The Value of Bankruptcy Court in Financial Distress: Evidence from Chinese Bond Market

Bo Li, Mai Li, Songnan Li, Laura Xiaolei Liu*

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Key Words: Bankruptcy Resolution, Creditor Protection, Cost of Debt, China's Bond Market

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1 Introduction

Legal institutions have an important effect on the financing cost for companies and households. In many developing countries, the weak protection of creditors' rights in bankruptcy cases is an important source of market distortion (La Porta et al., 1997; Djankov et al., 2007). In particular, the bankruptcy laws are underdeveloped and courts are slow to process cases, leading to a high bankruptcy cost, which is a barrier to firm access to finance and economic development (Ponticelli and Alencar, 2016; Li and Ponticelli, 2022; Müller, 2022).

The Chinese debt market has experienced booms and busts in the last two decades. During the 2008 global financial crisis, the Chinese government introduced several economic stimulus policies, which led to debt expansion and shadow banking (Chen et al., 2020), creating major overcapacity in zombie industries and firms. China has experienced several waves of credit market defaults since 2014 as shown in Panel A of Figure 1.[1] More importantly, the number of bond defaults filed for bankruptcy has risen sharply, since the de-leveraging campaigns in 2017 and the release of *"New Regulations on Asset Management"* in April 2018. In particular, the percentage of SOE bond defaults that filed for bankruptcy climbed after 2018 as shown in Panel B of Figure 1.

Given the surge in the number of debt defaults and subsequent bankruptcies by private enterprises (POEs) and in particular SOEs since 2015 (Amstad and He, 2019; Jin et al., 2021), the efficiency of bankruptcy resolution can significantly affect creditor protection and has broader implications for the credit market. However, the judicial independence in corporate bankruptcy cases may not be fully guaranteed even in developed countries with well-established legal institutions (Anginer and Warburton, 2014; Blaylock et al., 2015), let alone in emerging markets including China where government interference is pervasive in all kinds of economic activities

[1] Amstad and He (2019) discuss the first Chinese company ever to default on its onshore corporate bonds, Shanghai Chaori Solar (hereinafter *Chaori*), which failed to meet interest payments of 89.8 million RMB on a 1 billion RMB bond in March 2014, and filed for bankruptcy in one month. Later in October 2014, the Shanghai No.1 Intermediate People's Court approved the reorganization plan of *Chaori* in which unsecured creditors got a recovery rate of slightly more than 20%, changing investors' perception of the implicit government guarantees in corporate bonds.

(Allen et al., 2005; Fan et al., 2013).[2] Prior to 2018, we observed active government interference from both central and local governments—to politically influence the bankruptcy process by appointing bankruptcy trustees and administrators that are politically connected.[3] In Figure 2, government interference is pervasive in 57% of the bankruptcy proceedings associated with SOE bond defaults, based on our case-level information on trustees who are nominated by state.[4]

This is consistent with previous studies which provide evidence on how implicit government guarantees affect bond spreads and the state-owned enterprise (SOE) premium in China (Liu et al., 2017; Geng and Pan, 2022; Li et al., 2023). The Chinese court is also characterized by a lack of professional judges to deal with bankruptcy cases, rendering the bankruptcy process lengthy and cumbersome, and preventing creditors from getting repaid efficiently. The recent spike in bond defaults has led to calls for bankruptcy reform to increase bondholders' recovery values and shorten the time spent in bankruptcy proceedings. Therefore, handling default cases efficiently is of great importance not only for investors, but also for the healthy development of the bond market.

In this study, we investigate the impact of introducing specialized bankruptcy courts across cities in China on the financing cost of corporate bonds. Compared to traditional civil courts, specialized courts are run by better-trained judges and are part of an effort by the central government to limit interference by local governments to preserve creditor value in distress (INSOL 2018). In June 2016, the Supreme People's Court in China promulgated the *Work Plan for Establishing Liquidation and Bankruptcy Tribunals in Intermediate People's Courts*, mandating the introduction of liquidation and bankruptcy tribunals in Intermediate People's Courts

[2] In particular, concerning with the interests of multiple parties such as the valuation of state-owned assets or the resettlement of employees, the local governments in China often intervene in the debt resolutions or bankruptcies of local enterprises, especially SOEs.

[3] In the US, a bankruptcy trustee is appointed by the court to oversee the debtor's estate in a bankruptcy proceeding according to the Bankruptcy Code. From case-level analysis on media coverage associated with bond defaults and bankruptcy filings, we observe different ways that central and local governments can intervene in corporate debt resolutions process in China—to politically influence the bankruptcy process by appointing bankruptcy trustees and administrators that are politically connected. For example, politicians from Hainan Provincial Government were assigned as leaders of the bankruptcy trustee in the bankruptcy of Hainan Airlines Group. Alternatively, local government can take over the enterprises in financial distress by replacing the managers and appointed CEOs from the state (e.g., Dongbei Steel Company bankruptcy case).

[4] Specifically, we obtain the detailed information on trustees who are nominated by the court and judges responsible for the cases, and manually search for the ownership of trustees from firm registration database. A politically connected trustee is considered to influence the bankruptcy process from the perspective of government.

in the province-level municipalities, and prefectural cities. At the end of 2017, there were 97 bankruptcy tribunals in Intermediate People's Courts in China, and each province had at least one bankruptcy tribunal. By June 2020, another eight cities have established this type of bankruptcy court outside the Intermediate People's Court.[5]

Using the sample of corporate bonds in the Chinese onshore bond market, we analyze the change in bond spreads in the secondary market of bonds issued by the same company before and after the introduction of specialized courts from 2012 to 2021 in the difference-in-differences (DID) regression. Given that specialized courts were introduced at different times in different cities, we exploit the staggered introduction for identification. However, cities that introduced specialized courts might be affected by the local economic condition and the type of firms going bankrupt. To deal with this challenge we exploit the fact that, even after the introduction of specialized courts, bankruptcy cases were still handled by both traditional civil courts and specialized courts within the same city, in almost equal proportions. This feature of the Chinese judicial system allows us to compare the introduction of bankruptcy and civil courts within the same city and year as the identification.

We find that specialized court decreases the bond spreads of corporate bonds in the secondary market by 17.9 basis points, representing a 7.6% reduction in the average bond spreads. The baseline results indicate that corporate bond issuers ultimately gain from the bankruptcy courts with lower debt financing costs. To sharpen our identification, we include bond issuer fixed effects in the regression specifications, to compare the bond pricing before and after the introduction of bankruptcy court for the same bond issuer. This mitigates the concerns that omitted time-invariant issuer characteristics can affect the introduction of specialized courts. Moreover, we justify the validity of our DID design by the parallel trend analysis and placebo tests.

Which types of firms are more likely to gain from the introduction of specialized bankruptcy court? We exploit firm heterogeneity to help characterize how bankruptcy reform enhances bond values through expected bankruptcy costs. Our results show that the effects are concentrated when

[5] We use the term "specialized courts" to refer to both bankruptcy tribunals in Intermediate People's Courts and bankruptcy courts outside the Intermediate People's Courts throughout the paper.

ex ante default risk is higher, consistent with the better creditor protection in financial distress. Specifically, we find that the magnitude tends to be larger for risker bonds and issuers, and larger in cities with lower GDP growth rate or with pre-existing local SOE default. Moreover, we exploit the default of a state-owned coal producer Yongmei Group, which triggered market-wide panic among debt market investors, intensifying concerns about the lack of creditor protection and negative spillover effect to other companies.[6] We show that the reduction in bond spreads is amplified after the Yongmei default event, suggesting that positive impact associated with strengthening of creditor protection in severe financial distress. In addition, we provide evidence along the ownership of the bond issuer: specialized courts lead to a 31.6 basis point reduction for bonds issued by POEs, in contrast to a 20.8 basis point reduction for bonds issued by SOEs and a merely 5.5 basis point reduction for LGFV bonds (Chengtou bonds). The reduction in financing costs among POEs has implications for the literature on misallocation of resources and preferential lending treatment for SOEs with low productivity (Hsieh and Klenow, 2009; Cong et al., 2019).

Furthermore, we study the channel through which specialized courts improve creditor protection and reduce the cost of bond financing. Using hand-collected, case-level data on bankruptcy filings associated with bond defaults, we show that specialized courts improve efficiency in bankruptcy process. First, reorganization is more likely to be adopted for bankruptcy resolution in specialized courts, while liquidation is more common in traditional civil courts. Second, the introduction of specialized courts increases efficiency through reductions in time firms spend in bankruptcy proceedings as well as increases in recovery values, which pass through to the lower bond spreads. Third, perhaps surprisingly, bankruptcy court reduces government interference in bankruptcy cases by 63% and is less likely to appoint politically connected trustees.

Our study is related to the literature on the impact of bankruptcy reform on credit market. Papers in this literature focus on how creditor protection affects the cost of financing and its redistribution impact, especially in emerging countries with inefficient court, including the

[6] Yongmei Group, a Henan-based coal producer, started defaulting on a series of AAA-rated bonds worth more than RMB 3 billion (USD 460 million) in November 2020.

Haselmann et al. (2010), Lilienfeld et al. (2012), Gopalan et al. (2016), Rodano et al. (2016), Ponticelli and Alencar (2016), Cerqueiro et al. (2017), Campello et al. (2018), Iverson et al. (2020) and Müller (2022). Our study is closely related to Li and Ponticelli (2022), which shows that specialized court decreases the duration of case proceedings by 36% compared with traditional civil courts. In this paper we investigate the pricing implication associated with specialized courts on the Chinese bond market given the hikes in bond defaults. Using hand-collected bankruptcy filings, our paper provides novel evidence on the changes in government interference following bankruptcy reform.

There is a growing literature on the Chinese bond market and the role of government on pricing. Amstad and He (2019) provide an overview to China's bond market and stylized facts on bond defaults. Bai et al. (2016) and Chen et al. (2020) document the boom in China's bond market and the emergence of shadow banking. Recent studies explore how implicit government guarantees affect bond spreads and investment in China (Ang et al., 2016; Liu et al., 2017; Jin et al., 2021; Li et al., 2023). Our paper is naturally related to Geng and Pan (2022), who document the perception about government support for SOEs and the SOE premium. Our paper addresses a fundamental question, the conflicts of interests between government and suppliers of capital, namely bond creditors in particular. For example, government intervenes by empowering other stakeholders (e.g., workers or politically connected entities) and deviating from absolute priority, leading to reductions in the valuation of claims for unsecured bondholders. By focusing on bankruptcy resolution associated with bond defaults, our study demonstrates that judicial institutions have asset pricing implications for the corporate bond market in China.

Taken together, this paper documents the cost associated with political interference and weak investor protection. The evidence on bankruptcy reform has great policy implications for the design of bankruptcy system. The economic benefit associated with introduction of specialized bankruptcy courts is sizable in magnitude—saving about USD 2.4 billion in annual interest payments for China's corporate bond issuers. In many emerging economies, however, the legal institution in investor protection is still underdeveloped, which further hampers corporate

financing and financial development as documented in literature (Ponticelli and Alencar, 2016; Müller, 2022). In China, as implicit government guarantee leads to distortions, creditor protection in bankruptcy is important to debt issuers, and a "market-oriented" bankruptcy resolution can have great implications for bond pricing in the global debt market.

The rest of this paper is organized as follows. Section 2 introduces the institutional background related to the bankruptcy reform in China. Section 3 describes the data and model specifications, and presents the empirical results. Section 4 concludes the paper.

2 Institutional Setting: Bankruptcy Resolution in China

2.1 Bankruptcy Law and Traditional Civil Courts

The first bankruptcy code, *Enterprise Bankruptcy Law of the People's Republic of China* (hereinafter the Bankruptcy Law 1986) was enacted in 1986 to facilitate corporate bankruptcy proceedings. The Bankruptcy Law 1986 stated that secured creditors were to be given priority in debt repayment, followed by employees, taxes, and unsecured creditors (Articles 32, 37). The Bankruptcy Law 1986 was formulated during a period when China was transitioning from a centrally planned economy to a market economy, and was only applicable to SOE bankruptcies. However, during the latter 1990s, the Chinese government enacted several reforms with the goal strengthening the rights of employees in distressed SOEs over those of secured creditors to achieve social stability.[7]

After China's accession to the WTO, how to better protect creditors especially foreign creditors became a central question given the integration of global market. The goal of the WTO members was to bring Chinese bankruptcy law up to international standards, and to ensure that creditors were sufficiently protected, especially when it came to foreign firms operating in China.

[7] Notice on some issues in the trial implementation of the bankruptcy of state-owned enterprises in several cities, http://www.gov.cn/zhuanti/2015-06/13/content_2878961.htm;
Notice on some issues in the trial implementation of the merger and bankruptcy of state-owned enterprises, http://www.sasac.gov.cn/n2588035/n2588320/n2588335/c4260223/content.html;
Supplementary notice on some issues in the trial implementation of the merger and bankruptcy of state-owned enterprises and the re-employment of employees in several cities, http://www.mofcom.gov.cn/aarticle/b/bf/200207/20020700031314.html%3E.

In 2007, a new bankruptcy code, *the Enterprise Bankruptcy Law of the People's Republic of China* (hereinafter the Bankruptcy Law 2007) replaced Bankruptcy Law 1986. First, the Bankruptcy Law 2007 was considered as a step forward as it applies to all types of incorporated firms, regardless of their state ownership, equity structure and business scope, and provides enhanced protection to creditors by explicitly mandating that secured creditors have priority over employees in bankruptcy proceedings (Article 109, 113). Second, the Bankruptcy Law 2007 also introduces reorganization proceedings (Chapter 8) that resemble Chapter 11 of the US Bankruptcy Code, which allows companies in temporary financial distress to be reorganized instead of immediately liquidated. This empowered creditors by allowing them to hold meetings with the debtor and have the right to review and approve a reorganization plan. These features are intended to shorten the duration of bankruptcy proceedings and increase creditor recovery values.

Although the Bankruptcy Law 2007 improves creditor protection in written law, traditional civil courts still encounter many challenges in the actual resolution of bankruptcy cases. First, bankruptcy cases often involve a complex set of laws and the interests of multiple parties. However, traditional civil judges often lack the relevant expertise to deal with these disputes, as judges are equipped with general skills to handle diverse types of civil cases, such as labor and marriage issues. Second, political influence in bankruptcy resolution is still pervasive, from discussions with law professionals and judges. The local politicians bear significant influence by appointing political connected trustees in overseeing the bankruptcy proceedings. For example, politicians from Hainan Provincial Government were assigned as leaders of the bankruptcy trustee in the bankruptcy of Hainan Airlines Group. Alternatively, local government can take over the enterprises in financial distress by replacing the managers and appointed CEOs from the state (e.g., Dongbei Steel Company bankruptcy case).

Third, the number of bankruptcies jump rapidly since 2013 as shown in Figure 3, triggered by an increasing number of debt defaults by POEs and SOEs (Amstad and He, 2019; Jin et al., 2021). The surge in bankruptcy cases along with the lack of expertise and political influence leads to lengthy and cumbersome bankruptcy proceedings, preventing creditors from getting repaid and

therefore aggravating creditors' expected bankruptcy costs. How to mitigate these frictions in the bankruptcy system is a necessary step towards a "market-oriented" from a "state-dominated" resolution.

