There are three reasons that make relying on the staggered adoption of state-level constituency statutes highly appealing from an empirical standpoint. First, constituency statutes are adopted in the state of incorporation rather than the state of headquarters where a firm's main business operations are conducted and where a firm could be influential. A firm's state of incorporation often differs from its state of headquarters,[3] which helps alleviate the concern that a change in local economic conditions in the state of a firm's headquarters might be the omitted factor driving both the adoption of constituency statutes and the change in the cost of debt. Second, the motivation behind adopting constituency statutes centers around state legislators' emphasis on considering stakeholders' interests in corporate decision making. As constituency statutes are not adopted with the intent of reducing a firm's costs of financing, any effect on those costs is likely to be an unintended consequence. Third, the staggered adoption in various states enables us to identify the effect in a difference-in-differences framework. Because multiple exogenous shocks affect different firms at different points in time, we can avoid the common identification difficulty faced by studies with a single shock: the potential biases and noise coinciding with the shock that directly affects the cost of debt (Roberts and Whited, 2013).

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[3] In our sample, about three-quarters of the firms are not incorporated in the same state as their headquarters.

Using a sample of 35,345 bank loans of U.S. public firms from 1987 to 2012 and a difference-in-differences approach, we show that on average, firms incorporated in states that adopted constituency statutes experience a drop in the loan spread by approximately 15% (or 29 basis points) relative to firms incorporated in states that did not adopt such statutes. In terms of economic significance, this drop in the loan spread translates into an average savings in interest payments of $1.15 million per year. Our findings are robust to controlling for firm and loan characteristics and macro factors, and across different subsamples.

To ensure that our main results are not purely driven by chance, we run a placebo test where for each legislating state, we randomly pick a pseudo adoption year within the sample period, and estimate our baseline model based on those pseudo event years. We repeat this procedure 5,000 times. The results indicate that the effect of stakeholder orientation on the cost of debt documented in our main tests is likely not spurious: The smallest coefficient estimate in the placebo test is substantially larger than the coefficient estimate of the true (negative) effect.

The identifying assumption central to a causal interpretation of the difference-in-differences specification is that the treated and control firms share parallel trends prior to a state's law change. We show that the pre-treatment trends of these two groups of firms are indeed indistinguishable. Moreover, most of the impact of constituency statutes on the cost of debt occurs after a state's law change takes effect, which suggests a causal effect.

To provide further evidence that the effect of constituency statutes on the cost of debt is indeed tied to stakeholder orientation, we employ a triple differences approach to exploring heterogeneous treatment effects. We find that the treatment effect is stronger for firms whose stakeholders were less able to protect themselves prior to the law change. Specifically, we find stronger treatment effects in firms where creditor-shareholder conflict was more severe, whose

employees were less unionized, or whose customers/suppliers were less concentrated before the adoption of such statutes. These cross-sectional variations in the treatment effect further increase our confidence that the observed treatment effect is indeed tied to protecting the interests of a broad group of stakeholders.

Next, we explore two alternative explanations of our main results. We first investigate whether our main results are driven by a decrease in firms' financial leverage following a state's adoption of constituency statutes. High leverage increases a firm's risk of financial distress and thus adversely affects its creditors, employees, suppliers, and customers. A firm may reduce its leverage after its state of incorporation adopts constituency statutes, which in turn leads to a drop in the cost of debt. Contrary to this conjecture, we find that firms incorporated in states that adopted constituency statutes actually increase their leverage. This finding is consistent with the view that constituency statutes mitigate the agency cost of debt and thus increase a firm's debt capacity.

We then investigate whether constituency statutes may be used as an antitakeover defense (as they were triggered by but not limited to providing takeover protections), and thus our results would be driven by firms' improved resistance to takeover threats. We do not find that such statutes have any significant effect on firms' likelihood of being acquired, suggesting that the little change in takeover likelihood is unlikely to drive our results.

Finally, we show that the adoption of constituency statues also leads to a drop in a firm's expected default probability and an improvement in its credit rating, and has a positive effect on its other non-shareholding stakeholders (in addition to creditors).

Our paper makes a number of contributions to the literature. First, our paper is closely related to studies that examine the importance of nonfinancial stakeholders, such as employees

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and customers, for corporate decisions (see, for example, Faleye, Mehrotra, and Morck, 2006; Kale and Shahrur, 2007; Bae, Kang, and Wang, 2011; Chen, Kacperczyk, and Ortiz-Molina, 2012; Cen et al., 2016). Unlike those studies, we examine the importance of considering all stakeholders' interests all together, and show that despite potential conflicts of interest among those stakeholders, there is a causal effect of a firm's adopting stakeholder orientation on reducing its cost of bank loans. Our paper is one of the first studies to show that harmonizing the interests of all stakeholders leads to lower costs of debt.

Second, our paper is broadly related to the literature on corporate social responsibility (CSR). Despite the growing importance of CSR, the performance implications of CSR remain elusive. One group of researchers argues that CSR creates value because promoting the interests of other stakeholders increases their willingness to support a firm's operation, which in turn improves firm performance (see, for example, Jensen, 2001; Deng, Kang, and Low, 2013; Cheng, Ioannou, and Serafeim, 2014). Another group of researchers claims that CSR represents an inefficient wealth transfer from shareholders to other stakeholders (usually for the benefit of managers themselves) and thus hurts firm performance (see, for example, Pagano and Volpin, 2005; Cronqvist, Heyman, Nilsson, Svaleryd, and Vlachos, 2009). Our paper establishes a new channel through which CSR affects firm performance. We show that stakeholder orientation is beneficial in terms of lowering the cost of borrowing.

Finally, our paper adds to the literature on bank loan contracting. This literature is important given that bank loans represent one of the key sources of corporate financing (Myers, 2003). Prior research on this topic has focused on factors such as accounting quality (Graham, Li, and Qiu, 2008; Costello and Wittenberg-Moerman, 2011; Kim, Song, and Zhang, 2011), credit contagion (Hertzell and Officer, 2012), executive compensation contracting (Chan, Chen, and

Chen, 2013), shareholder rights (Chava, Livdan, and Purnanandam, 2009), and creditor rights (Qian and Strahan, 2007; Bae and Goyal, 2009; Becker and Stromberg, 2012). Complementing prior literature, our study provides new empirical evidence that stakeholder orientation associated with the adoption of constituency statutes has a causal effect on the cost of bank loans.

Our paper and its findings have important policy implications. There is a longstanding debate in corporate law and academia on the purpose and legal obligations of a corporation to society. In the English-speaking world with a common law tradition, it is believed that directors should not consider stakeholders' interests because their fiduciary duties require them to act exclusively in the interests of shareholders. Over the past century, an increasing number of legal scholars argued that firms' business operations affect not only their shareholders, but also a broader group of non-shareholding constituencies that have legitimate interests in those operations. The proponents of this stakeholder-oriented view sought to change corporate law to support their belief that corporations should be stakeholder-oriented rather than merely shareholder-oriented (Bainbridge, 1992). Although more than 30 states have enacted constituency statutes, legislators in the remaining states are still debating whether or not to follow them, partly because the effect of these statutes on firm policy is still not well understood. Our paper provides new evidence that this legislation helps lower firms' costs of borrowing.

The remainder of the paper is organized as follows. Section 2 provides background information about constituency statutes. Section 3 develops our hypothesis. Section 4 describes our sample. Section 5 presents our main finding, and Section 6 conducts additional investigation. We conclude in Section 7.

2. Institutional Background on Constituency Statutes

The origin of constituency statutes comes from a longstanding debate among legal scholars on the fundamental nature of corporations: Whether a corporation's responsibility is exclusively to shareholders or to a broader group of stakeholders (Bainbridge, 1992). In 1931, Adolf A. Berle, a professor at Columbia Law School, wrote *Corporate Powers as Powers in Trust,* an article published in the Harvard Law Review (Berle, 1931). In this article, he posited, "…all powers granted to a corporation or to the management of a corporation, or to any group within the corporation, whether derived from statute or charter or both, are necessarily and at all times exercisable only for the ratable benefit of all the shareholders as their interest appears." Berle believed that corporations were simply vehicles for advancing and protecting shareholders' interests and that corporate law should be interpreted to reflect this principle. Based on this view, management should concentrate its attention on achieving shareholder value maximization.

One year later, E. Merrick Dodd, a professor at Harvard Law School, challenged Berle's position in his Harvard Law Review article *For Whom Are Corporate Managers Trustees?* (Dodd, 1932), and set off a debate. Dodd advocated that corporations provide a social service as well as a profit-making function, and stated, "…business is permitted and encouraged by the law primarily because it is of service to the community rather than because it is a source of profit to its owners." Dodd argued that managers were not trustees for shareholders alone, but instead were also trustees for employees, suppliers, consumers, and the general public.

The shareholder versus stakeholder debate continued for many years before it sprang into prominence in the hostile takeover wave of the 1980s. Although these transactions benefited target firm shareholders, they typically imposed significant costs on creditors, employees, customers, suppliers, and communities, and thus were met with wide-ranging criticism and intense debate on whether the fiduciary duties of business leaders should be extended to a

broader group of stakeholders. This debate eventually led to the adoption of constituency

statutes, which allow directors to consider not only shareholders' interests but also those of other

stakeholders when making business decisions. Although these constituency statutes were

triggered by the hostile takeover wave of the 1980s (Karpoff and Wittry, 2016),[4] their reach was

not limited to takeovers; instead, they were applied to general business decisions as well

(Bainbridge, 1992; Elhauge, 2005).[5] Ohio was the first state to adopt such statutes in 1984, and

more than 30 states have since followed as of the end of 2012 (see Table 1).

As pointed out by Orts (1992) and Springer (1999), the core principle of constituency

statutes is that directors are allowed to run the firm in the interests of a broad group of

stakeholders, instead of exclusively shareholders.[6] For example, the Minnesota statutes state, "A

director may, in considering the best interests of the corporation, consider the interests of the

corporation's employees, customers, suppliers, and creditors, the economy of the state and

nation, community and societal considerations."[7]

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[4] Karpoff and Wittry (2016) point out that the legislating process of constituency statutes is typically influenced by a few lobbying firms across states, rather than by any state-wide economic or political shocks. Later in the paper, we conduct a formal test to show that the adoption of constituency statutes is indeed unrelated to local economic and political conditions or locally-incorporated firms' existing costs of debt, supporting the exogeneity of such state-level statutes.

[5] After searching in the Westlaw database from 1983 through 2013, Geczy, Jeffers, Musto, and Tucker (2015) identify 47 cases citing references to constituency statutes. Of the types of claims brought, seventeen cases (17/47) raised breach of fiduciary duty claims against directors in a takeover setting; eleven cases (11/47) alleged that directors breached other fiduciary duties (those arising outside of takeover contexts); and twelve cases (12/47) arose in the context of bankruptcy proceedings (in which trustees asserted claims against former directors for deepening insolvency or creditors of the now bankrupt corporation alleging that directors owed them enforceable fiduciary duties under the governing constituency statutes). Of the types of plaintiffs, twenty-four cases (24/47) were brought by shareholders; five cases (5/47) were brought by bankruptcy trustees; and seven cases (7/47) were brought by corporate creditors after corporate insolvency or bankruptcy. After studying the enforcement of these 47 cases, Geczy et al. (2015) conclude that constituency statutes do signal a change in the law—a clear departure from directors' duties established in Delaware cases such as Revlon and Unocal. Moreover, there is evidence that firms undertook more stakeholder friendly policies after constituency statutes were passed.

[6] See an illustrative quote from Geczy et al. (2015, p. 95), "Constituency statutes expand the protection of the business judgment rule by permitting, not mandating, directors to consider nonshareholder constituents. In other words, directors would not face liability for actions justified, in part, by serving nonshareholder interests."

[7] MINN. STAT. ANN. § 302A.251, subd. 5 (West Supp. 1985).

