# Corporate Misconduct and the Cost of Private Debt: Evidence from China

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## Abstract

Using a comprehensive dataset of corporate lawsuits in China, we investigate the implications of corporate misconduct on the cost of private debt. Evidence reveals that firms involved in litigations obtain subsequent loans with stricter pricing terms, 15.1 percent higher loan spreads, than non-litigated borrowers. Strong political connection and repeated relationship help to flatten the sensitivity of loan pricing to litigation. Non-bank financial institutions react in stronger manner to corporate misconduct than traditional banks in pricing loans. Overall, we show that private debt holders care about borrowers' wrong-doing in the past.

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## Abstract

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**Key words:** Litigation    Loan spreads    Political connection    Relationship

**JEL codes:** G12, G14, L14

## 1. Introduction

Corporate misconduct can lead to significant penalties in the form of losses in the value of firm's debt and equity. Existing studies show that financial misconduct such as restatements can adversely change the bank loan terms (e.g. Graham, Li and Qiu, 2008) or cause substantial wealth losses capitalized in share price (e.g. Dechow, Sloan and Sweeney, 1996; Grande and Lewis, 2009; Murphy, Shrieves and Tibbs, 2009) through reputational loss. The reputational penalty is defined as the expected loss in the present value of future cash flows due to lower sales and higher contracting and financing costs, which is calculated to be much higher than the sum of all penalties imposed through the formal legal and regulatory system (Karpoff, Lee and Martin, 2008).

In this paper, we investigate the implications of corporate misconduct on the cost of private debt, using a comprehensive dataset of corporate lawsuits in China. Lawsuits constitute contingent liabilities thus can affect lenders' evaluation of a company through revisions in beliefs about the firm's expected future cash flows. We hypothesize that lenders shall respond to firms' misconduct and increased risks by tightening up their loan contracts. We consider not only loans from banks but also those from nonbank financial institutions as these two types of lenders might have different risk tolerance and react in a different manner following corporate litigations.

We choose China as a laboratory for two reasons. First, under the U.S. securities law the disclosure of corporate litigation depends on the principle of "materiality", meaning that it is a choice at the discretion of the issuers; in contrast, in China the disclosure of lawsuits is mandatory since 1998 pursuant to the revision of the listing rules of both Shanghai and Shenzhen Stock Exchange, if the litigation stake is above RMB 10million (US$ 1.5million) and over 10% of the company's net assets[1], allowing us to observe the universe of corporate lawsuits rather than only

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[1] This monetary threshold for the disclosure of corporate litigation for listed firms in China is sufficiently low, compared to the counterparts in the US. Please also see Lu, Pan and Zhang (2015); Gu, Hasan and Lu (2018).

financial misconduct that might have material impact on borrowers.

Second, compared to other developed and emerging economies. China's financial system has been dominated by a large banking system, especially the state-owned banks. Historically the state-owned banks served the purpose of funding state-owned enterprises (SOEs) and government projects, which support the fast growth of Chinese economy in the last decades (Allen, Qian and Gu, 2017). Therefore, by far bank loans are the most important form of finance for companies in China. Driven by the regulation change, shadow banking has been growing dramatically in recent years (e.g. Chen, He and Liu, 2018, Allen, et al. 2018), making loans from non-bank financial institutions also one of the main sources of funding for firms in risky industries such as real estate. We compare the lending activities by traditional banking and non-bank financial institutions in response to corporate misconduct in China.

Our empirical tests suggest three sets of results. First, firms involved in litigation obtain subsequent loans with stricter pricing terms, and such effect is more pronounced for loan pricing of the same litigated borrowers on the private debt market. *Ceteris paribus*, litigated borrowers have 15.1 percent higher loan spreads than non-litigated borrowers. Litigation varies in their severity in terms of legal penalties. Our tests show that litigants as defendants have even higher borrowing costs than those as plaintiffs.

Second, strong political connection and repeated relationship flatten the sensitivity of loan spreads to litigation. The strength of political connection depends on the level of state ownership. Central state-owned enterprises (Central SOEs) tend to have significantly lower loan spreads even if they are involved in litigation. Local state-owned enterprises (Local SOEs) are less sensitive to the announcements of litigation than other non-SOEs. However, such mitigating effect of political connection is less pronounced for SOE as defendants.

Repeated relationship is another moderating factor for the potential loss from the litigation. For borrowers and lenders in a long-term contract relationship, lenders can obtain more private and soft information on the borrower through repeated ex-ante screening and ex post monitoring. Therefore, the negative impact from the public announcements of lawsuits that the borrower has been involved in might be lower. Consistent with our expectation, our results show that if a borrower is in a long-term relationship with the lender, they tend to have significantly lower loan spreads even following corporate litigation announcements.

Third, we find the increase in loan spreads for litigated borrowers is higher when the lender is a non-bank financial institution.  Because of the fast rise of lending from shadow banking sector in China in recent years, we also differentiate the lenders between banks and non-bank financial institutions.[2] Our investigation shows that the non-bank financial institutions are more sensitive to corporate misconduct, resulting in higher penalties through loan market. Considering that explicit guarantee is less prevalent for loans from non-bank financial institutions than those from traditional banks (e.g. Liu and Zhang, 2017), non-banks tend to have less risk tolerance.

To address the endogeneity issue, we first employ the one-to-one propensity score matching based on borrower characteristics including firm size, firm age, leverage, profitability and tangibility. Despite our effort to control for the observable loan-level and firm-level characteristics, concerns remain on the potential systemic difference between litigated and non-litigated borrowers. Our second strategy is the instrumental variable analysis. The instruments we use are the number of the law offices per 10,000 residents (and the number of law offices per 10,000 urban residents) in the province where the borrower is located. Our results remain consistent under two sets of robustness tests. Taken together, our evidence shows that private debt holders care about issuers'

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[2] Majority of non-bank financial institutions in our sample are trust companies. The loans granted by trust companies in China are the so-called "trust loans". For more details, please see http://www.xtxh.net/xtxh/

litigation. Instead of being an outsider, they react to the announcements of litigation through using tighter loan contract terms to overcome risks and informational problems.

This paper is closely related to the literature on the impact of corporate litigation on capital markets, Prior work focuses on the impact of particular type of lawsuits from the perspective of equity holders, such as securities class actions (Griffin, Grundfest and Perino, 2004), environment related violations (Karpoff, Lott and Wehrly, 2005), patent infringement lawsuits (Raghu et al., 2008). Firth, Rui and Wu (2011) study the equity market reaction to (generalized) lawsuits in China finding significant negative abnormal returns. More recently, Lin et al. (2013) use director and officers (D&O) liability insurance to proxy litigation risk and find its positive association with bank loan spreads. Among the recent relevant studies on lawsuits and bank loan contracting, Deng, Willis and Xu (2013) document that after the filing of shareholder litigation, defendant firms pay higher loan spreads, up-front charges, experience more financial covenants and are more likely to have a collateral requirement. Gu, Hasan and Lu (2018) document that firm reputation matters in the public debt market, using corporate lawsuits as negative shocks. Litigated public firms have tighter both pricing and non-pricing terms when borrowing from bond market, and such effects interact with institutional factors such as social trust and investor protection. Our paper complements these studies by examining the impact of corporate misconduct on the pricing of private debt in China. We show that lenders incorporate the risks associated with corporate litigations in the way that loan spreads are significantly higher for litigated borrowers than non-litigated peers.