2.2 The Introduction of Specialized Bankruptcy Courts

The Shenzhen Intermediate People's Court in Guangdong Province established the Liquidation and Bankruptcy Tribunal in December 1993, which was the first specialized bankruptcy court in China. After the passage of Bankruptcy Law 2007, several local courts in other provinces followed Shenzhen's practice and established bankruptcy tribunals in Henan, Shanxi, Shandong and Chongqing. In October 2014, the 4th Plenary Session of the 18th CPC Central Committee and the Supreme People's Court proposed the introduction of specialized bankruptcy courts across the nation. Subsequently, in June 2016, the Supreme People's Court promulgated the *Work Plan for Establishing Liquidation and Bankruptcy Tribunals in Intermediate People's Courts* (hereinafter Work Plan 2016). The Work Plan 2016 further mandates that bankruptcy tribunals should be established in the four province-level municipalities and provincial capital cities or sub-provincial cities in 11 provinces, including Hebei, Jilin, Jiangsu, and Zhejiang. Figure 4 shows the timeline of the introduction of bankruptcy tribunals in different cities. By the end of December 2020, there were 97 bankruptcy tribunals across China, and each province had at least one liquidation and bankruptcy tribunal.[8]

The bankruptcy tribunal is intended to improve efficiency of bankruptcy proceedings as follows. First, bankruptcy tribunals are run by judges with better training and specialization in bankruptcy cases. For example, job postings for bankruptcy court require judges to be equipped with "*outstanding experience in handling liquidation and bankruptcy cases*". Additionally, from the detailed case filings in bankruptcy tribunals, we observe an increase in the professionalization of judges—a large number of judges have graduated from China's elite law schools.

Second, in August 2016, the National Enterprise Bankruptcy Information Disclosure Platform

[8] A city can establish several bankruptcy tribunals, and we consider the introduction of the first bankruptcy tribunal or court throughout our empirical analysis.

(hereinafter the Bankruptcy Platform) was launched by the Supreme People's Court to improve transparency and credibility in bankruptcy trials. By the end of July 2017, more than 17.6 thousand documents had been published on the Bankruptcy Platform, with more than 51.44 million visitors to the site. The online platform improves transparency in bankruptcy resolution by providing timely information for creditors regarding the assets in place. It also allows small and distant creditors to participate in creditor committees and vote on reorganization plans. Therefore, bankruptcy tribunals reduce costs in coordination across creditors, and improve efficiency in bankruptcy proceedings.

More recently in January 2019, a more independent entity bankruptcy court was established outside the local Intermediate People's Court, in which judges handles only bankruptcy cases and is considered to be subject to less influence from civil court and local government. By the end of June 2020, nine cities established independent bankruptcy courts, including Shenzhen, Beijing, Shanghai, Tianjin, Guangzhou, Wenzhou, Hangzhou, Chongqing, and Nanjing. In the rest of this paper, we use the term "specialized court" to refer to both bankruptcy tribunals and independent bankruptcy courts.

3 Empirical Analyses

3.1 Data

Following Li and Ponticelli (2022), we obtain the exact dates associated with the introduction of specialized courts with the proprietary data from the Supreme People's Court, the Ministry of Justice, and local courts. Our empirical analysis is based on a new case-level dataset of bankruptcies led in Chinese courts between 2014 and 2021. We sourced case-level information from the "National Corporate Bankruptcy Information Disclosure Platform", an online platform launched in 2016 by the Chinese Supreme People's Court (SPC) that allows debtors and creditors to monitor the evolution of bankruptcy cases.[9] For each case, the online platform reports the name of the company filing for bankruptcy, the name of the court in which the case was handled, the

[9] The platform can be accessed at https://pccz.court.gov.cn/pcajxxw/index/xxwsy.

current status of the case, as well as the province, sector, size and ownership category of the bankrupt firm. The platform also offers access to the text of the court documents accompanying each case. Court documents include the text of the rulings made by the judges in charge of each case, as well as any communications from the government, bankruptcy administrators and trustees to the parties involved in the case. Using textual analysis, we extracted from these court documents the relevant information on how the bankruptcy cases are handled and the potential political interference in judicial institutions.

Bond information is obtained from the Wind database as Amstad and He (2019) and Geng and Pan (2022), and city-level variables are obtained from *China City Statistical Yearbook*. Our main sample focuses on corporate bonds issued between 2012 and 2021, including medium-term notes, exchange-traded corporate bonds, and enterprise bonds.[10] To address the concerns about the potential selection of bond issuance before or after the introduction of specialized courts, we focus on bond spreads of bonds issued by the same company in secondary market in the baseline regression. We further exclude bond observations with missing variables, and all continuous variables are winsorized at the 1st and 99th percentiles to mitigate any outliers.

According to Article 3 in Bankruptcy Law 2007 and Article 1 in "Provisions on Some Issues concerning the Trial of Enterprise Bankruptcy Cases" promulgated by the Supreme People's Court, bankruptcy cases fall under the jurisdiction of the people's court in the location where the debtor is domiciled. The domicile of the debtor refers to the location of debtor's main office. If the debtor has no office, the bankruptcy shall be under the jurisdiction of the people's court in the location of registration, which alleviate the possibility of "forum shopping" as in the U.S. in bankruptcy. Given the unique legal provisions and judicial practice on the location of bankruptcy filings, we use the introduction of specialized court in city where the bond issuer is registered to isolate other confounding effects.

[10] We exclude bonds issued by financial companies, asset-backed securities, and other convertible securities. See Amstad and He (2019) for a detailed description of China's corporate bond market. Since the trading activities of short-term financing bills (commercial papers) are scarce in the secondary market, we exclude the sample of short-term financing bills in the baseline regression. In Section 3.5 we conduct analysis in the primary market and include the short-term financing bills in the sample.

Table 1 reports the descriptive statistics of the variables used in the analysis of the secondary market.[11] The average bond spreads during the sample period is 2.362%, with an average remaining maturity of 3.493 years and an average logarithm of the issuance amount of 2.252.[12] Medium-term notes account for 48.1% of the observations, and over 75% of the bonds are traded in the interbank market. Bonds with AAA and AA+ rating comprise 25.3% and 31.5% of the observation in our sample, respectively. Over the sample period, bonds issued by local government financing vehicles (LGFVs) and non-LGFV SOEs account for 88.1% of all observations in total, where bond issued by POEs account for the rest. The average leverage ratio of bond issuers is 57.1%, while the average return on assets (ROA) is only 1.6%.

3.2 Baseline Results

In the baseline regression, we examine the impact of specialized courts on the bond spreads in the secondary market. We aggregate the data to a bond security-quarter panel similar to Geng and Pan (2022), and exploit the staggered introduction of specialized courts between 2012 and 2021 to estimate the following DID model.[13]

$$Y_{bcft} = \beta \times SpecialCourt_{ct} + \gamma Z_{bfct} + \alpha_f + \alpha_t + \varepsilon_{bcft} \quad (1)$$

where Y_{bcft} is the average bond spread of bond security b traded in the secondary market at time t measured in quarters, f denotes the bond issuer, and c denotes the city where the issuer is registered.[14] $SpecialCourt_{ct}$ is a dummy variable that takes a value of 1 if there is a specialized court in city c, and 0 otherwise. If a city has multiple specialized courts, we consider the establishment of the first court in the city. Z_{bfct} is a set of control variables, including firm size,

[11] Table A1 provides descriptive statistics of the variables used in the analysis of the primary market in Section 3.5.
[12] The unit of bond issuance amount is 100 million RMB.
[13] The sample period in baseline regression starts from 2012, considering that most specialized courts are established after 2012, and in the robustness checks, the China Development Bank bond index used as the benchmark yield starts in November 2012. We also conduct the empirical analysis between 2008 and 2021, or 2014 and 2021, given that the government bond index used as the benchmark yield starts in 2008, and the first bond default event occurs in 2014. The main findings are insensitive to the starting point of sample period.
[14] The baseline analysis uses the yield to maturity of the government bond index with similar maturity as the benchmark yield. In the robustness checks, we use the China Development Bank bond index as the benchmark yield. For a bond security that has multiple transactions within a period, the baseline analysis takes the average to calculate the dependent variable. In the robustness checks, we calculate the median value or weighted average of the bond spreads.

leverage ratio, ROA, the logarithm of bond issuance amount, remaining years to maturity of the bond, the logarithm of local GDP, and local fiscal deficit ratio (measured by the ratio of fiscal deficit to local GDP). α_f and α_t denote bond issuer and time fixed effects, respectively. Standard errors are clustered at the city level for the baseline regression, which allows for serial correlation across observations at the city level.[15] The coefficient of interest β captures the impact of specialized court on bond spread.

Table 2 presents this baseline DID estimates, as specified in Equation (1), at the bond security-quarter level. All model specifications in Table 2 include bond issuer fixed effects to control for both observable and unobservable factors that are time-invariant at the issuer level. We also include province-time and sector-time fixed effects to control for potential unobservable variables that can affect the decision to establish a court and bond spreads simultaneously, such as province-level economic conditions and sector-specific industrial policies. Essentially, our analysis compares the bond spread changes for the same bond issuer before and after the introduction of the bankruptcy court. Column (1) has no other control variables. The result in column (1) indicates that the introduction of specialized courts decreases the bond spreads of bond issuers in the local region by 17.9 basis points, which is significant at 1% level. The coefficient represents a 7.6% reduction in the average bond spread, suggesting that the effect is not only statistically, but also economically significant.

In column (2), we saturate the model with a comprehensive set of bond category-time fixed effects to account for various factors in the bond market, some of which are specific to China's context. Specifically, we include issuer's ownership -time, market place-time, security type-time, and bond rating-time fixed effects.[16] The results are robust to these fixed effects, which controls for the time-variant ownership premium (Geng and Pan, 2022), and the effects of market segmentation on bond prices (Chen et al., 2022).

[15] We do not include city fixed effects because they will be fully subsumed by bond issuer fixed effects, which controls for time-invariant issuer characteristics.

[16] The ownership of the issuer could be a private company, SOE, or LGFV. The market place could be either the interbank market or exchange market. The security type could be medium-term notes, exchange-traded corporate bonds, or enterprise bonds. The bond rating could be divided into three groups: AAA, AA+, and all others.

In columns (3) to (5), we include other controls at the city, bond issuer, and bond levels. The estimates are consistent with the baseline results, where specialized courts lead to a 19.0 basis point decrease in bond spreads as shown in column (5). Finally, in column (6), to capture the impact of bankruptcy court on the same bond, we include bond security fixed effects to subsume all time-invariant factors at the security level, and the estimate remains significant. This finding is consistent with our conjecture that specialized courts facilitate a faster bankruptcy resolution and strengthen creditor protection, which passes through into lower funding costs in the secondary market. Moreover, the coefficients on other control variables are also aligned with the predictions from the existing literature. For example, the bond spread is positively correlated with the deficit-to-GDP ratio of the city government and issuer's leverage, and negatively correlated with issuer's size and ROA.

We also perform an event study in the form of the following dynamic DID model to examine the dynamics of bond spreads before and after the introduction of bankruptcy courts, and assess the validity of parallel trend assumption in our DID design.

$$Y_{bcft} = \sum_{n} \beta_n \times D_n SpecialCourt_{ct} + \gamma Z_{bfct} + \alpha_f + \alpha_t + \varepsilon_{bcft} \quad (2)$$

where $D_n SpecialCourt_{ct}$ captures the dynamic impact: $D_n SpecialCourt_{ct}$ takes a value of 1 if at time t, it has been *n* quarters since the introduction of the first specialized court in city c, and 0 otherwise. A negative n means that n quarters prior to the introduction of the first specialized court in this city. Figure 5 presents the dynamics of the treatment effect, where the event study coefficients are obtained from estimating Equation (2).[17] The blue bar represents the specification with full controls and fixed effects as in column (5) of Table 2 and the red bar represents the estimation with bond-level fixed effects as used in column (6) of Table 2. Overall, the dynamics estimated from the two specifications resemble each other in terms of the shape of the trend and the magnitude of the impact. We observe that in both specifications, there is no pre-trend prior to the introduction of specialized courts. This validates the assumption of our DID design and we do

[17] The detailed regression results are shown in Table A2.

not observe significant changes in bond spreads prior to the court introduction. Next, we find a sizable reduction in bond spreads 4 quarters since the introduction of the court, and the effect remains significant 8 quarters after the shock with no indication of reverting afterwards.

We further quantify the aggregate benefits of the specialized courts to bond issuers by conducting a back-of-the-envelope calculation based on Müller (2022). The counterfactual scenario in this analysis assumes that no specialized court was established during the entire sample period from 2012Q1 to 2021Q4. We estimate ΔI, the total savings in corporate bond interest payments as follows:

$$\Delta I = \sum_{t} \sum_{c} L_{ct} * \Delta r_{ct} \tag{3}$$

where L_{ct} is total outstanding amount of corporate bonds at quarter t in city c. Δr_{ct} is the decrease in interest rate of bond financing caused by the specialized court. Based on the estimates in Table 2, Δr_{ct} equals to 0.0448% (i.e., 0.179%/4) if a specialized court has been established in city c at quarter t, and 0 otherwise. Our calculation indicates that the total savings in interest payments of corporate bonds associated with bankruptcy court is approximately 158 billion RMB, which is equivalent to USD 2.4 billion in annual interest payments of corporate bonds. We argue that this effect is economically significant.

3.3 Heterogeneous Effects

The results in the previous session show that the introduction of special court leads to significant reduction of bond spread. Intuitively, the effect of special court is mainly on expected bankruptcy costs; we expect the effects of special court to be stronger when *ex ante* default risk is higher. We test this conjecture by exploring the heterogeneity effects across different ex ante default risks using the following regressions model.

$$Y_{bcft} = \beta_1 \times SpecialCourt_{ct} + \beta_2 \times SpecialCourt_{ct} \times D_b(High\ \ Default\ \ Risk) + \gamma Z_{bfct} + \alpha_f + \alpha_t + \varepsilon_{bcft} \tag{4}$$

where $D_b(High\ \ Default\ \ Risk)$ takes value of 1 if ex ante default risk is high and 0 otherwise.

Other variables are as defined in the baseline specification.

We expect that the reduction in bond spreads is amplified for bonds with higher ex ante default risk, i.e. β_2 is expected to be negative. We use different proxies to capture ex ante default risk, measured at bond, issuer, and city levels, and over different time periods. At bond level, we measure ex ante default risk using initial bond rating; at issuer level we use different issuers' characteristics; at city level, we use local economic conditions and whether a city has experienced a default event. Table 3 to 5 report these heterogeneity results when the default risk is measured at bond, issuer and city levels respectively. Table 6 explores a special market event which significantly increases default risk at market level.