Critics of constituency statutes maintain that promoting the interests of stakeholders leads to less weight given to shareholder concerns. Proponents argue that such statutes, however, could achieve economic efficiency by promoting the interests of the company as a whole in an effort to ensure that directors consider the interests of all or at least most of the stakeholders while maximizing profitability and shareholder return in the long run (Adams and Matheson, 2000). Furthermore, the right to consider a wider variety of interests does not equal a right to ignore shareholders' interests (Bainbridge, 1992).[8]

Existing literature finds that the adoption of constituency statutes has greatly influenced corporate decisions and enhanced the welfare of firms' stakeholders. For example, Luoma and Goodstein (1999) find that such statutes are associated with a greater representation of non-shareholding stakeholders as directors on the board. Flammer and Kacperczyk (2016) find that such statutes help firms gain support from employees, customers, and other stakeholders alike, which in turn leads to more investment in risky and innovative projects.

3. Hypothesis Development

Non-shareholding stakeholders consist broadly of creditors, employees, customers, suppliers, etc. We posit that stakeholder orientation as promoted by constituency statutes will lower the cost of debt for the following reasons. First, from the perspective of creditors, the conflicts of interest between them and shareholders are an important consideration for debt

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[8] Given the permissive (instead of mandatory) nature of these statutes, it begs the question of why some directors choose to consider stakeholders' interests, while others may choose to ignore them. There are at least three possible answers. First, directors may personally believe that they (and their company) have a moral imperative to consider other stakeholders' interests. Second, a good relation with various stakeholders helps improve directors' reputation in the labor market (Borghesi, Houston, and Naranjo, 2014). Third, directors are likely to have similar risk preferences as fixed claimants, because insider directors likely hold large under-diversified equity portfolios and also have their human capital tied to the firm, and thus prefer a lower level of risk taking than what shareholders would prefer, while outsider directors are likely the representatives of external stakeholders (Wang and Dewhirst, 1992; Johnson and Greening, 1999).

contracting. One common example of such conflicts is the debt overhang problem (Myers, 1977): When a firm is highly leveraged and debt is risky, shareholders have a disincentive to raise new capital to invest in projects that would make debt safer, even if those projects have a positive net present value. Another common example of such conflicts between creditors and shareholders is the risk-shifting problem (Jensen and Meckling, 1976): Shareholders have an incentive to increase the riskiness of a firm's existing assets, even when this would reduce the value of the firm. These conflicts adversely affect creditors and as a result, creditors will protect themselves by demanding higher interests. Compared to a firm that exclusively serves to shareholders, a stakeholder-oriented firm is less likely to take advantage of creditors for the benefits of shareholders, and thus creditors would require a lower interest rate. Supporting this argument, Qian and Strahan (2007), Bae and Goyal (2009), and Becker and Stromberg (2012) show that better protection of creditor rights is associated with lower costs of debt.

Second, from the perspective of employees, a stakeholder-oriented firm can better attract high-quality workforce, and improve job satisfaction, employee commitment and retention (Sheridan, 1992; Turban and Greening, 1997). Employee retention has important implications for the cost of debt because a firm's human capital is increasingly viewed as one of the most important pillars for its competitive advantages (Zingales, 2000). Donangelo (2014) shows that the uncertainty associated with employee departure is a significant source of risk faced by companies these days. Klasa et al. (2017) find that a lower risk of losing employees is associated with a lower cost of debt. Becker and Olson (1986) and Chopra and Sodhi (2004) show that labor dispute can severely disrupt a firm's operation imposing substantial economic costs to the firm. Thus, stakeholder orientation could lead to a lower cost of debt through better treatment/retention of employees and reduced risks of labor dispute.

Finally, from the perspective of customers and suppliers, stakeholder-friendly initiatives help attract and retain customers/suppliers who develop positive attitudes, loyalty, brand recognition, and satisfaction in response to stakeholder orientation (Mohr, Webb, and Harris, 2001; Luo and Bhattacharya, 2006). Better reputation and more stable relations with its customers and suppliers can help reduce a firm's cost of debt because supply chain uncertainty is an important part of the business risk inherent in a firm's current and future cash flows (Ahern, 2012). Gruca and Rego (2005) find that high customer satisfaction reduces a firm's cash flow volatility due to increased brand loyalty and cross-selling; Cen et al. (2016) find that firms that are able to hold on to principal customers longer are perceived to be safer by banks, leading to a lower cost of debt. Biais and Gollier (1997) and Cuñat (2007) show that trade credit provided by suppliers helps customer firms to get low cost bank loans and/or protect these firms against liquidity shocks.

Based on the discussion above, we expect that the enactment of state-level constituency statutes leads to a lower cost of debt for firms incorporated in that state.

It is possible that adopting constituency statutes could exacerbate the conflicts of interest among various stakeholders and thus would increase the cost of debt. For example, Chen, Kacperczyk, and Ortiz-Molina (2012) point out that once a firm approaches bankruptcy, its employees become more concerned with a potential loss of their human capital invested in the firm and their future income; hence, they may oppose an efficient liquidation that benefits creditors. As a result, employees may align themselves with shareholders in trying to keep the firm alive by undertaking activities capable of diluting creditors' claims. More broadly, a stakeholder-oriented firm may be reluctant to lay off employees in an economic downturn, which makes creditors worse off. However, this view is largely inconsistent with our empirical findings.

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4. Our Sample

We start with all U.S. public firms traded on the NYSE, AMEX or NASDAQ with no missing value on total assets. We obtain bank loan information from the Loan Pricing Corporation's Dealscan database, which contains price terms of loans and non-price terms such as loan size, maturity, collateral, covenants, and lenders. We use the all-in-drawn spread (hereafter referred to as the loan spread) to measure the cost of bank loans, which is given as the additional basis points the borrower pays over the London Interbank Offered Rate (LIBOR). This measure includes any recurring annual fees paid to the lenders. We utilize the Compustat-Dealscan link file provided by Chava and Roberts (2008) to merge Dealscan with Compustat.[9]

Our sample period starts in 1987, the year in which Dealscan began offering comprehensive coverage of loans, and ends in 2012, five years after the last adoption of constituency statutes by Nebraska in 2007. Our final sample consists of 35,345 loan observations (issued by 5,469 unique firms) and 24,067 firm-year observations for the sample period 1987−2012.

We obtain historical information on a firm's state of incorporation from various sources. For the period before 1994 (during which the SEC's EDGAR was not available), we obtain the information from Compact Disclosure; for the period 1994−2007, we obtain such information from the SEC's EDGAR website;[10] for the period 2008−2012, we obtain such information from the Compustat-CRSP merged database.

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[9] The link file covers loans until the middle of 2012; we use company name matching for loans issued after that period.
[10] The data is provided by Bill McDonald and available on his website: http://www3.nd.edu/~mcdonald/10-K_Headers/10-K_Headers.html

We control for a number of firm characteristics, loan characteristics, and macro factors that may affect the cost of bank loans, and these controls are motivated by prior literature (e.g., Graham, Li, and Qiu, 2008; Costello and Wittenberg-Moerman, 2011; Hertzell and Officer, 2012; Chan, Chen, and Chen, 2013). Specifically, we control for firm size, market-to-book, book leverage, profitability, tangibility, cash flow volatility, and the modified Altman's (1968) Z-score. Larger firms have easier access to external financing and less information asymmetry; higher market-to-book firms have more growth opportunities; higher leverage, lower profitability, and lower tangibility are usually associated with a higher default risk; higher cash flow volatility proxies for a higher earnings risk; and Altman's Z-score further controls for default risk. We also control for loan characteristics, including loan maturity, loan size, and a performance pricing indicator variable. Longer maturity is likely associated with better credit quality of the borrowers; larger loan size generates economies of scale; and performance-priced loans may be structured differently. We employ two variables to control for macroeconomic conditions: credit spread and term spread. The former is the difference in yields between BAA and AAA corporate bonds, and the latter is the difference in yields between ten-year and two-year Treasury bonds. The data for both variables is obtained from the Federal Reserve Board of Governors. Both variables are measured in the month prior to a loan issuance. To minimize the effect of outliers, we winsorize all continuous variables at the 1st and 99th percentiles. Detailed variable definitions are provided in the Appendix.

Table 2 provides summary statistics. The median loan in our sample has a loan spread of 175 basis points, a maturity of 48 months, and a loan size of $155 million. About 40% of our sample loans have performance pricing clauses. The median firm in our sample has a book value of total assets of $1.3 billion, is moderately levered with a book leverage ratio of 33.60%, and

has 23.7% of total assets in the form of tangible assets. In terms of performance, the median firm in our sample has a market-to-book ratio of 1.32, a ratio of operating income before depreciation to total assets of 11.3%, and a Z-score of 1.35. As to measures of macroeconomic conditions, the median credit spread is 85 basis points and the median term spread is 79 basis points.

5. Main Results

5.1. The Timing of Adopting Constituency Statutes

Our empirical tests are based on the assumption that a state's adoption of constituency statutes is not related to the prevailing borrowing costs of firms incorporated in that state. To validate this assumption, following Acharya, Baghai, and Subramanian (2014) we employ a Weibull hazard model where the "failure event" is the adoption of constituency statutes in a state. The sample consists of all U.S. states over our sample period with treated states dropped from the sample once they have adopted the constituency statutes. All explanatory variables are at the state level and lagged by one year. *Ln (Average spread)* is the natural logarithm of the average all-in-drawn spread across loans issued by firms incorporated in a state. We also control for a number of state-level variables, including state GDP, population, unemployment rate, education level in the workforce, political climate (whether or not a state is governed by a Republican), and major state antitakeover laws (i.e., business combination laws, fair price laws, and control share acquisition laws).[11] Table 3 presents the results.

We show that the coefficients on *Ln(Average spread)* are not significant across all three specifications. Taking column (3) as an example, the coefficient on *Ln(Average spread)* is small

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[11] Data on state GDP is obtained from the Bureau of Economic Analysis. Data on state populations, the percentage of Bachelor's degree holders in the workforce, and the political climate is obtained from the U.S. Census Bureau. Data on state unemployment rates is obtained from the U.S. Bureau of Labor Statistics Local Area Unemployment Statistics Series. Information regarding major state antitakeover laws is collected from Bertrand and Mullainathan (2003).

in magnitude (−0.484) and is statistically insignificant. These results indicate that a state's

adoption of constituency statutes is not related to the prevailing borrowing costs of its locally-

incorporated firms, supporting our assumption that the adoption of constituency statutes is likely

to be exogenous to local firms' costs of debt prior to the law change.

5.2. Baseline Regressions

Over 30 states adopted constituency statutes in various years during the sample period

1987−2012. Thus, we can examine the before-after effect of the adoption of constituency statutes

in affected states (the treatment group) compared to the before-after effect in states without the

adoption of such statutes (the control group). This is a difference-in-differences test design with

multiple treatment groups and multiple time periods as employed by Bertrand and Mullainathan

(2003), Imbens and Wooldridge (2009), and Atanassov (2013). We implement this test through

the following regression specification:

$Ln(Loan\ Spread)_{i,t} = \alpha + \beta_1 Constituency\ Statute_{s,t} + \beta_2 Firm\ Characteristics_{i,t} + \beta_3 Loan\ Characteristics_{i,t} + \beta_4 Macro\ Factors_{i,t} + \beta_5 State\ Antitakeover\ Laws + Credit\ Lyonnais\ FE + Loan\ Type\ FE + Loan\ Purpose\ FE + Firm\ FE + Headquarter\ State \times Year\ FE + \varepsilon_{i,t}$,   (1)

where *i* indexes firm, *s* indexes the state in which firm *i* is incorporated, and *t* indexes the year.

The dependent variable is the natural logarithm of the loan spread. The variable *Constituency*

Statute is an indicator variable that takes the value of one if constituency statutes are in effect in

state *s* in a given year, and zero otherwise. As explained by Bertrand and Mullainathan (2003),

the staggered adoption of constituency statutes means that our control group is not restricted to

states that never adopt such statutes. In fact, Equation (1) can be estimated even if all states

eventually adopted such statutes. The estimation implicitly takes as the control group all firms

incorporated in states not adopting such statutes in year *t*, even if some of those states have already adopted such statutes before year *t* or some of those states will adopt them after year *t*.

