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JEL classification: G32, G33, G21, K22, K40

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Short debt maturity is commonly viewed as an enforcement device when debt financing involves multiple creditors. We show that a more efficient bankruptcy system crowds out such needs and promotes long-term financing. By exploiting the staggered rollout of bankruptcy reforms, we find larger increases in bankruptcy cases and decreases in case duration when a city establishes its first bankruptcy tribunal. Furthermore, financially distressed firms file for bankruptcy earlier and preserve more assets for distribution. This shift in insolvency resolution primarily benefits creditors with longer maturities, thereby improving firms' access to long-term financing and increasing investment and employment.

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1 Introduction

Short debt maturity is commonly viewed as an enforcement device when debt financing involves multiple creditors. However, it also exposes firms to rollover risks and makes them more vulnerable to liquidity shocks. This maturity mismatch, i.e., long-term projects being financed by short-term debt, is particularly pronounced for firms in emerging economies, which often lack long-term capital (e.g., Acharya et al., 2011; World Bank, 2015). Understanding the driving forces behind the debt maturity structure is therefore crucial for promoting financial stability and economic growth.

In this paper, we provide new empirical evidence of the legal determinants of corporate debt maturity. We focus on the role of the bankruptcy institution as a vital form of legal infrastructure, which affects not only ex-post payoffs but also ex-ante financial contracting. While extensive literature has examined how legal institutions determine the structure of the financial system and corporate debt contracts,[1] few studies have empirically investigated local enforcement of bankruptcy law. Some recent papers have examined the impact of court reforms (Ponticelli and Alencar, 2016; Li et al., 2022; Hotchkiss et al., 2022). However, little attention has been given to the impact on corporate debt maturity, one of the most important nonprice terms in debt financing (Colla et al., 2020).

We fill this gap by making corporate debt maturity the centerpiece of our analysis. We ask whether improvement in bankruptcy efficiency has a distributional effect on creditors

[1] See, for example, the impact of legal origins (La Porta et al., 1997, 1998; Glaeser and Shleifer, 2002; La Porta et al., 2008), creditor protection (Aghion and Bolton, 1992; Djankov et al., 2007; von Thadden et al., 2010; Pezone, 2023), and contract enforcement (Djankov et al., 2008; MacLeod, 2007; Nunn, 2007; Favara et al., 2017; Bae and Goyal, 2009).

with different maturities. Figure 1 illustrates the vast differences in long-term debt ratios among listed firms across countries and hints at the connection between bankruptcy efficiency and corporate debt maturity. Long-term creditors benefit from a more efficient bankruptcy system for two reasons. First, financially distressed companies tend to initiate bankruptcy earlier under a more efficient regime, thus ameliorating the disadvantages that long-term creditors face in a maturity rat race (e.g., Brunnermeier and Oehmke, 2013). Second, long-term creditors benefit more from the higher liquidation value when firms enter the bankruptcy process, as the value of shorter-term debt depends less on the value of the firm (e.g., Diamond and He, 2014).

We empirically examine the causal relationship between bankruptcy efficiency and debt maturity via a difference-in-differences (DID) approach with exogenous variations in the timing of bankruptcy reforms. Specifically, we exploit the staggered introduction of bankruptcy tribunals across Chinese cities. Bankruptcy tribunals are judicial institutions that specialize in handling bankruptcy cases and are staffed with experienced legal professionals. As one of the most significant judicial reforms in China in recent years, the establishment of bankruptcy tribunals provides an excellent opportunity to empirically examine the impact of bankruptcy efficiency, as shown by Li and Ponticelli (2022) and Li et al. (2022). Notably, these bankruptcy tribunals are judicial infrastructures that cater to all types of bankruptcy cases and all filing parties, which distinguishes our paper from previous studies such as Visaria (2009) and Gopalan et al. (2016).

We first document that establishing bankruptcy tribunals improves bankruptcy efficiency and reduces bankruptcy costs, thereby influencing ex-ante debt contracts. We

use administrative information obtained from China's largest court judgment website to compile a comprehensive dataset containing 62,136 bankruptcy-related court documents between 2014 and 2021, which correspond to approximately 32,000 bankruptcy cases. This dataset substantially expands the scope of bankruptcy cases studied in Li and Ponticelli (2022). We find that establishing bankruptcy tribunals reduces the duration of bankruptcy cases by approximately 146 days, indicating that previous findings outlined in Li and Ponticelli (2022) apply to a wider range of bankruptcy cases. At the extensive margin, the number of bankruptcy cases doubles in cities in which bankruptcy tribunals are established, with the acceptance ratio increasing by 9 percentage points compared to cities in which no such tribunals have been established.

Next, we examine whether a more efficient bankruptcy system leads to an increase in corporate debt maturity. Our analysis sample consists of all nonfinancial firms listed in China's A-share stock market between 2008 and 2020. Specifically, a listed company experiences a 1.1-percentage-point increase in its long-term borrowing ratio (as a percentage of total assets) after the city in which it is located establishes a bankruptcy tribunal. This coefficient is statistically significant at the 95% confidence level and economically meaningful: given that the average fraction of long-term borrowings is 7%, a coefficient of 1.1% represents an increase of 16% in an average firm's long-term borrowing ratio.

To address potential endogeneity problems caused by omitted variables that affect both the establishment of bankruptcy tribunals and our outcome variables, we analyze the impact of local economic factors on court establishment and employ propensity score matching to ensure the robustness of our baseline results. The cross-sectional variation

in the establishment of bankruptcy tribunals is exogenous to the extent that the timing is driven mainly by political processes rather than by local economic conditions or the maturity structure of firms.

We further analyze the mechanisms that increase creditors' willingness to supply longer-term debt to firms in regions featuring higher levels of bankruptcy efficiency. Improvements in bankruptcy efficiency lead to changes in the resolution methods adopted by financially distressed firms. Firms facing financial difficulties tend to enter bankruptcy earlier, as evidenced by the Cox proportional hazard regression. This result suggests that bankruptcy, as a method of debt resolution, is more frequently utilized after the establishment of bankruptcy tribunals, thus providing more protection to long-term creditors.

One possibility that may weaken our argument is related to the payment schedule of debt contracts. By requesting frequent interest payments from borrowing firms, long-term creditors effectively shorten their debt maturity and, therefore, should not be affected by the improvement in bankruptcy efficiency. To investigate whether bankruptcy institution matters to long-term creditors, we manually collect payment schedules of bank loans for listed companies. Consistent with our hypothesis, we find that the majority of loans are repaid in a lump sum at the time of maturity rather than in installments.

Additionally, we find supporting evidence in the banking industry using balance sheet information of city commercial banks in China, which operate mainly within a city. The share of long-term loans extended by city commercial banks, which typically serve local businesses, increases significantly after a bankruptcy tribunal is established. This bank-side result aligns with our argument that improved bankruptcy efficiency enhances pro-

tection for long-term creditors, thereby promoting longer-term bank loans.

Regarding firms' financing costs, although we cannot obtain interest rate data at the loan level, we find that the establishment of bankruptcy tribunals reduces the overall interest expenses of enterprises, consistent with the narrative that bankruptcy tribunals are favorable for creditor protection. We do not find a significant impact of bankruptcy tribunals on the collateral structure of corporate debt. These findings indicate that the impact of improved bankruptcy efficiency on the debt maturity structure is not driven by changes in collateral requirements or the availability of guarantees.

Finally, we test the real impact of corporate debt maturity. After the establishment of the bankruptcy tribunal, the share of capital expenditure increases by 9.4% and the proportion of employees increases by 6.7%. Overall, our findings reveal that bankruptcy efficiency has a significantly positive and meaningful effect on firms' employment and investment activities.

Our research makes two main contributions to the literature at the intersection of law and finance. First, by collecting a comprehensive dataset of bankruptcy court documents in a large developing country, we provide novel evidence on the impact of bankruptcy efficiency improvements at the local court level. Cross-country analysis suggests that legal rights, especially creditor protection, are positively correlated with the proportion of long-term loans (Demirgüç-Kunt and Maksimovic, 1999; Giannetti, 2003; Qian and Strahan, 2007; Gupta et al., 2008; Bae and Goyal, 2009). However, few studies have examined the actual efficiency of bankruptcy (Djankov et al., 2008), particularly with regard to differences within a country. While our research is closely related to Li and Ponticelli (2022)

and Li et al. (2022) in exploiting the staggered rollout of bankruptcy reforms in China, our paper differs by focusing on nonprice aspects of corporate debt. Furthermore, we compile a new bankruptcy case dataset that offers substantially greater coverage. We show that many cases experience extended durations and elevated dismissal rates primarily due to insufficient court resources and that bankruptcy tribunals have markedly changed these dynamics.[2] Methodologically, our paper is connected to the growing literature that draw insights via textual analysis of court documents, such as Eckbo et al. (2023) on debtor-in-possession financing.

Second, we offer empirical insights into the legal determinants of corporate debt maturity by highlighting the role of bankruptcy in resolving tensions between short- and long-term creditors.[3] Insolvency resolution is significantly influenced by legal characteristics (Claessens and Klapper, 2005), and changes in insolvency resolution, in turn, have a significant impact on the credit market (Povel, 1999).[4] While previous studies have demonstrated the impact of bankruptcy costs (Bris et al., 2006), court congestion (Ponticelli and Alencar, 2016), and judicial bias (Gennaioli and Rossi, 2010), the impact on the debt maturity structure remains relatively underexplored.[5] Our paper empirically

[2]Our setting also echoes that of Visaria (2009) and Gopalan et al. (2016) on the establishment of new debt recovery tribunals (DRTs) in India. Whereas DRTs mainly benefit banks and financial institutions with claims larger than Rs. 1 million (Vig, 2013), the specialized tribunals in China are more inclusive and cater to all bankruptcy cases.

[3]Jackson (1986) recognizes bankruptcy as "a collective debt-collection device, and it deals with the rights of creditors." Hart (1995) defines that "bankruptcy is a situation in which existing claims are inconsistent."

[4]Furthermore, Gilson et al. (1990) study how the characteristics of a company's assets and liabilities affect the company's choice between private negotiation and bankruptcy proceedings. Claessens and Klapper (2005) examine how the legal provisions, judicial efficiency, and financial markets of various countries influence the use of bankruptcy proceedings. Djankov et al. (2008) use surveys to reveal the differences in the most common debt enforcement methods among different countries.

[5]Extensive theories have focused on corporate debt maturity. Prominently, Diamond (2004) propose a model explaining the correlation between low debt enforcement efficiency and the proportion of long-term funding, which is empirically tested in Gopalan et al. (2016). Povel (1999) note that an earlier bankruptcy application often allows a company to salvage more value. Milbradt and Oehmke (2015) examine the im-

demonstrates that bankruptcy tribunals accelerate the timing of bankruptcy application after a financial distress event, emphasizing the role of an efficient bankruptcy system in reducing dilution caused by "biased repayments" to short-term creditors.

The rest of the paper proceeds as follows. Section 2 details the institutional background. Section 3 describes the data. Section 4 presents our empirical methodology and the results of bankruptcy efficiency improvements. Section 5 examines the impact of bankruptcy tribunals on corporate debt maturity. Section 6 analyzes the real effects. We conclude the paper in Section 7.

2 Background and Theoretical Hypotheses

2.1 Bankruptcy Reforms in China

The modern corporate bankruptcy law in China was signed into law in August 2006 and became effective in June 2007.[6] As a set of groundbreaking legislation for China's market economy, this law specifies legal procedures for bankruptcy filings of liquidation and reorganization,[7] similar to Chapter 7 and Chapter 11 bankruptcy in the United States.

pact of the timing of bankruptcy on creditors with different maturities. Brunnermeier and Oehmke (2013) examine the "maturity rat race," in which the presence of short-term creditors undermines the expected returns of long-term creditors, thus leading to an equilibrium involving short-term debt. Additional studies on this topic include Diamond (1993, 2004); Milbradt and Oehmke (2015); Pimentel et al. (2018); Hu et al. (2021). Becker and Josephson (2016) use a model to indicate that the efficiency of bankruptcy law affects a company's choice between private negotiation and bankruptcy proceedings, thereby affecting the proportions of bank loans and bonds in the company's debt structure.

[6]The Enterprise Bankruptcy Law of the People's Republic of China was adopted at the 23rd Meeting of the Standing Committee of the Tenth National People's Congress and signed into law by the No.54 Order of the President in August 2006, https://english.www.gov.cn/services/doingbusiness/202102/24/content_WS6035f009c6d0719374af97ad.html.

[7]Article 2 of the bankruptcy law states that "[w]here an enterprise legal person cannot pay off his debts due, and his assets are not enough for paying off all the debts, or he lacks the ability to pay off his debts,

However, promulgating this bankruptcy law does not automatically lead to a more efficient bankruptcy system. While the law specifies a clear timetable for the acceptance of bankruptcy cases and the corresponding responsibilities of the courts, the capacity of local courts to implement these requirements effectively is constrained. For example, before the reform, bankruptcy cases were managed by traditional civil tribunals, where judges often lack the professional skills necessary to handle complicated bankruptcy cases, and the duration for bankruptcy cases can be as long as several years (Li et al., 2022). The notion of "learning by doing" also characterizes judges' ability to deal with bankruptcy cases (Iverson et al., 2023). Additionally, due to the rigid performance evaluation system biased toward quantity, judges in local courts tend to reject bankruptcy cases that often require a substantial workload.

To facilitate insolvency resolution, China has implemented bankruptcy judicial reform to improve efficiency. Notably, in June 2016, the SPC issued the Work Plan on Establishing Liquidation and Bankruptcy tribunals in Intermediate People's Courts, indicating that "(a certain list of) cities should set up bankruptcy tribunals." Unlike civil tribunals, bankruptcy tribunals are subgroups of courts that specialize in dealing with bankruptcy cases and organize professional judges to conduct expeditious trials of corporate cases. Hence, in cities with such specialized tribunals, bankruptcy cases are handled by expert legal professionals, leading to higher bankruptcy efficiency.[8]

the debts shall be liquidated according to the provisions of this Law. Where an enterprise legal person is under the circumstances specified in the preceding paragraph, or he has forfeited the ability to pay off his debts, he may undergo reorganization according to the provisions of this Law."

[8]For example, Zhuzhou, which is a mid-sized city in central China known for its manufacturing industry, established its first bankruptcy tribunal in 2022. The establishment of the bankruptcy tribunal marked a significant improvement, with trials becoming notably "efficient and professional" owing to the introduction of specialized personnel and a revised incentive structure. More information on Zhuzhou's bankruptcy reform can be found in a news article in Chinese (link). According to a series of reports from the Supreme

2.2 Hypothesis Development

We hypothesize that institutional efficiency is a key factor in creditors' insolvency resolution method. When a borrower is in financial distress, its creditors have several resolution methods: a private workout, compulsory debt enforcement, and bankruptcy procedures. Regarding legal options for addressing insolvency, creditors may initiate a lawsuit in court against the debt contract and, if this lawsuit is successful, they may request the enforcement of the contract. Alternatively, they can file for the firm's bankruptcy. In the legal literature, the first proceeding is commonly known as "compulsory enforcement proceedings", whereas the second is referred to as "bankruptcy proceedings." Bankruptcy tribunals significantly improve the judicial efficiency of processing bankruptcy cases, changing the relative payoffs of different insolvency resolution methods. Therefore, with more efficient enforcement of bankruptcy procedures, firms and creditors are more inclined to opt for bankruptcy processes.

Hypothesis 1 (Improvement in bankruptcy institution): Specialized tribunals improve bankruptcy efficiency, thereby decreasing the average duration of bankruptcy cases and increasing the number of bankruptcy filings accepted by a court.