Table 3 reports results when ex ante default risk is measured at bond level using initial bond rating. $D_b(High\ \ Default\ \ Risk)$ is defined as $D_b(Low\ \ Rating)$ in Table 3, which takes value of one if bond's initial rating is below AAA and zero for bonds with AAA initial ratings. We use initial rating at issuance to alleviate the concern that the introduction of specialized courts can subsequently affect the bond ratings and confound the interpretation of the results. Column (2) shows that specialized courts lead to an 8.1 basis point reduction in the bond spreads of AAA-rated bonds and an extra reduction of 13.9 basis points for low-rated bonds, and the difference between these two groups are statistically significant. We also estimate Equation (2) for each subsample to explore the dynamics of the treatment effect. Figure 6 shows that the reduction in bond spreads is substantial for low-rated bonds, especially in the first two years after the introduction of bankruptcy court.

Table 4 reports the results of heterogeneity effects at issuer levels. We construct issuer level default risk proxies using several financial distress measures widely adopted in the literature (Altman, 1968; Asquith et al., 1994; Bhattacharjee and Han, 2014), including leverage ratio, interest coverage ratio, and Altman's Z-score. For each financial variable, we construct three dummy variables by partitioning our sample into high, medium, or low level of financial risk. We then interact the medium-risk and high-risk dummies with $SpecialCourt_{ct}$ to examine the heterogeneous responses of bond spreads relative to the low-risk cohort. Panel A of Table 4

indicates that the effect of specialized courts is generally stronger for high-risk issuers and financially distressed firms. The t-test shows that such differences between the high-risk and the low-risk firms are statistically significant.

According to the literature, bonds issued by LGFVs (named as Chengtou bonds in China) are generally considered safer due to implicit government guarantees (Liu et al., 2017; Geng and Pan, 2022; Jin et al., 2021), whereas those issued by POEs are perceived as risky by bondholders and SOE bonds are falling somewhere in between as they also enjoy certain implicit government guarantees comparing to POE bonds, but not as much as LGFVs bonds. In Panel B of Table 4, we compare the effects of specialized courts across three issuers groups: LGFV, SOE and POE. Column (2) shows that specialized courts lead to an additional 26.1 basis point reduction in bond spreads for POE-issued bonds relative to LGFV-issued bonds and there is an additional 15.3 basis point reduction for SOE-issued bonds relative to LGFV-issued bonds. The magnitudes of the coefficients are consistent with the underlying risk characteristics of bond issuing entities. These findings suggest that both POEs and SOEs benefit from the specialized courts, with POEs benefiting the most.[18]

Moreover, in Appendix Table A3, we test the variation across bonds that are collateralized, guaranteed by a third party, or without credit enhancement. Collateralized bonds are the least sensitive to the introduction of specialized courts, which are considered as secured and creditors have priority in selling the collateral to recover losses in the event of bond default. In columns (1) and (2), $D(Low\ Credit\ Enhancement)$ is an indicator for the bonds that are not collateralized, and low credit enhancement group includes bonds without guarantees in columns (3) and (4). Our results indicate that bonds with low credit enhancement are associated with significant reduction in bond spreads given high expected bankruptcy costs for unsecured creditors.

Table 5 explores the heterogenous effects in the default risk measured at city levels. We first partition our sample into two equal groups based on the city-level economic conditions, specifically, the city-level GDP growth rate or government deficit-to-GDP ratio. We define a

[18] We also test the difference between the coefficient of POE and SOE, and it is significant at 10% level.

dummy variable *D(weak condition)* which takes value of 1 if a city's GDP growth rate is below the sample median or if the city's deficit-to-GDP is above the sample median. Panel A of Table 5 shows a larger reduction in bond spreads for firms located in cities with lower GDP growth rate and cities with higher deficit-to-GDP. Besides these economic measures, we also consider whether the city has experienced a local SOE default. Existing literature has documented that a firms' default is also associated with increase in default for firms in the same location partially due to their correlation with local economic (Li et al., 2023).[19] Existing studies also show that local government provides implicit guarantee for local SOEs. A local SOE default suggests that either the local government has lower incentive to provide implicit guarantee or the local government has limited financial capacity to provide implicit guarantee. Both effects suggest that the faith in implicit guarantees will be considerably dampened, implying a higher default risk for local firms. Panel B of Table 5 shows that the impact on bond values is concentrated in cities that experienced bond defaults by local SOEs.

Finally, we exploit a major bond default event in China as a quasi-natural experiment to proxy the *ex ante* default risk. In November 2020, Yongmei Group, a Henan-based coal producer, began defaulting on a series of AAA-rated bonds worth more than RMB 3 billion (USD 460 million).[20] This event triggered market-wide panic among debt market investors, intensifying concerns about the lack of creditor protection and subsequent bond default waves of other companies (Li et al., 2023). We use the unexpected default of Yongmei Group as an exogenous shock, and compare the effect of specialized courts on bond spreads before and after this event. Column (2) of Table 6 shows that the reduction in bond spreads is substantial after the default event of Yongmei Group, consistent with the argument that the effect of specialized court is stronger when Yongmei default substantially elevated the perceived market default risk.

Overall, we find a stronger effect associated with the introduction of specialized courts for bonds with higher ex ante default risk, such as bonds with lower ratings, issued by poorly

[19] We also consider the initial bond default of all types of issuers, and the results remain similar.
[20] For more information about the default case, see https://www.reuters.com/article/china-bond-probe-idUSL4N2I61MJ.

performing issuers, POEs, and in cities with lower GDP growth and historical local (SOE) bond defaults, and post significant default event.

3.4 Mechanism through Reductions in Bankruptcy Costs

The above empirical evidence demonstrates that the introduction of specialized courts leads to reductions in corporate bond spreads, particularly when the ex ante default risk is higher. In this section, we aim to explore the channels through which specialized courts influence the bond spreads. Intuitively, bond value is determined by loss given default and default probability. We decompose loss given default into bankruptcy efficiency and government interference. In particular, we separate out government interference because government plays an active role in the Chinese bond market (Liu et al., 2017). Thus, we explore three channels: increasing bankruptcy efficiency, reducing government interference and reducing default probability.

To capture bankruptcy efficiency, we employ the following measures. First, we consider the outcome of bankruptcy resolution, specifically the choice between liquidation and reorganization. Prior research by Bris et al. (2006) has shown that liquidation tends to result in lower debt recovery rates for creditors and reduced overall efficiency in the bankruptcy resolution process. Thus, the efficiency channel predicts that specialized courts lead to increases in reorganizations over liquidations given judges and administrators are equipped with financial knowledge. Second, we examine the duration of bankruptcy cases. Duration not only affects the expected present value of the recovery but is also a significant determinant of fees and expenses incurred during litigation (LoPucki and Doherty, 2011). Given that specialized courts aim to streamline and improve the efficiency of the bankruptcy process, it is reasonable to expect that they would result in shorter case durations. Third, we focus on the recovery rate of creditors, which is arguably the most important measure. We aim to estimate whether specialized courts contribute to a larger recovery rate for bondholders. This measure provides a direct assessment of the impact of specialized courts on creditor outcomes.

Besides the efficiency considerations as documented in the literature, government interference

can significantly influence bankruptcy proceedings under the Chinese judicial system. Government may have different goals such as social stability and employment, which may not be aligned with the interests of creditors. Government interference may lead to potential biases or favoritism, which can affect the outcomes of bankruptcy cases and the allocation of assets. In order to assess the degree of government involvement, we examine whether the bankruptcy cases in our study were handled by politically connected trustees. In China, trustees play a crucial role in bankruptcy proceedings as they are responsible for overseeing the management and distribution of assets during the process. Politically connected trustees thus can capture the extent of government interference in the bankruptcy process. According to the World Bank's measure of business and investment climates B-READY in 180 economies worldwide, an effective insolvency framework should ensure that an insolvency administrator should be objective, clearly established, and publicly available.[21] The representative should objectively take into account the interests of creditors and employees and ensure that the law is applied effectively and impartially. Finally, we estimate default probability changes for bonds that are issued before and after the introduction of any specialized court.

To construct the above variables, we hand collect data on bankruptcy filings from the National Enterprise Bankruptcy Information Disclosure Platform from 2012 to 2021. This platform was launched by the Supreme People's Court in 2016 to improve transparency and credibility in bankruptcy trials. We extract detailed information from each bankruptcy filing associated with bond default events, including firm's name, location, size, and ownership. Additionally, the Bankruptcy Platform also discloses detailed information regarding the bankruptcy resolution process, including the court, judges and trustees responsible for the case, the timing of case acceptance and completion, and the resolution outcome in terms of liquidations or reorganizations. Furthermore, we explicitly construct recovery values to measure the bankruptcy efficiency, through collecting information on assets, liabilities, claim holders and calculate the distribution of

[21] For more information, one can refer to Table 14. Subcategory 2.2.2–Insolvency Administrator's Expertise in Practice, which is sourced from the following link https://thedocs.worldbank.org/en/doc/357a611e3406288528cb1e05b3c7dfda-0540012023/original/B-READY-Methodology-Handbook.pdf.

assets among all claim holders. To capture government interference, we obtain the detailed information on trustees who are nominated by the court and judges who are responsible for the cases. We further manually search for the ownership of trustees from firm registration database. If the owner of the trustees is state-owned or affiliated with government bureaus, we define it as a politically connected trustee.

In Appendix Figure A1 and A2, we first report the distribution of bankruptcy outcomes in terms of liquidations or reorganization. This figure reveals that distressed firms handled in specialized courts are less likely to be liquidated in bankruptcy resolution than traditional civil courts. This result is economically important, as on average 10% of firms in bankruptcy resolution end up in liquidation that bondholders lose substantial value according to Li and Ponticelli (2022). In Figure A3, we show that a specialized court is more likely to bring strategic investors relative to civil courts. In the bankruptcy court, the judges with expertise increases the probability of successful reorganizations through actively searching for strategic investors with funding. Our results indicate that strategic investors are involved in more than 60% of the bankruptcy cases in specialized courts, compared with 34% of the cases in traditional civil courts. Furthermore, Figure A4 shows that specialized courts are more likely to propose substantive consolidation in bankruptcy, by which the assets and liabilities of affiliated companies associated with the distressed firm are consolidated as a single entity, to ensure the recovery to all creditors of the consolidated debtor. The evidence presented above suggests that by adopting "market-oriented bankruptcy" model, the specialized courts increase debt recovery in bankruptcy resolution and economic values for bondholders.

The regression analysis results are reported in Table 7. We focus on a sample of bond defaulters whose issuers go bankrupt after the bond default events. Column (1) shows that the probability of liquidation is 58.0% lower for cases in specialized courts than that in traditional civil courts. We construct a measure of bankruptcy duration, which takes value of 1 if it takes more than one year for a court to approve the reorganization plan since the acceptance of the case. The estimate in column (2) shows that the likelihood of this duration exceeding one year is reduced by

77.7%. Additionally, specialized courts are associated with, on average, a 33.6% increase in the bond recovery rate, as shown in column (3). Column (4) demonstrates that the specialized court significantly reduces the likelihood of government interference in bankruptcy cases, making it 63% less probable for politically connected trustees to be appointed.

The test for default probability change is reported in Table 8. *Default* is a dummy variable equal to 1 if a bond defaults and zero otherwise. We find no significant effect of specialized courts on the probability of bond default. There is no evidence that firms change their default strategy with the existence of specialized courts. Overall, the results suggest that the introduction of specialized courts strengthens bondholder economic values through more judicial independence and higher recovery rate upon default, which in turn passes through into the reduction in the cost of bond financing.

3.5 Real Impact on the Bond Issuance Cost and Issuer's Outcomes

To extend our analysis, we explore the impact of specialized courts on the cost of corporate bond issuance as well as issuers' economic and financial outcomes. First, we measure the dependent variable using the bond issuance spread in the primary market, and construct other control variables in the same way as our baseline specification. Table 9 reports the impact of specialized court on bond spreads in the primary market by controlling for the bond issuer fixed effects for all specifications.

Column (1) shows that the introduction of specialized courts leads to reductions in corporate bond issuance spreads by 20.4 basis points, which represents 10.1% of the average bond issuance spread during the sample period. In the regression in columns (2) to (5), we further control for bond and issuer characteristics, as well as the economic condition of cities where the bond issuers are located. The statistical significance remains at the 1% level across all specifications.[22]

Next, we analyze the impact of bankruptcy court on issuer-level outcome variables. Specifically, we study various outcomes in the annual growth rate of assets, debt liabilities, the

[22] In an unreported table, we exclude new issuers and short-term commercial papers (SCPs), and the results are similar.

outstanding amount of bond securities and bank loans, cash holdings, and capital expenditure. In Table 10, total assets and total liabilities grow faster by 2.8% and 4.3% respectively one year after the bankruptcy court as shown in column (1) and (2). By decomposing the debt issuance into bond securities and bank loans, we further show that bond issuances are more responsive relative to bank loans, which is consistent with increases in unsecured bondholder values. We also analyze the term structure of debt, including the average maturity of bond and the proportion of long-term loans. Our results indicate that the introduction of bankruptcy court leads to increases in the maturity of debt given reductions in bankruptcy costs when firms enter financial distress. The dynamic responses of financial outcomes also indicate the economic effect increases over time after the court. Additional results show increases in cash holdings and capital expenditures. These findings are consistent with Ponticelli and Alencar (2016), Gopalan et al. (2016) and Müller (2022), which suggest that bankruptcy reforms lead to increased investment and long-term debt.

3.6 Additional Tests and Robustness

3.6.1 Placebo tests

We conduct two placebo tests to check the validity of our main findings on the introduction of specialized courts. In the first placebo test, we randomly select the cities to introduce the specialized courts with the probability equal to the actual proportion of the sample. Each selected city is assigned the introduction time that is independently drawn from the uniform distribution. After each random assignment, we construct the pseudo version of the primary variable $SpecialCourt_{c,t}$, and estimate the baseline model to get the pseudo coefficient. We repeat the procedure for 1000 times to draw the empirical distribution of the pseudo coefficient. Figure 7 shows that the distribution of pseudo coefficient has a mean close to 0 and statistically insignificant, supporting that our baseline results are not driven by alternative events.

In the second placebo test, we address the potential issue of forum shopping by debtors or creditors, who might select a court that would handle the bankruptcy case more favorably and protect claim values. According to the Bankruptcy Law 2007, forum shopping is unlikely as the

jurisdiction of the registration determines where bankruptcy cases should be filed, which addresses the possibility of court and case selection. We explicitly test whether the introduction of specialized courts can have impact on bond spreads for bond issuers that are distant away. Table A4 reports the estimates across different thresholds of the distance between bond issuers and courts, and none of them is statistically significant across registration city.