We include a set of control variables that may affect the cost of bank loans, as discussed in Section 4. We also control for a number of fixed effects. Francis, Hasan, John, and Waisman (2010) find that state antitakeover laws help mitigate the agency cost of debt by shielding debtholders from expropriation in takeovers, resulting in a lower cost of debt. Given that constituency statutes were passed at the same time as some of those antitakeover laws, we might simply capture the effect of those laws. To address this concern, we control for the adoption of any major state antitakeover laws, *State antitakeover laws*, which takes the value of one if a firm's state of incorporation adopted any major state antitakeover laws (i.e., business combination laws, fair price laws, and the control share acquisition laws), and zero otherwise. Becker and Strömberg (2012) find that after the 1991 ruling of the Credit Lyonnais case, shareholder-debtholder conflicts for Delaware-incorporated firms became significantly less severe, so we include the Credit Lyonnais fixed effect (which takes the value of one for the Delaware-incorporated firms after 1991, and zero otherwise) to capture its influence on the cost of debt. We also control for loan type fixed effects and loan purpose fixed effects. Loans are of different types, such as term loan, revolver, and 364-day facility. Loan purposes generally include corporate purposes, debt repayment, working capital, takeover, and other. The firm fixed effects allow us to control for time-invariant differences in a firm's cost of debt. Finally, we control for a full set of *Headquarters state × Year* fixed effects, because the incongruence between the state of incorporation and the state of headquarters (where a firm's business operations are actually conducted) for more than half of U.S. public firms allows us in theory to fully control for shocks to headquarters states by including this set of fixed effects in the

regression (Bertrand and Mullainathan, 2003).[12] Given that our treatment is defined at the state of incorporation level, we cluster standard errors by the state of incorporation.

The coefficient of interest in Equation (1) is β_1. As explained by Imbens and Wooldridge (2009), after controlling for all fixed effects, β_1 is the estimate of *within-state* difference between the periods before and after the adoption of constituency statutes relative to a similar before-after difference in states without such statutes.

It is helpful to consider an example. Suppose we want to estimate the effect of constituency statutes adopted by Connecticut in 1997 on the cost of bank loans for firms incorporated in Connecticut. We can subtract the cost of bank loans before the adoption from the cost of bank loans after the adoption for firms incorporated in Connecticut. However, economy-wide shocks may occur at the same time and affect the cost of bank loans in 1997. To difference away such influences, we calculate the same difference in the cost of bank loans for firms incorporated in a control state that did not have constituency statutes. Finally, we calculate the difference between these two differences, which represents the incremental effect of adopting constituency statutes on firms incorporated in Connecticut compared to firms incorporated in the control state without such statutes.

Table 4 presents the regression results. In column (1), we only include *Constituency Statute*, *Credit Lyonnais FE*, *Loan purpose FE*, *Loan type FE*, *Firm FE*, and *Year FE* as the independent variables, and the coefficient on *Constituency Statute* is negative and significant at the 5% level, suggesting a negative effect of constituency statutes on a firm's cost of debt.

In columns (2) to (5), we additionally control for firm characteristics, loan characteristics, macro factors, and the full set of *Headquarters state × Year* fixed effects, and in column (6), we

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[12] Examples of such shocks include state-level deregulations of the banking industry and various state-level employment laws, which take effect in a firm's headquarters state.

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additionally control for major state antitakeover laws. The coefficients on *Constituency Statute* are negative and statistically significant across all specifications. For example, controlling for the full set of firm, loan, and macro characteristics in column (6), we show that the coefficient on *Constituency Statute* is −0.142 and significant at the 5% level. The economic magnitude is also sizeable: The adoption of state-level constituency statutes leads to a drop in the loan spread by 15.2% (= $e^{0.142} − 1$). Considering that the sample average loan spread is 191 basis points, the adoption leads to a reduction in the loan spread by approximately 29 basis points (= 191 × 15.2%). With the sample average loan size of $395 million, this 29 basis point difference corresponds to an annual savings in interest payments of $1.15 (= 395 × 0.29%) million. Francis et al. (2010) show that the at-issue yield spread between firms incorporated in states with unrestrictive antitakeover laws and firms incorporated in states with restrictive laws is about 100 bps. Using the Herfindahl-Hirschman Index as a proxy for competition in three-digit Standard Industry Classification (SIC) code industries, Valta (2012) finds that loans in competitive industries have, on average, a spread that is 9.6% (17 basis points) higher than comparable loans in less competitive industries, controlling for other factors that affect spreads; this difference translates into an average additional interest payments of $527,000 per year. Chan, Chen, and Chen (2013) show that banks respond favorably to firm-initiated clawbacks by lowering interest rates on loans. In particular, the interest rates are 33 basis points lower on average after clawback initiation, which represents an economically significant 24% drop in the cost of bank loans. Our results show an economic significance similar to those studies' results.

With regards to control variables, larger firms and firms with greater growth potential, lower leverage, higher profitability, more tangible assets, and higher Z-scores have lower loan spreads. We also find that loans with longer maturity, larger size, and a performance pricing

clause have lower spreads. In terms of macroeconomic conditions, both the credit spread and the term spread are positively associated with the spread of bank loans. These results are broadly consistent with prior literature (e.g., Graham, Li, and Qiu, 2008; Hertzell and Officer, 2012). The coefficient on the *State antitakeover laws* indicator is negative but not significant, possibly because our sample period starts in 1987 while most of those laws were adopted before 1990 and/or the hostile takeover wave largely ended in the late 1980s.

5.3. Subsample Analyses

In this subsection, we repeat the baseline regression using different subsamples to ensure that our main finding remains unchanged.

First, even before the wave of adoption of constituency statutes starting in the mid-1980s, managers in Delaware may have taken into account the interests of other constituencies – only to the extent that they provided benefit to shareholders (Barzuza, 2009). The 1991 ruling of the Credit Lyonnais case changed corporate directors' fiduciary duties in Delaware firms, limiting their incentives to take actions that favored equity over debt for distressed firms (Becker and Strömberg, 2012). Two subsequent Delaware cases, Production Resources (2004) and Gheewalla (2007), represented a partial reversal of Credit Lyonnais. Given that more than half of our sample firms are incorporated in Delaware, we exclude loans issued by Delaware-incorporated firms and re-estimate the baseline regression in Equation (1) to ensure that Delaware-incorporated firms are not driving our main finding. Table 5 column (1) presents the results.

After removing loans issued by Delaware firms, we are left with 13,239 loans, or about 40% of the initial sample. We show that the coefficient on *Constituency Statute* is negative and significant at the 1% level, and the magnitude of the coefficient (−0.225) is larger than that in the

baseline regression reported in Table 4 column (6). This result indicates that our main finding is unlikely to be affected by Delaware firms.

Second, as shown in Table 1, a number of states adopted constituency statutes in or before 1987 (the first year of our sample period). As a robustness check, we exclude these states from our sample and re-estimate the baseline specification in Equation (1). Table 5 column (2) presents the results. After removing loans issued by firms in states that adopted constituency statutes in or before 1987, we are left with 32,267 loans, or about 90% of the initial sample. The coefficient on *Constituency Statute* is −0.166 and significant at the 1% level, indicating that our results are not sensitive to whether or not those states are kept in the sample.

Third, in response to a state's adoption of constituency statutes, firms may choose to change their states of incorporation. For example, a stakeholder-friendly board may choose to re-incorporate into the state that adopted such statutes, while a shareholder-friendly board may choose to re-incorporate elsewhere. This possibility is unlikely to affect our results because we examine the within-firm difference in the cost of debt between the periods before and after the adoption of constituency statutes, rather than the cross-sectional difference between firms in states with and without such statutes. Nonetheless, we exclude loans issued by firms that changed their states of incorporation during the sample period and re-estimate the baseline specification in Equation (1). Table 5 column (3) presents the results. After removing these loans, we are left with 33,177 loans, or about 94% of the initial sample. The coefficient on *Constituency Statute* is −0.156 and significant at the 1% level, indicating that our results are not sensitive to whether or not those re-incorporated firms are kept in the sample.

Finally, the large and active high-yield bond market in the 1980s which ended with the collapse of Drexel, Burnham, Lambert in February 1990 might have made creditors more like

residual claimants rather than fixed claimants. To address this possibility, we focus on the period

1990–2012, and re-estimate the baseline specification in Equation (1). Table 5 column (4)

presents the results. After removing loans before 1990, we are left with 33,265 loans, or about 94%

of the initial sample. The coefficient on *Constituency Statute* is −0.157 and significant at the 1%

level, indicating that our results are unlikely influenced by the high-yield bond market in the

1980s.

Overall, the results in Table 5 show that our main finding that the adoption of

constituency statutes leads to a lower cost of debt is not driven by Delaware-incorporated firms,

and is robust to removing states that adopted constituency statutes before the sample period,

removing firms that re-incorporated during the sample period, or removing loans issued in the

1980s.

5.4. The Placebo Test

In this subsection, we conduct placebo tests to check whether our results disappear when

we randomly pick an adoption year other than the actual one. Specifically, for each state that

adopted constituency statutes, we assign a pseudo adoption year randomly chosen from the

sample period 1987–2012. We further require the pseudo event year to be either at least five

years before or five years after the actual event year, so that the pseudo event year is not

confounded with the actual one. We then re-estimate the baseline regression in Equation (1)

based on those pseudo event years and save the coefficient on *Constituency Statute*. We repeat

this procedure 5,000 times.

Figure 1 plots the empirical distribution of the coefficient estimates based on those

pseudo events. The figure clearly shows that the coefficient estimate from column (6) of Table 4

lies well to the left of the entire distribution of coefficient estimates from the placebo test. The

coefficient estimate from Table 4 (−0.142) is approximately five standard deviations (0.029) below the mean (0.012) of the distribution and is much smaller than the minimum coefficient estimate (−0.101) from the placebo test. These results suggest that it is the adoption of constituency statutes that leads to our main finding.

5.5. The Pre-treatment Trends

The validity of difference-in-differences tests depends on the parallel trends assumption: Absent constituency statutes, treated firms' costs of debt would have evolved in the same way as that of control firms. To compare the pre-treatment trend between the treated group and the control group, we re-estimate the baseline specification in Equation (1) by replacing the indicator *Constituency Statute* with five new indicator variables: *Constituency Statute^{-2}*, *Constituency Statute^{-1}*, *Constituency Statute^{0}*, *Constituency Statute^{1}*, and *Constituency Statute^{2+}*. These variables indicate the years relative to the year of adoption. For example, *Constituency Statute^{-2}* indicates two years before the adoption, while *Constituency Statute^{2+}* indicates two or more years after the adoption. Other indicator variables are defined similarly. The coefficients on *Constituency Statute^{-2}* and *Constituency Statute^{-1}* are especially important because their significance and magnitude indicate whether there is any difference in the cost of debt between the treatment group and the control group prior to the adoption of constituency statutes. Table 6 presents the results.

In column (1) of Table 6, we use the full sample. The coefficients on *Constituency Statute^{-2}* and *Constituency Statute^{-1}* are small in magnitude (−0.035 and −0.027, respectively) and are not significantly different from zero. This result indicates that there is no difference in the cost of bank loans between the treated and control groups prior to the treatment, suggesting that the parallel trend assumption of the difference-in-differences approach is not violated.

Furthermore, the impact of constituency statutes only shows up after the adoption: The coefficients on *Constituency Statute^1* and *Constituency Statute^{2+}* are −0.139 and −0.161, respectively (five to six times as large as that of *Constituency Statute^{-1}*), and are significant at or below the 5% level.