Different resolution approaches to addressing financial distress have significantly different impacts on creditors, particularly those holding debts with different maturities. A key reason for these differences lies in the relationship between the timing of the bankruptcy procedure and the dynamics of the firm's preserved assets. Since many debts are paid bilaterally through private enforcement, a company's assets often experience a

Court, similar cases are increasingly common across China. See the reported effect of bankruptcy tribunals in China in this news article in Chinese (link).

rapid decline before bankruptcy. Delays in bankruptcy filing also entail opportunity costs due to inefficient utilization of firms' resources (Povel, 1999). Therefore, a financially distressed company preserves more assets if it enters bankruptcy earlier.

Hypothesis 2 (Insolvency resolution and preserved assets): Bankruptcy tribunals lead to earlier applications of bankruptcy proceedings for financially distressed firms and increase the preserved value of average bankruptcy cases.

Long-term debt is generally less favored by creditors because of higher levels of risk exposure and potential dilution by short-term creditors. In the absence of cross-default mechanisms, the risks associated with long-term debt are difficult to mitigate effectively, resulting in a supply of long-term loans that fall short of demand. Furthermore, compulsory enforcement usually distributes any property obtained among the participating creditors, with priority given to those who applied for enforcement first. Namely, short-term creditors benefit more than long-term creditors from debt enforcement before bankruptcy. However, if the creditor chooses the bankruptcy procedure, then all claims are distributed equally among all creditors (with the same seniority), regardless of the loan term.[9] Therefore, improvements in the efficiency of bankruptcy trials may provide better protection for long-term creditors.

Hypothesis 3 (Maturity structure of corporate debt): Bankruptcy tribunals lead to a higher long-term debt ratio among firms.

[9]For example, Giammarino (1989) indicates that "[b]ankruptcy law mitigates the common pool problem by imposing an automatic stay on all creditor actions when a bankruptcy petition is filed. Effectively, the stay protects the firm from creditor harassment and allows it full use of all assets, subject only to the supervision of a trustee, until a reorganization plan is formulated and ultimately confirmed by the courts."

3 Data and Descriptive Analysis

We compile a unique dataset from various sources to investigate the impact of bankruptcy efficiency improvements on corporate debt maturity. We present summary statistics in Table 1 and outline the different samples in Table A1.

3.1 Bankruptcy Tribunals

We manually gather data on all bankruptcy tribunals, including their founding year and location, from the official websites of local courts. We validate and supplement this information by browsing news articles via search engines. We identify 106 specialized bankruptcy judgment institutions, 97 of which are tribunals associated with a court and 9 of which are independent bankruptcy courts, which rank one level above tribunals.[10]

We define the timing of the city-level bankruptcy reform as the year when a city established its first prefecture-level bankruptcy tribunal. In total, there are 49 such reform policy shocks.[11] As shown in Figure 2, several batches of bankruptcy tribunal establishments have been established since 2013, with the most influential batch of bankruptcy tribunals established in 2016.

[10]Four cities implemented pilot bankruptcy courts before 2013, namely, Shenzhen in 1993, Luoyang in 2002, and Taiyuan and Baoji in 2008. We omit certain early-period policy experiments between 1993 and 2008 from our study because of their distinct characteristics (Wang et al., 2020). We also recheck our data via summary statistics from other studies, such as Li et al. (2022).

[11]There are both county-level and prefecture-city-level bankruptcy tribunals. China features approximately 330 cities at the prefecture level alongside more than 3,000 counties; each county is part of a prefecture-level city. Our study focuses on prefecture-level bankruptcy tribunals, as they predominantly handle bankruptcy cases involving publicly listed companies. All nine separate bankruptcy courts have been established in cities with existing tribunals. Therefore, we do not include bankruptcy courts as new policy shocks.

3.2 Corporate Bankruptcy Cases

To assess the impact of bankruptcy tribunals on judicial efficiency over bankruptcy cases, we compile a comprehensive dataset of corporate bankruptcy cases from China Judgment Online (CJO), an official website established by the Supreme People's Court (SPC) to disclose court documents.[12] Our sample period spans between 2014 and 2021, as the large-scale online publication of court judgment documents began in 2014. Owing to the mandatory disclosure requirements and the growth of China's market economy, our bankruptcy case database is, to the best of our knowledge, one of the largest existing databases concerning developing economies.[13]

Similar to the keyword search method adopted in previous studies (e.g., Eckbo et al., 2023), we download all bankruptcy documents from the CJO website by scraping cases containing a bankruptcy-related keyword. Since China's bankruptcy law stipulates that firms going bankrupt must be certified by the court, each bankrupt firm should correspond to at least one court judgment document. Specifically, based on the SPC's requirements regarding the format of bankruptcy legal documents, we define cases featuring judgment types such as "po" (bankruptcy), "poshen" (bankruptcy application), "pochu" (initial bankruptcy), and similar terms in case numbers as bankruptcy cases. We then consolidate multiple judgment documents of the same case based on the unique case number. We match firms with prefecture-level bankruptcy tribunals by their operating

[12] In 2013, the Provisions on the Publication of Judgment Documents by the People's Courts on the Internet required all judgment documents (except those involving sensitive issues such as state secrets and personal privacy) to be published on the CJO website starting from January 1, 2014.

[13] For the analysis of bankruptcy institutions in China, Li and Ponticelli (2022) utilizes data from the National Corporate Bankruptcy Information Disclosure Platform (NCBIDP), established in 2016 also by the SPC. Unlike the reorganization-serving role of the NCBIDP, the CJO offers broader coverage due to its mandatory disclosure requirements, as demonstrated by our extensive sample.

location. We obtain 62,136 court documents of bankruptcy cases. Our sample contains approximately 63.9% to 80.7% of all bankruptcy cases disclosed by the SPC, albeit with variations across different years.

We start with the application stage of bankruptcy cases, as it is the first and foremost step in all bankruptcy procedures.[14] We use textual analysis methods to identify variables from the judgment filings, including the name and location of the bankrupt firm, the filing party, the type of bankruptcy (liquidation or reorganization), whether the case was accepted or rejected, the court's judgment result and date, and the bankrupt firm's assets and liabilities. We then match 6,984 bankruptcy cases[15] with both beginning and ending files, thus allowing the case duration to be calculated accurately. To alleviate the problem of truncation, we use only the 3,646 cases with applications prior to 2019 for our analysis.

Panel A of Table 1 reports statistics from the application stage of the bankruptcy process. The average year of application is 2019, implying that most bankruptcy cases were filed after the bankruptcy reform. The average acceptance rate of bankruptcy cases is 83.7%, which is potentially driven by postreform efficiency improvement. For a subset of 4,138 cases for which we can extract asset and liability information, the mean asset-to-liability ratio is 0.567, implying a maximum recovery rate of 56.7% for creditors. The interquartile ranges from 0.203–0.867, indicating substantial differences in the levels of preserved assets among bankrupt firms.

[14]Each bankruptcy case proceeds through three stages: application, declaration, and conclusion. As shown in Figure A3, 32,721 cases are in the application stage, 9,161 cases in the declaration stage (important intermediate results ruled by courts, including the declaration of corporate liquidation or the status of corporate restructuring), 12,170 cases in the conclusion/closure stage (when no assets remain to be distributed), and 8,084 cases in other stages.

[15]The number of cases is smaller than the number of files because one case can have many files (including an application for bankruptcy and records of creditor meetings).

Panel B of Table 1 focuses on the closure stage of the bankruptcy process for cases filed in or before 2019. The average case duration is approximately 380 days, with a standard deviation of 368 days, thus reflecting considerable dispersion in the time required to resolve bankruptcy cases. The average conclusion year is 2018, with cases predominantly concluding between 2017 and 2019. The mean log of registered capital is 15.367.

We also extract types of applicants from 32,388 judgment documents related to the bankruptcy application stage. Figure A4 shows the changing trends in the number of applicants for bankruptcy cases from 2014 to 2021. The fraction of debtor-initiated applications has been steadily declining from approximately 41% in 2014 to 21% in 2021, whereas the fraction of various types of creditor-initiated applications, such as those initiated by banks, nonbank financial institutions, individual creditors, and other institutions, has been increasing. Creditors resort to bankruptcy procedures more frequently, potentially to prevent value-destroying acts by debtors, who may file to discharge debts.

3.3 Publicly Listed Firms

To delve deeper into the effect of bankruptcy tribunals on corporate debt maturity, we focus on listed firms given their data availability and comprehensiveness. Our sample comprises all A-share listed companies from the Chinese Stock Market & Accounting Research (CSMAR) database, which provides comprehensive financial statements and voluntarily disclosed information for all listed firms. This sample also allows us to identify whether a company is experiencing financial distress and to examine the time it takes for a firm to move from financial distress to filing for bankruptcy. Our sample period ranges

from 2008 to 2020, capturing the longest possible time frame following the global financial crisis and the revision of Chinese accounting standards.

We construct a balanced panel covering the period from 2008 to 2020, which includes 1,433 companies.[16] Our final sample consists of 1,277 companies.[17] Article 3 of the bankruptcy law specifies that a bankruptcy case shall be under the jurisdiction of the people's court "where the debtor resides." Hence, bankruptcy lawsuits are handled by courts in the bankrupt firms' operating location and are matched in our sample accordingly.

Debt maturity. We characterize a firm's debt maturity structure by the share of short- and long-term borrowings in its balance sheets. We focus on firms' borrowing from banks, thereby excluding bonds and trade credit due to their different natures.[18] According to the accounting principle, loans with a maturity longer (shorter) than one year are defined as long-term (short-term) debt. These definitions are consistent with the literature on debt maturity (e.g., Gopalan et al., 2016). Notably, long-term loans with remaining maturity of less than one year are recorded separately, thereby alleviating the concern that the change in short-term debt is affected by the change in long-term debt coming due.

Panel C of Table 1 summarizes the key financial ratios for these listed firms. Long-term and short-term debt, as a proportion of total assets, average 7.1% and 12.3%, respectively.

[16] We conduct robustness checks using an unbalanced panel that includes newly listed and delisted firms. As shown in Table A4, the sign and magnitude of the coefficients align closely with those in the baseline analysis, which was conducted using a balanced panel. That is, our main findings remain robust to adjustments to the firm sample.

[17] We exclude 35 companies housed within the financial industry. Additionally, we remove 106 companies located in cities where bankruptcy tribunals were established very early as policy experiments (e.g., Shenzhen in 1993, Luoyang in 2002, Taiyuan and Baoji in 2008), as these tribunals are significantly different from those subsequently established in other cities (Wang and Yang, 2021). We further remove 15 companies with significant data deficiencies.

[18] Including bonds would unnecessarily incorporate the collective action problem of bondholders, which is a core subject in Becker and Josephson (2016).

The mean of cash flows scaled by total assets is modest at 1.2%, with a high degree of variability (standard deviation = 8.3%). The EBIT-to-total-assets ratio averages 5%, whereas the EBIT-to-operating-income ratio displays a wide range, with a mean of 4.2 but a high standard deviation of 17, thus indicating substantial dispersion among firms. On average, fixed assets (cash or equivalents) account for 25.2% (14.4%) of total assets. The top 10 shareholder ratios exhibit a mean of 54%, suggesting concentrated ownership structures. The average capital expenditures ($Capex$) scaled by total assets is 5.6%, whereas the number of employees scaled by total assets averages 0.9%.

Panel D of Table 1 reports city-level macroeconomic variables, including the bankruptcy tribunal indicator, GDP per capita, the proportion of workers in the secondary industry, and the nonfarm population. Notably, only 23.2% of the cities in the sample have dedicated bankruptcy tribunals. The average log of GDP per capita is 2.03, with the nonfarm population averaging 5.66 in log terms.

3.3.1 Financial Distress and Bankruptcy

We identify a financially distressed firm-year observation as one warned of "special treatment (ST)" and with an Altman Z-score below the healthy line for two consecutive years (Fan et al., 2013). In our balanced panel, 196 listed companies had previously experienced financial difficulties, and 27 eventually filed for bankruptcy. To examine whether bankruptcy tribunals improve the asset-to-liability ratio of all bankrupt companies at the time of bankruptcy, we use a sample of all bankrupt listed firms. We download data on all listed companies that filed for bankruptcy during this period from CNINFO (cninfo.com),

excluding financial industries and the four early pilot cities, resulting in a sample of 69 companies as listed in Table A9.

By collecting the restructuring plans of listed companies in bankruptcy, we obtain estimates of the market value of various assets assessed by auditors at the time of bankruptcy, as well as the total liabilities declared by creditors. From these data, we calculate the expected recovery rate of the company. For the 69 listed firms that underwent bankruptcy, the mean asset-to-liability ratio is 12.546, with significant variability as indicated by a standard deviation of 18.297 and an interquartile ranging from 7.43 to 14.82.

4 Judicial Reform and Bankruptcy Efficiency

We first estimate the impact of bankruptcy tribunals on judicial efficiency using a purpose-built case-level dataset. We characterize local courts' efficiency in handling corporate bankruptcy cases in both intensive (i.e., the number of days between the acceptance and closure of a case $Duration_i$) and extensive margins (i.e., whether the bankruptcy application is accepted for firm i). The specification of our cross-sectional analysis is as follows:

$$Y_i = \alpha + \beta BankruptcyTribunal_{jt} + \gamma_t + \gamma_k + \eta X_{ijt-1} + \epsilon_i \tag{1}$$

Y_i denotes the outcome variable of interest. $BankruptcyTribunal_{jt}$ indicates whether city j has established a bankruptcy tribunal when the case was filed in court in year t. We include application-year fixed effects γ_t to account for the general trend of improving

judicial efficiency over time and industry fixed effects γ_k to absorb time-invariant industry characteristics. X_{ijt-1} represents a series of characteristics at the firm and city levels, including registered capital (natural log), firm age, GDP (natural log), population (natural log), fiscal revenue (natural log), and the ratio of the manufacturing industry in GDP.

4.1 Extensive Margin: Acceptance Ratio of Bankruptcy Cases

One salient feature of bankruptcy inefficiency in developing countries is that the court system, which often lacks the manpower and expertise necessary to handle these claims, rejects many eligible bankruptcy cases. We explore whether a bankruptcy case is more likely to be accepted in cities with bankruptcy tribunals than in those without such tribunals. Column (1) of Panel A of Table 2 shows that the acceptance ratio of bankruptcy cases increased by 19.4 percentage points after the establishment of bankruptcy tribunals. This estimate represents an economically significant impact given the sample mean of 83.7 percentage points. Columns (2) and (3) include a series of fixed effects (e.g., year of application, industry, and the city in which the firm is located) and control variables. Our results are robust to these modified specifications, indicating that these factors cannot fully explain our findings.

4.2 Intensive Margin: Duration of Bankruptcy Cases

Another common feature of an inefficient bankruptcy system is a slow-moving process, which may be due to court congestion and inexperienced judges. We then test whether

there is a reduction in bankruptcy case duration conditional on the acceptance of the application. As indicated in Panel B of Table 2, the duration of bankruptcy cases in court decreases significantly after the establishment of bankruptcy tribunals. In Column (1), we include application-year fixed effects. Since the sample mean is 379 days, a decrease of 141 days in case duration, as indicated by the regression coefficient, represents a substantial improvement in bankruptcy efficiency. We find consistent results in Columns (2) and (3), which also include industry fixed effects, firms' location city fixed effects, and control variables. Additionally, Figure A5 compares the unprocessed distribution of case durations. Evidently, the case duration is much shorter in cities with bankruptcy tribunals.