3.6.2 Effects on Equity holders

Our empirical findings indicate that specialized courts strengthen creditor protection and increase the market value of creditors. However, an important question arises naturally: do creditors benefit at the expense of equity holders, resulting in wealth redistribution from shareholders to creditors? To answer this question, we examine the outcome of equity holders by analyzing the change in stock prices after the introduction of specialized courts based on a subsample of bond issuers that are listed on the Chinese stock market. In Table A5, we observe a sizable reduction in bond spreads after the introduction of specialized courts (columns (1) and (2)), but no significant effect on equity returns measured by quarterly equity holding period returns (columns (3) and (4)). This result is consistent with the intuition that equity stakes *do not* share senior creditor status as the bondholders and other secured creditors. In Figure 8, we also estimate the dynamics of the treatment effect on bond spreads and observe the parallel trend holds for this subsample of listed companies.[23] This evidence suggests that specialized courts increase creditor value without adversely affecting shareholder value.

3.6.3 Robustness check

In this subsection, we discuss results of various robustness tests. Table A7 report results using alternative measures of bond spreads. The dependent variable is the median value of bond spreads in column (1), and is weighted by the issuance amount of security in column (2). Column (3) excludes the new bond issuers after court, and column (4) excludes bonds with time to maturity

[23] The details of the regression results are given in Table A6.

less than 1 quarter. The results remain robust to the alternative measures and estimation method. In column (5), we exclude bonds issued by central SOEs as the bankruptcy case is administered by the central government instead of the local court. Column (6) shows that the bankruptcy courts have a significant impact on the ex ante pricing even for bonds without experiencing any default over the sample periods. Furthermore, we observe sizable impact by focusing on bond issuers located in plausibly balanced economic regions—Yangtze River Belt region and Yangtze River Delta region.[24] The bankruptcy court introduced in the provincial capital city is administered by the central government and the Supreme People's Court, which could be correlated with other government policies. We focus on courts introduced at the non-capital cities, and the results are similar to the baseline.

In Table A8, we compare the impact for bonds traded on different markets and across different types of bonds. The results are stronger for medium-term notes and exchange-traded corporate bonds relative to enterprise bonds. Table A9 estimates the model by clustering the standard errors at different levels and the statistical significance is not sensitive to clustering. In Table A10, the dependent variable is calculated at the issuer-quarter level using the average spreads of bonds traded at quarter t. The corresponding dynamics of the issuer-quarter level regression is shown in Figure A5.[25] In Table A11, following Geng and Pan (2022) and Amstad and He (2019), we use bonds issued by the China Development Bank (CDB) with similar maturity to calculate bond spreads. Table A12 uses yield to maturity (YTM) as the dependent variable, and Table A13 controls for the city-level commercial environment that may affect the cost of debt issuance. These results suggest that the positive impact of specialized courts remains across various measures and specifications.

[24] Yangtze River Delta refers to Zhejiang, Jiangsu and Anhui provinces. Yangtze River Belt refers to Zhejiang, Jiangsu, Anhui, Hubei, Jiangxi, Hunan, Sichuan, Yunnan and Guizhou provinces.

[25] Similar to the approach adopted by Figure 6, we first aggregate the data at the issuer-quarter level and then divide the sample by issuer rating instead of security rating. Figure A6 provides the results of the event study for high-rated and low-rated issuers, which yields similar results.

4 Conclusion

In this paper, we explore the consequences of bankruptcy reform on creditor protection and how it affects the cost of bond financing. Using the staggered introduction of specialized bankruptcy courts across cities in China, we show that the court has pricing implications on bond market, a reduction of 10% for issuers, and the effect is stronger when default risk is higher. To analyze the channel through which specialized courts improve creditor protection, we hand-collected, case-level data on issuers that file for bankruptcy after bond defaults. The estimation from bankruptcy filings indicates that specialized courts help to reduce political interference, increase bondholder's recovery values and shorten the time firms spend in bankruptcy proceedings, which contributes to the reduction in the cost of bond financing.

Our paper explores the linkages between bankruptcy reform and the development of bond market. The evidence has policy implications for the future design of bankruptcy system especially for countries experiencing obstacles in bankruptcy resolution, as documented by the Doing Business Report. The economic benefits associated with introduction of specialized bankruptcy courts is substantial, saving around 2.4 billion dollars in annual interest payments for China's corporate bond issuers. In many emerging economies, however, the bankruptcy system is still underdeveloped, which subsequently hampers corporate financing and financial development as documented in literature (Ponticelli and Alencar, 2016; Müller, 2022). Our paper highlights the importance of creditor protection in bankruptcy to bondholders through less political interference, and a "market-oriented" bankruptcy resolution can have great implications for bond pricing in the global debt market.

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Figures

Figure 1: Bond Defaults and Bankruptcy Filings in China

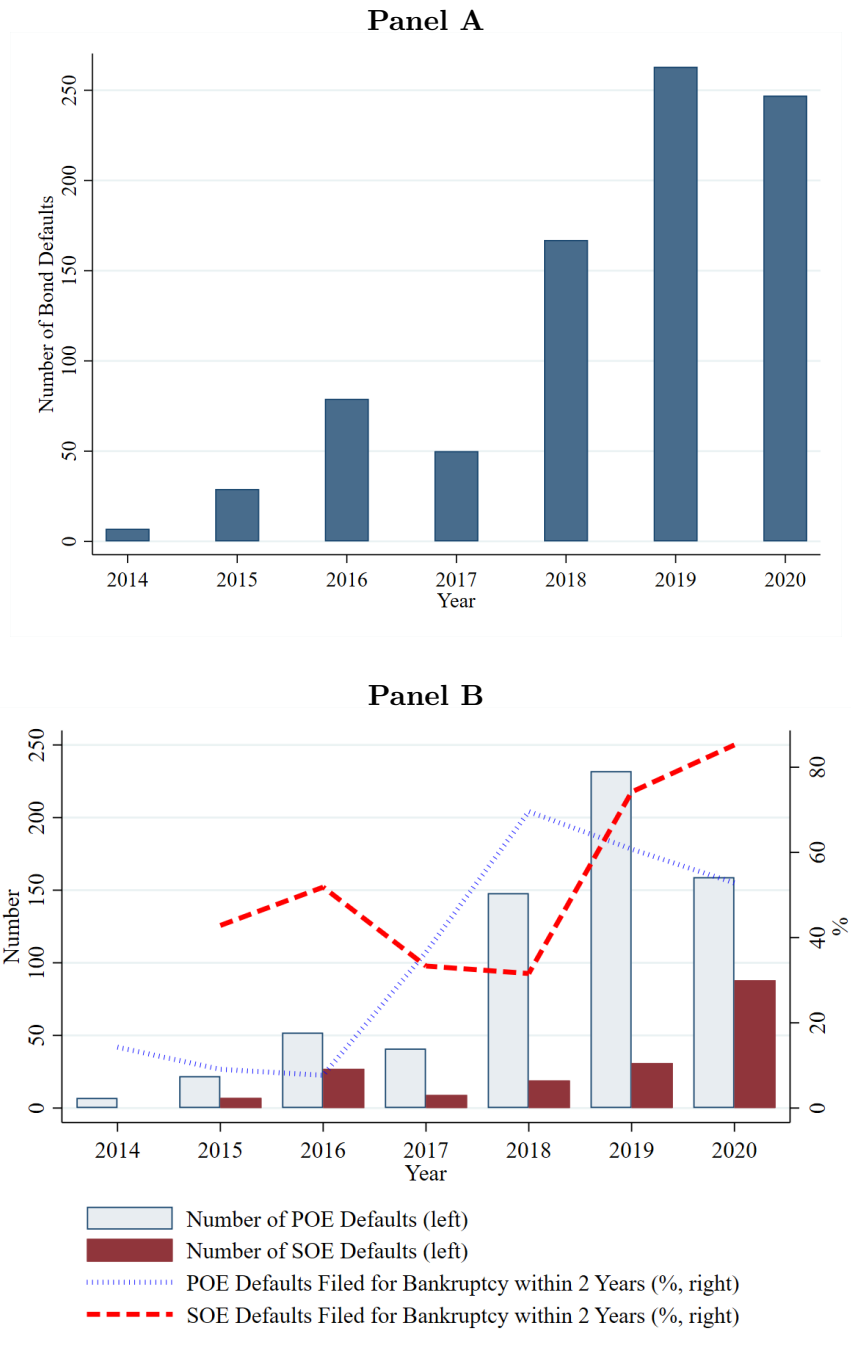


Figure 2: Bond Defaults and Government Interference in China

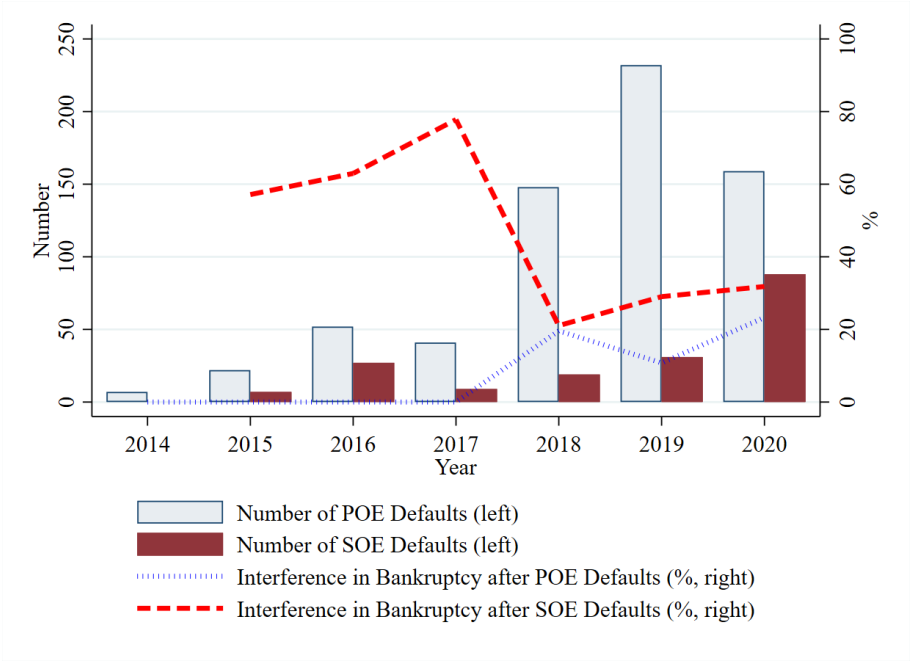


Figure 3: Number of Bankruptcy Cases in China

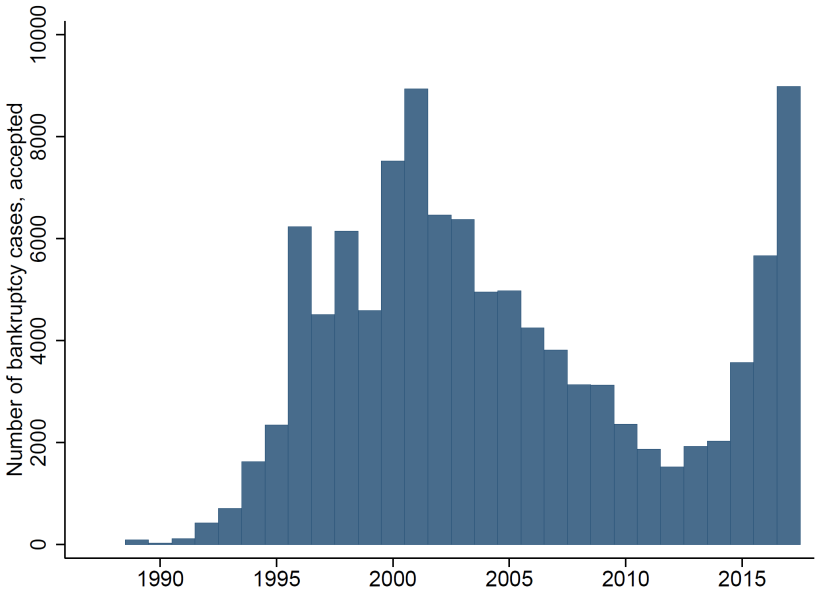


Figure 4: Number of Bankruptcy Courts Introduced

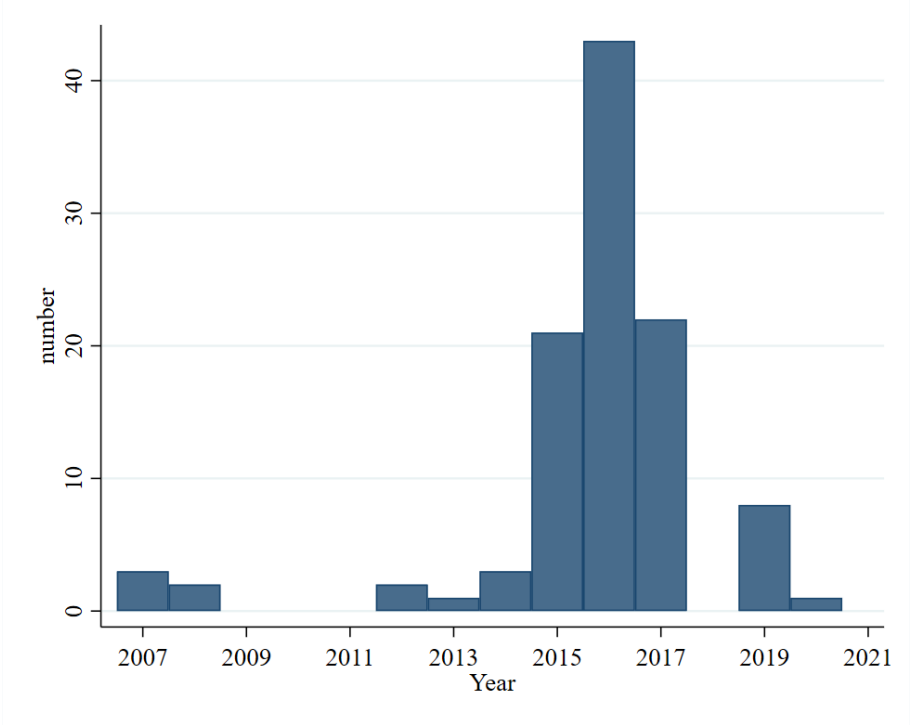


Figure 5: Test for the Parallel Trend Assumption

Notes: This figure tests the parallel trend assumption by estimating the following model specification:

$$y_{bfct} = \sum_n \beta_n D_n \text{SpecialCourt}_{ct} + \gamma X_{bfct} + \alpha_f + \varepsilon_{bfct}$$

Red vertical line indicates the quarter t_0 when a city introduces the court, and is considered as the benchmark period. The dummy variable $D_n\text{SpecialCourt}_{ct}$ takes 1 if it has been n quarters since the city c introduced the court (if n is negative, it will introduce the court in $-n$ quarters). The inner and the outer confidence interval are at significance level of 10% and 5% respectively. Standard errors are clustered at city level.