In columns (2)-(5) of Table 6, we repeat the analysis based on the subsamples used in Table 5. In particular, in column (2) we focus on the subsample of firms incorporated outside Delaware; in column (3) we focus on the subsample of firms after removing those in states that adopted constituency statutes in or before 1987; in column (4) we focus on the subsample of firms after removing those that changed their states of incorporation during the sample period; and in column (5) we focus on the sample period 1990–2012. In all cases, we find similar results: The coefficients on *Constituency Statute^{-2}* and *Constituency Statute^{-1}* are not significantly different from zero, while the coefficients on *Constituency Statute^1* and *Constituency Statute^{2+}* are of a much larger magnitude and are significant at or below the 5% level.

Overall, Table 6 shows that the treated group and the control group share a similar trend in the cost of debt prior to the adoption of constituency statutes, thus supporting the parallel trends assumption necessary for the difference-in-differences test, and that there is an absence of significant lead effects, suggesting that the adoption of constituency statutes is unlikely to be anticipated by the treated firms. Moreover, Table 6 also indicates that the effect of constituency statutes on the cost of debt occurs *after* the adoption of such statutes, which suggests a causal effect.

5.6. Triple Differences Tests

To provide further evidence that the effect of constituency statutes on the cost of debt is indeed tied to stakeholder orientation, in this subsection we implement triple differences tests to

examine heterogeneous treatment effects. Evidence of heterogeneous treatment effects helps further alleviate the concern that some omitted firm or state variables are driving our results, because such variables would have to be uncorrelated with all the control variables we include in the regression model and would also have to explain cross-sectional variations in the treatment effect. As pointed out by Claessens and Laeven (2003) and Raddatz (2006), it is less likely to have an omitted variable correlated with the interaction term than with the linear term.

Absent constituency statutes, stakeholders' interests are more likely to be ignored if stakeholders have limited influence on a firm's business activities (Kale and Shahrur, 2007). In such a situation, we would expect a stronger treatment effect from the adoption of constituency statutes. In contrast, if other stakeholders were strong enough to protect their own interests in the first place, we would expect a weaker treatment effect. Following this logic, we explore four possible sources of heterogeneity in the treatment effect, based on the strengths of creditors, employees, customers, and suppliers in protecting their interests.

First, Acharya, Bharath, and Srinivasan (2007) argue that a lower liquidation value gives greater power to equity holders against creditors, because equity holders' first-mover advantage allows them to strategically offer creditors only the value that creditors would receive if a firm were liquidated. Creditors are in a weaker position and hence conflicts between creditors and shareholders are more severe if the borrowing firm's liquidation value is low, even if liquidation does not actually take place. We measure a firm's liquidation value following Berger, Ofek, and Swary (1996):

$$Liquidation\ Value_{i,t} = 0.715 \times Receivables_{i,t} + 0.547 \times Inventory_{i,t} + 0.535 \times Capital_{i,t},$$
$$(2)$$

where *Receivables* is total receivables scaled by book value of total assets, *Inventory* is total inventories scaled by book value of total assets, and *Capital* is net total property, plant, and equipment scaled by book value of total assets.

Following Bertrand and Mullainathan (1999) and Atanassov (2013), we use a sticky measure to capture the level of creditor power (i.e., the liquidation value) prevailing in 1987 (the first year of the sample period); this level remains constant, both prior to the statutes' adoption and throughout the remaining years of the sample period.[13] By doing so, we avoid using future values of the liquidation value as the conditioning variable that may be endogenous to the adoption of constituency statutes.

In column (1), the indicator variable *Low liquidation value* takes the value of one if a firm's liquidation value in 1987 is below the sample median, and zero otherwise. We re-estimate Equation (1) by adding the interaction term *Constituency Statute × Low liquidation value* and the indicator *Low liquidation value*.[14] The coefficient on *Constituency Statute × Low liquidation value* is negative and significant at the 1% level. This result indicates that the treatment effect is significantly stronger for firms whose creditors were in a weak position vis-à-vis the equity holders prior to the statutes' adoption.

Second, unionized employees generally have greater influence on corporate decisions. We use the industry unionization rate to proxy for employees' strength in protecting their own interests following Chen, Kacperczyk, and Ortiz-Molina (2012). The industry unionization rate is the proportion of employees in the primary industry covered by unions in collective bargaining with an employer. Data on the industry unionization rate is obtained from the Union Membership and Coverage Database constructed by Hirsch and Macpherson (2003). We use the unionization

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[13] For firms that appeared in Compustat after 1987, we use data from the earliest year available.

[14] Because we use the value of *Low liquidation value* as of 1987 (i.e., it is time-invariant) in combination with firm fixed effects, there is no standalone term *Low liquidation value* in the regression specification.

rate at the two-digit industry level (based on the Census Industry Classification (CIC)) in 1987. The indicator variable *Low unionization rate* takes the value of one if the industry unionization rate in 1987 is below the sample median, and zero otherwise. In column (2) of Table 7, we re-estimate Equation (1) by adding the interaction term *Constituency Statute × Low unionization rate* and the indicator *Low unionization rate*. The coefficient on *Constituency Statute × Low unionization rate* is negative and significant at the 1% level, which indicates that the treatment effect is more pronounced for firms whose employees were less effective in protecting their own interests prior to the statutes' adoption.

Third, following Kale and Shahrur (2007), we use customer concentration to measure customers' ability to protect their own interests.[15] For each firm in the *i*th industry, the customer concentration measure is defined as:

$$Customer\ Concerntration_i = \sum_{\substack{j=1 \\ i \neq j}}^{n} Herfindahl\ Index_j \times Industry\ Percentage\ Sold_{ji} , (3)$$

where *n* is the number of customer industries, *Herfindahl Index$_j$* is the sales-based Herfindahl index of the *j*th customer industry, and *Industry Percentage Sold$_{ji}$* is the percentage of the *i*th industry's output sold to the *j*th customer industry. We rely on the *Use* table of the 1987 (the first year of the sample period) benchmark input-output (IO) account to identify customer and supplier industries. The *Use* table is obtained from the Bureau of Economic Analysis. For each customer and supplier industry pair, the *Use* table reports the dollar value of the supplier industry's output used as an input by the customer industry. Industry is defined at the two-digit IO code level in 1987. We employ the IO-SIC conversion table provided by Fan and Lang (2000) to assign a two-digit IO code to each firm in Compustat. Firm sales from Compustat are then

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[15] The measure of customer market power can be taken at the industry or firm level. According to Kale and Shahrur (2007), there are a number of advantages in using industry-level data, relative to firm-level data: a significantly larger sample size, less severe endogeneity problems, and greater suitability for constructing concentration measures.

used to calculate the Herfindahl index for each IO industry in 1987. Once we have the *Customer Concentration* in 1987, we assign this measure to each firm in our sample. The indicator variable *Low customer concentration* takes the value of one if the customer concentration measure in 1987 is below the sample median, and zero otherwise. We re-estimate Equation (1) by adding the interaction term *Constituency Statute × Low customer concentration* and the indicator *Low customer concentration*.

Table 7 column (3) presents the result. The coefficient on *Constituency Statute × Low customer concentration* is negative and significant at the 1% level, suggesting that the treatment effect is significantly stronger for firms whose customers were less effective in protecting their own interests prior to the statutes' adoption.

In Table 7 column (4), we use supplier concentration to measure suppliers' ability to protect their own interests following Kale and Shahrur (2007). For each firm in the *i*th industry, the concentration of suppliers is:

$$Supplier\ Concentration_i = \sum_{\substack{j=1 \\ i \neq j}}^{n} Herfindahl\ Index_j \times Industry\ Input\ Coeffcient_{ji}, \quad (4)$$

where *n* is the number of supplier industries, *Herfindahl Index$_j$* is the Herfindahl index of the *j*th supplier industry, and *Industry Input Coefficient$_{ji}$* is the dollar value of the *j*th supplier industry's output used by the *i*th industry to produce one dollar value of output. The supplier concentration is also measured in 1987 and assigned to each firm in our sample. The indicator variable *Low supplier concentration* takes the value of one if the supplier concentration measure in 1987 is below the sample median, and zero otherwise. We re-estimate Equation (1) by adding the interaction term *Constituency Statute × Low supplier concentration* and the indicator *Low supplier concentration*. The coefficient on *Constituency Statute × Low supplier concentration* is negative and significant at the 5% level, indicating that the treatment effect is more pronounced

for firms whose suppliers were less effective in protecting their own interests prior to the statute's adoption.

Taken together, the cross-sectional variations in the treatment effect show that the effect of constituency statutes on the cost of debt is indeed tied to considering the interests of a broad group of stakeholders (in addition to equity holders), including creditors, employees, customers, and suppliers. In particular, we find a stronger treatment effect in firms whose stakeholders were less able to protect themselves before the adoption of constituency statutes.[16]

5.7. Robustness Checks

In this subsection, we conduct a number of robustness checks on our main finding and the results are reported in the Internet Appendix.

First, collateral requirement and covenants are important in loan contracts to protect lenders' rights. Riskier loans and riskier borrowers are more often associated with collateral requirement and stringent covenants (Graham, Li, and Qiu, 2008; Chan, Chen, and Chen, 2013). However, as pointed out by Chava, Livdan, and Purnanandam (2009), because loan contracts are very complicated and detailed, Dealscan does not code collateral and covenants information for all loan agreements. In our sample, only about 40% of loans have non-missing information on collateral and covenants. Based on 15,543 loans with non-missing data on collateral and covenants, we additionally include an indicator variable to flag whether the loan is secured by collateral and the number of covenants in the regression and re-estimate column (6) of Table 4. Table IA1 of the Internet Appendix presents the results. The coefficient on *Constituency Statute* is −0.094 and significant at the 1% level. These results indicate that our main results are robust to

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[16] In untabulated analyses, we also additionally control for the interactions between the four stakeholder power measures and all other firm and loan characteristics, and our inference is unchanged. For example, in column (1), after controlling the interactions between *Low liquidation value* and all other firm and loan characteristics, the coefficient on *Constituency Statute × Low liquidation value* is −0.197 and significant at the 1% level.

controlling for collateral and covenants.[17]

Second, throughout the paper, we use a full set of *Headquarters state × Year* fixed effects to control for any shocks to firms' local business conditions. As a robustness check, we also use a matched sample approach. In particular, we match each treated firm to a control firm that is (1) headquartered in the same state but incorporated in a different state that never adopted constituency statutes, (2) in the same industry based on the two-digit SIC code, and (3) closest in total assets in the year prior to the adoption of constituency statutes. Given that both treated and control firms are headquartered in the same state (but incorporated in different states), we can difference away any shocks to local business conditions. Using this matched sample (14,569 loan-year observations), we re-estimate column (6) of Table 4. Table IA2 presents the results. The coefficient on *Constituency Statute* is −0.139 and significant at the 5% level. These results provide further support that our main results are likely not driven by any shocks to local business conditions (that could be correlated with the adoption of constituency statutes).

Third, there are some discrepancies from legal studies in the adoption year of constituency statutes for a number of states. For example, six states in our sample have different adoption years from those reported in Karpoff and Wittry (2016), including Connecticut, Indiana, Kentucky, Maine, Missouri, and Nebraska. We remove these six states from our sample and re-estimate column (6) of Table 4. Table IA3 presents the results. The coefficient on *Constituency Statute* is −0.137 and significant at the 5% level (see column (1)). Alternatively, we take the adoption years reported in Karpoff and Wittry (2016) for those six states and re-estimate column (6) of Table 4. The coefficient on *Constituency Statute* is −0.139 and significant at the 5% level (see column (2)). These results indicate that our main results are robust to these discrepancies.

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[17] In contrast, we do not find any significant effect of the adoption of constituency statutes on the usage of collateral and covenants in loan contracts.

Fourth, Karpoff and Wittry (2016) identify five firms that actively lobbied for the adoption of state-level constituency statutes (see their Table 4). For these five firms, such adoptions may not be exogenous. We remove loans issued by those firms in our sample (81 loans) and re-estimate column (6) of Table 4. Table IA3 presents the results. The coefficient on *Constituency Statute* is −0.144 and significant at the 5% level (see column (3)). These results indicate that our main results are robust to removing the motivating firms.