5 Bankruptcy Tribunals and Corporate Debt Maturity

5.1 Baseline Results

How does the improvement in bankruptcy efficiency affect corporate debt maturity? Similar to previous analyses, we use the following staggered DID specification:

$$Y_{it} = \alpha + \beta BankruptcyTribunal_{jt} + \eta X_{ijt-1} + \gamma_i + \gamma_{kt} + \epsilon_{it} \tag{2}$$

Y_{it} represents a series of outcome variables, including short-term and long-term borrowings (divided by assets) of firm i located in the prefecture-level city j in year t. $Tribunal_{jt}$ equals 1 if there is a specialized bankruptcy tribunal in city j in year t and zero otherwise. The coefficient of interest is β, which captures the changes in a firm's debt maturity be-

fore and after the tribunal was established. We include firm and year fixed effects, γ_i and γ_t, to control for time-invariant individual characteristics and macroeconomic trends, respectively. We also include industry-by-year fixed effects (γ_{kt}) to absorb confounding industry-specific shocks (e.g., changes in industry demand). X_{ijt-1} refers to firm- and city-level covariates lagged by one year, including cash flow/total assets, EBIT/total assets, EBIT/operating income, fixed assets/ total assets, the proportion of shares held by the largest 10 shareholders, per capita GDP (in natural logs), the ratio of the secondary industry in GDP, and the number of nonfarm workers (in natural logs).

Panel A of Table 3 provides the baseline results regarding the effect of bankruptcy tribunals on firms' long-term borrowings. Consistent with our hypothesis, Column (1) shows that the proportion of long-term borrowings in total borrowings increases by an additional 3.2 percentage points in cities with bankruptcy tribunals, indicating a shift toward longer maturities in the corporate borrowing structure. Column (2) changes the denominator to firms' total assets and further illustrates the substitution effect. The total long-term borrowings of listed companies (scaled by their total assets) increase by approximately 1.1 percentage points when a prefecture establishes its first bankruptcy tribunal. This estimate is also economically meaningful as the average ratio of long-term borrowings to assets is 7 percentage points, thereby translating into a 16% increase.

Column (3) examines the impact of bankruptcy tribunals on firms' short-term borrowings and shows a decrease of 0.7 percentage points. This result aligns with the anticipated negative substitution effect for short-term creditors, whose advantages in debt collection timing are weakened when firms enter bankruptcy. We note that this decrease in short-

term borrowing ratios is smaller than the increase in long-term borrowing ratios. Column (4) analyzes total borrowings as a ratio of total assets and shows a 0.48 increase, albeit statistically insignificant, indicating the aggregated improvement in creditor protection.

5.1.1 Pretrend Analysis

To examine the dynamic effects of the establishment of bankruptcy tribunals, we estimate the following regression specification:

$$Y_{it} = \alpha + \sum_{m=-5}^{5} \beta_m BankruptcyTribunal_{jt+m} + \eta X_{ijt-1} + \gamma_i + \gamma_{kt} + \epsilon_{it} \tag{3}$$

β_m with $m > 0$ captures the dynamic changes in firm i's debt maturity in m months since city j where the firm is located established its first bankruptcy tribunal. A negative value of the subscript m indicates m years before the establishment of such tribunals, and we expect β_m with $m < 0$ to be statistically indifferent from zero if our assumption of pre-reform parallel trends holds. Figure 3 illustrates the dynamic effects of bankruptcy tribunals on long-term borrowings. The magnitude of the coefficients before the bankruptcy reform is indistinguishable from zero. Consistent with the regression results, the coefficients after the reform are significant and persist for several years.

5.1.2 Endogeneity Issues

The main concern regarding our DID specification is that the introduction of bankruptcy tribunals may be correlated with confounding factors that may also influence our outcome variables. For example, local economic conditions may affect both the timing of

establishing bankruptcy tribunals and local firms' debt maturity structure.

To address this issue, we estimate a linear probability model to explore the determinants of the establishment of bankruptcy tribunals. As shown in Table A2, we regress the bankruptcy tribunal dummy on a series of prefecture-level economic characteristics. We find that the majority of these variables do not predict the introduction of bankruptcy tribunals, although the total credit scaled by GDP shows a weak correlation. We then include these observable city-level characteristics factors as covariates and find consistent results. This test provides supporting evidence that the establishment timing of bankruptcy courts in different cities is influenced primarily by political and judicial factors, rather than the financial state of local firms.

Matching. We further employ a propensity score matching (PSM) method to ensure comparability among different cities. In our balance test, we observe systematic differences between firms in cities with and without bankruptcy tribunals, particularly in size, leverage, and profitability. We begin by conducting a probit regression analysis to estimate the likelihood of a company being located within the prefecture with bankruptcy tribunals. We use the pre-reform average of total assets, total liability, retained earnings, interest expense, ROA, and ROE to predict the probability (i.e., the propensity score) using a nearest-neighbor matching method. Table A3 shows that the differences become statistically insignificant after matching. We then estimate the treatment effect by reweighing Equation 2 where treatment units have a weight of one, and control units are weighted by the number of times they are matched to a treatment unit. Our PSM-DID estimates in Panel B of Table 3 show consistent results, indicating that our baseline findings are not

driven by preexisting observable differences between the treatment and control groups.[19]

Robustness of multiperiod DID. Recent studies have indicated that in multiperiod DID settings with varying policy implementation times, using a two-way fixed-effects model could lead to biased estimates (Goodman-Bacon, 2021; Callaway and SantAnna, 2021).[20] We split the baseline coefficient into the weight differences between the two group types. Figure A7 illustrates that the primary outcome is largely influenced by the disparity between the never-treated group and the timing group (with a weight of 0.81). Consequently, our baseline regression is subject to minimal impact from the estimation bias of the two-way fixed-effects model.

Alternative samples. Our main analysis uses a balanced panel that excludes newly listed and delisted firms. To demonstrate that our results are not driven by this sample filter, we rerun our analysis on an unbalanced sample. Panel A of Table A4 shows that the coefficients closely align with those in the baseline results. Panel B of Table A4 restricts our sample to observations before 2017 and reveals similar results, indicating that our findings are not driven by confounding policies after 2017.

[19] Figure A6 illustrates the dynamic effect of bankruptcy tribunals on firms' long-term borrowings scaled by total assets, which is also similar to the dynamic effect in Figure 3.

[20] For example, Goodman-Bacon (2021) indicate that the timing groups (i.e., groups that receive the treatment sometime) are "bad" control groups, whereas the never-treated groups (i.e., groups that never received treatment during the sample period) are "good" control groups. In this paper, the term "timing groups" refers to prefectures that had established bankruptcy tribunals by the end of our sample period.

5.2 Mechanism Analysis

5.2.1 Financial Distress and Insolvency Resolution

Next, we examine whether bankruptcy tribunals affect the timing of bankruptcy filings. Given the absorbing nature of bankruptcy status, we use the Cox proportional-hazards regression model with the following setup:

$$h(it) = h_0(t) \exp(\alpha + \beta BankruptcyTribunal_{jt} + \eta Z_{it-1} + \epsilon_{it}) \tag{4}$$

Our sample includes publicly listed companies that have experienced financial distress, which are defined as companies that have been warned of "special treatment" for two continuous years and with an Altman Z score (Altman, 1984) below the healthy threshold. t represents the time relative to the year of financial distress occurrence. $h(it)$ denotes the risk ratio for firm i in year t, representing the instantaneous probability of bankruptcy in that year since the company has not gone bankrupt before year t.

Our coefficient of interest is β, which indicates the effect of establishing a bankruptcy tribunal on the likelihood of companies/creditors applying for bankruptcy. Figure A8 shows that in regions with bankruptcy tribunals, publicly listed companies facing financial distress enter bankruptcy proceedings more rapidly, with the majority applying for bankruptcy within two years of experiencing financial distress. Table 4 reports a positive coefficient of 2.2, indicating that a financially distressed firm is more likely to file bankruptcy after the establishment of bankruptcy tribunals.

5.2.2 Asset Preservation

The timing of bankruptcy is crucial for preserving assets for creditors, especially those who possess unmatured claims. When a company faces financial distress, creditors associated with mature debts typically enforce their claims, thus leaving few assets for other creditors. Therefore, long-term creditors are more likely to become in-bankruptcy creditors. This unequal division of assets among different creditors creates the *de facto* seniority of short-term debt claims.

We find this effect to be pronounced in the Chinese system. Figure A9 shows a significant decrease in the share of short-term debt (more than 10% over five years) when a firm approaches bankruptcy. As short-term loans mature and are repaid, fewer assets are left for long-term creditors, who are more likely to be involved in bankruptcy proceedings than short-term creditors are. Table A5 provides further support for this argument, showing that the ratio of long-term loans is significantly higher during bankruptcy periods than during nonbankruptcy periods. This finding indicates that long-term creditors are statistically more likely to be involved in the bankruptcy process, whereas short-term creditors are more likely to be repaid before bankruptcy.

We then explore the relationship between bankruptcy efficiency and the asset-liability ratios of bankrupt listed companies. We replace the outcome variable in Equation 1 with each bankrupt firm's asset-to-liability ratio. Table A6 shows that bankrupt firms' asset-to-liability ratios, as declared by creditors, are 12.52 percentage points greater in cities with bankruptcy tribunals. This effect is economically important since the sample average is only 12.54 percentage points. Consequently, when a company files for bankruptcy,

more assets are left for distribution among creditors associated with unmatured debt. Due to the relatively small sample size, we do not observe statistically significant results. However, our findings are consistent with those of previous studies and indicate higher expected recovery rates for creditors after bankruptcy reform, which benefits long-term creditors more.

5.2.3 Payment Schedule

An important legal characteristic of bankruptcy law is that "at the moment when bankruptcy proceedings commence, all debts, regardless of maturity, are treated as mature." However, if long-term loans require partial payments before reaching maturity, then a firm's failure to make these payments triggers immediate default, thereby effectively shortening the debt maturity without leading to bankruptcy. To address this issue, we collect repayment schedules for listed companies' loans by downloading firms' announcements to disclose repayment schedules for bank loans from CSMAR. While only a few borrowing announcements disclose repayment schedules, we find that conditional on releasing the payment schedule information, most firms are structured to repay the full principal at maturity, while only a small fraction of firms repay the principal in installments.

5.2.4 Bank-Level Evidence

How do banks respond to bankruptcy reform? Given no loan-level data are publicly available in China, we manage to provide some evidence at the bank level. Given that many commercial banks operate across cities and do not disclose branch-level informa-

tion, we focus on the loan structure of city commercial banks (CCBs), which, by regulation, are required to conduct business mainly within their registered city. We use a similar regression specification to our baseline analysis:

$$Y_{bt} = \alpha + \beta BankruptcyTribunal_{jt} + \eta X_{bt-1} + Z\theta_t + \gamma_b + \gamma_{kt} + \epsilon_{bt} \tag{5}$$

where Y_{bt} represents the amount of long-term loans scaled by the total assets of bank b operating in prefecture-level city j in year t. Table 5 presents the results for the bank-level data. Column (1) shows the results of the base specification with bank (γ_b) and industry-by-year (γ_{kt}) fixed effects. Column (2) adds bank-level covariates, including total assets (in natural logs), nonperforming loan ratio, loan-to-deposit ratio, net profit, and total operating income. Column (3) adds city-level variables. We find that the long-term loan share increased by approximately 6 points after the introduction of bankruptcy tribunals. Considering that long-term loans account for 35% of the total assets of city commercial banks, this increase is also economically significant.

6 Further Analysis

6.1 Other Debt Characteristics

Collateral and guarantee structure. One alternative hypothesis is that long-term loans are more frequently secured than are short-term loans and that establishing bankruptcy courts makes it easier to enforce collateral, thus benefiting long-term loans. Similarly,

long-term loans are more likely to be guaranteed by others.[21] To test this hypothesis, we rerun our baseline regressions on the collateral and guarantee structures of listed companies. As shown in Table A7, however, we do not find statistically significant changes in the ratios of collateralized or guaranteed loans.

Interest expenditures. If bankruptcy tribunals benefit the overall expected recovery rate and the speed of recovery for creditors, then creditors will be more willing to issue debt at a lower price on the margin. Table 6 shows the results of regressing the introduction of bankruptcy tribunals in city j on the total interest expenditure of firm i located in city j. The total interest expenditure decreases by 0.511 percentage points on average, which translates into approximately 10% of the sample mean of 5.98 percentage points.

6.2 Real Impact

Corporate investment. After the establishment of bankruptcy courts, the proportion of long-term financing increases, thus enabling companies to match the maturities of their assets and liabilities. To test this maturity-matching hypothesis (Morris, 1976), we collect annual capital expenditures from the CSMAR database. On average, the annual capital expenditures is 707 million RMB. To ensure consistency with our baseline regression and improve the comparability of dependent variables, we scale capital expenditures by total assets.

Table 7 presents the results of the effect of the bankruptcy tribunal on capital expendi-

[21] A loan guaranteed by another person, which is often referred to as a cosigned loan or guaranteed loan, involves an additional party who agrees to take on the responsibility of repaying the loan if the primary borrower defaults. This guarantor typically has a strong credit history and financial stability, providing the lender with added assurance that the loan will be repaid.

tures. Column (1) shows that the share of capital expenditures increases by 0.47 percentage points. Given that the average value was only 5.5 percentage points, this increase has significant economic implications. Column (2) indicates that the results are unchanged after controlling for firm- and city-level covariates. Our results echo those reported in previous studies highlighting the maturity-matching principle of firms' maturity choice (Morris, 1976) and that a well-functioning bankruptcy law encourages investment and innovation in firms (Hoshi et al., 1990; Acharya and Subramanian, 2009).

Employment. A crucial welfare analysis involves an assessment of the benefits of judicial reforms to the labor market. According to Pezone (2023), reforms that ease financial constraints on corporations can substantially increase the scale of corporate employment. We collect annual employment data from the CSMAR database for our sample firms to investigate the impact on human capital. On average, the firms employ 5,983 people.

Columns (3) and (4) of Table 7 present the impact of bankruptcy tribunals on employment. We scale the number of employees by total assets to control for firm size. Column (3) indicates an increase in employment of 0.0792 percentage points. Given that the average employment rate was only 0.896 percentage points, this increase is economically substantial. Column (4) shows consistent results when accounting for covariates at the firm and the city level. Our results remain largely unchanged when the logarithm of total employment is used. These findings indicate that the increase in debt maturity through the bankruptcy tribunal also supports an increase in the scale of corporate employment, supporting the complementarity between capital and labor.

7 Conclusion

While bilateral debt enforcement mechanisms are relatively well-established in many developing countries, the construction of bankruptcy systems involving multiple creditors often lags behind (Tang, 2008). This imbalance may encourage creditors to prefer enforcement procedures over bankruptcy proceedings upon debt maturity, thus leading to a scramble for assets and causing "short-termism" of corporate debt if creditors rationally expect this consequence (Milbradt and Oehmke, 2015). How does bankruptcy efficiency affect corporate debt maturity? Using a manually compiled dataset containing more than 32,000 bankruptcy cases alongside a sample of 1,277 publicly listed companies, we present new empirical findings at the local court level by exploiting the phased implementation of bankruptcy reforms across various Chinese cities.

We show that the establishment of a specialized bankruptcy tribunal significantly improves bankruptcy efficiency, as evidenced by reduced case duration and increased acceptance of bankruptcy filings. This judicial improvement shifts corporate debt structures toward longer maturities, with the proportion of long-term loans increasing significantly in regions with such specialized bankruptcy tribunals. Financially distressed companies are more likely to initiate bankruptcy proceedings earlier, resulting in higher liquidation values and thus benefiting long-term creditors. Our findings of economic benefits, such as increased capital expenditures and employment levels, offer insights into the broader impact of a more efficient legal framework.