This paper also contributes to the literature on the effect of alternative governance mechanisms such as political connections and network in debt finance, tracing back to Spatt (1985) and Diamond (1989, 1991). In the absence of reputation effects, borrowers have incentives to select

excessively risky projects. Our evidence shows that government connection and repeated relationship can either provide implicit guarantee or mitigate informational problem henceforth tend to moderate negative shocks from corporate litigations. This is in line with the argument that in a country with weak legal protection mechanism, alternative institutions such as those based on political connection and relationship serves as safeguards to contracts and investments (Allen, Qian, Qian, 2005).

The rest of this paper proceeds as follows. Section 2 introduces the institutional background of Chinese legal system and corporate litigation. Section 3 describes our data sample and variables. Section 4 discusses the empirical results. Section 5 concludes.

## 2. Institutional background: Law-finance nexus in China

The origins of China's legal system are a mixture of socialist and civil law.[3] Allen, Qian and Qian (2005) assessed China's legal system on multiple aspects and found that the majority of LLSV-sample[4] countries have creditor and shareholder protection better than that of China. China's modern market-supporting laws, such as Contract Law (1994), Company Law (2005), Bankruptcy Law (2006), and Property Law (2007), and Anti-Monopoly Law (2008) resemble their counterpart codes in Germany, Switzerland and Japan. Despite the legal codes in place, their enforcement through courts is fraught with government intervention (Djankov et al. 2003).

Despite the nascent legal protection, the use of courts as a forum for settling business disputes has increased dramatically since the 1990s, especially for large and listed firms. These firms have modern corporate governance required by the securities regulations, are more likely to use courts and lawyers to resolve disputes. From 2006 to 2015, the number of concluded court cases per year

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[3] La Porta Lopez-de-Silanes and Shleifer (2008) argue that the common law legal origin stands for a strategy that seeks to support private market outcomes, whereas civil law seeks to replace such outcomes with state-desired allocations.
[4] See the cross-country studies on legal origin and finance by La Porta et al. (1998).

swelled from 8.55 to 16.7 million (Supreme People's Court Annual Work Report). Over 190,000 judges work in China's 3,500 county-level basic courts, 400 prefecture-level intermediate courts, 32 provincial-level high courts, and the Supreme Court in Beijing. Each level of the courts can be the first-instance court and the benchmark is on the monetary value of the disputes at stake for commercial lawsuits. As of 2015, China had around 270,000 registered lawyers, or 1.96 per 10,000 people, a rate far below that of developed countries. [5]

Several pieces of evidence show Chinese corporate litigations have impact on investors. Firth, Rui, and Wu (2011) examine the wealth effect of corporate litigation in China and find significant negative market reaction upon lawsuit announcements, yet the effect is less pronounced for politically connected firms. Zou et al. (2008) identify 53 Chinese listed companies that bought director's and officer's (D&O) liability insurance (an insurance against securities lawsuit claims) and find firms with more acute controlling-minority shareholder incentive conflicts are more likely to consider purchasing D&O insurance. Lu, Pan and Zhang (2015) study 3.323 commercial lawsuits of listed companies in China and find Chinese courts favor state firms and private firms with personal political ties. The effect is pronounced in the outcomes of litigation but not arbitration, and less pronounced in provinces with better legal institutions.

## 3. Data and summary statistics

### 3.1 Sample description

The data in this paper are collected from multiple sources. The loan data are retrieved from CSMAR and the litigation data are obtained from WIND. CSMAR contains detailed information on bank loans for listed firms, including yield, maturity, loan amount, collateral, etc. We then match loan information with financial and other information of borrowers extracted from WIND.

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[5] For example, Ramseyer and Rasmusen (2010) document the following numbers of lawyers per 10,000 people for six democracies in the mid- to late 2000s: United States, 39.1; United Kingdom, 25.1; Japan, 2.3; France, 7.2; Canada, 2.6; and Australia, 35.7.

Borrowers' financial data in year *t-1* are matched with loan issuance in year *t*. We treat each loan as one observation. We exclude loans from borrowers of financial and utility firms.

We collect litigation information of Chinese listed firms from WIND from 1998 to 2013. The Listing Rule of 1998 stipulates that listed companies must disclose their litigation/arbitration of the claim which is over RMB 10 million, and/or over 10 percent of the company's net assets. If below this threshold, the company should also disclose such information, if in the opinion of its directors the lawsuit would have significant impact on company's securities. This rule essentially requires the disclosure of all lawsuits that would have material impact on listed firms. We hand collect some key variables from each lawsuit, including involving parities, lawsuit type, litigation stake (in RMB), whether the borrowing (disclosing) firm is a plaintiff or defendant.

Our loan sample covers the bank loans initiated by listed firms from 2007 to 2013. We drop the previous years because of the poor data quality including missing variables (e.g. loan yield). Merging loan level data with lawsuit information allows us to obtain 2,802 loans, out of which 902 are issued by listed firms with lawsuits (treated debt) and 1,900 are loans issued by listed firms not involved in lawsuits (control debt). We then employ a propensity score matching algorithm based on borrower characteristics including firm size, firm age, tangibility, leverage, profitability, which gives us 902 loans issued by litigated borrowers and 902 loans issued by non-litigated borrowers. Results of both full and matched sample are reported in our regression analysis.

*3.2 Variables*

Our main dependent variable is *Loan spread*, which is the difference between the initial loan yield and a matched benchmark lending rate, based on the maturity and date of loan granting. We consider other key loan characteristics, namely, *Log(maturity)* is the natural logarithm of loan maturity by month; *Collateral* equals one if the loan has collaterals or zero otherwise;

*Log(loan_amt)* is the natural logarithm of the issuance amount. *Lender bank* is defined as one if the lender is a traditional bank; or zero otherwise. *Lender Big 4* is defined as one if the lender is a Big 4 bank (the Bank of China, the Industrial and Commercial Bank of China, China Construction Bank, and Agricultural Bank of China); or zero otherwise, which includes either trust companies or other financial entities regulated by the China Banking Regulatory Commission (CBRC).

Our analyses also incorporate an assortment of borrower characteristics. *Firm size* is defined as the natural logarithm of the book value of total assets; *Firm age* is defined as the natural logarithm of number of years between the date of loan initiation and firm establishment year; *Profitability* is the ratio of net profits to total assets; *Leverage* is the ratio of total debt to total assets; and *Tangibility* is the ratio of fixed assets to total assets. *SOE* equals one if a borrower has either central government or local government as its ultimate controller, and zero otherwise. *Central SOE* equals one if a borrower is ultimately owned by the central government, and zero otherwise; and *Local SOE* equals one if a borrower is ultimately owned by a local government, and zero otherwise. *L_relationship* is defined as one if they are in the long-term contract or zero otherwise.

Other litigation variables include the following: *Log(Indem_amt)* is the natural logarithm of the monetary claim of the plaintiff in the lawsuits; *Defense* equals one if the disclosing borrower is the defendant, and zero otherwise. Table A.1 provides detailed variable definitions.