Fifth, we re-estimate column (6) of Table 4 by additionally controlling for state of incorporation-level variables used in Table 3. Table IA4 presents the results. Our inference is unchanged: The coefficient on *Constituency Statute* is −0.152 and significant at the 1% level.

Finally, the effect of constituency statutes on cost of debt may depend on a firm's financial health: *Ceteris paribus*, conflicts of interest among different stakeholders may be particularly severe when a firm is closer to financial distress. To explore this implication, following Vassalou and Xing (2004), we use Merton's (1974) option pricing model to compute a firm's expected default probability.[18] This measure takes into account a firm's leverage ratio, expected asset return, and asset volatility: Firms that have higher leverage, lower expected asset returns, and higher asset volatility are closer to insolvency, and have a higher expected default probability. The indicator variable *High default probability* takes the value of one if a firm's expected default probability is above the sample median, and zero otherwise. We then re-estimate column (6) of Table 4 by adding the interaction term *Constituency Statute × High default probability* and the indicator *High default probability*. Table IA5 presents the results. The

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[18] We use this measure instead of commonly used measures of corporate risk taking, such as volatility of assets or volatility of returns, because one key manifestation of the agency cost of debt is risk-shifting from equity holders to creditors, leading to a high likelihood of default. However, it is possible that a stronger relation with various stakeholders fosters risk taking. Flammer and Kacperczyk (2016) show that a stakeholder orientation enables firms to take on long-term risky projects (i.e., to engage in innovation). If we interpret leverage as a risk-taking measure, our results in Table 8 on increased leverage are consistent with Flammer and Kacperczyk (2016). Further, if financially constrained firms are less likely to take risks, a drop in the cost of debt as we show in this paper may lead to more risk taking. None of these two outcomes is directly related to the agency cost of debt on which we focus.

coefficient on *Constituency Statute × High default probability* is significantly negative, indicating that the effect of constituency statutes on reducing the cost of debt is more pronounced when firms are closer to default.

6. Alternative Explanations and Additional Investigation

6.1. Capital Structure

One possible alternative explanation for our main results is that firms reduce leverage after their states' adoption of constituency statutes, leading to a drop in the cost of debt. Titman (1984) shows that a firm can commit to a liquidation policy that takes into consideration the effect of its liquidation on customers by choosing a lower level of debt. Maksimovic and Titman (1991) argue that customers may be unwilling to conduct business with a highly levered firm because high leverage reduces the firm's willingness to invest in its reputation and produce high-quality products. This line of research suggests that adopting constituency statutes might prompt firms to reduce leverage and thus bankruptcy risk to protect non-shareholding stakeholders.

To investigate this possibility, we examine the effect of constituency statutes on firms' leverage. Based on our sample of 24,067 firm-year observations over the period 1987-2012, we re-estimate Equation (1) by using leverage as the dependent variable and removing all loan-level control variables.[19] Table 8 presents the results.

Using both book leverage and market leverage, we find that firms incorporated in states that adopted constituency statutes are associated with a significant increase in leverage. Taking column (2), for example, the coefficient on *Constituency Statute* is 0.04 and significant at the 5% level, indicating that firms in states that adopted constituency statutes increase their book

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[19] We conduct our analyses using firm-year observations in our sample because we are interested in whether the change in leverage for our sample firms drives our results. Nonetheless, in untabulated analyses, we repeat the analyses using firm-year observations in the Compustat universe, and our inference is unchanged.

leverage ratio by four percentage points. This finding is consistent with the view that the adoption of constituency statutes increases a firm's debt capability by mitigating the agency cost of debt.[20] Importantly, our findings in Table 8 also highlight that constituency statutes are different from major state antitakeover laws, which are shown to reduce leverage (Garvey and Hanka, 1999; Francis et al. 2010).[21]

Overall, Table 8 shows that the lower cost of debt associated with constituency statutes is not driven by a contemporaneous decrease in leverage (which actually increases).

6.2. The Likelihood of Being Acquired

As we discussed in Section 2, constituency statutes were triggered by the hostile takeover wave of the 1980s (although their reach was not limited to takeovers). It is possible that constituency statutes affect the cost of debt through the channel of affecting a firm's likelihood of being acquired.

The existing literature provides mixed evidence on how takeovers affect target firms' costs of debt. On the one hand, a takeover may increase a target firm's cost of debt if it is accompanied by a large increase in leverage (such as via leveraged buyouts (LBOs)). On the other hand, a takeover may reduce a target firm's cost of debt simply though coinsurance—risky debt benefits from a reduction in the probability of default when merging firms have imperfectly correlated cash flows (Lewellen, 1971; Higgins and Schall, 1975). Empirically, Klock, Mansi, and Maxwell (2005) and Chava, Livdan, and Purnanandam (2009) find that firms with stronger

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[20] Matsa (2010) proposes a bargaining theory of capital structure and shows that firms use more debt when facing stronger labor unions and use less debt after their states adopt legislation to reduce union bargaining power. Our finding of higher leverage when other stakeholders gain power after the adoption of constituency statutes is consistent with Matsa's bargaining theory of capital structure. However, our main finding of lower costs of debt for firms in states adopted such statutes is distinctly different from the bargaining theory of capital structure.

[21] In terms of economic significance, Garvey and Hanka (1999) show that following protection by antitakeover laws, the four-year cumulative abnormal leverage decreases by about 30 percent. In Table 8, the coefficient on the *State antitakeover laws* indicator is negative but insignificant, possibly because our sample period starts in 1987 while most of those laws were adopted before 1990 and/or the hostile takeover wave largely ended in the late 1980s.

takeover defenses have lower costs of debt financing, while Bilett, King, and Mauer (2004) find

that target bondholders earn a significant positive return at acquisitions. Other studies like

Dennis and McConnell (1986) and Maquieira, Megginson, and Nail (1998) find insignificant

excess returns to target bonds. In summary, from an *ex ante* perspective, it is unclear how

acquisitions affect target firms' costs of debt.

Nonetheless, we examine whether a firm's likelihood of being acquired changes

following its state's adoption of constituency statutes. We first conduct the analysis using state-

level data. Based on 1,311 state-year observations over the sample period 1987–2012, we

measure the likelihood of being acquired as the number of firms being acquired in a state

normalized by the total number of firms incorporated in that state.[22] We control for various state-

average firm characteristics, state fixed effects, and year fixed effects. Table 9 column (1)

presents the results. The coefficient on *Constituency Statute* is close to zero (-0.004) and

statistically insignificant.

Considering that hostile takeovers and LBOs are more likely to adversely affect target

firms' creditors, we measure the likelihood of being acquired via hostile takeovers (LBOs) as the

number of firms being acquired via hostile takeovers (LBOs) in a state normalized by the total

number of firms incorporated in that state. Table 9 columns (2) and (3) show that the coefficients

on *Constituency Statute* are all close to zero in magnitude and statistically insignificant.

It is worth noting that almost none of the state-average firm characteristics has a

significant coefficient, consistent with the view that a state's adoption of constituency statutes is

typically triggered by a few lobbying firms rather than by state-level economic or political

factors (Karpoff and Wittry, 2016).

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[22] We focus on completed deals, in which an acquirer owns 100% of a target firm after deal completion. In untabulated analyses, we redo the analysis based on announced deals, and our main finding remains.

In columns (4)-(6) of Table 9, we repeat the analysis using firm-level data and a linear probability model. The dependent variable in column (4), *Firm being acquired*, takes the value of one if a firm is acquired in a given year, and zero otherwise. The coefficient on *Constituency Statute* is small in magnitude (0.001) and not significantly different from zero. In column (5), the dependent variable is *Firm being acquired via a hostile takeover*, which takes the value of one if a firm is acquired in a hostile takeover in a given year, and zero otherwise. In column (6), the dependent variable is *Firm being acquired via a LBO*, which takes the value of one if the firm is acquired in a LBO in a given year, and zero otherwise. In both columns, the coefficients on *Constituency Statute* are close to zero and statistically insignificant.

Overall, Table 9 shows that the lower cost of debt associated with constituency statutes is likely not driven by a change in firms' likelihood of being acquired. These results are not surprising given that various antitakeover laws (except for business combination laws) offer very limited protection from takeovers (Bertrand and Mullainathan, 2003).

6.3. The Expected Default Probability and Credit Ratings

As discussed in our hypothesis development in Section 3, if constituency statutes help mitigate conflicts of interest between shareholders and other stakeholders, we would also expect such statutes to reduce a firm's expected default probability and to improve its credit rating.

Within our sample, 9,778 firm-year observations have sufficient data to compute a firm's expected default probability; we re-estimate Equation (1) by using the expected default probability as the dependent variable and removing all the loan-level control variables. Table 10 column (1) presents the results. We find that the coefficient on *Constituency Statute* is negative and significant at the 5% level, indicating that a state's adoption of constituency statutes leads to a significant decrease in its firms' default probabilities.

To explore the credit rating implication, we use the long-term issuer credit ratings complied by S&P available in Compustat as a measure for credit ratings. The ratings range from AAA (the highest rating) to D (the lowest rating, i.e., debt in payment default), and reflect S&P's assessment of a firm's creditworthiness with respect to its creditors. Following Dimitrov, Palia, and Tang (2015), we convert letter ratings into numbers ranging between 1 (the highest rating, AAA) and 21 (the lowest rating, C); the D rating is excluded because we do not include defaulted firms in our sample. We re-estimate Equation (1) by using *Rating score* as the dependent variable and removing all loan-level control variables. Table 10 column (2) presents the results. We show that the coefficient on *Constituency Statute* is negative and significant at the 5% level, indicating that a state's adoption of constituency statutes leads to a significant improvement in its firms' credit ratings.

In summary, Table 10 shows that the adoption of constituency statues also leads to a drop in a firm's expected default probability and an improvement in its credit rating, which is broadly consistent with our main result on bank loan spreads.

6.4. The Effect of Constituency Statutes on Other Stakeholders (Except Creditors)

So far, we examine the effect of constituency statutes on creditors. A natural question is: How do constituency statutes affect other non-shareholding stakeholders? In this subsection, we use the Kinder, Lydenberg, and Domini (KLD) index as a proxy of firms' social performance with respective to their stakeholders. The KLD database covers approximately 650 companies that are part of the Domini 400 Social SM Index and the S&P 500 since 1991 and more than 3,000 companies that are part of the Russell 3000 since 2003. KLD measures a firm's social performance along a number of dimensions, including community, corporate governance, diversity, employee relations, environment, human rights, and product quality and safety. Each

dimension is associated with positive (i.e., strength) and negative (i.e., concern) indicators. If a firm does a good deed (makes any harm), it gains one point in its strength (concern) indicator. We focus on four dimensions that are relevant to stakeholders, including employees, customers, environment, and community. We then compute the *KLD gross score* as the total strength scores in those areas, and the *KLD net score* as the total strength scores in those areas minus the total concern scores. Given that the KLD database starts in 1991, our sample period for this analysis is 1991−2012.

We re-estimate Equation (1) by using the *KLD gross score* (or *KLD net score*) as the dependent variable. Table 11 presents the results. We find that the coefficients on *Constituency Statute* are positive and significant in both columns, indicating that a state's adoption of constituency statutes leads to a significant improvement in firms' social performance with respect to employees, customers, environment, and community. This result suggests that constituency statutes have a positive effect not only on creditors but also on other non-shareholding stakeholders.

7. Conclusions

In this paper, we investigate the causal effect of stakeholder orientation on firms' costs of debt financing by exploiting exogenous shocks from the staggered adoption of constituency statutes in various U.S. states. Constituency statutes allow corporate directors to consider stakeholders' interests when making business decisions, rather than merely serving shareholders' interests. We hypothesize that the adoption of constituency statutes would lead to a lower cost of debt, because these statutes helps mitigate creditor-shareholder conflicts, retain employees and

thus reduce the risk of employee turnover and labor dispute, and maintain a stable relation with a firm's customers and suppliers and thus reduce the uncertainty in product market.