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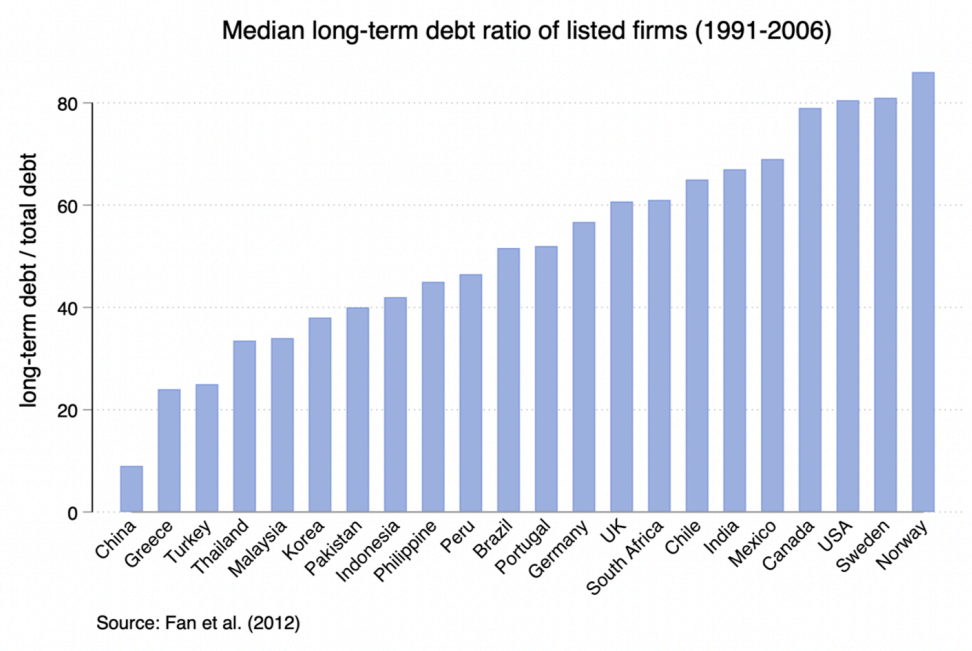
FIGURE 1: BANKRUPTCY EFFICIENCY AND CORPORATE DEBT MATURITY: CROSS-COUNTRY EVIDENCE

Note: This figure illustrates the cross-country differences in corporate debt maturity in 2012 (upper panel) and the relationship between bankruptcy efficiency and the long-term debt ratio of listed firms across 31 countries in 2019 (lower panel). Debt maturity is the median ratio of long-term debt (i.e., debt with a maturity longer than one year) over the total debt of listed firms across various countries between 1991 and 2006 (Fan et al., 2012). The efficiency of a country's bankruptcy process is measured in terms of the reciprocal of the average duration of bankruptcy proceedings from the World Bank database.



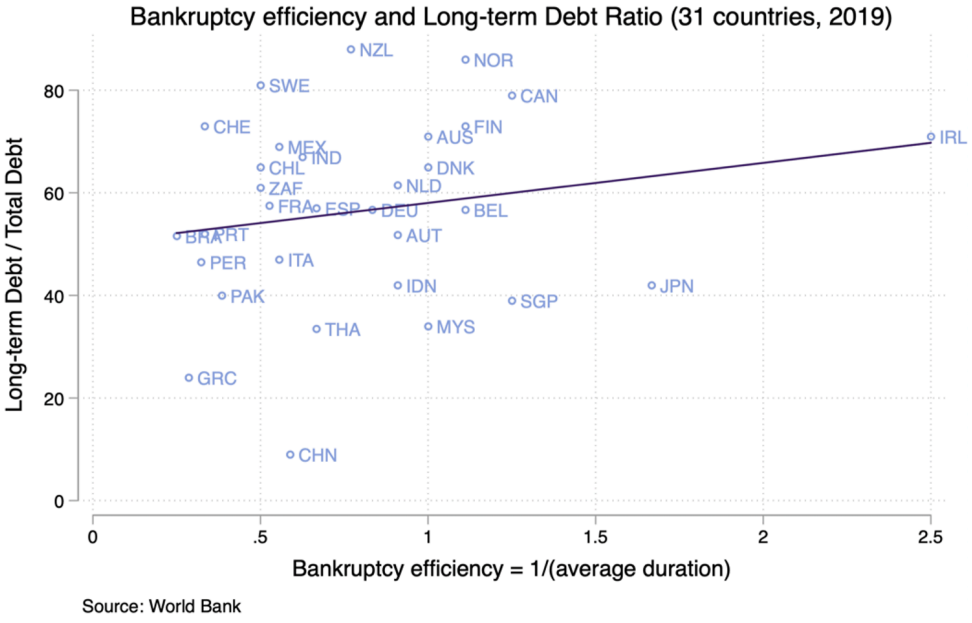


FIGURE 2: TIMELINE OF BANKRUPTCY TRIBUNAL ESTABLISHMENTS

Note: This figure presents the number of new bankruptcy tribunals introduced each year (upper panel) alongside the percentage of listed firms in a prefecture with bankruptcy tribunals (lower panel) using the authors' manually collected data. We count only the first specialized bankruptcy tribunal in each prefecture-level city.

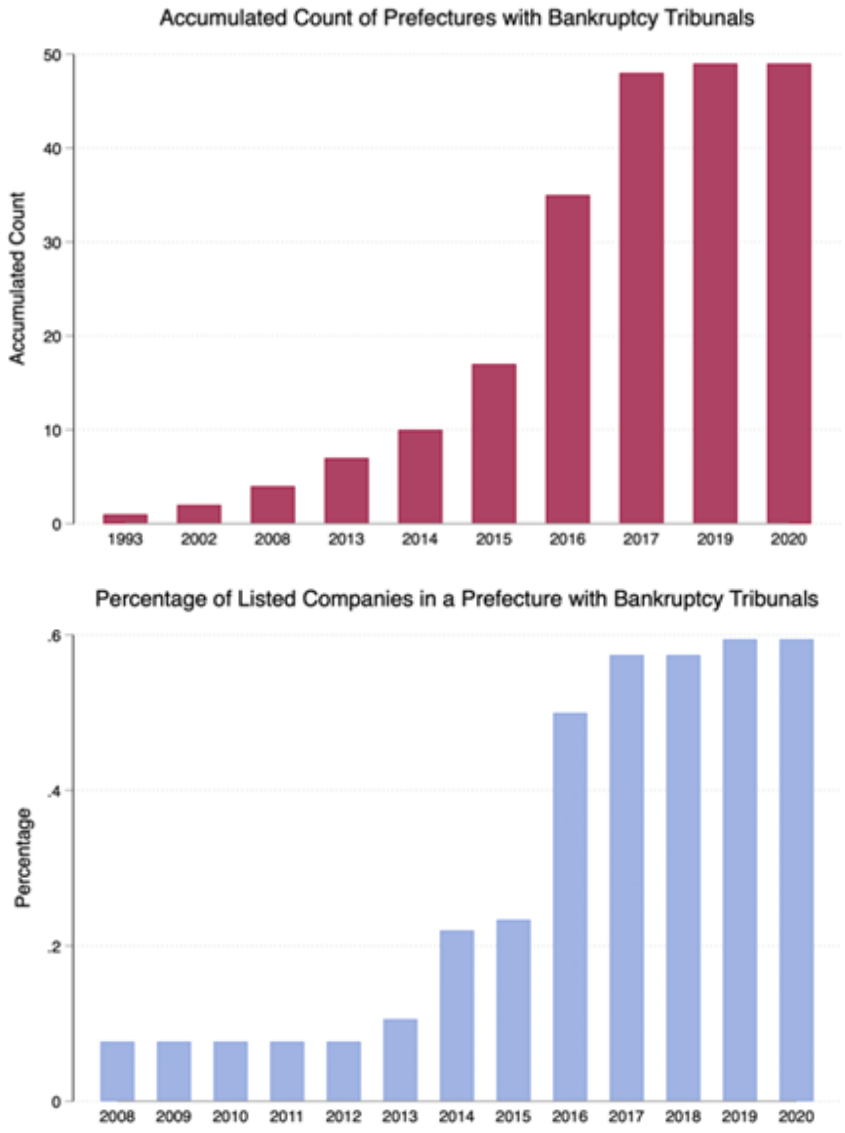


FIGURE 3: DYNAMIC EFFECTS ON CORPORATE DEBT MATURITY

Note: This figure plots regression coefficients using the following dynamic regression specification:

$$Y_{it} = \alpha + \sum_{m=-5}^{5} \beta_m BankruptcyTribunal_{jt+m} + \eta X_{ijt-1} + \gamma_i + \gamma_{kt} + \epsilon_{it}$$

where β_m captures the dynamic changes in firm i's debt maturity in m months since its location city j establishing the first bankruptcy tribunal. We regress firms' long-term loans/total assets on the bankruptcy tribunal indicator $BankruptcyTribunal_{jt}$ in firms' location city j in year t and other control variables, such as cash flow/total assets, EBIT/total assets, and EBIT/operating income. City-level control variables include the natural logarithm of per capita GDP, the proportion of output in the secondary industry, and the natural logarithm of the number of non-agricultural labor force. EBIT = Earnings Before Interest and Tax. Standard errors are clustered at the prefecture-level city level. We present 95% confidence intervals.

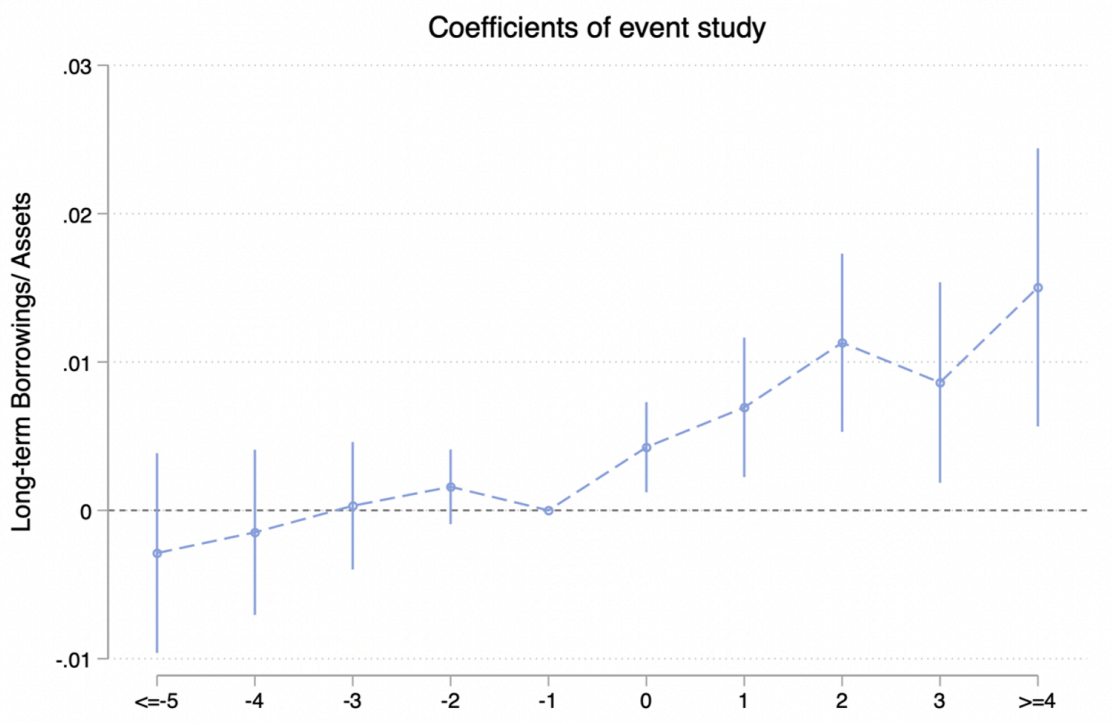


TABLE 1: SUMMARY STATISTICS

Note: This table presents summary statistics of bankruptcy cases between 2014 and 2021 and listed firms in China between 2008 and 2019. We match 6,984 out of 62,136 bankruptcy files with both beginning and ending files to produce an accurate calculation of the case duration, i.e., the number of days between the acceptance of the case by the court and case closure. For bankruptcy application analysis, our sample is restricted to 32,388 application cases before 2021. For case duration analysis, our sample is restricted to 3,780 cases closed as of December 2019. $EBIT$ is earnings before interest and taxes. Bank loans and total assets are obtained from firms' balance sheets. Cash flow, EBIT, and operating income are obtained from firms cash flow and income statements.

	N	Mean	S.D.	p25	p50	p75
Panel A: Bankruptcy Applications						
1(Acceptance)	32388	0.837	0.369	1	1	1
Year of case acceptance	32388	2018.953	1.591	2018	2019	2020
Log(Registered capital)	32388	16.512	1.727	15.425	17.129	17.562
Asset/Liability	4138	0.567	0.406	0.203	0.568	0.867
Panel B: Bankruptcy Duration (Closure Stage<2019)						
Case duration	3646	379.734	368.14	123	258	531
Year of case acceptance	3780	2017.943	1.291	2017	2018	2019
Log(Registered capital)	3780	15.367	1.831	13.816	15.425	17.034
Panel C: Listed Firms' Financial Statements						
Long-term borrowing / Total assets	14456	.071	.098	0	.031	.104
Short-term borrowing / Total assets	15647	.123	.119	.027	.094	.186
Cash flow / Total assets	16426	.012	.083	-.022	.004	.037
EBIT / Total assets	16544	.05	.075	.026	.048	.08
EBIT / Operating income	16090	4.205	16.982	1.258	2.175	3.806
Fixed Assets/ Total Assets	16600	.252	.186	.103	.215	.369
Top 10 Shareholder Ratio	16601	.54	.159	.426	.537	.65
Capex/ Total Assets	16522	.056	.066	.013	.034	.073
Employee Number/ Total Assets	16538	.009	.009	.003	.006	.012
Panel D: Local Macroeconomic Conditions						
bankruptcy tribunals	16601	.232	.422	0	0	0
Log(GDP per capita)	16601	2.03	.683	1.554	2.116	2.583
Ratio of Secondary Industry	16601	.447	.105	.389	.474	.513
Log(Nonfarm population)	16601	5.661	.803	5.148	5.661	5.844

TABLE 2: BANKRUPTCY TRIBUNALS AND JUDICIAL EFFICIENCY

Note: This table examines the effect of the establishment of bankruptcy tribunals on bankruptcy efficiency using a manually collected dataset containing bankruptcy judgments between 2014 and 2019. Our cross-sectional analysis uses the following specification:

$$Y_i = \alpha + \beta BankruptcyTribunal_{jt} + \gamma_t + \gamma_k + \eta X_{ijt-1} + \epsilon_i$$

$1(Acceptance_i)$ equals one if the bankruptcy application is accepted for firm i of industry k located in city j and zero otherwise. $Duration_i$ represents the number of days between the filing and closure of the bankruptcy case of firm i. $BankruptcyTribunal_{jt}$ is a binary variable indicating whether a prefecture-level bankruptcy tribunal is established in the city j when the case is filed in year t. We include the application year fixed effects (γ_t) in Column (1), and industry fixed effects (γ_k) in Column (2). X_{ijt-1} represents a series of characteristics at the firm and city levels, including the logarithm of registered capital, and firm age, GDP (natural logarithm), population (natural logarithm), fiscal revenue (natural logarithm), and the ratio of the manufacturing industry in GDP. Standard errors are clustered at the city level and are presented in parentheses. ***, **, and * represent significance at the 1%, 5% and 10% significance levels, respectively.