*3.3 Summary statistics*

Table 1 reports the summary statistics of our sample. The statistics reveal substantial heterogeneity. Panel A describes loan characteristics. *Loan yield* ranges from 0.675% to 16.070%, with a sample mean of 8.965%. Subtracting the matched benchmark lending rate, *Loan yield spread* ranges from -5.010% to 9.915%, with a sample mean of 2.794% and a standard deviation of 3.023%. *Collateral* ranges from 0 to 1, with a sample mean of 0.541, indicating that roughly

54.1% of loans have collaterals. *Maturity* ranges from 0.083 years to 20 years, with a sample mean of 1.594 years. *Loan amount* ranges from 100 million RMB to 10 billion RMB. Panel B reports the summary statistics of borrower characteristics. *Total asset* ranges from 187 million RMB to 296 billion RMB. *Tangibility* ranges from 0.075% to 88.464%, with a sample mean of 13.486% and a sample median of 2.333%. *Profitability* ranges from -83.045% to 39.990%, with a sample mean of 2.767% and a sample median of 2.432%. *Leverage* ranges from 0.712% to 98.208, with a sample mean of 73.130% and a sample median of 79.342%. *Firm age* ranges from 5 years to 34 years, with a sample mean of 18.383 years.

Panel C reports the descriptive statistics of the matched sample by groups, i.e. loan and firm characteristics of litigated borrowers vs. non-litigated borrowers. The results show that the treated (litigated) borrowers have the average loan yield at 9.191%, significantly higher than that of control (non-litigated) borrowers at 7.098%. Correspondingly, the average loan spread of litigated borrowers is significantly higher than that of non-litigated borrowers. Notably, on average the litigated borrowers have significantly larger firm size, higher firm age, higher leverage ratio and are more likely to have collaterals, while have significantly lower tangibility and profitability.

[TABLE 1]

Panel D reports the statistics of lawsuit distribution. There are in total 820 unique lawsuits involved in our loan sample. We classify these lawsuits into three categories: (1) bank loans and inter-corporate loans, (2) regular business contracts, and (3) tort cases. Loan-related cases account for 31.5 percent, regular business dispute cases account for 36.2 percent, and tort cases account for 32.2 percent. Compared to non-SOEs, SOEs are more likely to be the plaintiffs, with the P/D ratios much higher than those of non-SOEs.

## 4. Methodology and empirical results

### 4.1 Methodology

We start by examining the effect of lawsuits on initial loan spreads using the Model (1) below:

$$Loan\ spread_{i,t} = \delta_t + \gamma_j + \beta_0 + \beta_1 \cdot Treated\ Debt_{i,t-1} + \beta_2 \cdot Loan\ characteristics_{i,t} + \beta_3 \cdot (Borrower\ characteristics)_{i,t-1} + \varepsilon_{i,t} \qquad (1)$$

where *Loan spread* is the dependent variable and $\delta_t, \gamma_j$ are year, and industry fixed effects respectively. The key explanatory variable is *Treated debt*, where we expect a positive coefficient. Following the bank loan literature (e.g., Deng et al., 2014; Jiang et al., 2018), we include other loan characteristics: *Log (loan_amt)*, *Log(maturity)*, *Collateral*; as well as borrower characteristics including *Firm size*, *Firm age*, *Profitability*, *Leverage*, *Tangibility, SOE*. We include year and industry fixed effects into the regressions to account for time- and industry- specific heterogeneities.

### 4.2 Lawsuits and initial loan spreads

Table 2 reports the results on the effects of litigation and initial spreads. The dependent variable is the loan spreads and the key variable is Treated Debt. We start from using the full sample for the regression analysis, with the results shown in column (1) and (2). In column (1) we include only the loan characteristics and in column (2) we further include the borrower characteristics. The coefficients of the Treated Debt are significant and positive, suggesting that on average when the borrowers are involved in lawsuits, the loan spreads are significantly higher. The impact of the lawsuits is also economically meaningful. For example, the results in column (1) show that holding all the other factors as constants, treated debts (loans by litigated borrowers) would have 15.1 percent (=0.422/2.794) higher yield spreads than control debts (loans by non-litigated borrowers). Results in column (2) with more borrower controls point to the same direction.

[TABLE 2]

Several comments on the signs of control variables in column (1) and (2) are in order. First, loans with collaterals on average have significantly higher loans spreads than those without collaterals. This pattern is consistent with the existing finding on loan spreads and collateral assets in China (e.g. Allen et al., 2019), and explained by the fact that private debt holders often impose collateral requirements on borrowers perceived to have higher ex ante credit risk.[6] Second, higher loan amount tends to reduce the loan spreads. Third, in both column (1) and (2) we didn't find significant relationship between state ownership (political connections) and initial spreads, indicating that there might be some selection issue here. For example, SOEs might be less likely to be sued if controlling for all the other variables (e.g. Lu, Pan, Zhang, 2015).

To address this concern, we further employ the one-to-one propensity score matched sample, using borrower characteristics including firm size, firm age, leverage, profitability and tangibility. The propensity score matching algorithm gives us a sample of 902 treated loans and 902 control loans. Using the matched sample, we find that, in column (3) and (4), our main results still hold, that on average, the spreads of loans issued by litigated borrowers are significantly higher than those by non-litigated borrowers. Similarly, the economic impact is meaningful as well. Treated loans tend to have 10.3 (=0.289/2.794) percent higher spreads than control loans when holding all the other factors as constants. The variable, SOE, enters with significant and negative coefficients, suggesting that politically connected borrowers tend to have significantly lower loan spreads. More specifically, SOEs tend to have 14.2 (=0.398/2.794) percent lower loan spreads than non-SOEs,

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[6] We thank the referee for this enquiry. To verify this proposition we investigating the collateral requirement for SOEs versus non-SOEs. In our sample, only 7.5% (141/1877) of loans to SOEs have collateral requirements, whilst 17.1% (158/925) of loans to non-SOEs have collateral requirements. This finding is also consistent with prior literature on relationship based lending that borrowers with relationship with lenders receive favorable terms such as greater credit ability and lower collateral requirements (Petersen and Rajan, 1994; Berger and Udell, 1995).

*ceteris paribus*. Collateral and loan amount affect the loan spreads in a similar manner, while maturity enters with significant and positive coefficients now, suggesting than loans with longer maturity tend to have lower loan spreads. Additionally, borrower that have higher leverage, lower profitability and lower tangibility tend to have significantly higher loan spreads.

To the extent that the monetary policy of People's Bank of China (PBOC) affect banks' lending behavior through the supply of money and the borrowing costs, we account for this effect by partition the sample into loans made during the "tightening" and "loosing" monetary policy period. Our working hypothesis is that during "tightening" (easing) monetary policy period, banks facing tighter (softer) budget constraints are more (less) cautious in lending to firms with misconduct. If this proposition is true, then we should find the positive effect of lawsuits on loan spreads to be more significant in "tightening" monetary policy period than in "easing" period.