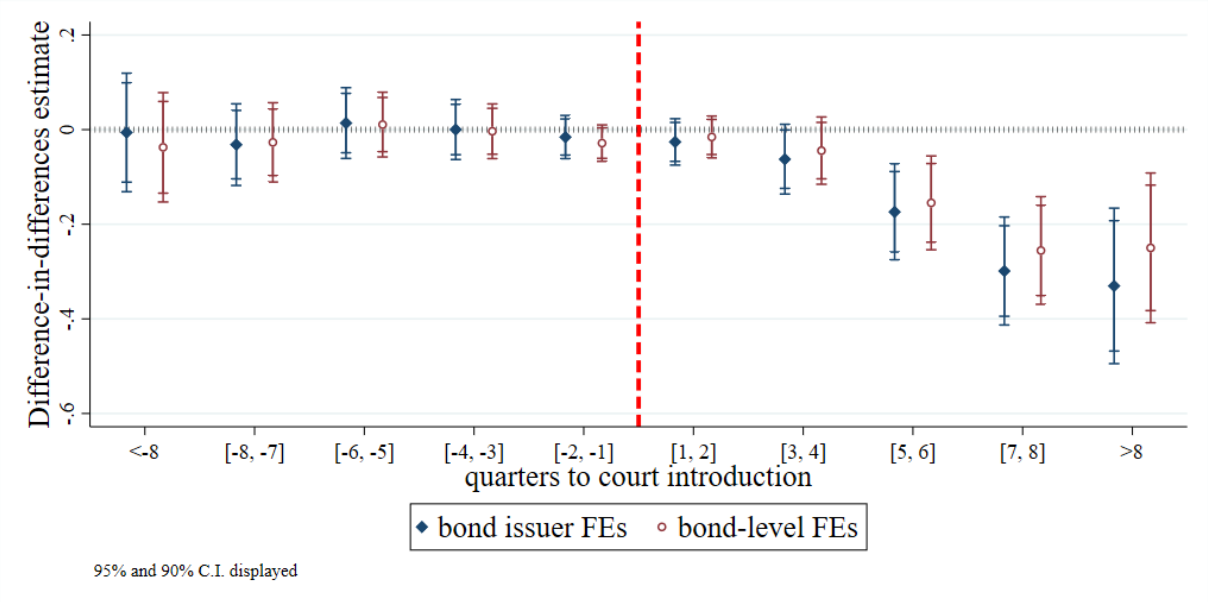


Figure 6: Dynamic Response by Bond Rating

Notes: These figures first divide the sample by whether bond initial rating is AAA or below, and then estimate the dynamic DID model in each subsample. Red vertical line indicates the quarter t_0 when a city introduces the court, and is considered as the benchmark period. The inner and the outer confidence interval are at significance level of 10% and 5% respectively.

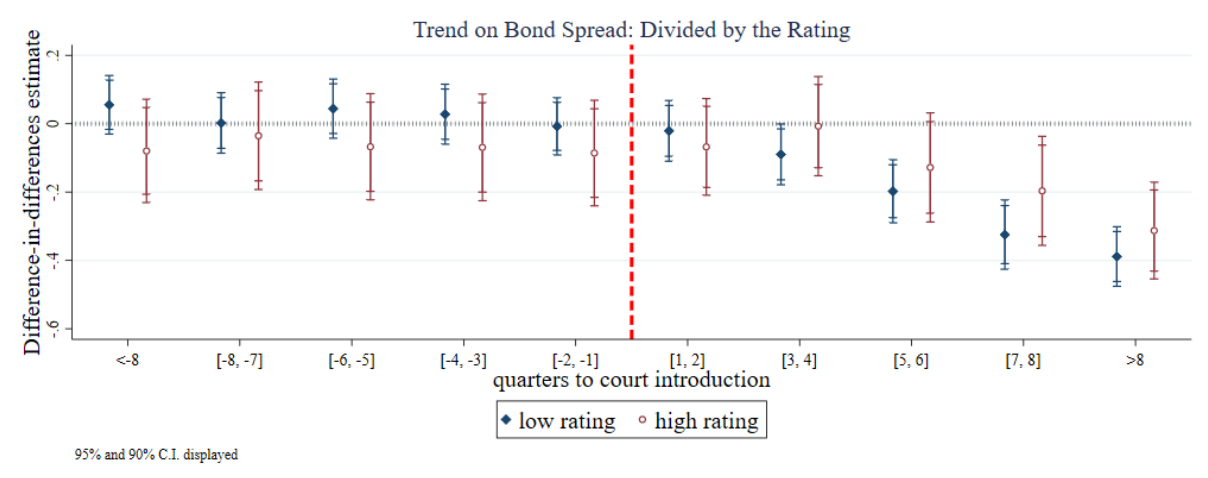


Figure 7: Placebo Test

Notes: This figure shows the distribution of the pseudo coefficients of bond spreads. We randomly select the cities to introduce the specialized court, and each one of the selected cities is randomly assigned the period of court introduction. After each random assignment, we construct the pseudo version of the variable $SpecialCourt_{c,t}$, and estimate the baseline model to get the coefficient. We repeat the procedure for 1000 times to draw the histogram of the pseudo coefficients. The red vertical dash line indicates the baseline result. The values of p1, p5 and mean of the empirical distribution are displayed on the horizontal axis.

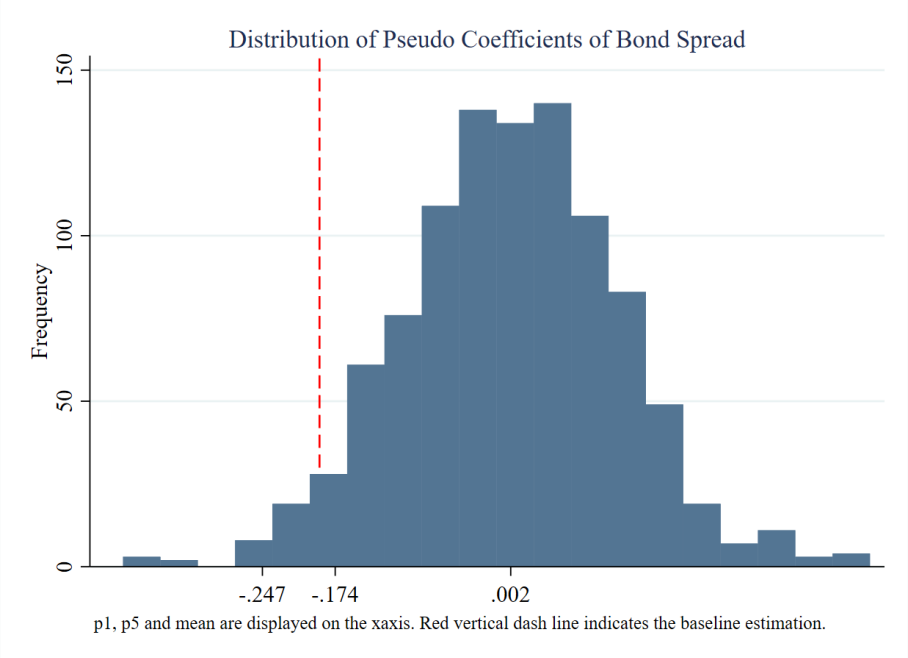
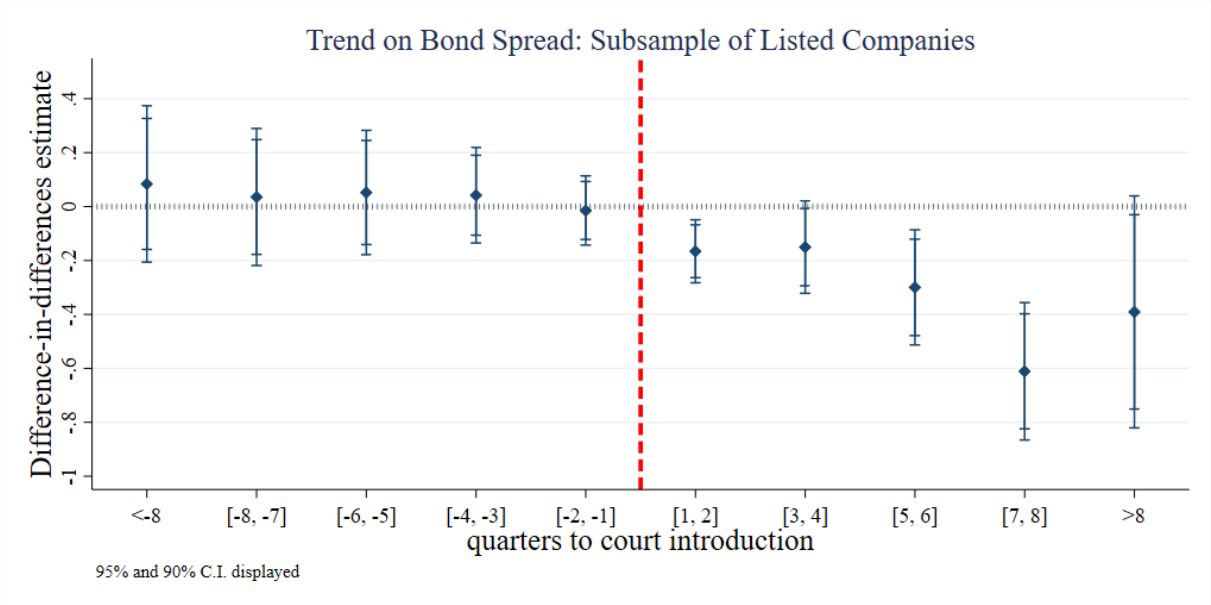
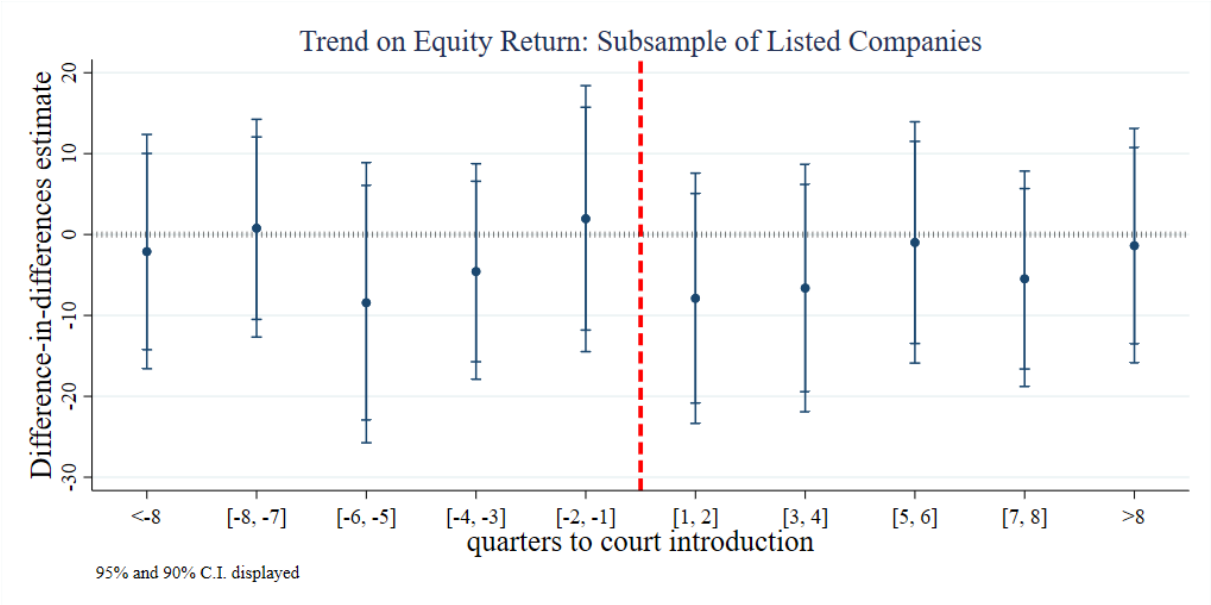


Figure 8: Response of Equity Return versus Bond Spread

Notes: These figures show the responses of bond spread and equity holding period return estimated in the subsample of bond issuers that are listed in the Chinese stock market as well. Red vertical line indicates the quarter t_0 when a city introduces the court, and is considered as the benchmark period. The inner and the outer confidence interval are at significance level of 10% and 5% respectively. Standard errors are clustered at city level.





Tables

Table 1: Summary Statistics

Bond-level characteristics

	count	mean	sd	p10	p50	p90
bond spread$_{b,t}$	167045	2.362	1.532	0.878	2.032	4.136
log(issuance amount$_b$)	167045	2.252	0.618	1.609	2.303	2.996
years to maturity$_{b,t}$	167045	3.493	1.987	1.000	3.250	6.250
bond guaranteed	167045	0.228	0.419	0.000	0.000	1.000
medium term note	167045	0.481	0.500	0.000	0.000	1.000
interbank	167045	0.769	0.421	0.000	1.000	1.000
AAA	167045	0.253	0.435	0.000	0.000	1.000
AA+	167045	0.315	0.464	0.000	0.000	1.000

Issuer-level characteristics

	count	mean	sd	p10	p50	p90
size$_{f,t-1}$	165467	10.600	1.161	9.202	10.447	12.294
leverage$_{f,t-1}$	165467	0.571	0.139	0.373	0.590	0.735
ROA$_{f,t-1}$	165467	1.595	1.950	0.173	1.029	3.912
tangibility$_{f,t-1}$	165467	0.162	0.185	0.003	0.083	0.436
LGFVs (soe muni.)	165467	0.186	0.389	0.000	0.000	1.000
non-LGFV SOEs (soe corp.)	165467	0.695	0.460	0.000	1.000	1.000

City-level characteristics

	count	mean	sd	p10	p50	p90
SpecialCourt$_{c,t}$	165114	0.405	0.491	0.000	0.000	1.000
log(GDP$_{c,t-1}$)	165114	8.392	0.922	7.129	8.413	9.606
govt. deficit/GDP$_{c,t-1}$	165114	0.058	0.055	0.006	0.043	0.135

Table 2: Specialized Court and Bond Spread, Baseline Regression

Notes: This table reports the results of the following model specification:

$$y_{bfct} = \beta \text{SpecialCourt}_{ct} + \gamma X_{bfct} + \alpha_t + \alpha_f + \varepsilon_{bfct}$$

where dependent variable y_{bfct} is the average yield spread of bond b in quarter t. If the city c, where the bond issuer f is located, introduces the specialized court at time t_0, the independent variable SpecialCourt_{ct} is set to be 1 for any $t \geq t_0$. α_t stands for the time fixed effects, and α_f stands for the bond issuer fixed effects. X_{bfct} represents a series of bond-level, issuer-level and city-level control variables. The bond category-time fixed effects in columns (2)-(6) include issuer's ownership-time fixed effects (POEs, SOEs, or LGFVs), market place-time fixed effects (interbank or exchange market), security type-time fixed effects (medium-term notes, enterprise bonds or exchange-traded corporate bonds), and bond rating bin-time fixed effects (AAA, AA+, or below). Standard errors are clustered at city level.