	(1)	(2)	(3)
Panel A: Y = 1(Acceptance)			
$BankruptcyTribunal_{jt}$	0.194***	0.101*	0.101*
	(0.0534)	(0.0560)	(0.0561)
Mean of Dep. Var.	0.837	0.837	0.837
Observations	32,367	32,367	32,367
R-squared	0.149	0.170	0.171
Panel B: Y = Case duration			
$BankruptcyTribunal_{jt}$	-141.40**	-145.12**	-146.23**
	(58.79)	(60.87)	(60.81)
Mean of Dep. Var.	379.73	379.73	379.73
Observations	3,220	3,128	3,128
R-squared	0.386	0.448	0.449
All Panels			
City FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Application year FE	No	Yes	Yes
Covariates	No	No	Yes

TABLE 3: BANKRUPTCY REFORM AND CORPORATE DEBT MATURITY

Note: This table assesses the effect of bankruptcy tribunals on debt maturity. Panel A illustrates the result from a balanced firm-year panel of 1,277 publicly listed companies in China's A-share stock market between 2008 and 2020. Panel B shows the results under the same specification after propensity score matching. Our staggered DID regression is specified as follows:

$$Y_{it} = \alpha + \beta BankruptcyTribunal_{jt} + \eta X_{ijt-1} + Z\theta_t + \gamma_i + \gamma_{kt} + \epsilon_{it}$$

Where Y_{ijt} represents a series of outcome variables, including short-term borrowing/total assets, long-term borrowing/total assets, long-term borrowing/total debt, and total debt/total assets (in percentage points). $Tribunal_{jt}$ denotes whether a prefecture-level bankruptcy tribunal was established in city j in year t. Since the introduction of bankruptcy tribunals is staggered, the equation employs a multi-period DID strategy. We control for firm (γ_i) and industry-year fixed effects (γ_{kt}) in all columns. Firm-level covariates include cash flow/total assets, EBIT/total assets, EBIT/operating income, fixed assets/ total assets, and the proportion of shares held by the largest 10 shareholders. City-level covariates include the natural logarithm of per capita GDP, the proportion of output in the secondary industry, and the natural logarithm of the number of nonfarm workers. In Panel B, we use the pre-reform average of total assets, total liability, retained earnings, interest expense, ROA, and ROE to predict the probability (i.e., the propensity score) by using a nearest-neighbor matching method. The other settings are the same as in Panel A. Standard errors are clustered at the city level and presented in parentheses. ***, **, and * represent significance at the 1%, 5% and 10% significance levels, respectively.

$Dep.Var.$	Long-term borrowings /Total borrowings	Long-term borrowings /Total assets	Short-term borrowings /Total assets	Total borrowings /Total assets
	(1)	(2)	(3)	(4)
Panel A: Baseline				
$BankruptcyTribunal_{jt}$	3.21**	1.10***	-0.683*	0.477
	(1.25)	(0.325)	(0.391)	(0.458)
Mean of dep. var.	33.4	7.11	12.3	19.7
Observations	12,714	13,957	15,121	13,652
R-squared	0.662	0.700	0.655	0.707
Panel B: Matched sample				
$BankruptcyTribunal_{jt}$	3.59***	1.01***	-0.791*	0.366
	(1.22)	(0.314)	(0.410)	(0.477)
Mean of dep. var.	33.4	7.11	12.3	19.7
Observations	12,016	13,200	14,329	12,907
R-squared	0.669	0.711	0.671	0.718
All Panels				
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Covariates	Yes	Yes	Yes	Yes

TABLE 4: USAGE OF BANKRUPTCY PROCEDURES BY FINANCIALLY DISTRESSED FIRMS

Note: This table evaluates how soon companies/creditors use bankruptcy procedures for debt resolution following financial distress. Our sample consists of listed companies that have experienced financial distress. We define company-year observations of financial distress as those where a company has been warned of "special treatment" for two consecutive years and has an Altman Z-score below the healthy threshold. We use the following Cox proportional-hazards regression model:

$$h(it) = h_0(t) \exp(\alpha + \beta BankruptcyTribunal_{jt} + \eta Z_{ijt-1} + \epsilon_{it})$$

where t denotes time relative to the year of financial distress onset. $h(i,t)$ represents the hazard ratio for company i in year t (the year after entering financial distress), i.e., the instantaneous probability of bankruptcy in that year given that the company has not gone bankrupt before year t. Control variables include the logarithm of the prefecture population, the logarithm of the prefecture GDP, the proportion of manufacturing industry in GDP, and the logarithm of fiscal revenue. Standard errors of clustering to the city level are in brackets. ***, **, and * represent significance at the 1%, 5% and 10% significance levels, respectively.

Dep. Var.	Entry into Corporate Bankruptcy Procedure		
	(1)	(2)	(3)
$BankruptcyTribunal_{jt}$	2.024**	2.222**	2.804***
	(0.934)	(1.074)	(0.946)
Observations	1173	1173	1067
Entities	168	168	163
Failures	19	19	14
Pseudo R-squared	0.144	0.147	0.695
City Covariates	No	Yes	Yes
Firm Covariates	No	No	Yes

TABLE 5: BANKRUPTCY TRIBUNALS AND BANK LOAN MATURITY

Note: This table investigates the impact of bankruptcy tribunal establishment on the loan maturity structure of 37 city-level commercial banks between 2008 and 2020 using the following staggered DID specification:

$$Y_{bt} = \beta_0 + \beta_1 BankruptcyTribunal_{jt} + X_{bt-1}\eta + Z\theta_t + \gamma_b + \gamma_t + \epsilon_{bt}$$

Y_{bt} represents the long-term loans divided by assets of bank b operating in city j in year t. $BankruptcyTribunal_{jt}$ indicates whether the prefecture-level city j has set up a bankruptcy tribunal as of year t. We control for bank (γ_b) and year fixed effects (γ_t). City-level control variables include the population (natural log), GDP (natural log)), the ratio of the secondary industry in GDP, and fiscal revenue (natural log). Bank-level control variables include the total assets of banks (natural log), the non-performing loan ratio, the loan-to-deposit ratio, net profits, and the total operating income. Standard errors of clustering to the industry level are in parentheses. ***, **, and * represent significance at the 1%, 5% and 10% significance levels, respectively.

$Dep.Var.$	Long-term Loans /Total Loans (%)		
	(1)	(2)	(3)
$BankruptcyTribunal_{jt}$	6.29**	6.87**	5.67*
	(3.17)	(3.06)	(3.01)
Mean of dep. var.	37.0	37.0	37.0
Observations	392	377	377
R-squared	0.506	0.580	0.601
Bank FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
City-level covariates	No	No	Yes
Bank-level covariates	No	Yes	Yes

TABLE 6: BANKRUPTCY TRIBUNALS' IMPACT ON FIRMS' INTEREST EXPENDITURES

Note: This table presents the firm-year panel analysis of the impact of a bankruptcy tribunal on the interest expenditure of listed firms. We use a balanced firm-year panel of 1,277 publicly listed companies in China's A-share stock market between 2008 and 2020. We use the following regression specification:

$$Y_{it} = \alpha + \beta BankruptcyTribunal_{jt} + \eta X_{ijt-1} + \gamma_t + \gamma_j + \epsilon_{it}$$

$InterestExpenditure/TotalDebt_{it}$ represents the interest expenditure divided by the total debt of firm i in year t. $BankruptcyTribunal_{jt}$ equals one if the first bankruptcy tribunal was established in city j in year t. Firm-level covariates include cash flow/total assets, EBIT/total assets, and EBIT/operating income, fixed assets/ total assets, and the proportion of shares held by the largest 10 shareholders. City-level covariates include the natural logarithm of per capita GDP, the proportion of output in the secondary industry, and the natural logarithm of the number of non-agricultural labor force. We include year fixed effects (γ_t) and municipality-industry fixed effects (γ_j) to control for time-invariant city-level characteristics and annual common trends, respectively. Standard errors are clustered at the city level and presented in parentheses. ***, **, and * represent significance at the 1%, 5% and 10% significance levels, respectively.

Dep. Var.	Interest Expenditures/Total Debt$_{it}(\%)$		
$BankruptcyTribunal_{jt}$	-0.606***	-0.430*	-0.459**
	(0.180)	(0.235)	(0.203)
Mean of dep. var.	5.96	5.96	5.96
Observations	16,459	16,538	15,874
R-squared	0.541	0.581	0.573
Industry-Year FE	No	Yes	Yes
Firm FE	No	Yes	Yes
Covariates	No	No	Yes

TABLE 7: BANKRUPTCY TRIBUNALS AND THE REAL OUTCOME

Note: This table presents the firm-year panel analysis of the impact of a bankruptcy tribunal on the investment, employment, and cash-holding behavior of listed firms. We use a balanced firm-year panel of 1,277 publicly listed companies in China's A-share stock market between 2008 and 2020. The empirical setup is as follows:

$$Y_{it} = \alpha + \beta BankruptcyTribunal_{jt} + \eta X_{ijt-1} + \gamma_t + \gamma_j + \epsilon_{it}$$

Y_{it} represents a series of outcome variables of firm i in year t, including capital expenditure, total employment, and cash and cash equivalents. All variables are divided by the total assets of the previous year. To enhance the readability of the coefficient, we scale the raw variable by a factor of 100. $BankruptcyTribunal_{jt}$ equals one if the first bankruptcy tribunal was established in city j in year t. Firm-level covariates include cash flow/total assets, EBIT/total assets, EBIT/operating income, fixed assets/ total assets, and the proportion of shares held by the largest 10 shareholders. City-level covariates include the natural logarithm of per capita GDP, the proportion of output in the secondary industry, and the natural logarithm of the number of non-agricultural labor force. We include year fixed effects (γ_t) and municipality-industry fixed effects (γ_j) to control for time-invariant city-level characteristics and annual common trends, respectively. Standard errors are clustered at the city level and presented in parentheses. ***, **, and * represent significance at the 1%, 5%, and 10% significance levels, respectively.

Dep. Var.	Capex/Asset		Employment/Asset	
	(1)	(2)	(3)	(4)
$BankruptcyTribunal_{jt}$	0.477*	0.524**	0.0792***	0.0628**
	(0.278)	(0.250)	(0.0297)	(0.0258)
Mean of dep. var.	5.553	5.553	0.896	0.896
Observations	16,419	15,954	16,435	15,959
R-squared	0.426	0.477	0.708	0.772
Industry-Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Covariates	No	Yes	No	Yes

A Online Appendix

A.1 City-Level Analysis of Bankruptcy Cases

We then conduct a panel regression analysis based on the aggregated number of corporate bankruptcy cases accepted at the city level using the following staggered difference-in-differences (DID) specification:

$$\text{Case}_{jt} = \alpha + \beta \text{BankruptcyTribunal}_{jt} + \gamma_t + \gamma_j + \eta X_{jt-1} + \epsilon_{jt} \tag{A1}$$

where Case_{jt} represents the number of corporate bankruptcy cases accepted in city j in year t. $\text{BankruptcyTribunal}_{jt}$ is a binary variable that indicates whether a prefecture-level bankruptcy court was established in city j in year t. To control for city-level heterogeneities and time trends, we include year (γ_t) and city-by-industry fixed effects (γ_j). X_{jt-1} represents a series of characteristics lagged by one year at the city level.

As shown in Figure A10, the absolute quantity of bankruptcy cases substantially increases after a city establishes its first bankruptcy tribunal. The city-level aggregated number of bankruptcy cases increases by 70% (the coefficient becomes 68.2% after controlling for covariates). Similarly, the number of bankruptcy cases divided by the number of all firms increases by 1.396 percentage points (the coefficient becomes 1.297 after controlling for covariates). Taking into account the sample average of 1.227%, this outcome is economically significant.

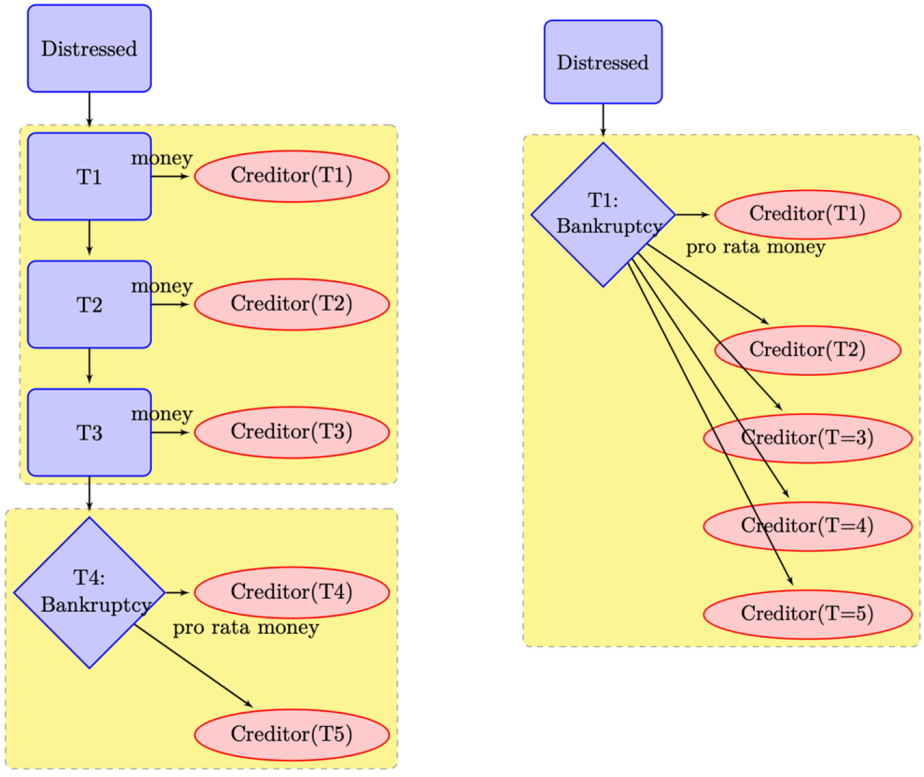
A.2 Heterogeneity Tests: Default Probability

In the robustness check section, we explore whether the increase in corporate debt maturity is driven primarily by companies with higher default probabilities. This analysis lends further support to our argument that the changes in debt structure caused by bankruptcy tribunals originate primarily from the bankruptcy law itself rather than from other confounding factors related to bankruptcy tribunals (Sautner and Vladimirov, 2018; Favara et al., 2017).

We use two methods to measure default probability: the default distance Bharath and Shumway (2008) and the Altman Z score. The larger these two indicators are, the smaller the default probability of the enterprise is. Following Favara et al. (2017), we use the average Merton distance in each year before the establishment of the bankruptcy tribunal (using predetermined variables to prevent the default probability of the categorical variable itself from being affected by the bankruptcy tribunal) to sort all companies into high and low default probabilities (firms with average Z scores/default distances below the 33% percentile are identified as exhibiting high default probabilities). Table A8 shows the results for different subsamples. Columns (1) and (3) show that for firms with higher default risk (lower Z scores and smaller Merton default distances), the establishment of bankruptcy tribunals leads to large increases in long-term debt of 1.9 and 1.39 percentage points, respectively. Columns (2) and (4) show that for firms with lower default risk (higher Z scores and larger Merton default distances), the establishment of bankruptcy tribunals leads to a relatively moderate increase in long-term debt, with increases of 1.12 and 0.71 percentage points, respectively.

FIGURE A1: BANKRUPTCY EFFICIENCY AND INSOLVENCY RESOLUTION REGIME SHIFT

Note: This figure illustrates a theoretical framework of the impact of bankruptcy efficiency on creditors. In a scenario with low bankruptcy efficiency, long-term creditors (T4, T5) receive less as bankruptcy is filed later (at T4), thus allowing short-term creditors (T1-T3) to claim more assets. Conversely, high bankruptcy efficiency leads to earlier filings, resulting in more equal asset distribution among all creditors, regardless of debt maturity. The key takeaway is that more efficient bankruptcy processes level the playing field for creditors, protecting the interests of long-term creditors by preventing the asset depletion associated with delayed filings.



Low bankruptcy efficiency

High bankruptcy efficiency

FIGURE A2: TREND OF BANKRUPTCY CASES

Note: This figure plots the number of bankruptcy cases in China over time. The corporate bankruptcy law took effect in 2007 and the bankruptcy reform establishing specialized bankruptcy tribunals started in 2016.