Column (5) and (6) partition the sample into loans made during the tightening and easing monetary policy period. Following Allen, Gu and Qian (2018), we use the Reserve Requirement Ratio (RRR) to define the tightening and easing periods, based on the one-to-one matched sample. More specifically, the tightening periods are defined as those when the PBC increased the RRRs or kept the RRRs unchanged above the mean level; the easing periods are defined as those when the PBC cut the RRRs or kept RRRs unchanged below the mean level, in our sample period. The results, reported in column (5) and (6) of Table 2, show that the tightening effects by lenders on loan terms following the corporate litigation is more significant when the monetary policy was tightened, suggesting that lenders are more sensitive to announcements on corporate litigation when the monetary policy is more conservative.

To isolate the potential borrower heterogeneity that might bias our results, we further investigate a subsample of borrower that have been granted loans both before and after litigation.

This refined focus reduces our sample to 562 treated and control loans. Column (7) and (8) report the results. First, our main results on the positive effect of litigation on initial loan spreads still hold. In fact, the economic impact is even larger for this smaller subsample of borrowers. The coefficients on Treated Debt suggest that holding all the other factors as constants, treated loans have 24.8 (=0.692/2.794) percent higher spreads than control loans. For the same litigated borrowers, the effect of state ownership is significant but even more economically important. *Ceteris paribus*, SOEs have 28.9 (=0.808/2.794) percent lower initial loan spreads. The impact of other borrower characteristics stays significant, in a similar manner.

*4.3 The impact of political connections*

The benefit of political connection in raising funds has been well documented in the literature (e.g. Borisova and Megginson, 2011; Borisova, et al. 2015). This section reports the results on how political connection matters for the effect of litigation on borrowing costs through loan market. We classify borrowers into three groups, central SOEs, local SOEs and non-SOEs. In Table 3, column (1) and (2) report the results using the full sample and column (3) and (4) report those of the matched sample using again the one-to-one propensity score matching algorithm. The results show that, first, our main results still hold, that the *Treated Debt* enters with significant and positive coefficients in all the specifications. Second, both *Central SOE* and *Local SOE* enter with significant and negative coefficients, suggesting that political connections help reduce the borrowing costs. Third, more importantly, the coefficients of the interaction terms of *Central SOE* and *Treated Debt* are negative but not significant when using full sample. The significance level increases when using matched sample, The coefficients of the interaction terms of *Local SOE* and *Treated Debt* and positive and significant in majority of the specifications. This result suggests that the political connection to central government matters more in mitigating the impact of

litigation, though such effect is not consistently strong. For borrowers connected to local governments, the impact of litigation is even stronger. As political connected firms are less likely to be involved in a lawsuit, such litigation might suggest an even worse signal of the borrowing firm.

[TABLE 3]

Then, we further explore the heterogeneity based on a disclosing firm's status of either plaintiff or defendant and how the political connection would impact the effect of being sued. Intuitively, the effect of a defensive lawsuit should have stronger effect on the loan spreads. The results are reported in Table 4. Column (1) and (2) show the results of the regressions without borrower characteristics while column (3) and (4) show those with more borrower controls. We find that, first, the coefficients of Defense enter with significant and positive sign. Moreover, when the borrowers are the defendants, the economic impact of the litigation tends to be higher. When the loans are issued by borrowers as defendants, holding all the other factors as constants, the spreads are 35.2 (=0.983/2.794) percent higher, as shown in column (1). In Column (2) we further introduce the interaction term of Defense and SOEs. The results show that, however, the effects of "involving in lawsuits as defendants" tend to be more significant and stronger for SOEs as borrowers. Again, we interpret this as the stronger negative sign of SOEs being sued. Column (3) and (4) show consistent results with those in column (1) and (2). Overall, we find evidence that being sued has stronger effects in initial loan spreads for borrowers.

[TABLE 4]


*4.4 The impact of repeated relationship*

Repeated relationship can help to alleviate the information asymmetry when lenders make decisions (Allen, 1985). In this section, we further explore how repeated relationship with lenders

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can affect the borrowing costs in loan market. We use whether the borrower and lender are in a long-term contract, *L_relationship*, as a measure for repeated relationship. It is usually cheaper for borrowers to go to the cooperative lender for funding and in the meanwhile it is easier for lenders to obtain more soft information if the borrower and lender are in a cooperative contract. Table 5 reports the results. Column (1) and (3) introduce *L_relationship* in the regressions, and column (2) and (4) further incorporate the interaction term *L_relationship * Treated Debt,* with or without other firm controls. The results show that repeated relationship significantly helps to reduce the cost of loan when the borrowers are involved in corporate litigations. The impact is also economically significant. For example, the result in column (2) shows that while litigation increases the cost of loan, the repeated relationship seems to offset this impact and further reduce the cost of loan by 14.1 (=(1.063-0.670)/2.794) percent.

[TABLE 5]


We then further investigate whether the type of lender matters for the initial loan pricing, by differentiating banks with non-bank financial institutions as lenders. Non-bank financial institutions are lightly regulated by the authorities and usually more aggressive in lending decisions, especially when borrowers are from real estate industry (e.g. Allen, et al., 2018); while banks tend to rely more on borrowers' soft information and tightly monitor the borrowers and the funded projects (Liberti and Petersen, 2018). Such monitor might help to mitigate the negative impact of corporate lawsuit announcements. Table 6 reports the results. In column (1) and (3) we include *Lender bank* and its interaction with *Treated Debt*, and in column (2) and (4) we include the *Lender Big4* and its interaction with *Treated Debt*, with or without other firm controls. The results show that obtaining loans from banks can significantly mitigate the impact of litigation on cost of loan,

both for state-owned and non-state owned banks as lenders.

[TABLE 6]

*4.4 Robustness checks*

Despite our effort in matching the borrowers' observable firm characteristics, it is still possible that some unobserved heterogeneities (e.g. corporate governance) could correlate with both litigation likelihood and loan pricing, which might further bias our results. One way to establish causality is to use instrument variable to extract the exogenous component of our potentially endogenous variable, i.e. the litigation likelihood, and relate it to our outcome variable loan pricing. This section reports the results of further robustness checks, using the instrumental variable (IV) analysis, in order to address the potential endogeneity concerns, that whether involved in litigation or being sued might be endogenously determined, which further affects loan pricing.

We use two instrumental variables, the number of law offices per 10,000 residents and the number of law offices per 10,000 urban residents in the home provinces where the borrowers are located. The data are collected from the Chinese Provincial Yearbook.[7] As Ray, Shleifer and Vishny (1996) argue, "*the rule of law means, in part, that people use the legal system to structure their economic activities and resolve disputes*" (pp.559). Our instrument captures the supply of (and demand for) professional legal services in the region. The assumption is that in a province with higher demand for legal services, lenders are more inclined to structure economic activities following the law and more likely to use courts to resolve its disputes, which enhances litigation probability.

For the exclusion restriction, we note that the law-office density in a given province/year is a

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[7] There are five provinces, Guangxi, Hebei, Gansu, Inner Mongolia and Tibet, not reporting law office number in our sample period (2007-2015), therefore, we exclude borrowers from these five provinces from the IV analysis in this Section.

legal environment variable that scarcely affects the pricing of individual debt. One possibility that law firm density could indirectly affect the pricing of loans is through product market competition. It is likely that law firm density is positively correlated with regional economic activities. More economic activities mean higher product market competition. Following this logic, if higher law-firm density affects loan spread through product market competition, it should reduce rather than increase the spread. However, we find the opposite, thus reducing concerns for exclusion restriction.