	$\text{Bond Spread}_{b,t}$					
	(1)	(2)	(3)	(4)	(5)	(6)
$\text{SpecialCourt}_{c,t}$	-0.179***	-0.218***	-0.185***	-0.189***	-0.190***	-0.085**
	(0.058)	(0.053)	(0.052)	(0.053)	(0.053)	(0.038)
$\log(\text{GDP}_{c,t-1})$			-0.292	-0.139	-0.140	-0.113
			(0.246)	(0.237)	(0.237)	(0.220)
govt. $\text{deficit/GDP}_{c,t-1}$			2.469**	2.421**	2.417**	1.329
			(1.110)	(1.093)	(1.093)	(0.844)
$\text{size}_{f,t-1}$				-0.249***	-0.249***	-0.424***
				(0.064)	(0.063)	(0.061)
$\text{leverage}_{f,t-1}$				0.367**	0.364**	0.559***
				(0.165)	(0.164)	(0.153)
$\text{ROA}_{f,t-1}$				-0.097***	-0.097***	-0.074***
				(0.011)	(0.011)	(0.011)
$\text{tangibility}_{f,t-1}$				-0.047	-0.047	0.172
				(0.188)	(0.188)	(0.163)
$\log(\text{issuance amount}_b)$					0.011	
					(0.024)	
$\text{years to maturity}_{b,t}$					-0.011	0.042**
					(0.007)	(0.020)
bond issuer FEs	Yes	Yes	Yes	Yes	Yes	Yes
province×time FEs	Yes	Yes	Yes	Yes	Yes	Yes
sector×time FEs	Yes	Yes	Yes	Yes	Yes	Yes
bond category×time FEs	No	Yes	Yes	Yes	Yes	Yes
bond-level FEs	No	No	No	No	No	Yes
R^2	0.548	0.581	0.580	0.583	0.583	0.778
N	166935	166935	165001	163455	163455	161977
Mean of dependent variable	2.362	2.362	2.352	2.348	2.348	2.350

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Heterogenous Effect by Bond Rating

Notes: This table shows the heterogenous effect on bond spread by bond initial rating. D_b(Low Rating) is a dummy variable that equals one if bond's initial rating is below AAA, and the benchmark group is constituted by bonds with AAA initial rating.

By Bond Initial Rating	Bond Spread$_{b,t}$	
	(1)	(2)
SpecialCourt$_{c,t}$	-0.111***	-0.081***
	(0.029)	(0.029)
SpecialCourt$_{c,t}$ × D_b(Low Rating)	-0.136***	-0.139***
	(0.030)	(0.030)
bond issuer FEs	Yes	Yes
province×time and sector×time FEs	Yes	Yes
bond category×time FEs	Yes	Yes
city controls	No	Yes
issuer, bond controls	No	Yes
R^2	0.581	0.583
N	166935	163455

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Heterogenous Effect by Issuer's Default Risk and Ownership

Notes: This table shows the heterogenous effect on bond spread by issuer-level characteristics. In Panel A, we measure the financial risk of bond issuers by the proxy variables (lagged by one year) that are shown in the header of each column. We further divide the sample into three groups of the equal number of observations. D_f(Medium Risk) is a dummy variable that equals one if the proxy is in the range of the medium risk group, D_f(High Risk) is a dummy variable that equals one if the proxy is in the range of the high risk group, and the benchmark group is constituted by the observations with either low leverage ratio, high interest coverage ratio, or high Altman's Z-score (low risk group). In Panel B, we measure the default risk by issuer's ownership. D_f(SOE) is an issuer-specific indicator for non-LGFV state-owned enterprises, and D_f(POE) is an issuer-specific indicator for private owned enterprises. The benchmark group is local government financing vehicles (LGFVs).

Panel A: By Issuer's Financial Risk	Bond Spread$_{b,t}$					
Proxy Variable D_f =	Leverage Ratio		EBITDA/Interest		Altman Z-score	
	(1)	(2)	(3)	(4)	(5)	(6)
SpecialCourt$_{c,t}$	-0.185***	-0.161***	-0.213***	-0.178***	-0.193***	-0.175***
	(0.027)	(0.027)	(0.025)	(0.025)	(0.027)	(0.027)
SpecialCourt$_{c,t}$ × D_f(Medium Risk)	-0.122***	-0.134***	-0.021	-0.038	0.002	-0.009
	(0.029)	(0.029)	(0.028)	(0.027)	(0.027)	(0.027)
SpecialCourt$_{c,t}$ × D_f(High Risk)	-0.103***	-0.088**	-0.068**	-0.066**	-0.123***	-0.105***
	(0.036)	(0.036)	(0.027)	(0.026)	(0.034)	(0.034)
financial soundness bins×time FEs	Yes	Yes	Yes	Yes	Yes	Yes
bond issuer FEs	Yes	Yes	Yes	Yes	Yes	Yes
province×time and sector×time FEs	Yes	Yes	Yes	Yes	Yes	Yes
bond category×time FEs	Yes	Yes	Yes	Yes	Yes	Yes
city controls	No	Yes	No	Yes	No	Yes
issuer, bond controls	No	Yes	No	Yes	No	Yes
R^2	0.584	0.588	0.589	0.591	0.583	0.586
N	166455	163455	156324	153821	166156	163244

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

(continued)

Panel B: By Issuer's Ownership	Bond Spread$_{b,t}$	
	(1)	(2)
SpecialCourt$_{c,t}$	-0.097***	-0.055**
	(0.023)	(0.023)
SpecialCourt$_{c,t} \times D_f$(SOE)	-0.138***	-0.153***
	(0.020)	(0.021)
SpecialCourt$_{c,t} \times D_f$(POE)	-0.234***	-0.261***
	(0.067)	(0.065)
bond issuer FEs	Yes	Yes
province×time and sector×time FEs	Yes	Yes
bond category×time FEs	Yes	Yes
city controls	No	Yes
issuer, bond controls	No	Yes
R^2	0.581	0.583
N	166935	163455

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: City-level Default Risk

Notes: This table shows the heterogenous effect on bond spread by city-level characteristics observed in the previous year. In columns (1) and (2) of Panel A, the benchmark group is constituted by the observations whose GDP growth rates are above the sample median, and $D_{c,t-1}$(Low) is an indicator for the observations whose GDP growth rates are below the sample median. In columns (3) and (4) of Panel A, the benchmark group is constituted by the observations whose government deficit ratios are below the sample median, and $D_{c,t-1}$(Low) is an indicator for the observations whose government deficit ratios are above the sample median. In Panel B, the benchmark group is constituted by the observations whose courts are introduced prior to the first bond default by local state-owned enterprise, and D_c(Post Local SOE Default) is an indicator for the observations whose courts are introduced after the first local SOE default in city c.

Panel A: By City's Economic Condition	Bond Spread$_{b,t}$			
Proxy Variable D_c =	GDP growth$_{b,t-1}$		Deficit/GDP$_{b,t-1}$	
	(1)	(2)	(3)	(4)
SpecialCourt$_{c,t}$	-0.118***	-0.119***	-0.142***	-0.177***
	(0.021)	(0.022)	(0.030)	(0.030)
SpecialCourt$_{c,t}$ × $D_{c,t-1}$(Weak Condition)	-0.137***	-0.144***	0.011	0.039
	(0.025)	(0.024)	(0.035)	(0.035)
city characteristic bin×time FEs	Yes	Yes	Yes	Yes
bond issuer FEs	Yes	Yes	Yes	Yes
province×time and sector×time FEs	Yes	Yes	Yes	Yes
bond category×time FEs	Yes	Yes	Yes	Yes
city controls	Yes	Yes	Yes	Yes
issuer, bond controls	No	Yes	No	Yes
R^2	0.580	0.584	0.581	0.585
N	164961	163415	165001	163455

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

(continued)

Panel B	Bond Spread$_{b,t}$	
	(1)	(2)
SpecialCourt$_{c,t}$	-0.123***	-0.126***
	(0.020)	(0.020)
SpecialCourt$_{c,t}$ × D_c(Post Local SOE Default)	-0.282***	-0.340***
	(0.074)	(0.073)
city's SOE default FEs	Yes	Yes
bond issuer FEs	Yes	Yes
province×time and sector×time FEs	Yes	Yes
bond category×time FEs	Yes	Yes
city controls	Yes	Yes
issuer, bond controls	No	Yes
R^2	0.582	0.586
N	165001	163455

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Yongmei's Default

Notes: This table shows the effects on bond spread before and after the Yongmei's default event. Yongmei is located in Shangqiu city, Henan province, and it belongs to the energy sector. Its unexpected default on Nov 2020 has caused tremendous impacts in Chinese bond market. The dummy variable Post-Yongmei is set to be 1 as long as time is between 2020q4 and 2021q4 (4 quarters). Standard errors are clustered at city level.

	Bond Spread$_{b,t}$	
	(1)	(2)
SpecialCourt$_{c,t}$	-0.182***	-0.156***
	(0.048)	(0.049)
SpecialCourt$_{c,t}$× Post-Yongmei	-0.287***	-0.291***
	(0.075)	(0.075)
bond issuer FEs	Yes	Yes
province×time and sector×time FEs	Yes	Yes
bond category×time FEs	Yes	Yes
city controls	No	Yes
issuer, bond controls	No	Yes
R^2	0.582	0.584
N	166935	163455

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: The Bankruptcy Resolution

Notes: This table reports the effect of the specialized court on the resolution of defaulted bonds using a sample of bond issuers that went bankrupt. Liquidation is a dummy variable that equals one if a bond defaulter ends up in liquidation. Duration is a dummy variable that equals one if it takes more than one year for a court to approve the reorganized plan since the acceptance of the bankruptcy case. Recovery rate is the repaid proportion of defaulted bond. $\text{SpecialCourt}_{c,d}$ equals one if city has already had a specialized court by the time of bond default. Government Interference is a dummy variable that equals one if the bankruptcy procedure is managed by a trustee who has political connections with any member of local government departments or officials. Standard errors are clustered at city level.

	Liquidation	Duration	Recovery Rate	Government Interference
	(1)	(2)	(3)	(4)
$\text{SpecialCourt}_{c,d}$	-0.580**	-0.777***	0.336**	-0.261***
	(0.242)	(0.223)	(0.143)	(0.087)
$\text{yield at issuance}_b$	-0.002	-0.026	0.012	0.003
	(0.013)	(0.018)	(0.015)	(0.008)
$\log(\text{issuance amount}_b)$	-0.022	-0.001	0.033	0.004
	(0.046)	(0.025)	(0.025)	(0.022)
time FEs	Yes	Yes	Yes	Yes
city FEs	Yes	Yes	Yes	Yes
sector FEs	Yes	Yes	Yes	Yes
province×year of default	Yes	Yes	Yes	Yes
R^2	0.808	0.857	0.803	0.965
N	349	349	349	349

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: The Bond Default Probability

Notes: This table reports the results of the following model specification:

$$Default_{bfcm} = \beta \text{SpecialCourt}_{cm} + \gamma X_{bfcm} + \alpha_m + \alpha_f + \varepsilon_{bfcm}$$

where dependent variable $Default_{bfcm}$ is a dummy variable equal to 1 if bond b defaults at time m and 0 otherwise, where time m is the default date for defaulted bonds, and the maturity date for bonds with no default. If the city c, where the bond issuer f is located, introduces the specialized court at time t_0, the independent variable SpecialCourt_{cm} is set to be 1 for any $m \geq t_0$; while $\text{SpecialCourt}_{c,m}$ is set to be 0 for any $m < t_0$. α_m stands for the time fixed effects, and α_f stands for the bond issuer fixed effects. X_{bfcm} represents a series of bond-level, issuer-level and city-level control variables. Standard errors are clustered at city level.

	Default_{bfcm}				
	(1)	(2)	(3)	(4)	(5)
$\text{SpecialCourt}_{c,m}$	0.002	0.001	0.007	0.004	0.003
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
$\log(\text{GDP}_{c,m-1})$			0.028	0.037	0.032
			(0.047)	(0.043)	(0.044)
govt. deficit/$\text{GDP}_{c,m-1}$			-0.302	-0.305	-0.317
			(0.254)	(0.248)	(0.248)
$\text{size}_{f,m-1}$				-0.037***	-0.038***
				(0.011)	(0.011)
$\text{leverage}_{f,m-1}$				0.091***	0.090***
				(0.032)	(0.032)
$\text{ROA}_{f,m-1}$				-1.187***	-1.186***
				(0.240)	(0.241)
$\text{tangibility}_{f,m-1}$				0.019	0.020
				(0.027)	(0.028)
$\log(\text{issuance amount}_b)$					0.005**
					(0.002)
$\text{years to maturity}_b$					0.005**
					(0.002)
bond issuer FEs	Yes	Yes	Yes	Yes	Yes
province×time and sector×time FEs	Yes	Yes	Yes	Yes	Yes
bond category×time FEs	No	Yes	Yes	Yes	Yes
R^2	0.673	0.696	0.695	0.690	0.691
N	14673	14666	13696	12947	12947
Mean of dependent variable	0.018	0.018	0.017	0.013	0.013

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Evidence from Bond Primary Market

Notes: This table reports the result of the following model specification:

$$y_{bfct} = \beta \text{SpecialCourt}_{ct} + \gamma X_{bfct} + \alpha_t + \alpha_f + \varepsilon_{bfct}$$

where dependent variable y_{bfct} is the issuance spread of bond b issued in quarter t. If the city c, where the bond issuer f is located, introduces the specialized court at time t_0, the independent variable SpecialCourt_{ct} is set to be 1 for any $t \geq t_0$. α_t stands for the time fixed effects, and α_f stands for the bond issuer fixed effects. X_{bfct} represents a series of bond-level, issuer-level and city-level control variables. The bond category-time fixed effects in columns (2)-(5) include issuer's ownership-time fixed effects (POEs, SOEs, or LGFVs), market place-time fixed effects (interbank or exchange market), security type-time fixed effects (medium-term notes, enterprise bonds, exchange-traded corporate bonds or short-term commercial papers), and bond rating bin-time fixed effects (AAA, AA+, or below). Standard errors are clustered at city level.

	Bond Spread$_{b,t}$ at Issuance				
	(1)	(2)	(3)	(4)	(5)
SpecialCourt$_{c,t}$	-0.204***	-0.210***	-0.205***	-0.183***	-0.184***
	(0.063)	(0.060)	(0.059)	(0.058)	(0.058)
log(GDP$_{c,t-1}$)			-0.194	-0.050	-0.059
			(0.176)	(0.175)	(0.173)
govt. deficit/GDP$_{c,t-1}$			2.322*	2.547**	2.449*
			(1.289)	(1.269)	(1.266)
size$_{f,t-1}$				-0.169***	-0.154***
				(0.032)	(0.031)
leverage$_{f,t-1}$				1.134***	1.107***
				(0.130)	(0.127)
ROA$_{f,t-1}$				-3.195***	-3.268***
				(0.522)	(0.522)
tangibility$_{f,t-1}$				-0.042	-0.040
				(0.133)	(0.134)
log(issuance amount$_b$)					-0.063***
					(0.011)
years to maturity$_{b,t}$					-0.038***
					(0.008)
bond issuer FEs	Yes	Yes	Yes	Yes	Yes
province×time and sector×time FEs	Yes	Yes	Yes	Yes	Yes
bond category×time FEs	No	Yes	Yes	Yes	Yes
R^2	0.816	0.862	0.862	0.862	0.863
N	40034	40032	38932	38347	38347
Mean of dependent variable	1.962	1.961	1.944	1.932	1.932

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: The Real Outcomes of Bond Issuer

Notes: This table reports the responses of bond issuer's outcome variables including the growth rates of total assets (Δ Assets (%)), the growth rates of total liabilities (Δ Debt (%)), the growth rates of bond debts (Δ Bonds (%)), the average maturity of outstanding bond weighted by the issuance amount (Bond maturity), the growth rates of bank loans (Δ Loans (%)), the proportion of long-term loans in bank loans (LTloan (%)), the growth rates of cash equivalents (Δ Cash(%)), and the growth rates of capital expenditure (Δ Capex (%)). The panel is at issuer-year level from 2012 to 2021. All the continuous variables are winsorized at 1%. Standard errors are clustered at city level.