Consistent with our conjecture, we find a significant drop in the bank loan spread for firms incorporated in states that adopted constituency statutes, relative to firms incorporated in states without such statutes. In support of a causal interpretation of our findings, our timing tests indicate that a firm's cost of debt changes only after its state of incorporation has adopted constituency statutes. Further, our evidence on cross-sectional variations in the treatment effect indicates that our main finding is indeed tied to protecting the interests of a broad group of stakeholders: The effect of constituency statutes on a firm's cost of debt is more pronounced for firms whose creditors, employees, customers, and suppliers are less able to protect themselves before the adoption of such statutes. Overall, our findings are consistent with the view that incorporating stakeholders' interests into corporate decision-making mitigates stakeholder-related uncertainties and thus reduces the cost of debt.

Finally, although our paper focuses on the cost of bank loans, other corporate policies could also be influenced by stakeholder orientation. For example, major corporate events, such as mergers, liquidation, and layoff, usually have significant effects on the welfare of not only shareholders but also other non-shareholding stakeholders. In these events, can a stakeholder-oriented firm better balance the interests between shareholders and other stakeholders and achieve a better outcome? Examining these issues could be an interesting area for future research.

Appendix:
Variable Definitions

Variable	Definition
Average spread	The average all-in-drawn spread across loans issued by firms incorporated in a state.
Book leverage	Book value of long-term debt and debt in current liabilities scaled by book value of total assets.
Cash flow volatility	Standard deviation of quarterly operating cash flows over four fiscal years prior to a loan issuance scaled by book value of total assets.
Constituency Statute	An indicator variable that takes the value of one if constituency statutes are adopted in a firm's state of incorporation, and zero otherwise.
Credit spread	The difference between BAA and AAA corporate bond yields in the month prior to a loan issuance.
Default probability	Calculated using Merton's (1974) model as implemented by Vassalou and Xing (2004) to measure how close a firm is to financial distress.
High default probability	An indicator variable that takes the value of one if a firm's expected default probability is above the sample median, and zero otherwise.
KLD gross score	The total score of strengths in the aspects of employees, customers, environment, and community, provided by the KLD database.
KLD net score	The total score of strengths minus the total score of concerns in the aspects of employees, customers, environment, and community, provided by the KLD database.
Loan maturity	Loan maturity in months.
Loan size	Loan amount in millions of dollars.
Loan spread	The all-in-drawn spread in the Dealscan database, in terms of additional basis points that the borrower pays over LIBOR
Low customer concentration	An indicator variable that takes the value of one if a firm's customer concentration measure in year 1987 is below the sample median, and zero otherwise.
Low liquidation value	An indicator variable that takes the value of one if a firm's liquidation value in year 1987 or the earliest year available is below the sample median, and zero otherwise.
Low supplier concentration	An indicator variable that takes the value of one if a firm's supplier concentration measure in year 1987 is below the sample median, and zero otherwise.
Low unionization rate	An indicator variable that takes the value of one if a firm's proportion of employees in its primary two-digit industry (according to the Census Industry Classification) covered by unions in collective bargaining is below the sample median, and zero otherwise.
Market-to-book	Market value of equity plus book value of debt scaled by book value of total assets.
Market leverage	Book value of long-term debt and debt in current liabilities scaled by market value of total assets.
Performance pricing	An indicator variable that takes the value of one if a loan uses performance pricing, and zero otherwise.
Profitability	Operating income before depreciation scaled by book value of total assets.
Rating score	The credit rating score assigned following Dimitrov, Palia, and Tang (2015). The credit rating score ranges from 1 (the highest grade, AAA) to 21 (the lowest grade, C).
Republican governor	An indicator variable that takes the value of one if a state's governor is a Republican, and zero otherwise.
State antitakeover laws	An indicator variable that takes the value of one if any of the major antitakeover laws (i.e., business combination laws, fair price laws, and control share acquisition laws) are adopted in a firm's state of incorporation, and zero otherwise.
State GDP	Total GDP in a state.
State population	Total population in a state.
State unemployment rate	Unemployment rate in a state.
Tangibility	Net property, plant, and equipment scaled by book value of total assets.
Time to adoption	The number of years before a state adopts constituency statutes.

Total assets	Book value of total assets.
Term spread	The difference between ten-year and two-year Treasury yields in the month prior to a loan issuance.
Z-score	Modified Altman's Z-score = (1.2 × working capital + 1.4 × retained earnings + 3.3 × EBIT + 0.999 × sales) / total assets. We exclude the ratio of market value of equity to book value of total debt, because we already have a similar term, market-to-book, in the regression.
% workforce with a Bachelor's degree	Percentage of a state's workforce with a Bachelor's degree.

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Figure 1. Placebo Tests

This figure plots the histogram of coefficient estimates on the indicator *Constituency Statute* from 5,000 bootstrap simulations of the baseline model in column (6) of Table 4. For each legislating state, we assign a pseudo passage year randomly chosen from the sample period 1987−2012, and at least either five years before or five years after the actual event year. We then estimate the baseline regression based on those pseudo event years and save the coefficient estimates on the indicator *Constituency Statute*. We repeat this procedure 5,000 times.
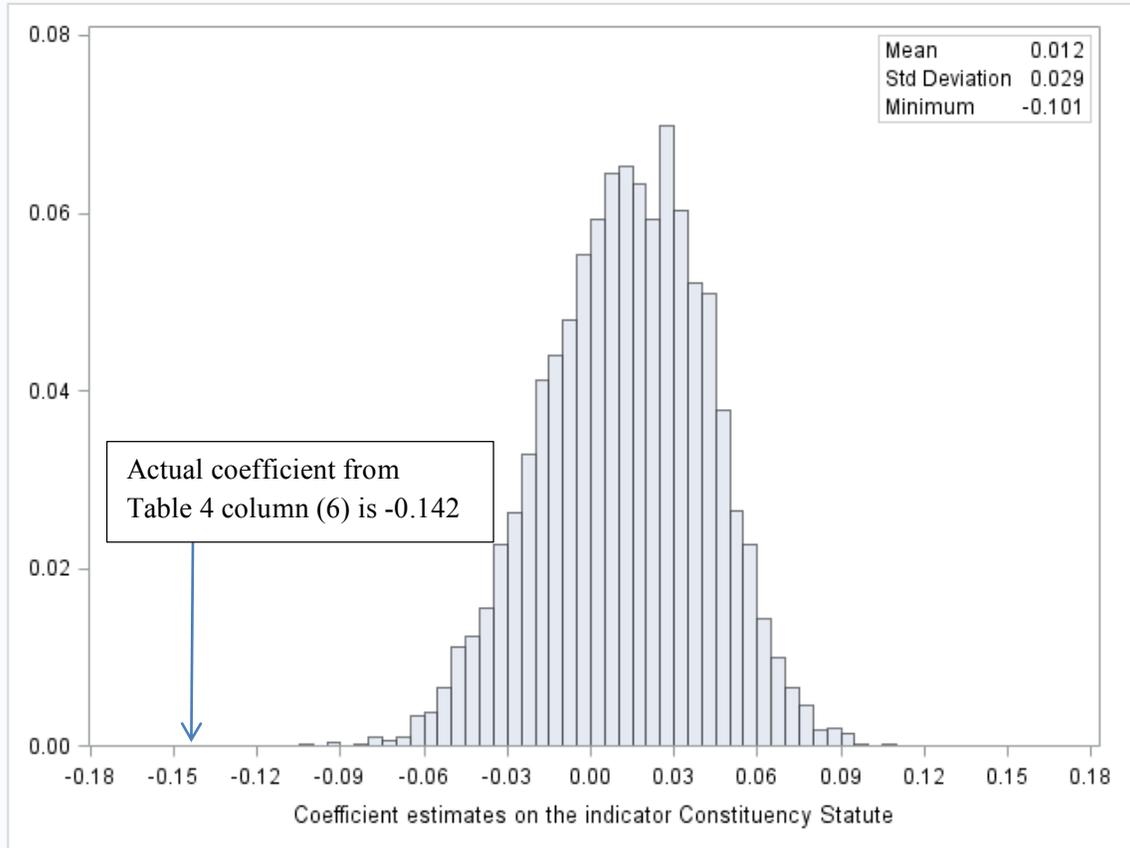
Table 1. List of States That Have Adopted Constituency Statutes

This table lists the years when various U.S. states adopted constituency statutes. The list is adapted from Barzuza (2009, Table 6, pp. 2040-2041).

State	Year
Ohio	1984
Illinois	1985
Maine	1986
Arizona	1987
Minnesota	1987
New Mexico	1987
New York	1987
Wisconsin	1987
Idaho	1988
Louisiana	1988
Tennessee	1988
Virginia	1988
Florida	1989
Georgia	1989
Hawaii	1989
Indiana	1989
Iowa	1989
Kentucky	1989
Massachusetts	1989
Missouri	1989
New Jersey	1989
Oregon	1989
Mississippi	1990
Pennsylvania	1990
Rhode Island	1990
South Dakota	1990
Wyoming	1990
Nevada	1991
North Carolina	1993
North Dakota	1993
Connecticut	1997
Vermont	1998
Maryland	1999
Texas	2006
Nebraska	2007

Table 2. Summary Statistics

The sample consists of 35,345 loan observations over the period 1987−2012 covered by the Dealscan database with non-missing loan spreads. Firm characteristics are obtained from the Compustat database. All loans are issued by U.S. public firms traded on the NYSE, AMEX, or NASDAQ. Variable definitions are provided in the Appendix. All dollar values are in 2012 dollars. All continuous variables are winsorized at the 1st and 99th percentiles.

Variable	Mean	Std. Dev	25th Percentile	Median	75th Percentile
Loan spread (bps over LIBOR)	191.44	128.73	87.50	175.00	275.00
Loan maturity (months)	45.00	24.79	24.00	48.00	60.00
Loan size (millions)	395.35	667.46	43.91	154.90	422.56
Performance pricing	0.41	0.49	0.00	0.00	1.00
Total assets (millions)	8676	28000	342	1247	4702
Market-to-book	1.58	0.86	1.08	1.32	1.78
Book leverage	36.00%	23.10%	19.40%	33.60%	48.80%
Profitability	11.40%	9.30%	6.70%	11.30%	16.30%
Tangibility	30.10%	25.20%	8.90%	23.70%	47.10%
Cash flow volatility	2.10%	3.40%	0.50%	1.00%	2.00%
Z-score	1.43	1.25	0.56	1.35	2.21
Credit spread (bps)	90.60	31.60	69.00	85.00	103.00
Term spread (bps)	102.60	90.60	22.00	79.00	186.00

Table 3. The Timing of Adopting Constituency Statutes: The Duration Model

This table reports estimates from a Weibull hazard model where the "failure event" is the adoption of constituency statutes in a state. States are dropped from the sample once they adopt those statutes, which happens to 35 states before or during the period 1987−2012. All explanatory variables are at the state level and lagged by one year. *Ln (Average spread)* is the natural logarithm of the average all-in-drawn spread across loans issued by firms incorporated in a state. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
Ln (Average spread)	-0.447	-0.383	-0.484
	(0.297)	(0.283)	(0.320)
Ln (State GDP)		-7.877***	-7.646***
		(2.365)	(2.405)
Ln (State population)		8.467***	8.256***
		(2.690)	(2.705)
State unemployment rate		-0.320	-0.376
		(0.228)	(0.231)
% workforce with a Bachelor's degrees		0.111	0.078
		(0.145)	(0.134)
Republican governor			-0.910*
			(0.468)
Antitakeover law			-0.022
			(0.695)
Constant	-1,450.385***	-3,815.055***	-3,768.951***
	(133.799)	(835.403)	(815.994)
Observations	396	396	396