Table 7 reports the two-stage least squares regression results. Column (1) and (3) report the first-stage results, where we regress Treated Debt on the instrumental variable and a set of other firm control variables. The results show that both IVs are significantly and positively associated with the treated dummy, which represents for the litigation probability. Column (2) and (4) report the results for the reduced form estimation, where we regress the initial loan spreads on the instruments and other borrower characteristics. Both instruments enters with significant and positive coefficients, indicating that higher likelihood of litigation would lead to significantly higher borrowing costs.

[TABLE 7]

## 5. Conclusion

In this paper, we examine the implications of corporate misconduct on the cost of private debt, using the announcements of corporate lawsuits in China. We find firms involved in litigation obtain subsequent loans with stricter pricing terms. More specifically, litigated borrowers have 15.1 percent higher loan spreads than non-litigated borrowers. Strong political connection and repeated relationship flatten the sensitivity of loan spreads to litigation. In addition, non-bank financial institutions react in a stronger way to corporate litigations in pricing loans than traditional banks. Overall, our evidence shows that private debt holders care about borrowers' wrong-doing

in the past. Instead of being an outsider, they respond to the announcements of corporate litigation through tightening loan pricing terms to overcome risks and informational problems.

**Reference:**

Allen, F., 1985. Repeated Principal-Agent Relationships with Lending and Borrowing. *Economic Letters* 17: 27-31.

Allen, F., J. Qian and M. Qian, 2005. Law, Finance, and Economic Growth in China. *Journal of Financial Economics* 77 (1), 57-116.

Allen, F., X. Gu, and J. "QJ" Qian, 2018. The People's Bank of China: From 1948 to 2016. In: Waldenstrom, D., R. Edvinsson, T. Jacobson (eds.), *Sveriges Riksbank and the History of Central Banking.* Cambridge University Press, Cambridge: pp. 418-453. Studies in Macroeconomic History.

Allen, F., X. Gu, J. Qian, Y. Qian, 2018. Implicit Guarantee and the Rise of Shadow Banking: the Case of Trust Products, Working Paper, Imperial College London.

Allen, F., J. Qian, and X. Gu, 2017. An Overview of China's Financial System. *Annual Review of Financial Economics*, 9: 191-231.

Allen, F., Y. Qian, G. Tu, and F. Yu, 2019. Entrusted Loans: A Close Look at China's Shadow Banking System. *Journal of Financial Economics*, forthcoming.

Berger, A., Udell, G., 1995. Relationship Lending and Lines of Credit in Small Firm Finance. *Journal of Business*, 68, 351–381.

Borisova, G. and W. Megginson, 2011. Does Government Ownership Affect the Cost of Debt? Evidence from Privatization. *Review of Financial Studies*, 24(8), 2693-2737.

Borisova, G., V. Fotak. K. Holland. and W. Megginson, 2015. Government Ownership and the Cost of Debt: Evidence from Government Investments in Publicly Traded Firms. *Journal of Financial Economics*, 118(1), 168-191.

Chen, Z., Z. He, and C. Liu, 2018. The Financing of Local Government in China: Stimulus Loan Wanes and Shadow Banking Waxes, Working Paper, Chicago Booth.

Dechow, P., R. Sloan and A. Sweeney, 1996. Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Action by the SEC, *Contemporary Accounting Research*, 13(1): 1-36.

Deng, S., R. Willis, L. Xu, 2014. Shareholder Litigation, Reputational Loss, and Bank Loan Contracting. *Journal of Financial and Quantitative Analysis* 49(4), 1101–1132.

Diamond, D., 1989, Reputation Acquisition in Debt Markets, *Journal of Political Economy* 97(4), 828-862.

Diamond, D., 1991, Monitoring and reputation: The Choice Between Bank Loans and Directly Placed Debt, *Journal of Political Economy* 99(4), 689-721.

Fan, G., X. Wang, and H. Zhu, 2011. *NERI INDEX of Marketization of China's Provinces*. Economic Science Press, Beijing.

Firth, M., O. Rui, and W. Wu, 2011. The Effects of Political Connections and State Ownership on Corporate Litigation in China. *Journal of Law and Economics* 54 (3), 574–607.

Gande, A. and C. Lewis, 2009. Shareholder-initiated Class Action Lawsuits: Shareholder Wealth Effects and Industry Spillovers. *Journal of Financial and Quantitative Analysis* 44: 823-850.

Gu, X., I. Hasan and H. Lu, 2018. Corporate Reputation in Bond Market: Evidence from Lawsuits, Working Paper. Fordham University.

Graham, J., S. Li and J. Qiu, 2008. Corporate Misreporting and Bank Loan Contracting. *Journal of Financial Economics* 89 (1), 44-61.

Griffin, P., J. Grundfest and M. Perino, 2004. Stock Price Response to News of Securities Fraud Litigation: An Analysis of Sequential and Conditional Information. *Abacus* 40(1), 21-48

Jiang, F., K. John., W. Li and Y. Qian, 2018. Earthly Reward to the Religious: Religiosity and the Costs of Public and Private debt. *Journal of Financial and Quantitative Analysis 53(5),* 2131-2160.

Karpoff, J., D. Lee and G. Martin, 2008. The Cost to Firms of Cooking the Books. *Journal of Financial and Quantitative Analysis* 43(3), 581-612.

Karpoff, J., J. Lott and E. Wehrly, 2005. The Reputational Penalties for Environmental Violations: Empirical Evidence. *Journal of Law & Economics* 48 (2), 653-675

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, R. Vishny,, 1998. Law and Finance. *Journal of Political Economy* 106(6), 1113–1155.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, 2008. The Economic Consequences of Legal Origins. *Journal of Economic Literature* 46(2), 285–332.

Liberti, J. and M. Petersen, 2018. Information: Hard and Soft, Working Paper. Northwestern University.

Lin, C., M. Officer, R. Wang and H. Zou, 2013. Directors' and Officers' Liability Insurance and Loan Spread. *Journal of Financial Economics* 110(1), 37-60.

Liu, L. and X. Zhang, 2017. Risk Contagion along Loan Guarantee Chain: Evidence from Court Enforcement in China, Working Paper. Peking University.

Lu, H., H. Pan, C. Zhang, 2015. Political Connectedness and Court Outcomes: Evidence from Chinese Corporate Lawsuits. *Journal of Law and Economics* 58 (4), 829–861.

Murphy, D., R. Shrieves and S. Tibbs, 2009. Understanding the Penalties Associated with Corporate Misconduct: An Empirical Examination of Earnings and Risk. *Journal of Financial and Quantitative Analysis* 44 (1), 55-83.

Petersen, M.A., Rajan, R.G., 1994. The Benefits of Lending Relationships: Evidence from Small Business Data. *Journal of Finance*, 49, 3–37.

Raghu, T., W. Woo, S. Mohan, and H. Rao, 2008. Market Reaction to Patent Infringement Litigations in the Information Technology Industry. *Information Systems Frontiers* 10 (1), 61–75.