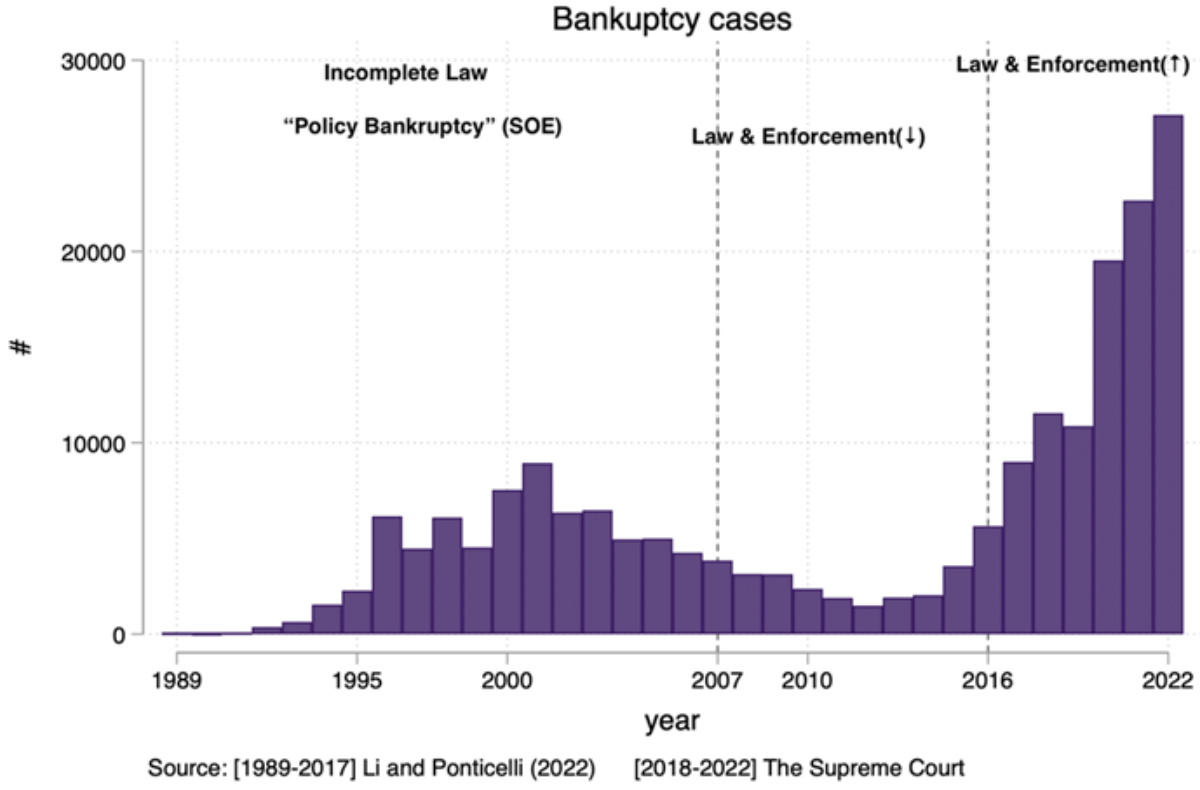


FIGURE A3: STAGE-WISE DISTRIBUTION OF CASES

Note: This figure demonstrates the distribution of bankruptcy cases with documents in different stages. We obtain 62,136 court documents of bankruptcy cases between 2014 and 2021. Each bankruptcy case progresses through three stages: application, declaration, and conclusion. 32,721 cases are in the application stage (a firm officially enters the bankruptcy status when the court accepts the application), 9,161 cases in the declaration stage (when important intermediate results are established by court rulings, including the declaration of enterprise liquidation and the failure or success of enterprise restructuring), and 12,170 cases in the conclusion stage (when the court decides to terminate the bankruptcy process because no assets remain to be allocated).

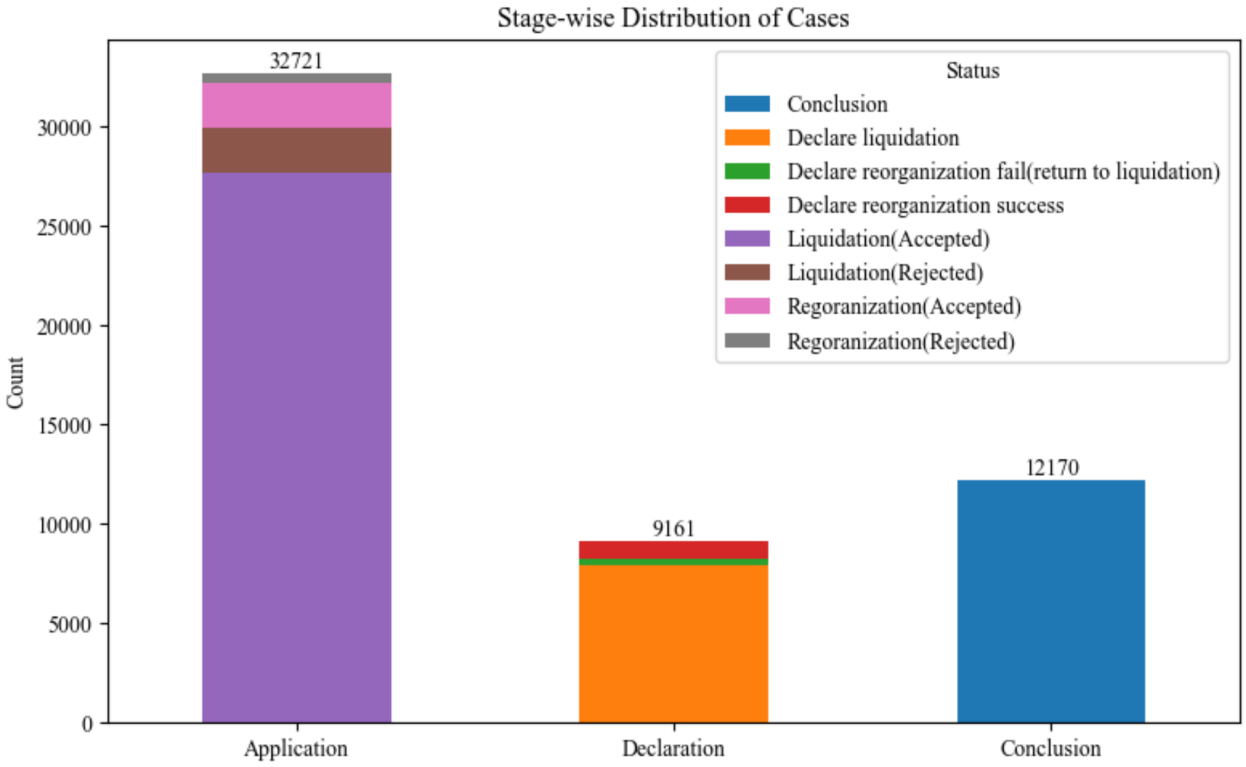


FIGURE A4: TYPES OF BANKRUPTCY APPLICANTS

Note: This figure plots the ratios of different types of bankruptcy applicants in China between 2014 and 2021. Our sample of bankruptcy applications comes from court documents released by CJO. We extract the types of applicants from more than 30,000 judgment documents of bankruptcy application.

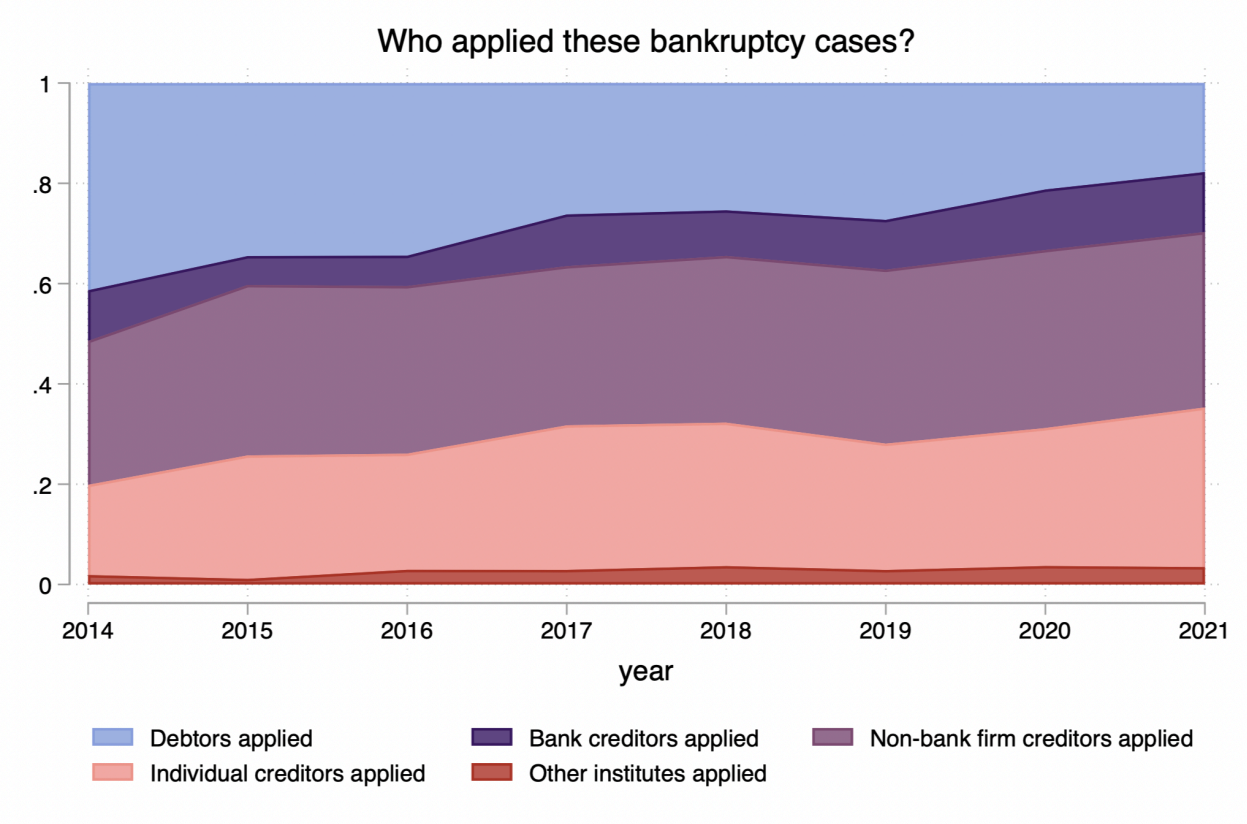


FIGURE A5: DECREASE OF TIME IN COURTS

Note: This figure illustrates the distribution of bankruptcy case duration between the acceptance and the closure documents. Cases handled by bankruptcy tribunals are presented in blue (maroon) for the CJO sample (the listed firm sample). Bankruptcy cases handled by civil tribunals are represented by white columns.

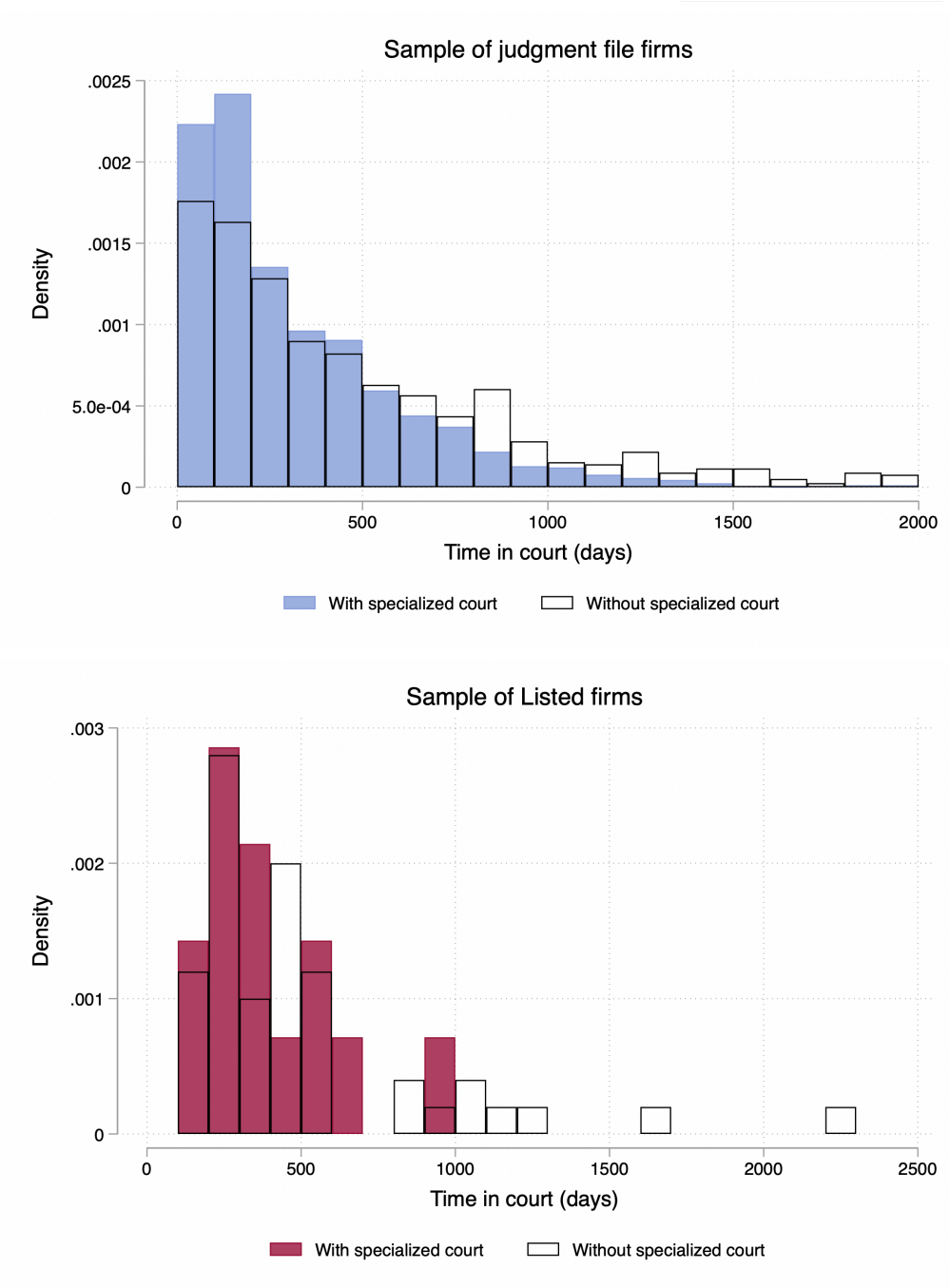


FIGURE A6: DYNAMIC EFFECTS OF BANKRUPTCY TRIBUNALS AFTER MATCHING

Note: This figure presents the dynamic effects of the establishment of bankruptcy tribunals on corporate debt maturity using the matched sample. We plot regression coefficients ($\beta_0 \sim \beta_6$) with a 95% confidence interval. The dependent variable is long-term loans/total assets, and the explanatory variable is whether there is a bankruptcy tribunal in city j as of year t. Firm-level control variables include cash flow/total assets, EBIT/total assets, and EBIT/operating income. City-level control variables include the GDP per capita (natural log), the ratio of the secondary industry in GDP, and the nonfarm workers (natural log). EBIT = Earnings Before Interest and Tax. Standard errors are clustered at the prefecture-level city level. The significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01.