Table 4. Constituency Statutes and the Cost of Debt

This table reports difference-in-differences tests that examine the effect of constituency statutes on the cost of debt. The sample consists of 35,345 loan observations over the period 1987−2012 covered by the Dealscan database with non-missing loan spreads. The dependent variable, *Ln(Loan spread)*, is the natural logarithm of the loan spread. In column (1), we include only the indicator *Constituency Statute*. In column (2), we add firm characteristics. In column (3), we add loan characteristics. In column (4), we add macro factors. In column (5), we add headquarters state times year fixed effects. In column (6), we add the *State antitakeover laws* indicator. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Constituency Statute	-0.160**	-0.134**	-0.136**	-0.137**	-0.141**	-0.142**
	(0.069)	(0.061)	(0.064)	(0.064)	(0.059)	(0.058)
Ln (Total assets)		-0.221***	-0.159***	-0.159***	-0.160***	-0.160***
		(0.011)	(0.012)	(0.012)	(0.014)	(0.014)
Market-to-book		-0.067***	-0.063***	-0.063***	-0.060***	-0.060***
		(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Leverage		0.410***	0.441***	0.444***	0.445***	0.445***
		(0.028)	(0.031)	(0.031)	(0.030)	(0.030)
Profitability		-0.493***	-0.490***	-0.485***	-0.480***	-0.479***
		(0.071)	(0.070)	(0.070)	(0.075)	(0.075)
Tangibility		-0.457***	-0.440***	-0.442***	-0.430***	-0.431***
		(0.053)	(0.049)	(0.048)	(0.040)	(0.040)
Cash flow volatility		0.175	0.219	0.220	0.235*	0.234*
		(0.144)	(0.147)	(0.145)	(0.126)	(0.126)
Z-score		-0.089***	-0.080***	-0.080***	-0.088***	-0.089***
		(0.010)	(0.009)	(0.009)	(0.007)	(0.007)
Ln (Loan maturity)			-0.052***	-0.051***	-0.050***	-0.050***
			(0.006)	(0.005)	(0.006)	(0.006)
Ln (Loan size)			-0.084***	-0.084***	-0.081***	-0.081***
			(0.004)	(0.004)	(0.004)	(0.004)
Performance pricing			-0.054***	-0.053***	-0.053***	-0.053***
			(0.014)	(0.014)	(0.013)	(0.013)
Credit spread				0.106***	0.111***	0.111***
				(0.027)	(0.025)	(0.025)
Term spread				0.055***	0.055***	0.055***
				(0.012)	(0.011)	(0.011)
State antitakeover laws						-0.070
						(0.048)
Constant	5.053***	6.694***	6.783***	6.593***	7.398***	7.455***
	(0.061)	(0.052)	(0.055)	(0.065)	(0.131)	(0.139)
Observations	35,345	35,345	35,345	35,345	35,345	35,345
R-squared	0.254	0.330	0.353	0.354	0.402	0.402
Credit Lyonnais FE	Yes	Yes	Yes	Yes	Yes	Yes
Loan type FE	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose FE	Yes	Yes	Yes	Yes	Yes	Yes

Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	No	No
Headquarter state × Year FE	No	No	No	No	Yes	Yes

Table 5. Constituency Statutes and the Cost of Debt: Subsample Analyses

This table reports difference-in-differences tests that examine the effect of constituency statutes on the cost of debt in different subsamples. The dependent variable, *Ln(Loan spread)*, is the natural logarithm of the loan spread. In column (1), we exclude loans issued by firms incorporated in Delaware. In column (2), we exclude loans issued by firms incorporated in states that adopted constituency statutes in or before 1987 (the first year of the sample period). In column (3), we exclude loans issued by firms that changed their states of incorporation during the sample period 1987−2012. In column (4), we use the subsample period 1990−2012. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Exclude Delaware-incorporated firms	Exclude firms in states that adopted constituency statutes in or before 1987	Exclude re-incorporated firms	Year ≥ 1990
	(1)	(2)	(3)	(4)
Constituency Statute	-0.225***	-0.166***	-0.156***	-0.157***
	(0.052)	(0.049)	(0.057)	(0.057)
Other controls		Same as column (6) of Table 4		
Observations	13,239	32,267	33,177	33,265
R-squared	0.453	0.402	0.402	0.411
Credit Lyonnais FE	No	Yes	Yes	Yes
Loan type FE	Yes	Yes	Yes	Yes
Loan purpose FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Headquarters state × Year FE	Yes	Yes	Yes	Yes

Table 6. Testing for Pre-treatment Trends

This table examines pre-treatment trends between the treated group and the control group. The regression specification is the same as that in column (6) of Table 4, except that we replace the indicator *Constituency Statute* with the indicators *Constituency Statute^{-2}, Constituency Statute^{-1}, Constituency Statute^{0}, Constituency Statute^{1}*, and *Constituency Statute^{2+}*. These five indicators flag the years relative to the year that a state adopts constituency statutes. The dependent variable, *Ln(Loan spread)*, is the natural logarithm of the loan spread. In column (1), we use the full sample. In column (2), we exclude loans issued by firms incorporated in Delaware. In column (3), we exclude loans issued by firms incorporated in states that adopted constituency statutes in or before 1987 (the first year of the sample period). In column (4), we exclude loans issued by firms that changed their states of incorporation during the sample period 1987−2012. In column (5), we use the subsample period 1990−2012. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscript ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Full sample	Exclude Delaware-incorporated firms	Exclude firms in states that adopted constituency statutes in or before 1987	Exclude re-incorporated firms	Year ≥ 1990
	(1)	(2)	(3)	(4)	(5)
Constituency Statute^{-2}	-0.035	0.006	-0.053	-0.062	-0.008
	(0.038)	(0.055)	(0.041)	(0.039)	(0.026)
Constituency Statute^{-1}	-0.027	-0.056	-0.051	-0.054	0.001
	(0.042)	(0.083)	(0.045)	(0.050)	(0.032)
Constituency Statute^{0}	-0.021	-0.003	-0.014	-0.049	-0.024
	(0.047)	(0.058)	(0.052)	(0.062)	(0.053)
Constituency Statute^{1}	-0.139***	-0.190**	-0.149***	-0.167***	-0.144***
	(0.036)	(0.078)	(0.030)	(0.042)	(0.030)
Constituency Statute^{2+}	-0.161**	-0.253***	-0.197***	-0.196**	-0.165**
	(0.070)	(0.084)	(0.062)	(0.077)	(0.073)
Other controls	Same as column (6) of Table 4				
Observations	35,345	13,239	32,267	33,177	33,265
R-squared	0.402	0.453	0.403	0.402	0.411
Credit Lyonnais FE	Yes	No	Yes	Yes	Yes
Loan type FE	Yes	Yes	Yes	Yes	Yes
Loan purpose FE	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes
Headquarters state × Year FE	Yes	Yes	Yes	Yes	Yes

Table 7. Heterogeneous Treatment Effects

This table reports triple differences tests that examine heterogeneous treatment effects by varying a firm's level of stakeholder orientation as of 1987 (the first year of the sample period). The dependent variable, *Ln(Loan spread)*, is the natural logarithm of the loan spread. Column (1) focuses on creditors. Column (2) focuses on employees. Column (3) focuses on customers. Column (4) focuses on suppliers. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
Constituency Statute × Low liquidation value	-0.219***			
	(0.047)			
Constituency Statute × Low unionization rate		-0.168***		
		(0.034)		
Constituency Statute × Low customer concentration			-0.123***	
			(0.039)	
Constituency Statute × Low supplier concentration				-0.118**
				(0.055)
Constituency Statute	-0.006	-0.035	-0.059	-0.062
	(0.034)	(0.053)	(0.046)	(0.041)
Other controls	Same as column (6) of Table 4			
Observations	35,345	35,345	35,345	35,345
R-squared	0.403	0.403	0.403	0.403
Credit Lyonnais FE	Yes	Yes	Yes	Yes
Loan type FE	Yes	Yes	Yes	Yes
Loan purpose FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Headquarters state × Year FE	Yes	Yes	Yes	Yes

Table 8. Constituency Statutes and Capital Structure

This table reports difference-in-differences tests that examine the effect of constituency statutes on capital structure. The sample consists of 24,067 firm-year observations over the period 1987−2012. In columns (1) and (2), the dependent variable is book leverage, and in columns (3) and (4), the dependent variable is market leverage. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Book leverage		Market leverage	
	(1)	(2)	(3)	(4)
Constituency Statute	0.040**	0.040**	0.023***	0.030**
	(0.018)	(0.019)	(0.008)	(0.013)
Ln(Total assets)		0.009***		0.008***
		(0.002)		(0.002)
Market-to-book		-0.022***		-0.088***
		(0.001)		(0.002)
Profitability		0.424***		0.209***
		(0.034)		(0.026)
Tangibility		0.077***		0.062***
		(0.019)		(0.014)
Cash flow volatility		0.037		-0.080***
		(0.043)		(0.027)
Z-score		-0.104***		-0.066***
		(0.004)		(0.003)
State antitakeover laws		-0.019		-0.008
		(0.013)		(0.010)
Constant	0.481***	0.562***	0.605***	0.669***
	(0.057)	(0.073)	(0.076)	(0.090)
Observations	24,067	24,067	24,067	24,067
R-squared	0.091	0.225	0.125	0.368
Credit Lyonnais FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Headquarters state × Year FE	Yes	Yes	Yes	Yes

Table 9. Constituency Statutes and the Likelihood of Being Acquired

This table reports difference-in-differences tests that examine the effect of constituency statutes on firms' likelihood of being acquired. In columns (1) to (3), the sample consists of 1,311 state-year observations over the period 1987−2012. All control variables in these columns are calculated as the average of firms incorporated in a state. In column (1), the dependent variable is the number of firms being acquired in a state normalized by the total number of firms incorporated in that state. In column (2), the dependent variable is the number of firms being acquired via hostile takeovers in a state normalized by the total number of firms incorporated in that state. In column (3), the dependent variable is the number of firms being acquired via LBOs in a state normalized by the total number of firms incorporated in that state. In columns (4) to (6), we conduct firm-level analysis using the same sample as that in Table 8. In column (4), the dependent variable, *Firm being acquired*, is an indicator variable taking the value of one if a firm is acquired in a given year, and zero otherwise. In column (5), the dependent variable, *Firm being acquired via a hostile takeover*, is an indicator variable taking the value of one if a firm is acquired in a hostile takeover in a given year, and zero otherwise. In column (6), the dependent variable, *Firm being acquired via a LBO*, is an indicator variable taking the value of one if the firm is acquired in a LBO in a given year, and zero otherwise. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	% firms being acquired	*% firms being acquired via hostile takeovers*	*% firms being acquired via LBOs*	*The likelihood of a firm being acquired*	*The likelihood of a firm being acquired via a hostile takeover*	*The likelihood of a firm being acquired via a LBO*
	(1)	(2)	(3)	(4)	(5)	(6)
Constituency Statute	-0.004	0.000	-0.002	0.001	-0.001	-0.001
	(0.009)	(0.001)	(0.001)	(0.004)	(0.001)	(0.003)
Ln (Total assets)	0.009*	0.001	0.000	0.002*	-0.000	-0.000
	(0.005)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
Market-to-book	-0.009*	-0.000	-0.000	0.004***	0.000	0.002***
	(0.005)	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)
Leverage	-0.023	-0.000	-0.002	0.021***	0.001	0.018***
	(0.032)	(0.002)	(0.004)	(0.005)	(0.001)	(0.004)
Profitability	0.007	-0.009	0.008	-0.005	-0.003	-0.003
	(0.064)	(0.007)	(0.009)	(0.009)	(0.002)	(0.004)
Tangibility	-0.011	0.006	0.005	-0.015*	0.001	-0.015***
	(0.029)	(0.006)	(0.003)	(0.007)	(0.001)	(0.004)
Cash flow volatility	-0.224	0.011	0.060	-0.033	0.003***	-0.032***
	(0.257)	(0.014)	(0.039)	(0.020)	(0.001)	(0.012)
Z-score	-0.003	0.001	0.000	-0.003**	0.000***	-0.001**
	(0.006)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
State antitakeover laws	0.009	-0.004	0.002	-0.015**	-0.001	-0.015**
	(0.011)	(0.003)	(0.002)	(0.007)	(0.001)	(0.007)
Constant	-0.025	-0.007	-0.005	-0.007	0.002	0.011*
	(0.028)	(0.008)	(0.004)	(0.012)	(0.002)	(0.006)
Observations	1,311	1,311	1,311	24,067	24,067	24,067
R-squared	0.136	0.118	0.112	0.072	0.083	0.075
Credit Lyonnais FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	No	No	No
Year FE	Yes	Yes	Yes	No	No	No
Firm FE	No	No	No	Yes	Yes	Yes
Headquarters state × Year FE	No	No	No	Yes	Yes	Yes