	Δ Assets (%)	Δ Debt (%)	Δ Bonds (%)	Bond maturity	Δ Loans (%)	LTloan (%)	Δ Cash(%)	Δ Capex (%)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
years to court $= -1$	0.002	0.008	0.014	0.030	-0.004	0.004	-0.037	-0.011
	(0.007)	(0.012)	(0.014)	(0.020)	(0.021)	(0.007)	(0.031)	(0.063)
years to court $= 0$	0.011	0.019	0.044***	0.055*	-0.032	0.014	-0.034	0.041
	(0.008)	(0.013)	(0.015)	(0.028)	(0.025)	(0.009)	(0.028)	(0.064)
years to court $= 1$	0.028***	0.043***	0.045***	0.089***	0.049*	0.019*	0.054*	0.139*
	(0.009)	(0.015)	(0.017)	(0.031)	(0.028)	(0.010)	(0.031)	(0.081)
years to court ≥ 2	0.040***	0.077***	0.094***	0.144***	0.054***	0.029***	0.122***	0.139***
	(0.009)	(0.016)	(0.017)	(0.037)	(0.021)	(0.009)	(0.028)	(0.048)
bond issuer FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
province×time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
sector×time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
issuer, city controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.403	0.347	0.279	0.628	0.159	0.814	0.163	0.085
N	28588	28580	27792	21406	27797	28111	28556	27960

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figures

Figure A1: The Number of Liquidations

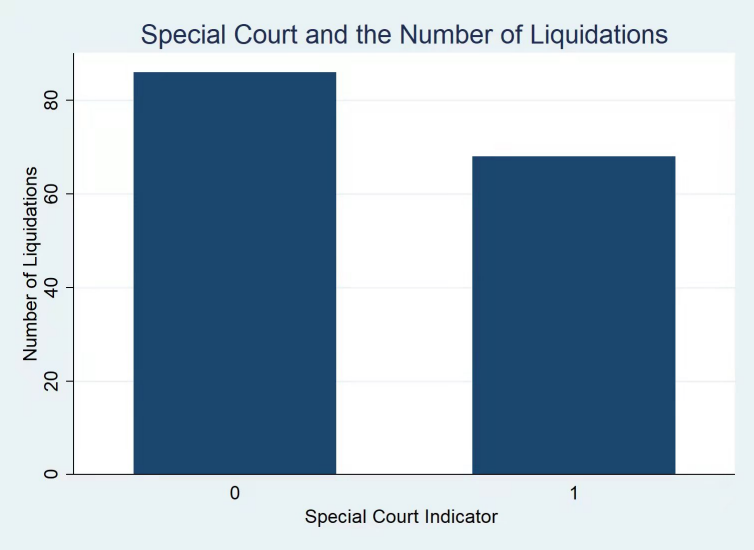


Figure A2: The Number of Reorganizations

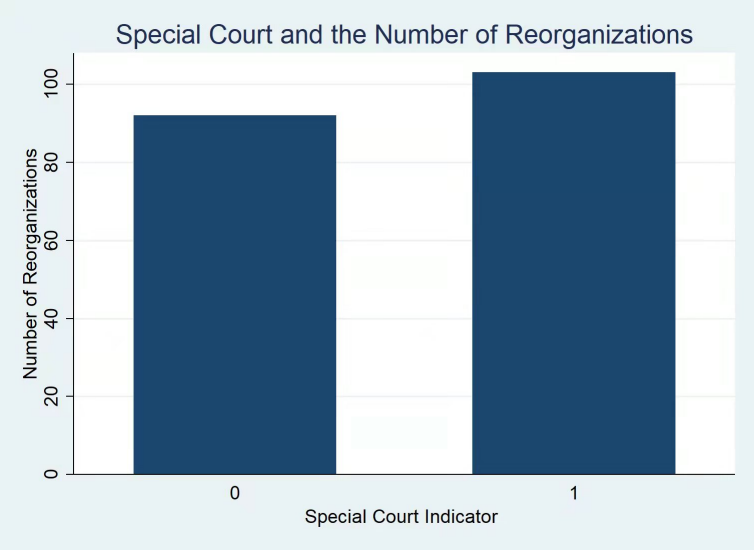


Figure A3: Attracting Outside Investors

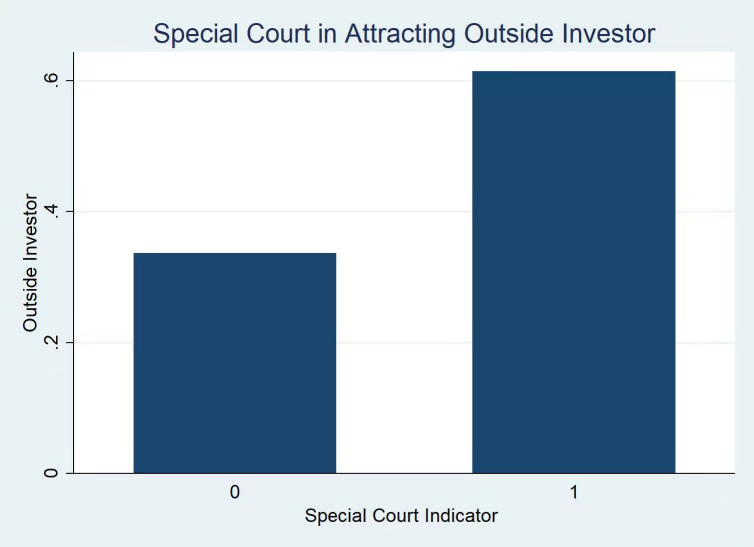


Figure A4: The Probability of Consolidation

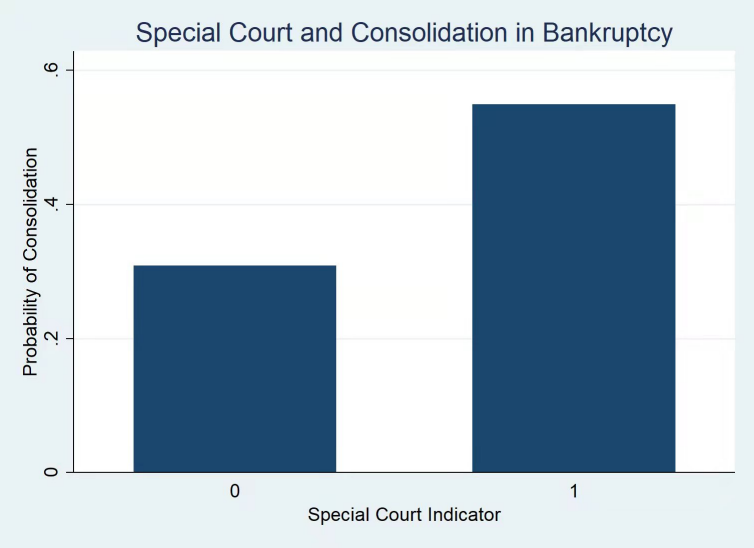


Figure A5: Parallel Trend from Issuer-quarter Regression

Notes: The figure tests the parallel trend assumption using a new panel that is collapsed at the issuer-quarter level. Each observation is the average of yield spreads of all traded bonds issued by a specific issuer within one quarter. Red vertical line indicates the quarter when a city introduces the court, and is considered as the benchmark period. The inner and the outer confidence interval are at significance level of 10% and 5% respectively. Standard errors are clustered at city level.

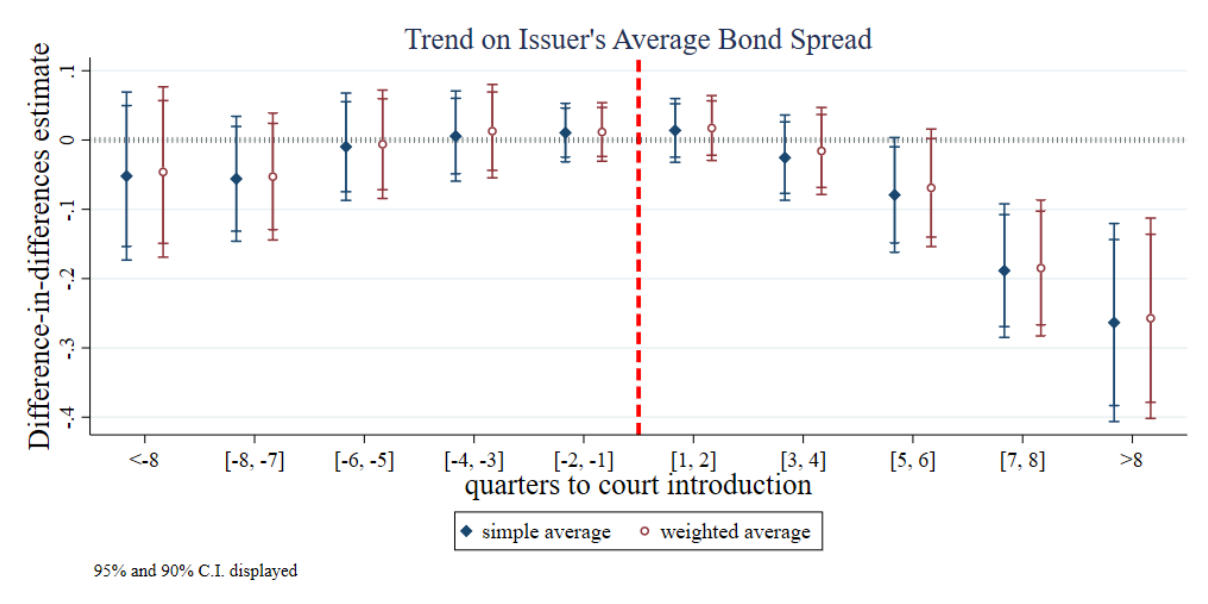
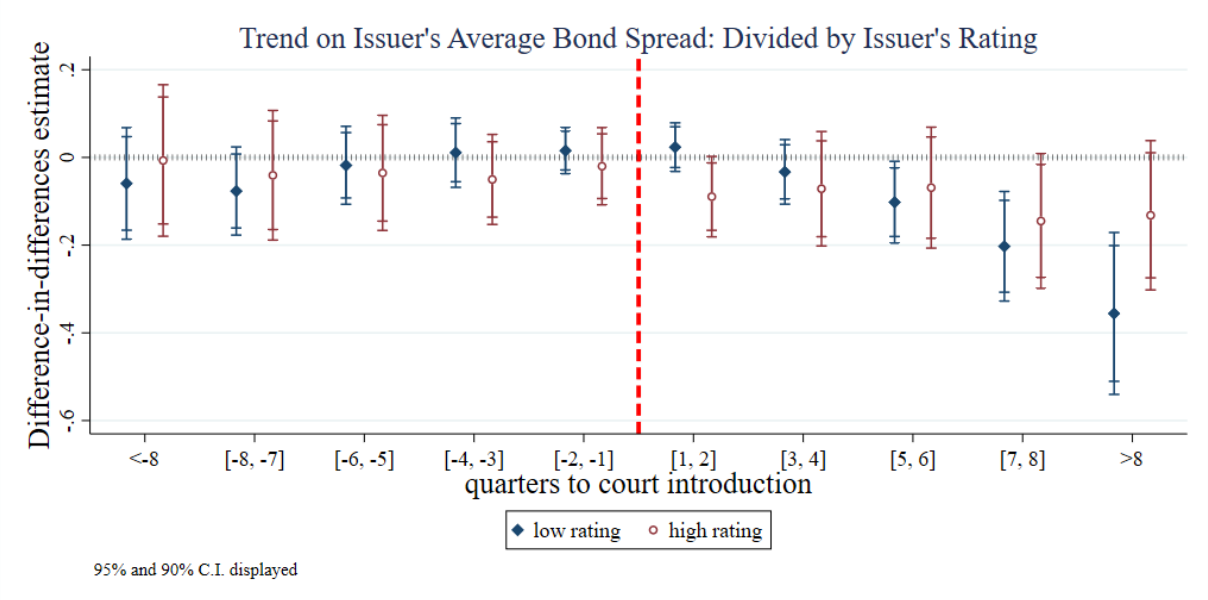


Figure A6: Parallel Trend from Issuer-quarter Regression: Divided by Rating

Notes: This figure exhibits the parallel trend when the data is collapsed at issuer-quarter level and divided by issuer's rating. The inner and the outer confidence interval are at significance level of 10% and 5% respectively. Standard errors are clustered at city level.



Appendix Tables

Table A1: Summary Statistics from the Primary Market

Bond-level characteristics

	count	mean	sd	p10	p50	p90
bond spread$_{b,t}$	41305	2.011	1.312	0.586	1.759	3.930
log(issuance amount$_b$)	41305	1.974	0.724	1.099	2.054	2.996
years to maturity$_{b,t}$	41305	2.999	2.521	0.496	3.003	7.008
short-term note	41305	0.446	0.497	0.000	0.000	1.000
medium term note	41305	0.222	0.416	0.000	0.000	1.000
corporate bond	41305	0.166	0.372	0.000	0.000	1.000
enterprise bond	41305	0.166	0.372	0.000	0.000	1.000
interbank	41305	0.756	0.430	0.000	1.000	1.000
AAA	41305	0.177	0.382	0.000	0.000	1.000
AA+	41305	0.149	0.356	0.000	0.000	1.000

Issuer-level characteristics

	count	mean	sd	p10	p50	p90
size$_{f,t-1}$	40709	24.448	1.296	22.816	24.395	26.209
leverage$_{f,t-1}$	40709	0.598	0.147	0.394	0.622	0.773
ROA$_{f,t-1}$	40709	0.018	0.021	0.001	0.012	0.043
tangibility$_{f,t-1}$	40709	0.172	0.192	0.004	0.095	0.459
LGFVs (soe muni.)	40709	0.158	0.364	0.000	0.000	1.000
non-LGFV SOEs (soe corp.)	40709	0.680	0.466	0.000	1.000	1.000

City-level characteristics

	count	mean	sd	p10	p50	p90
SpecialCourt$_{c,t}$	40366	0.470	0.499	0.000	0.000	1.000
log(GDP$_{c,t-1}$)	40366	17.803	0.900	16.532	17.859	18.952
govt. deficit/GDP$_{c,t-1}$	40366	0.047	0.045	0.003	0.036	0.107

Table A2: The Parallel Trends in Dynamic DID Model

Notes: This table presents the results of parallel trend test using the following model specification:

$$y_{bfct} = \sum_n \beta_n D_n \text{SpecialCourt}_{ct} + \gamma X_{bfct} + \alpha_f + \varepsilon_{bfct}$$

where the dummy variable $D_n\text{SpecialCourt}_{ct}$ takes 1 if it has been n quarters since the city c introduced the specialized court at time t_0 (if n is negative, it means it will introduce the court in $-n$ quarters). This model includes the full set of control variables and fixed effects as in the baseline. Standard errors are clustered at city level.