Ray, J.R., A. Shleifer, R. Vishny, 1996. Towards a Theory of Legal Reform. *European Economic Review* 40, 559–567.

Spatt, Chester S, 1985. Risky Debt, Investment Incentives, and Reputation in a Sequential Equilibrium: discussion. *Journal of Finance* 40(3), 878-880.

Wu, W., M. Firth, O. Rui, 2014. Trust and the Provision of Trade Credit. *Journal of Banking & Finance* 39, 146–159.

Zou, H., S. Wong, C. Shum, J. Xiong, and J. Yan 2008. Controlling-Minority Shareholder Incentive Conflicts and Directors' and Officers' Liability Insurance: Evidence from China', *Journal of Banking & Finance* 32: 2636-264.

**Table 1: Summary Statistics**

This table reports summary statistics for the loan sample employed in the analysis as well as the lawsuit distribution. The loan-level dataset consists of 2802 loan. Out of the loans, 902 loans are issued by the listed firm with lawsuits and 1900 loans are issued by the listed firms without lawsuits. New debt issued by financial firms and utilities are excluded. The matched loan sample is of 902 treated loans and 902 control loans that are defined by one-to-one propensity score matching algorithm based on firm characteristics including firm size, firm age, tangibility, leverage, profitability. Panel A and B reports the summary statistics of loan characteristics and borrower characteristics, respectively. Panel C reports the characteristics of loans and borrowers by treated (litigated) and control (non-litigated) group of the matched sample. Standard deviations are in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively. Panel D reports the distribution of lawsuits that borrowers are involved in by SOEs and non-SOEs. Definitions of all the variables are provided in the Table A-1 of the Appendix.

**Panel A: Loan characteristics**

|  | Obs | Mean | Std. Dev. | Min | Median | Max |
|---|---|---|---|---|---|---|
| Loan yield (%) | 2,802 | 8.965 | 3.040 | 0.675 | 8.500 | 16.070 |
| Loan spread (%) | 2,802 | 2.794 | 3.023 | -5.010 | 2.345 | 9.915 |
| Collateral | 2,802 | 0.541 | 0.498 | 0.000 | 1.000 | 1.000 |
| Maturity (year) | 2,631 | 1.594 | 1.503 | 0.083 | 1.000 | 20.000 |
| Loan amount (mn RMB) | 2,651 | 204 | 559 | 2 | 100 | 10,000 |

**Panel B: Borrower characteristics**

|  | Obs | Mean | Std. Dev. | Min | Median | Max |
|---|---|---|---|---|---|---|
| Total asset (mn RMB) | 2,802 | 8,380 | 8,760 | 187 | 9,310 | 296,000 |
| Tangibility (%) | 2,802 | 13.486 | 19.926 | 0.075 | 2.333 | 88.464 |
| Profitability (%) | 2,802 | 2.767 | 7.832 | -83.045 | 2.432 | 39.990 |
| Leverage (%) | 2,802 | 73.130 | 18.541 | 0.712 | 79.342 | 98.208 |
| Firm age(years) | 2,802 | 18.383 | 4.117 | 5 | 19 | 34 |

**Panel C: Loan and borrower characteristics by group: matched sample**

|  | Treated Firms | | Control Firms | | Difference |
|---|---|---|---|---|---|
| Loan yield | 9.191 | 902 | 7.098 | 902 | 2.092*** |
|  | (0.102) |  | (0.087) |  | (0.135) |
| Loan spread | 3.065 | 902 | 0.862 | 902 | 2.202*** |
|  | (0.086) |  | (0.101) |  | (0.071) |
| Collateral | 0.675 | 902 | 0.404 | 902 | 0.271*** |
|  | (0.015) |  | (0.016) |  | (0.022) |
| Maturity (year) | 1.902 | 849 | 1.567 | 849 | 0.334*** |
|  | (1.473) |  | (1.582) |  | (0.074) |
| Loan amount | 261.20 | 849 | 206.00 | 849 | 55.20* |
|  | (231.00) |  | (224.00) |  | (32.1) |
| Firm size | 22.483 | 902 | 21.999 | 902 | 0.483*** |
|  | (0.035) |  | (0.034) |  | (0.049) |
| Firm age | 18.414 | 902 | 15.922 | 902 | 2.491*** |
|  | (0.122) |  | (0.156) |  | (0.198) |
| Leverage (%) | 69.486 | 902 | 58.507 | 902 | 10.978*** |
|  | (0.527) |  | (0.690) |  | (0.868) |
| Profitability (%) | 2.023 | 902 | 2.601 | 902 | -0.577** |
|  | (1.596) |  | (0.003) |  | (0.298) |
| Tangibility (%) | 10.338 | 902 | 22.573 | 902 | -12.234*** |
|  | (0.541) |  | (0.732) |  | (0.910) |

**Panel D: Lawsuits distribution**

| | SOE | | | non-SOE | | | Total |
|---|---|---|---|---|---|---|---|
| Suit type | Plaintiff | Defendant | P/D ratio | Plaintiff | Defendant | P/D ratio | |
| 1 | 15 | 103 | 14.56% | 3 | 138 | 2.17% | 259 |
| 2 | 58 | 91 | 63.74% | 41 | 107 | 38.32% | 297 |
| 3 | 72 | 80 | 90.00% | 34 | 78 | 43.59% | 264 |
| Total | **145** | **274** | **52.92%** | **78** | **323** | **24.15%** | **820** |