Table 10. Constituency Statutes, Default Probability, and Credit Rating

This table reports difference-in-differences tests that examine the effect of constituency statutes on a firm's default probability and its credit rating. In column (1), the dependent variable, *Default probability*, measures how close a firm is to financial distress using Merton's (1974) model as implemented by Vassalou and Xing (2004). In column (2), the dependent variable is the firm's credit rating score assigned following Dimitrov, Palia, and Tang (2015). The rating score ranges from 1 to 21; smaller value indicates better credit rating. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Default probability	*Rating score*
	(1)	(2)
Constituency Statute	-0.027**	-0.195**
	(0.012)	(0.084)
Ln (Total assets)	-0.016***	-0.563***
	(0.003)	(0.050)
Market-to-book	-0.018***	-0.369***
	(0.002)	(0.019)
Book leverage	0.185***	2.117***
	(0.019)	(0.154)
Profitability	-0.169***	-4.779***
	(0.028)	(0.402)
Tangibility	-0.005	-0.382
	(0.016)	(0.339)
Cash flow volatility	0.594***	0.036
	(0.083)	(0.582)
Z-score	-0.022***	-0.263***
	(0.004)	(0.036)
State antitakeover laws	-0.005	-0.028
	(0.013)	(0.234)
Constant	0.023	15.614***
	(0.033)	(0.760)
Observations	9,778	11,100
R-squared	0.290	0.350
Credit Lyonnais FE	Yes	Yes
Firm FE	Yes	Yes
Headquarters state × Year FE	Yes	Yes

Table 11. The Effect of Constituency Statutes on Other Stakeholders (Except Creditors)

This table reports difference-in-differences tests that examine the effect of constituency statutes on a firm's other non-shareholding stakeholders except creditors. We use the score provided by the KLD database to measure a firm's social performance with respect to its employees, customers, environment, and community over the sample period 1991−2012. In column (1), the dependent variable, *KLD gross score,* is a firm's total score of strengths in those aspects. In column (2), the dependent variable, *KLD net score,* is the difference of a firm's total score of strengths and its total score of concerns in those aspects. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	KLD gross score	*KLD net score*
	(1)	(2)
Constituency Statute	0.126**	0.251*
	(0.062)	(0.125)
Ln (Total assets)	0.049***	-0.019
	(0.014)	(0.041)
Market-to-book	0.018	0.072***
	(0.013)	(0.018)
Leverage	-0.050	0.282**
	(0.067)	(0.112)
Profitability	-0.105	-0.465*
	(0.160)	(0.232)
Tangibility	0.119	0.331**
	(0.093)	(0.144)
Cash flow volatility	-0.414	-1.344***
	(0.417)	(0.485)
Z-score	0.039	0.039
	(0.025)	(0.033)
State antitakeover laws	0.079	-0.152
	(0.135)	(0.177)
Constant	0.255*	0.594
	(0.132)	(0.564)
Observations	7,083	7,083
R-squared	0.292	0.296
Credit Lyonnais FE	Yes	Yes
Firm FE	Yes	Yes
Headquarters state × Year FE	Yes	Yes

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Internet Appendix for

"Stakeholder Orientation and the Cost of Debt:

Evidence from a Natural Experiment"

Table IA1. Constituency Statutes and the Cost of Debt: Controlling for Collateral and Covenants

This table reports difference-in-differences tests that examine the effect of constituency statutes on the cost of debt using a sample of 15,543 loans with non-missing data on collateral and covenants. We re-estimate column (6) of Table 4 by additionally controlling for *Collateral* and *Total number of covenants* in the regression. *Collateral* is an indicator variable that takes the value of one if a loan is secured by collateral, and zero otherwise. *Total number of covenants* is the total number of loan covenants recorded in the Dealscan Database. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)
Constituency Statute	-0.094***
	(0.018)
Collateral	0.239***
	(0.033)
Total number of covenants	0.068***
	(0.003)
Ln (Total assets)	-0.106***
	(0.006)
Market-to-book	-0.037***
	(0.010)
Leverage	0.348***
	(0.025)
Profitability	-0.593***
	(0.088)
Tangibility	-0.253***
	(0.044)
Cash flow volatility	0.160
	(0.113)
Z-score	-0.061***
	(0.006)
Ln (Loan maturity)	-0.048***
	(0.013)
Ln (Loan size)	-0.056***
	(0.003)
Performance Pricing	-0.108***
	(0.010)
Credit spread	0.129***
	(0.018)
Term spread	0.086***
	(0.013)
Antitakeover law	0.082
	(0.052)
Constant	5.692***
	(0.148)
Observations	15,543

R-squared	0.560
Credit Lyonnais FE	Yes
Loan type FE	Yes
Loan purpose FE	Yes
Firm FE	Yes
Year FE	Yes

Table IA2. Constituency Statutes and the Cost of Debt: Using a Matched Sample

In this table, we re-estimate column (6) of Table 4 using a matched sample of 14,569 loan-year observations. Specifically, we match each treated firm to a control firm that is (1) headquartered in the same state but incorporated in a different state that never adopted constituency statutes, (2) in the same industry based on the two-digit SIC code, and (3) closest in total assets in the year prior to the adoption of constituency statutes. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)
Constituency Statute	-0.139**
	(0.056)
Ln (Total assets)	-0.147***
	(0.017)
Market-to-book	-0.024**
	(0.011)
Leverage	0.354***
	(0.051)
Profitability	-0.489***
	(0.069)
Tangibility	-0.215
	(0.131)
Cash flow volatility	0.836***
	(0.210)
Z-score	-0.080***
	(0.018)
Ln (Loan maturity)	-0.041***
	(0.015)
Ln (Loan size)	-0.060***
	(0.010)
Performance Pricing	-0.060***
	(0.015)
Credit spread	0.107*
	(0.063)
Term spread	0.018
	(0.027)
Antitakeover law	-0.256**
	(0.102)
Constant	6.706***
	(0.186)
Observations	14,569
R-squared	0.402
Credit Lyonnais FE	Yes
Loan type FE	Yes
Loan purpose FE	Yes
Firm FE	Yes
Year FE	Yes

Table IA3. Constituency Statutes and the Cost of Debt: Based on Karpoff and Wittry (2016)

In column (1), we re-estimate column (6) of Table 4 by removing loans issued by firms incorporated in Connecticut, Indiana, Kentucky, Maine, Missouri, and Nebraska, as these six states have different adoption years from those reported in Karpoff and Wittry (2016). In column (2), for those six states we take the adoption years reported in Karpoff and Wittry (2016) and re-estimate column (6) of Table 4. In column (3), we exclude loans issued by five lobbying firms identified by Karpoff and Wittry (2016) and re-estimate column (6) of Table 4. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
Constituency Statute	-0.137**	-0.139**	-0.144**
	(0.064)	(0.061)	(0.058)
Ln (Total assets)	-0.157***	-0.160***	-0.161***
	(0.012)	(0.014)	(0.014)
Market-to-book	-0.061***	-0.060***	-0.060***
	(0.008)	(0.008)	(0.008)
Leverage	0.451***	0.443***	0.444***
	(0.031)	(0.031)	(0.030)
Profitability	-0.472***	-0.478***	-0.476***
	(0.070)	(0.074)	(0.074)
Tangibility	-0.423***	-0.429***	-0.427***
	(0.040)	(0.040)	(0.040)
Cash flow volatility	0.208*	0.235*	0.249*
	(0.114)	(0.126)	(0.125)
Z-score	-0.085***	-0.089***	-0.089***
	(0.006)	(0.007)	(0.007)
Ln (Loan maturity)	-0.052***	-0.050***	-0.049***
	(0.006)	(0.006)	(0.006)
Ln (Loan size)	-0.083***	-0.081***	-0.081***
	(0.004)	(0.004)	(0.004)
Performance Pricing	-0.056***	-0.053***	-0.052***
	(0.011)	(0.013)	(0.013)
Credit spread	0.110***	0.111***	0.112***
	(0.027)	(0.025)	(0.026)
Term spread	0.054***	0.055***	0.055***
	(0.011)	(0.011)	(0.011)
Antitakeover law	-0.058	-0.069	-0.074
	(0.051)	(0.048)	(0.048)
Constant	6.394***	7.452***	7.459***
	(0.078)	(0.139)	(0.137)
Observations	34,429	35,345	35,264
R-squared	0.403	0.402	0.402
Credit Lyonnais FE	Yes	Yes	Yes
Loan type FE	Yes	Yes	Yes
Loan purpose FE	Yes	Yes	Yes

Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes

Table IA4. Constituency Statutes and the Cost of Debt: Controlling for State of Incorporation-Level Variables

In this table, we re-estimate column (6) of Table 4 by additionally controlling for state of incorporation-level variables used in Table 3. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)
Constituency Statute	-0.152***
	(0.055)
Ln (Total assets)	-0.160***
	(0.014)
Market-to-book	-0.060***
	(0.008)
Leverage	0.444***
	(0.029)
Profitability	-0.480***
	(0.075)
Tangibility	-0.431***
	(0.040)
Cash flow volatility	0.237*
	(0.125)
Z-score	-0.088***
	(0.007)
Ln (Loan maturity)	-0.050***
	(0.006)
Ln (Loan size)	-0.081***
	(0.004)
Performance Pricing	-0.053***
	(0.013)
Credit spread	0.111***
	(0.025)
Term spread	0.055***
	(0.011)
Antitakeover law	-0.064
	(0.050)
Ln (State GDP)	0.094
	(0.193)
Ln (State population)	-0.057
	(0.180)
State unemployment rate	-0.000
	(0.008)
% workforce with a Bachelor's degrees	-0.003
	(0.010)
Republican governor	0.008
	(0.017)
Constant	7.324***
	(0.566)

Observations	35,345
R-squared	0.402
Credit Lyonnais FE	Yes
Loan type FE	Yes
Loan purpose FE	Yes
Firm FE	Yes
Year FE	Yes

Table IA5. Constituency Statutes and the Cost of Debt: High Expected Default Probability

In this table, we re-estimate column (6) of Table 4 by additionally controlling for the interaction term *Constituency Statute × High expected default probability* and the indicator *High expected default probability*. Variable definitions are provided in the Appendix. Robust standard errors clustered at the state of incorporation level are reported in parentheses. The superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)
Constituency Statute	0.066
	(0.053)
Constituency Statute × High expected default probability	-0.058**
	(0.025)
High expected default probability	0.088***
	(0.008)
Ln (Total assets)	-0.180***
	(0.018)
Market-to-book	-0.027***
	(0.007)
Leverage	0.417***
	(0.057)
Profitability	-0.131
	(0.082)
Tangibility	-0.378***
	(0.094)
Cash flow volatility	0.126
	(0.152)
Z-score	-0.081***
	(0.011)
Ln (Loan maturity)	-0.079***
	(0.009)
Ln (Loan size)	-0.051***
	(0.006)
Performance Pricing	-0.075***
	(0.009)
Credit spread	0.091***
	(0.023)
Term spread	0.047***
	(0.014)
Antitakeover law	-0.209**
	(0.085)
Constant	7.707***
	(0.172)
Observations	13,518
R-squared	0.392
Credit Lyonnais FE	Yes
Loan type FE	Yes
Loan purpose FE	Yes

Firm FE	Yes
Year FE	Yes