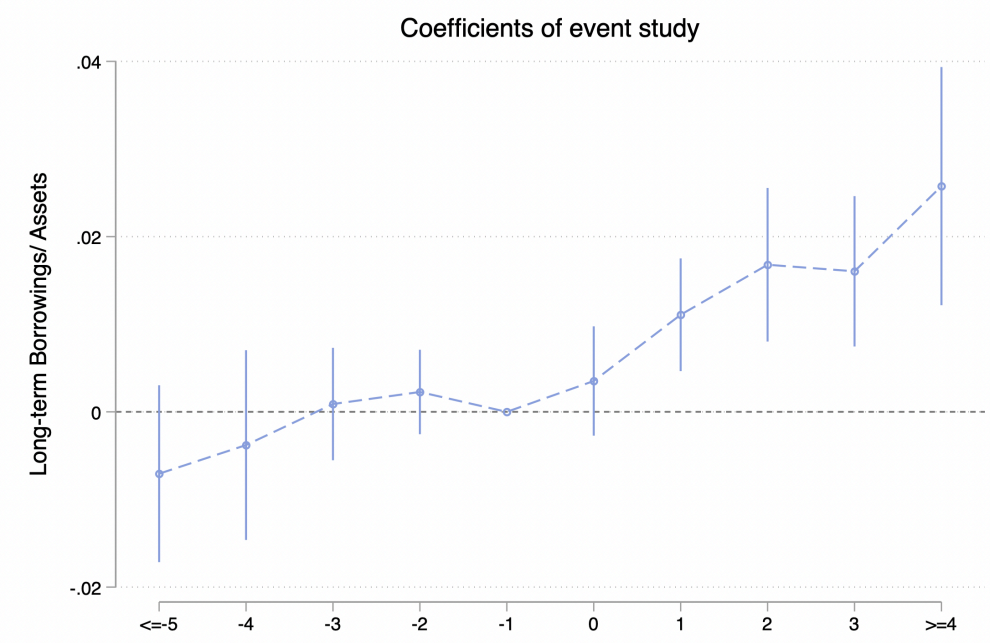


FIGURE A7: COEFFICIENT DECOMPOSITION

Note: This figure tests the robustness of our DID results by splitting the baseline coefficient into the weight differences between two group types (Goodman-Bacon, 2021; Callaway and SantAnna, 2021). We define timing groups as firms in the cities that had established bankruptcy tribunals by the end of our sample period. We use the `bacondecomp` command in Stata to decompose the regression coefficients.

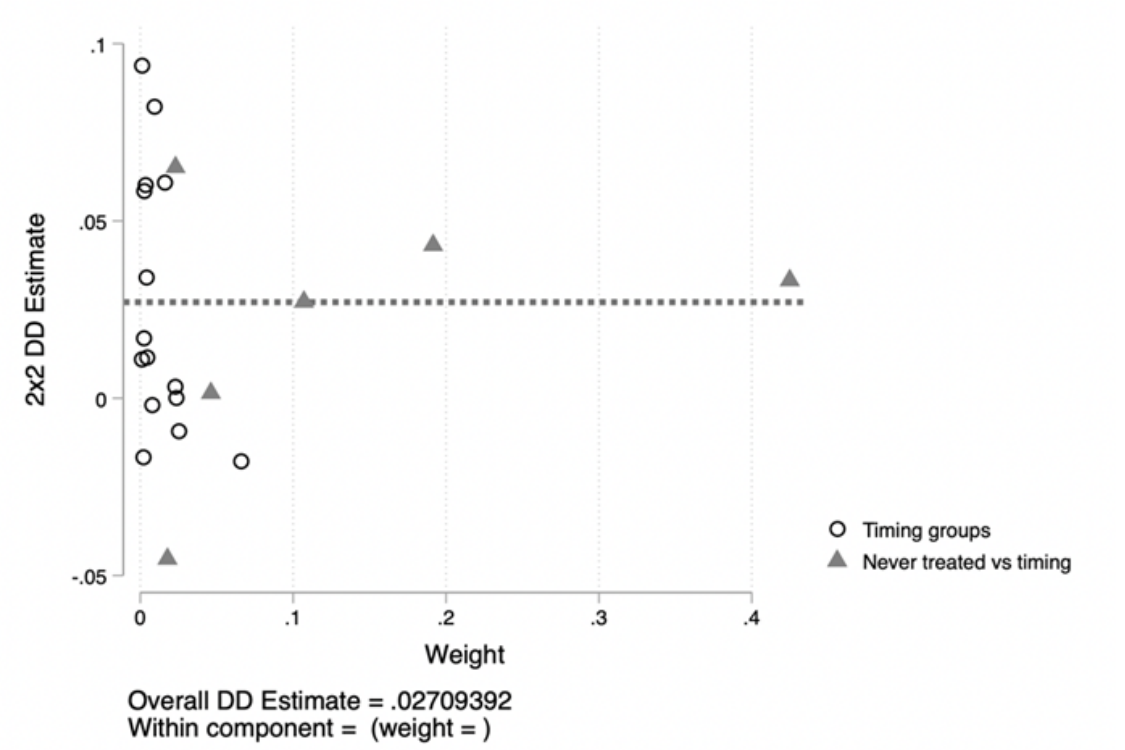
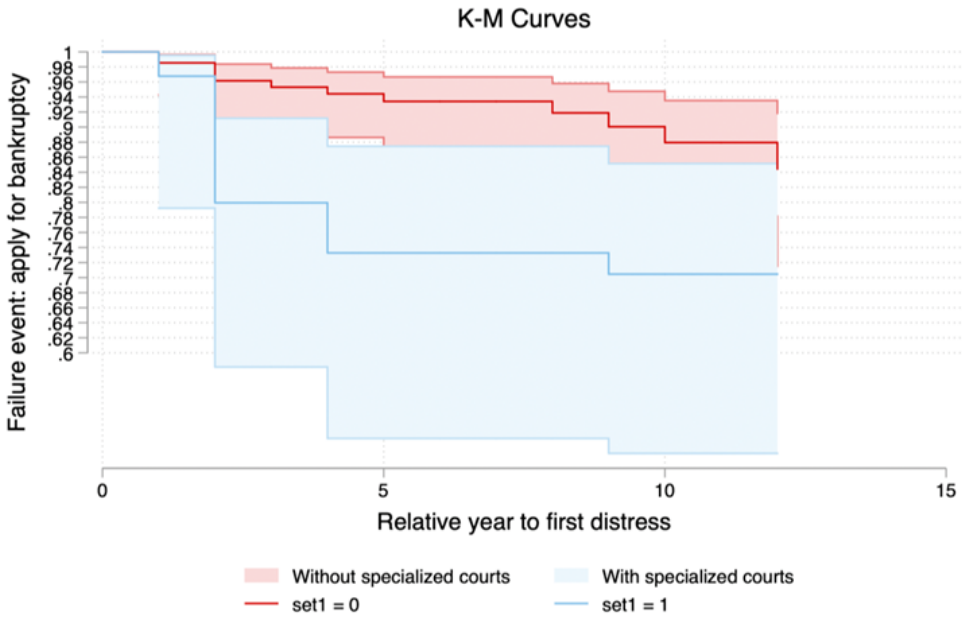


FIGURE A8: TIME TO FILE FOR BANKRUPTCY

Note: This figure illustrates the time between a firm's financial distress event and its bankruptcy based on coefficients estimated based on the Cox proportional hazard model. We use the listed firm sample in the upper panel and the 2016 National Tax Survey sample in the lower panel. We compare two types of firms: those located in cities with at least one bankruptcy tribunal and those without. We define a financial distress event as a situation in which a firm receives a "Special Treatment" warning and maintains an Altman Z-Score below 2.8 for two consecutive years Fan et al. (2013). The time from the distress event until the initiation of a formal bankruptcy case is calculated using data disclosed by publicly listed companies. The shaded area represents 95% confidence intervals.



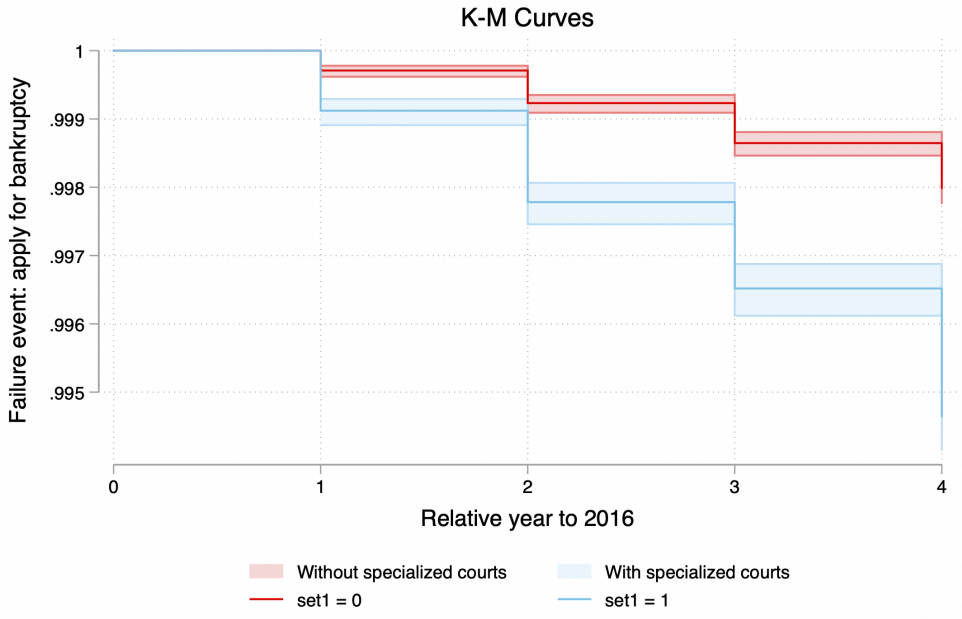


FIGURE A9: THE DYNAMICS OF SHORT-TERM LOANS BEFORE AND AFTER THE FIRM BECOMES FINANCIALLY DISTRESSED

Note: This figure presents the short-term loans divided by total loans before and after a listed firm becomes financially distressed. We plot the mean and the 95% confidence interval. The X-axis indicates the relative year relative to its financial distress. We identify a financially distressed event (a firm-year level observation) as one that has received a "Special Treatment" warning and obtained an Altman Z Score below the healthy line for two consecutive years (Fan et al., 2013).

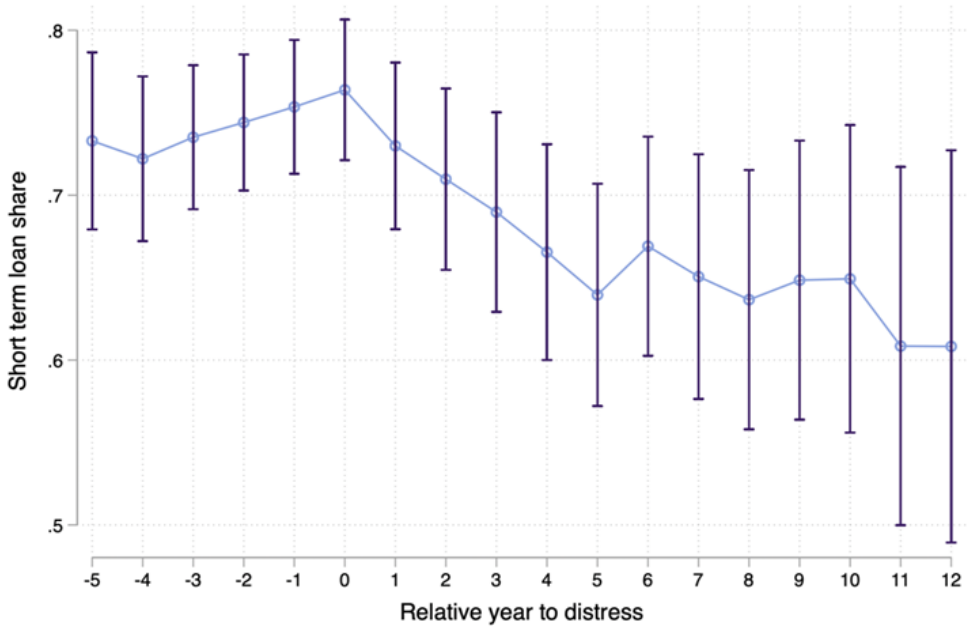


FIGURE A10: INCREASES IN CITY-LEVEL BANKRUPTCY APPLICATIONS

Note: The figure illustrates the coefficients of the dynamic DID analysis of the city-level number of bankruptcy cases (natural logs). The vertical line represents the 95% confidence interval. Our key explanatory variable is the bankruptcy tribunal indicator $BankruptcyTribunal_{jt}$ for city j in year t. Control variables include the city-level GDP (natural log), population (natural log), the ratio of total loans from financial institutions to GDP, the ratio of the secondary industry to GDP, and the general budget revenue of the local government (natural log). We employ a two-way fixed-effects model and control for both city fixed effects and year fixed effects. Standard errors are clustered at the prefecture-city level.

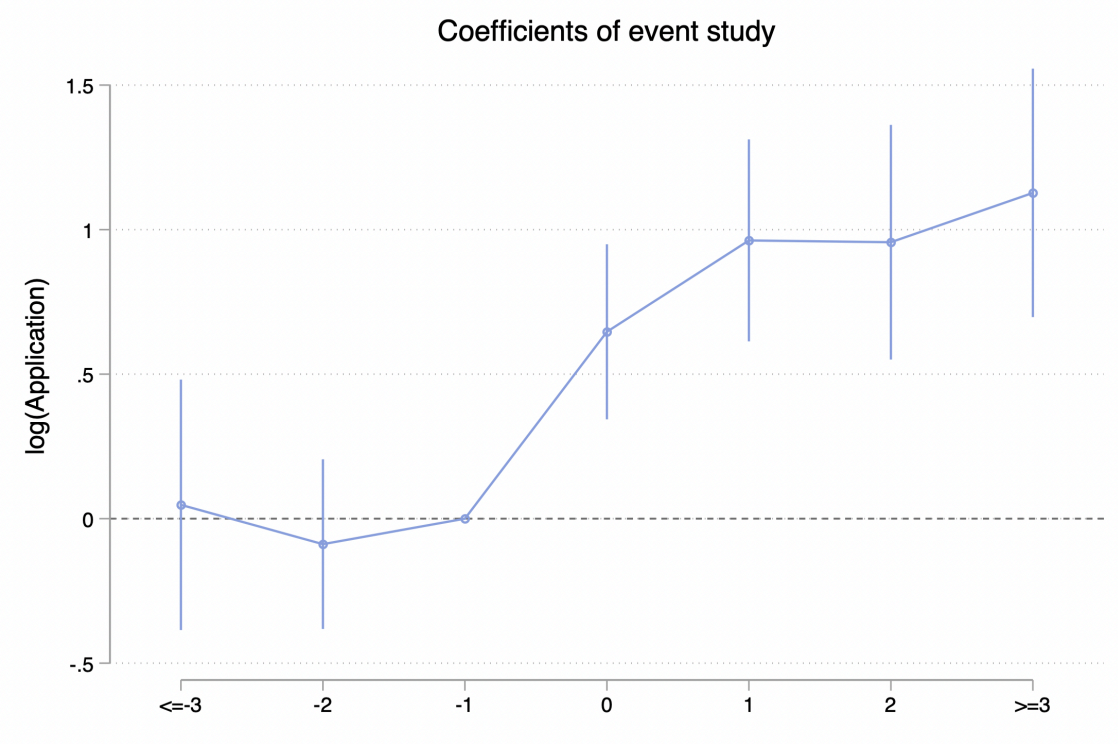


TABLE A1: SUMMARY OF ANALYSIS SAMPLES

Listed firms from CSMAR	#
Listed firms (balanced sample)	1,277
Listed firms (balanced sample & with financial distress experience)	196
Listed firms (balanced sample & go bankrupt)	27
Bankrupt listed firms from www.cninfo.com	
All bankrupt listed firms (2008-2020)	69
Bankrupt firms from CJO	
With application-stage documents	32,721
With both application- and closure-stage documents	6,984
With both application- and closure-stage documents (Closure<2019)	3,646

TABLE A2: DO CITY-LEVEL CHARACTERISTICS PREDICT THE ESTABLISHMENT OF BANKRUPTCY TRIBUNALS?