**Table 2: Effects of litigation on loan spreads**

This table reports the regression results estimating the effects of litigation on loan spreads. *Treated Debt* equals 1 if the debt is issued by a firm involved in private litigation previously and 0 otherwise. The matched sample is defined by one-to-one propensity score matching algorithm based on borrower characteristics including firm size, firm age, leverage, profitability and tangibility. Tightening periods are defined as the periods when the PBC increase the reserve requirement ratios (RRRs), or kept the RRRs unchanged above the mean level in our sample period; Easing periods are defined as those when the PBC cut the RRRs or kept the RRRs unchanged below the mean level in our sample period. The sample of same litigated borrowers represents for a sample of loans issued by the same litigated firms both before and after the litigation. All the other variables are defined in Appendix Table A.1. Robust standard deviations are in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| | Dep Var: Loan spreads | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | *Full sample* | | *Matched sample* | | *Easing* | *Tightening* | *Same litigated borrowers* | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Treated Debt | 0.422*** | 0.390*** | 0.289** | 0.201* | 0.145 | 0.325** | 0.692*** | 0.315* |
| | (0.118) | (0.119) | (0.133) | (0.105) | (0.230) | (0.161) | (0.185) | (0.183) |
| SOE | 0.164 | 0.0797 | -0.398*** | -0.263** | -1.224*** | 0.170 | -0.808*** | -1.084*** |
| | (0.118) | (0.120) | (0.131) | (0.132) | (0.288) | (0.133) | (0.224) | (0.221) |
| Collateral | 0.522*** | 0.835*** | 0.549*** | 0.845*** | 0.327** | 0.907*** | 1.022*** | -0.149 |
| | (0.0898) | (0.0943) | (0.131) | (0.144) | (0.173) | (0.163) | (0.264) | (0.313) |
| Log(maturity) | -0.0150 | -0.00719 | 0.192*** | 0.215*** | 0.397*** | 0.184* | 0.0327 | 0.120 |
| | (0.0602) | (0.0590) | (0.0742) | (0.0708) | (0.0955) | (0.0952) | (0.104) | (0.0980) |
| Log(loan_amt) | -0.232*** | -0.282*** | -0.385*** | -0.366*** | 0.0609 | -0.438*** | 0.331*** | 0.381*** |
| | (0.0352) | (0.0348) | (0.0474) | (0.0471) | (0.121) | (0.0494) | (0.0957) | (0.101) |
| Firmsize | | 0.157*** | | 0.0130 | -0.0892 | -0.0181 | | -0.939*** |
| | | (0.0527) | | (0.0691) | (0.152) | (0.0823) | | (0.159) |
| Firmage | | 0.835*** | | 0.534* | 0.329 | 1.207*** | | 0.160*** |
| | | (0.278) | | (0.314) | (0.496) | (0.349) | | (0.0247) |
| Leverage | | -0.000523 | | 0.0140*** | 0.00851 | -0.0000441 | | 0.0409*** |
| | | (0.00249) | | (0.00398) | (0.00683) | (0.00464) | | (0.00793) |
| Profitability | | -0.0682*** | | -0.0580*** | 1.088 | -10.70*** | | 0.0209 |
| | | (0.00652) | | (0.0124) | (1.823) | (1.348) | | (0.0180) |
| Tangibility | | -0.0185*** | | -0.00988** | 0.0305* | -0.0217*** | | -0.0400*** |
| | | (0.00424) | | (0.00473) | (0.0168) | (0.00499) | | (0.00615) |
| Cons. | 5.839*** | 2.000 | 8.742*** | 5.893*** | 1.341 | 7.322*** | -2.829 | 13.95*** |
| | (1.136) | (1.715) | (1.218) | (1.944) | (3.228) | (2.454) | (1.930) | (3.375) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Year FE | Y | Y | Y | Y | Y | Y | Y | Y |
| Industry FE | Y | Y | Y | Y | Y | Y | Y | Y |
| # of obs. | 2,514 | 2,514 | 1,598 | 1,598 | 516 | 1,082 | 562 | 562 |
| adj. R-sq | 0.620 | 0.652 | 0.537 | 0.562 | 0.631 | 0.637 | 0.541 | 0.617 |

**Table 3: Effects of litigation on loan spreads: the role of political connection**

This table reports the regression results examining the effects of litigation on loan spreads and the impact of political connections. Treated Debt equals 1 if the borrower is a firm involved in lawsuits previously and 0 otherwise. The matched sample is defined by one-to-one propensity score matching algorithm based on borrower characteristics including firm size, firm age, leverage, profitability and tangibility. Central SOE is defined as 1 if the borrower is an SOE controlled by the central government, and 0 otherwise; Local SOE is defined as 1 if the borrower is an SOE controlled by the local government, and 0 otherwise. All the other variables are defined in Appendix Table A.1. Robust standard deviations are in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| | Dep Var: Loan spread | | | |
| --- | --- | --- | --- | --- |
| | Full sample | | Matched sample | |
| | (1) | (2) | (3) | (4) |
| Treated Debt | 0.394** | 0.340* | 0.731*** | 0.523** |
| | (0.197) | (0.182) | (0.226) | (0.225) |
| Central SOE | -1.117*** | -0.959*** | -1.285*** | -0.983*** |
| | (0.202) | (0.213) | (0.210) | (0.216) |
| Local SOE | -0.457** | -0.321* | -0.567*** | -0.299 |
| | (0.194) | (0.197) | (0.205) | (0.204) |
| Treated Debt * Central SOE | -0.074 | -0.043 | -0.576** | -0.468* |
| | (0.248) | (0.242) | (0.272) | (0.268) |
| Treated Debt * Local SOE | 2.684*** | 1. 301*** | 1.093*** | 0.401 |
| | (0.248) | (0.244) | (0.291) | (0.285) |
| Collateral | 1.695*** | 1.347*** | 1.825*** | 1.445*** |
| | (0.096) | (0.093) | (0.133) | (0.132) |
| Log(Maturity) | -0.188** | -0.127* | -0.000 | 0.049 |
| | (0.075) | (0.068) | (0.090) | (0.084) |
| Log(loan_amt) | -0.163*** | -0.116*** | -0.185*** | -0.270*** |
| | (0.041) | (0.039) | (0.051) | (0.056) |
| Firm Controls | No | Yes | No | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| # of obs. | 2,514 | 2,514 | 1,598 | 1,598 |
| adj. R-sq | 0.508 | 0.598 | 0.408 | 0.486 |

**Table 4: Effects of litigation on loan spreads: plaintiffs or defendants**

This table reports the regression results examining the effects of litigation on loan spreads using the sample of defendants as borrowers. Defense is defined as 1 if the borrower is a defendant, or 0 otherwise. All the other variables are defined in Appendix Table A.1. Robust standard deviations are in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| | Dep. Var: Loan spreads | | | |
| --- | --- | --- | --- | --- |
| | (1) | (2) | (3) | (4) |
| Defense | 0.983*** | 0.141 | 0.629*** | 0.119 |
| | (0.177) | (0.360) | (0.175) | (0.376) |
| SOE | -0.547*** | -1.474*** | -0.634*** | -1.171*** |
| | (0.196) | (0.365) | (0.203) | (0.357) |
| Defense * SOE | | 1.295*** | | 0.792** |
| | | (0.404) | | (0.418) |
| Log(Indem_amt) | 0.095*** | 0.086*** | 0.099*** | 0.094*** |
| | (0.031) | (0.032) | (0.034) | (0.034) |
| Collateral | 2.556*** | 2.525*** | 1.517*** | 1.556*** |
| | (0.167) | (0.164) | (0.198) | (0.199) |
| Log(Maturity) | 0.046 | 0.045 | 0.092 | 0.088 |
| | (0.132) | (0.132) | (0.122) | (0.121) |
| Log(loan_amt) | -0.614*** | -0.562*** | -0.503*** | -0.466*** |
| | (0.059) | (0.062) | (0.061) | (0.065) |
| Firm Controls | No | No | Yes | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| # of obs. | 1,054 | 1,054 | 1,054 | 1,054 |
| adj. R-sq | 0.453 | 0.460 | 0.565 | 0.568 |

**Table 5: Effects of litigation on loan spreads: The role of repeated relationship**

This table reports the regression results examining the effects of litigation on loan spreads and the impact of repeated relationship. Treated Debt equals 1 if the borrower is a firm involved in lawsuits previously and 0 otherwise. L_relationship is defined as 1 if the borrower and lender are in a long-term cooperative contract, and 0 otherwise. All the other variables are defined in Appendix Table A.1. Robust standard deviations are in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10%  level, respectively.

| | Dep. Var: Loan spreads | | | |
| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| L_relationship | 0.0188 | 0.209* | -0.0752 | 0.142 |
| | (0.100) | (0.105) | (0.0962) | (0.100) |
| Treated Debt | 0.422*** | 0.670*** | 0.392*** | 0.693*** |
| | (0.118) | (0.130) | (0.119) | (0.130) |
| L_relationship* Treated Debt | | -1.063*** | | -1.273*** |
| | | (0.161) | | (0.146) |
| SOE | 0.163 | 0.183 | 0.0842 | 0.107 |
| | (0.118) | (0.118) | (0.122) | (0.120) |
| Collateral | 0.523*** | 0.517*** | 0.832*** | 0.827*** |
| | (0.0900) | (0.0896) | (0.0943) | (0.0938) |
| Log(Maturity) | -0.0164 | 0.0272 | -0.00156 | 0.0519 |
| | (0.0620) | (0.0630) | (0.0606) | (0.0611) |
| Log(Loan_amt) | -0.231*** | -0.217*** | -0.285*** | -0.274*** |
| | (0.0353) | (0.0348) | (0.0346) | (0.0340) |
| Firm Controls | No | No | Yes | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| # of obs. | 2,514 | 2,514 | 2,514 | 2,514 |
| adj. R-sq | 0.620 | 0.625 | 0.651 | 0.658 |

**Table 6: Effects of litigation on loan spreads: Loans from Banks vs. nonbank financial institutions**

This table reports the regression results examining the effects of litigation on loan spreads and the impact of political connections. Treated Debt equals 1 if the borrower is a firm involved in lawsuits previously and 0 otherwise. Lender bank is defined as 1 if the lender is a bank, or 0 otherwise (either trust companies or other financial entities). Lender Big4 is defined as 1 if the lender is a Big4 (ICBC, BOC, ABC, CCB), or 0 otherwise. All the other variables are defined in Appendix Table A.1. Robust standard deviations are in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| | Dep. Var: Loan spreads | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Lender bank | -0.520*** | | -0.300** | |
| | (0.149) | | (0.151) | |
| Treated Debt | 1.257*** | 0.684*** | 1.307*** | 0.671*** |
| | (0.168) | (0.136) | (0.167) | (0.139) |
| Lender bank * Treated Debt | -1.749*** | | -1.777*** | |
| | (0.193) | | (0.191) | |
| Lender Big4 | | -0.640*** | | -0.167 |
| | | (0.147) | | (0.171) |
| Lender Big4* Treated Debt | | -1.084*** | | -1.072*** |
| | | (0.205) | | (0.194) |
| SOE | -0.0984 | 0.123 | -0.135 | 0.0640 |
| | (0.108) | (0.114) | (0.112) | (0.118) |
| Collateral | 0.672*** | 0.730*** | 0.910*** | 0.927*** |
| | (0.0850) | (0.0932) | (0.0875) | (0.0936) |
| Log(Maturity) | 0.0359 | 0.0352 | 0.0281 | 0.0133 |
| | (0.0530) | (0.0619) | (0.0518) | (0.0605) |
| Log(Loan_amt) | -0.163*** | -0.243*** | -0.203*** | -0.271*** |
| | (0.0320) | (0.0342) | (0.0326) | (0.0341) |
| Firm Controls | No | No | Yes | Yes |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| # of obs. | 2,514 | 2,514 | 2,514 | 2,514 |
| adj. R-sq | 0.681 | 0.639 | 0.700 | 0.659 |

**Table 7: Effects of litigation on loan spreads: Instrumental variables**

This table reports the regression results examining the effects of litigation on loan spreads using instrumental variables (IVs), in order to solve the endogeneity concerns. The first IV used in column (1) and (2) is the number of law offices per 10k residents of the provinces where the borrowers are located; and the second IV used in column (3) and (4) is the number of law offices per 10k urban residents of the provinces where the borrowers are located. All the other variables are defined in Appendix Table A.1. Robust standard deviations are in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

| Dep. Var. | Treated Debt | Loan spreads | Treated Debt | Loan spreads |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Law_off_num | 0.142** | 2.440*** | | |
| | (0.0657) | (0.472) | | |
| Law_off_num urban | | | 0.121* | 1.771*** |
| | | | (0.0710) | (0.477) |
| SOE | 0.133*** | 0.0250 | 0.141*** | 0.0661 |
| | (0.0179) | (0.117) | (0.0178) | (0.118) |
| Collateral | 0.0443*** | 1.162*** | 0.0415*** | 1.108*** |
| | (0.0143) | (0.0923) | (0.0144) | (0.0945) |
| Firmsize | -0.00478 | 0.132** | -0.00566 | 0.164** |
| | (0.0103) | (0.0648) | (0.0102) | (0.0648) |
| Firmage | -0.0172 | 1.424*** | -0.0611 | 1.332*** |
| | (0.0460) | (0.268) | (0.0461) | (0.268) |
| Leverage | 0.00580*** | 0.0231*** | 0.00578*** | 0.0233*** |
| | (0.000596) | (0.00328) | (0.000598) | (0.00328) |
| Profitability | 0.00858*** | -0.0415*** | 0.0110*** | -0.0363*** |
| | (0.00137) | (0.00604) | (0.00131) | (0.00613) |
| Tangibility | -0.00562*** | -0.0477*** | -0.00689*** | -0.0511*** |
| | (0.000481) | (0.00231) | (0.000464) | (0.00238) |
| Cons. | -0.196 | -6.576*** | -0.0395 | -7.016*** |
| | (0.241) | (1.534) | (0.239) | (1.534) |
| Year FE | Y | Y | Y | Y |
| Industry FE | Y | Y | Y | Y |
| # of obs. | 2,616 | 2,616 | 2,584 | 2,584 |
| adj. R-sq | 0.466 | 0.550 | 0.487 | 0.542 |

# Appendix

**Table A.1**

| Variable | Definition |
|---|---|
| Log (Loan amt) | = the logarithm of issuance volume of loan. |
| Loan yield | = the yield of loan |
| Loan yield spread | = the difference between the loan yield and the matched benchmark lending rate |
| Log (maturity) | = the logarithm of the maturity of loans |
| Treated Debt | =1 if the borrower of the loan has been involved in lawsuits before loan initiation; 0 otherwise. |
| Collateral | =1 if the issue is based on collateral; 0 otherwise. |
| Firm size | = the logarithm of total assets. |
| Firm age | = the logarithm of the difference between the loan granting year and the firm's establishment year. |
| Profitability | = the ratio of net profit to total assets. |
| Leverage | = the ratio of total debt to total assets. |
| Tangibility | = the ratio of fixed assets to total assets. |
| SOE | = 1 if the firm is state-owned enterprise (SOE); 0 otherwise. |
| Central SOE | = 1 if the firm is central SOE; 0 otherwise. |
| Local SOE | = 1 if the firm is local SOE; 0 otherwise. |
| Defense | =1 if the firm is the defendant; 0 otherwise |
| Log (indem amt) | = the logarithm of the money amount of the plaintiff's claims. |
| Law_off num | =the number of law offices per 10 thousands residents in the province. |
| Law_off num urban | = the number of law offices per 10 thousands urban residents in the province. |
| L_relationship | =1 if the borrower and lender are in a long-term cooperative contract, 0 otherwise. |
| Lender bank | =1 if the lender is a bank; 0 otherwise. |
| Lender Big4 | =1 if the lender is a Big4 bank; 0 otherwise. |