Note: This table assesses whether local economic conditions affect the establishment of specialized bankruptcy tribunals by estimating a linear probability model. We include contemporaneous and lagged annual changes in the share of bankrupt firms scaled by the total number of firms, which serves as proxies for the demand for bankruptcy. We also include both contemporaneous and lagged annual changes in the logarithm of population, GDP per capita, manufacturing proportion, the logarithm of the total number of firms and tax revenues, and the total credit scaled by GDP (leverage). Standard errors are presented in parentheses. ***, **, and * represent significance at the 1%, 5%, and 10% significance levels, respectively.

Dep. Var.	$BankruptcyTribunal_{jt}$
$\Delta(NBankruptcies/NFirms)_{t-1}$	0.000867
	(0.000839)
$\Delta(NBankruptcies/NFirms)_{t}$	0.000449
	(0.00207)
$\Delta GDPpercapita_{t-1}$	-0.00198
	(0.00284)
$\Delta GDPpercapita_{t}$	-0.00459
	(0.00310)
$\Delta log(Nfirms)_{t-1}$	0.00902
	(0.0144)
$\Delta log(Nfirms)_{t}$	0.00794
	(0.0411)
$\Delta log(Population)_{t-1}$	-0.00155
	(0.0139)
$\Delta log(Population)_{t}$	0.0905
	(0.0834)
$\Delta Leverage_{t-1}$	-0.00512*
	(0.00285)
$\Delta Leverage_{t}$	-0.00118
	(0.00241)
$\Delta ManufacturingProportion_{t-1}$	0.0457
	(0.0541)
$\Delta ManufacturingProportion_{t}$	0.0750
	(0.0867)
$\Delta log(TaxRevenue)_{t-1}$	-0.0184
	(0.0112)
$\Delta log(TaxRevenue)_{t}$	-0.00454
	(0.0126)
Observations	1,348
R-squared	0.935

TABLE A3: BETWEEN-GROUP DIFFERENCES BEFORE AND AFTER MATCHING

Note: This table presents the differences in characteristics between the treatment group (i.e., firms in cities where bankruptcy tribunals were ultimately established) and the control group (i.e., firms in cities with no bankruptcy tribunals). Matching characteristics refer to the features used in the propensity score probit regression, while untargeted characteristics refer to features that were not included in the regression. ***, **, and * represent significance at the 1%, 5% and 10% significance levels, respectively.

Variables	Original sample			Matched sample		
	Mean		Diff.	Mean		Diff.
	Control	Treatment		Control	Treatment	
	N = 561	N = 716		N = 517	N = 693	
Panel A: Matching characteristics						
Total asset	7.712	18.495	-10.783**	7.805	8.612	-0.807
Total liability	4.497	10.981	-6.484**	4.588	5.182	-0.594
Retained earnings	1.161	3.327	-2.165	1.142	1.228	-0.086
Interest expense	5.285	15.229	-9.944*	5.310	5.940	-0.630
ROA (Return on asset)	0.234	0.562	-0.328*	0.229	0.250	-0.021
ROE (Return on equity)	5.253	0.027	5.225	0.027	0.027	-0.001
Panel B: Untargeted characteristics						
SOE (State-owned enterprise)	0.597	0.616	-0.019	0.596	0.604	-0.008
Selling expenses	0.233	0.489	-0.256*	0.236	0.270	-0.034
Administrative expenses	0.268	0.627	-0.359*	0.267	0.282	-0.015
Stock price volatility	0.504	0.505	-0.001	0.505	0.508	-0.002

TABLE A4: BANKRUPTCY TRIBUNALS AND DEBT MATURITY (ALTERNATIVE SAMPLES)

Note: This table examines the effect of bankruptcy tribunals on corporate debt maturity using alternative samples. We use the unbalanced sample of publicly listed companies between 2008 and 2020 in Panel A and a subsample of publicly listed companies before 2017 in Panel B. The multiperiod DID model is as follows:

$$Y_{it} = \alpha + \beta BankruptcyTribunal_{jt} + \eta X_{ijt-1} + Z\theta_t + \gamma_i + \gamma_{kt} + \epsilon_{it}$$

Where Y_{it} represents a series of outcome variables, including short-term borrowings/total assets, long-term borrowings/total assets, long-term borrowings/borrowings total, and total borrowings/total assets. $BankruptcyTribunal_{jt}$ denotes whether city j has established a bankruptcy tribunal as of year t. We control for firm fixed effects (γ_i) and industry-year fixed effects (γ_{kt}). Firm-level covariates include cash flow/total assets, EBIT/total assets, EBIT/operating income, fixed assets/ total assets, and the proportion of shares held by the largest 10 shareholders. City-level covariates include the natural logarithm of per capita GDP, the proportion of output in the secondary industry, and the natural logarithm of the number of non-agricultural labor force. Standard errors of clustering to the city level are in parentheses. ***, **, and * represent significance at the 1%, 5%, and 10% significance levels, respectively.

$Dep.Var.$	Long-term borrowings /Total assets (1)	Short-term borrowings /Total assets (2)	Long-term borrowings /Total borrowings (3)	Total borrowings /Total assets (4)
Panel A: Unbalanced Sample				
$BankruptcyTribunal_{jt}$	0.839***	-0.00533	2.601***	0.988**
	(0.246)	(0.305)	(0.953)	(0.395)
Mean of dep. var.	0.0589	0.109	0.313	0.172
Observations	22,874	26,600	20,196	22,319
R-squared	0.706	0.668	0.654	0.721
Panel B: Pre-2017 Sample				
$BankruptcyTribunal_{jt}$	0.849***	-0.457	2.372**	0.400
	(0.313)	(0.355)	(1.226)	(0.458)
Mean of dep. var.	6.389	12.32	30.45	18.81
Observations	11,029	11,016	9,931	11,016
R-squared	0.753	0.714	0.700	0.757
All Panels				
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Covariates	Yes	Yes	Yes	Yes

TABLE A5: IN-BANKRUPTCY CREDITORS: LONG-TERM OR SHORT-TERM CREDITORS?

Note: This table compares corporate debt maturity structure during and outside bankruptcy using a firm-year sample of 93 bankrupt listed companies between 2008 and 2020. We match this sample with our main sample, which consists of 1,292 companies in total. The bankruptcy time refers to the year when the court accepts a listed company's bankruptcy application. Non-bankruptcy time refers to each year before bankruptcy for listed companies. ***, **, and * represent significance at the 1%, 5% and 10% significance levels, respectively.

Within The Same Firm	Bankrupt time	Non-bankrupt time	Difference (Bankrupt - Non-bankrupt)
Long-term loan/ all bank borrowings	30.41%	22.85%	**7.5%****
Long-term loan (to mature in one year)/ all bank borrowings	13.76%	8.05%	**5.71%*****
Short-term loan/ all bank borrowings	55.82%	69.09%	**-13.27%*****

TABLE A6: BANKRUPTCY TRIBUNALS AND PRESERVED VALUE IN BANKRUPTCY

Note: This table presents the results of a cross-sectional analysis of the relationship between the asset-liability ratios of listed companies in bankruptcy and the establishment of bankruptcy tribunals in the city in which a firm is located. We use a balanced firm-year panel of 1,277 publicly listed companies in China's A-share stock market between 2008 and 2020. We use the following cross-sectional regression specification:

$$Asset/Liability_i = \alpha + \beta BankruptcyTribunal_{jt} + \gamma_t + \gamma_k + \eta X_{ijt-1} + \epsilon_i$$

Firm-level covariates include cash flow/total assets, EBIT/total assets, and EBIT/operating income, fixed assets/ total assets, and the proportion of shares held by the largest 10 shareholders. City-level covariates include the natural logarithm of per capita GDP, the proportion of output in the secondary industry, and nonfarm workers (natural logs). Standard errors of clustering to the industry level are in parentheses. ***, **, and * represent significance at the 1%, 5%, and 10% significance levels, respectively.

$Dep.Var.$	Asset Value / Debt Value		
	(1)	(2)	(3)
$BankruptcyTribunal_{jt}$	9.343*	8.521	12.52
	(5.548)	(6.133)	(8.320)
Mean of dep. var.	12.54	12.54	12.54
Observations	69	69	49
R-squared	0.051	0.184	0.322
Industry FE	No	Yes	Yes
Year FE	No	Yes	Yes
Covariates	No	No	Yes

TABLE A7: BANKRUPTCY TRIBUNALS AND COLLATERALIZED/GUARANTEED BORROWING STRUCTURE

Note: This table presents the results of a panel-data analysis of the relationship between the collateral/guarantee structure and the establishment of bankruptcy tribunals. We use a balanced firm-year panel of 1,277 publicly listed companies in China's A-share stock market between 2008 and 2020. We employ a difference-in-differences approach, specified as follows:

$$Y_{it} = \alpha + \beta BankruptcyTribunal_{jt} + \eta X_{ijt-1} + \gamma_i + \gamma_{kt} + \epsilon_{it}$$

Y_{it} represents the collateralized or guaranteed borrowings divided by all bank borrowings. $Tribunal_{jt}$ denotes whether a municipal bankruptcy tribunal was established in city j in year t. Since the introduction of bankruptcy tribunals is staggered, the equation employs a multi-period difference-in-differences strategy. We control for firm fixed effects (γ_i) and year fixed effects (γ_t). In most regressions, we also control for industry-year fixed effects (α_{kt}). Firm-level covariates include cash flow/total assets, EBIT/total assets, EBIT/operating income, fixed assets/ total assets, and the proportion of shares held by the largest 10 shareholders. City-level covariates include log(GDP per capita), second industry share, and log(non-farm population). Standard errors of clustering to the city level are presented in parentheses. ***, **, and * represent significance at the 1%, 5% and 10% significance levels, respectively.

Dep. Var.	Guaranteed Borrowings Ratio		Collateralized Borrowings Ratio	
	(1)	(2)	(3)	(4)
$BankruptcyTribunal_{jt}$	-0.139	-0.274	1.540	1.344
	(1.435)	(1.495)	(1.150)	(1.118)
Mean of dep. var.	62.99	62.99	31.10	31.10
Observations	13,082	12,934	8,941	8,871
R-squared	0.607	0.615	0.540	0.680
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Covariates	No	Yes	No	Yes

TABLE A8: HETEROGENEITY TESTS: FIRMS' DEFAULT PROBABILITIES

Note: This table presents the heterogeneity results using a balanced firm-year panel of 1,277 publicly listed companies in China's A-share stock market between 2008 and 2020. Following Favara et al. (2017), we use the average Merton distance in each year before the establishment of the bankruptcy tribunal and define firms with average Z-score/default distance below the 33% quantile as high-default-probability ones. We obtain the data regarding Merton default distances and Z scores from the CSMAR database. Our method of construction is based on Bharath and Shumway (2008). Firm-level covariates include cash flow/total assets, EBIT/total assets, EBIT/operating income, fixed assets/ total assets, and the proportion of shares held by the largest ten shareholders. City-level covariates include the natural logarithm of per capita GDP, the proportion of output in the secondary industry, and the number of non-agricultural labor force (log scale). Standard errors are clustered at the prefecture level. The bottom rows specify the fixed effects included in each column. Observations at the firm-year level. Differences in the number of observations are due to the missing value of control variables, and the number of zeros varies across variables. The significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01.

Dep. Var.	Long-term loans /Assets			
	Z-score		default dist.	
	Low	High	Low	High
	(1)	(2)	(3)	(4)
$BankruptcyTribunal_{jt}$	1.90***	1.12***	1.39**	0.714**
	(0.684)	(0.405)	(0.630)	(0.352)
Mean of dep. var.	7.11	7.11	7.11	7.11
Observations	4,293	10,163	4,929	9,205
R-squared	0.553	0.674	0.722	0.568
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Year-Industry FE	Yes	Yes	Yes	Yes
Covariates	Yes	Yes	Yes	Yes

TABLE A9: LIST OF BANKRUPT LISTED FIRMS

Founding Year	Restructuring Year	Company Name
1992	2012	Shenzhen Zhonghua Bicycle (Group)
1993	2010	Guangdong Shengrun Group
1993	2015	Shenzhen Xindu Hotel
1993	2009	Shenzhen Suntek Technology (Group)
1994	2011	China Kejian
1997	2016	Sichuan Chemical
1993	2019	Shenyang Machine Tool
1992	2013	Changhang Phoenix
1994	2010	Guangxia (Yinchuan) Industrial
1992	2007	Changling (Group)
1990	2009	Guangming Group Furniture
1996	2020	Baota Industry
1993	2007	Lanbao Technology Information
1989	2007	Tianfa Petroleum
1988	2012	Shandong Hailong
1989	2007	Chaohua Technology (Group)
1993	2009	Xianyang Deflection
1989	2008	Jiaozuo Xin'an Technology

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Founding Year	Restructuring Year	Company Name
1993	2013	Huludao Zinc Industry
1997	2010	Sichuan Direction Photonics
1993	2010	Chuangzhi Information Technology
1997	2019	Qinghai Salt Lake Industry
1997	2010	Fangda Jinhua Chemical Technology
1993	2012	Jincheng Paper
1997	2008	Xingmei United
1999	2017	Sichuan Lutianhua
1999	2007	Zhejiang Haina Technology
1994	2012	Xinjiang Zhongji Industry
1998	2020	Yinyi
1998	2019	Ningxia Zhongyin Wool Industry
1992	2014	Jiangsu Xiake Environmental Spinning
2001	2011	CNNC Huayuan Titanium Dioxide
1998	2020	Shenzhen Feima International Supply Chain
2006	2020	Deao General Aviation
2003	2020	Dalian Tianshen Entertainment
2008	2020	Zhongnan Red Cultural Group

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Table A9 – continued from previous page

Founding Year	Restructuring Year	Company Name
2001	2020	Jilin Liyuan Precision Manufacturing
2003	2014	GCL Integration Technology
2003	2016	Jiangsu Guoxin
2004	2020	Chenzhou Jinrui Silver Industry
1999	2008	Chengde Dixian Knitting
2001	2020	Sky & Sea Defense Equipment Technology
2005	2019	Shaanxi Jianrui Woneng
1997	2009	Amoi Electronics
1997	2013	Jiangsu Zhongda New Material Group
1998	2015	Xinjiang Yilu Wanyuan Industrial Investment Holding
1998	2007	Hebei Baoshuo
1989	2020	Yongtai Energy
1998	2020	Antong Holdings
1998	2008	Shandong Jiufa Edible Fungus
1998	2019	Lotus Health Industry Group
1996	2009	Shaanxi Qinling Cement (Group)
1993	2008	Guangdong Hualong Group
1998	2013	Qinghai Xiangcheng Mining

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Table A9 – continued from previous page

Founding Year	Restructuring Year	Company Name
1999	2018	Fushun Special Steel
2001	2018	Liuzhou Chemical
1998	2011	Yanbian Shixian Bailu Paper Industry
1993	2008	Guangxi Beisheng Pharmaceutical
1988	2011	Sichuan Jinding (Group)
1992	2010	Liaoyuan Deheng
1993	2007	Tianyi Technology
1992	2008	North Asia Industrial (Group)
1994	2007	Cangzhou Chemical Industry
1996	2016	Yunnan Yunwei
1993	2008	Huadian Energy
1992	2011	Suntek Technology
1993	2009	Shanghai Huayuan Enterprise Development
1996	2010	Xiamen XGMA Machinery
1994	2019	Xi'an Hongsheng Technology Development
1992	2010	Danhua Chemical Technology
1993	2007	Chongqing Iron & Steel
1992	2008	Pangda Automobile Trade Group

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Table A9 – continued from previous page

Founding Year	Restructuring Year	Company Name
1994	2007	Lifan Technology (Group)