	Bond Spread$_{b,t}$	
	(1)	(2)
quarters to court introduction		
< -8	-0.006	-0.037
	(0.064)	(0.059)
$[-8, -7]$	-0.032	-0.027
	(0.044)	(0.043)
$[-6, -5]$	0.014	0.011
	(0.038)	(0.035)
$[-4, -3]$	0.000	-0.003
	(0.032)	(0.029)
$[-2, -1]$	-0.016	-0.028
	(0.023)	(0.020)
$[1, 2]$	-0.026	-0.016
	(0.025)	(0.022)
$[3, 4]$	-0.062*	-0.044
	(0.037)	(0.036)
$[5, 6]$	-0.174***	-0.155***
	(0.052)	(0.050)
$[7, 8]$	-0.299***	-0.255***
	(0.058)	(0.058)
> 8	-0.330***	-0.250***
	(0.084)	(0.080)
bond issuer FEs	Yes	Yes
province×time and sector×time FEs	Yes	Yes
bond category×time FEs	Yes	Yes
bond-level FEs	No	Yes
city, issuer, bond controls	Yes	Yes
R^2	0.584	0.778
N	163455	161977

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A3: The Role of Credit Enhancement

Notes: In columns (1) and (2), the benchmark group is constituted by the collateralized bonds, and D(Low Credit Enhancement) is an indicator for bonds without any collaterals. In columns (3) and (4), the benchmark group is constituted by the guaranteed bonds, and D(Low Credit Enhancement) is an indicator for bonds without guarantee by a third party. The extra bond category-time fixed effects that correspond to each group are added.

Credit Enhancement Proxy $D =$	Bond Spread$_{b,t}$			
	Collateralized		Guaranteed	
	(1)	(2)	(3)	(4)
SpecialCourt$_{c,t}$	-0.090**	-0.069	-0.157***	-0.144***
	(0.045)	(0.044)	(0.026)	(0.026)
SpecialCourt$_{c,t}$ $\times$ D(Low Credit Enhancement)	-0.128***	-0.123***	-0.074***	-0.056**
	(0.044)	(0.044)	(0.025)	(0.025)
bond issuer FEs	Yes	Yes	Yes	Yes
province$\times$time and sector$\times$time FEs	Yes	Yes	Yes	Yes
bond category$\times$time FEs	Yes	Yes	Yes	Yes
city controls	No	Yes	No	Yes
issuer, bond controls	No	Yes	No	Yes
R^2	0.582	0.584	0.583	0.585
N	166935	163455	166935	163455

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A4: Robustness Test for Issuers distant away from Bankruptcy Court

Notes: This table examines whether the introduction of specialized courts in the neighborhood surrounding the registration city will affect bond spreads of the local bond issuers. $SpecialCourt_{c,t}(akm < dist. <= bkm)$ is an indicator variable equal to 1 if any specialized court has been introduced in the range between a km and b km from issuer's registration city c by time t. For each range of distance, we estimate the model and report the coefficients and its standard error. The model includes the full set of control variables and fixed effects as in the baseline. The standard errors are clustered at city level.

Distance from courts to firms	
$\text{SpecialCourt}_{c,t}$ (50km<dist.<=100km)	-0.0242
	(0.0805)
$\text{SpecialCourt}_{c,t}$ (100km<dist.<=150km)	-0.0882
	(0.0614)
$\text{SpecialCourt}_{c,t}$ (150km<dist.<=200km)	-0.0196
	(0.0496)
$\text{SpecialCourt}_{c,t}$ (200km<dist.<=300km)	0.0344
	(0.0695)
$\text{SpecialCourt}_{c,t}$ (300km<dist.<=400km)	-0.00926
	(0.0557)
$\text{SpecialCourt}_{c,t}$ (400km<dist.<=500km)	-0.0790
	(0.0641)

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A5: Equity Return and Bond Spread of the Listed Issuers

Notes: This table compares the responses of bond spread and equity holding period return using the subsample of bond issuers that are listed in equity market. Columns (1) and (2) estimate the baseline model using the bond spread in the subsample. Columns (3) and (4) replace the dependent variable by the equity holding period return. The equity return is computed at the quarterly frequency, and is defined as $R_{f,t} = \frac{P_{f,t}-P_{f,t-1}}{P_{f,t-1}} \times 400$, where $P_{f,t}$ is the closing price at the end of each quarter t. The bond category-time fixed effects in columns (1) and (2) include market place-time fixed effects (interbank or exchange market), security type-time fixed effects (medium-term notes, enterprise bonds or exchange-traded corporate bonds), and bond rating bin-time fixed effects (AAA, AA+, or below). Standard errors are clustered at city level.

subsample of listed companies	Bond Spread$_{b,t}$		Equity Return$_{f,t}$	
	(1)	(2)	(3)	(4)
SpecialCourt$_{c,t}$	-0.401***	-0.311***	-0.869	-0.633
	(0.120)	(0.112)	(1.726)	(1.891)
log(GDP$_{c,t-1}$)		0.353		0.873
		(0.931)		(8.027)
govt. deficit/GDP$_{c,t-1}$		8.533**		-81.519
		(3.792)		(54.026)
size$_{f,t-1}$		-0.465***		-13.427***
		(0.146)		(1.480)
leverage$_{f,t-1}$		1.855***		28.467***
		(0.478)		(7.457)
ROA$_{f,t-1}$		-0.114***		-0.047
		(0.017)		(0.180)
tangibility$_{f,t-1}$		0.684*		41.584***
		(0.412)		(6.610)
log(issuance amount$_b$)		0.073		
		(0.054)		
years to maturity$_{b,t}$		-0.014		
		(0.019)		
lag equity return $R_{s,t-1}$				-0.091***
				(0.010)
bond issuer FEs	Yes	Yes	Yes	Yes
province×time and sector×time FEs	Yes	Yes	Yes	Yes
issuer's ownership×time FEs	Yes	Yes	Yes	Yes
bond category×time FEs	Yes	Yes	No	No
R^2	0.660	0.677	0.453	0.464
N	17762	17555	20698	20290
Mean of dependent variable	2.586	2.563	8.000	8.203
S.D. of dependent variable	1.865	1.830	91.977	91.763

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A6: Comparing Equity Returns with Bond Spreads

Notes: This table reports the results of dynamic DID model using the subsample of bond issuers that are listed in the Chinese stock market as well. This model includes the full set of control variables and fixed effects as in the baseline model. Standard errors are clustered at city level.

subsample of listed companies	Bond Spread$_{b,t}$	Equity Return$_{f,t}$
	(1)	(2)
quarters to court introduction		
< -8	0.084	-2.109
	(0.147)	(7.328)
$[-8, -7]$	0.035	0.785
	(0.129)	(6.812)
$[-6, -5]$	0.052	-8.429
	(0.117)	(8.762)
$[-4, -3]$	0.042	-4.570
	(0.090)	(6.740)
$[-2, -1]$	-0.015	1.960
	(0.065)	(8.322)
$[1, 2]$	-0.166***	-7.882
	(0.059)	(7.827)
$[3, 4]$	-0.151*	-6.620
	(0.087)	(7.741)
$[5, 6]$	-0.300***	-0.978
	(0.108)	(7.548)
$[7, 8]$	-0.611***	-5.471
	(0.129)	(6.737)
> 8	-0.391*	-1.380
	(0.218)	(7.331)
bond issuer FEs	Yes	Yes
province×time and sector×time FEs	Yes	Yes
issuer's ownership×time FEs	Yes	Yes
bond category×time FEs	Yes	No
city, issuer and security controls	Yes	Yes
R^2	0.678	0.464
N	17555	20290

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A7: Robustness Tests of the Baseline Model

Notes: This table reports the results of a battery of robustness tests. Column (1) uses median yield spread as the dependent variable. Column (2) uses bond issuance amount as the weight and estimates the model via WLS method. Column (3) excludes the any bond that is issued after the court introduction. Column (4) excludes any observation whose remaining maturity is no longer than 1 quarter. Column (5) excludes all bonds that are issued by central-government-owned enterprises. Column (6) excludes any bond that is issued by bond defaulter during the sample period. Column (7) keeps the observations from the provinces along the Yangtze River. Column (8) keeps the observations from the three provinces within Yangtze River Delta Region, including Anhui, Jiangsu and Zhejiang. Column (9) excludes the bond observations from all capital cities. Columns (1)-(9) include the full set of control variables and fixed effects as in the baseline. Standard errors are clustered at city level.

	Median spread	WLS estimate	Excl. new issuance	Excl. obs. with mat. l.t. 1q	Excl. csoe	Excl. defaulters	Yangtze River Belt	Yangtze River Delta	Excl. capital cities
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$\text{SpecialCourt}_{c,t}$	-0.185***	-0.166***	-0.144***	-0.191***	-0.185***	-0.206***	-0.258***	-0.221**	-0.190***
	(0.052)	(0.052)	(0.050)	(0.053)	(0.055)	(0.054)	(0.079)	(0.088)	(0.073)
bond issuer FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
province×time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
sector×time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
bond category×time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
city, issuer, bond controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.586	0.567	0.600	0.589	0.589	0.572	0.597	0.606	0.597
N	163455	163455	121177	160203	154380	159940	88028	49833	101274
Mean of dependent variable	2.333	2.196	2.421	2.351	2.380	2.300	2.290	2.174	2.502

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A8: By Market Place and Security Type

Notes: This table estimates the heterogenous effects on bond spread by splitting the sample according to the market place and the security type. Standard errors are clustered at city level.

	Bond Spread$_{b,t}$				
	Market Place		Security Type		
	Exchange Market	Interbank Market	Medium-term Notes	Exchange-Traded Corporate Bonds	Enterprise Bonds
	(1)	(2)	(3)	(4)	(5)
SpecialCourt$_{c,t}$	-0.194***	-0.177***	-0.276***	-0.275***	-0.126**
	(0.055)	(0.058)	(0.075)	(0.089)	(0.053)
bond issuer FEs	Yes	Yes	Yes	Yes	Yes
province×time and sector×time FEs	Yes	Yes	Yes	Yes	Yes
bond category×time FEs	Yes	Yes	Yes	Yes	Yes
city controls	Yes	Yes	Yes	Yes	Yes
issuer, bond controls	Yes	Yes	Yes	Yes	Yes
R^2	0.692	0.567	0.548	0.741	0.677
N	37705	125583	79156	18215	65859
Mean of dependent variable	2.608	2.269	2.154	2.681	2.489

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A9: Alternative Standard Error Clustering

Notes: The table reports the results when standard errors are clustered at different levels. This model includes the full set of control variables and fixed effects as in the baseline.

Standard error cluster level	
robust	-0.190***
	(0.0127)
issuer	-0.190***
	(0.0432)
issuer and time	-0.190***
	(0.0567)
issuer-time	-0.190***
	(0.0166)
city	-0.190***
	(0.0529)
city and time	-0.190**
	(0.0637)
city-time	-0.190***
	(0.0192)
province	-0.190**
	(0.0593)
province and time	-0.190**
	(0.0670)
province-time	-0.190***
	(0.0248)

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A10: Robustness for Regression at Issuer-quarter Level

Notes: This table reports the regression results when the panel is collapsed at bond issuer-quarter level. Columns (1) and (2) use the simple average of yield spreads of all traded bonds issued by a specific issuers within period t as dependent variable. Columns (3) and (4) use the weighted average to calculated the dependent variable, where the bond issuance amount is treated as the weight. The model includes issuer-level and city-level control variables. The model also includes issuer rating bin-time fixed effects and issuer's ownership-time fixed effects. Standard errors are clustered at city level.

	Issuer-level Average Bond Spread$_{f,t}$			
	Simple Average		Weighted Average	
	(1)	(2)	(3)	(4)
SpecialCourt$_{c,t}$	-0.118**	-0.112**	-0.116**	-0.111**
	(0.049)	(0.048)	(0.049)	(0.049)
bond issuer FEs	Yes	Yes	Yes	Yes
province×time and sector×time FEs	Yes	Yes	Yes	Yes
issuer category×time FEs	Yes	Yes	Yes	Yes
city controls	No	Yes	No	Yes
issuer controls	No	Yes	No	Yes
R^2	0.712	0.715	0.708	0.710
N	71295	69364	71295	69364

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A11: Using CDB Bond Yield as Benchmark Interest Rate

Notes: This table reports the results that use China Development Bank (CDB) bond index to construct the benchmark interest rate. The CDB bond index is available from Wind since Nov. 2012. The model includes the full set of control variables and fixed effects as in the baseline model. Standard errors are clustered at city level.

	Bond Spread$_{b,t}$ (CDB Bond as Benchmark)			
	Mean		Median	
	(1)	(2)	(3)	(4)
SpecialCourt$_{c,t}$	-0.217***	-0.193***	-0.211***	-0.187***
	(0.054)	(0.054)	(0.053)	(0.053)
log(GDP$_{c,t-1}$)		-0.110		-0.109
		(0.249)		(0.240)
govt. deficit/GDP$_{c,t-1}$		2.598**		2.467**
		(1.166)		(1.134)
size$_{f,t-1}$		-0.270***		-0.263***
		(0.070)		(0.069)
leverage$_{f,t-1}$		0.377**		0.367**
		(0.177)		(0.174)
ROA$_{f,t-1}$		-0.108***		-0.104***
		(0.013)		(0.012)
tangibility$_{f,t-1}$		-0.056		-0.044
		(0.199)		(0.195)
log(issuance amount$_b$)		0.014		0.007
		(0.025)		(0.025)
years to maturity$_{b,t}$		-0.048***		-0.043***
		(0.007)		(0.007)
bond issuer FEs	Yes	Yes	Yes	Yes
province×time and sector×time FEs	Yes	Yes	Yes	Yes
bond category×time FEs	Yes	Yes	Yes	Yes
R^2	0.572	0.575	0.575	0.578
N	159724	156369	159724	156369

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A12: Using Yield to Maturity as Dependent Variable

Notes: This table reports the result which uses yield to maturity rather than bond spread as the dependent variable. The model includes the full set of control variables and fixed effects as in the baseline model. Standard errors are clustered at city level.

	Bond Yield to Maturity$_{b,t}$			
	Mean		Median	
	(1)	(2)	(3)	(4)
SpecialCourt$_{c,t}$	-0.220***	-0.190***	-0.214***	-0.183***
	(0.055)	(0.054)	(0.054)	(0.053)
log(GDP$_{c,t-1}$)		-0.123		-0.116
		(0.248)		(0.242)
govt. deficit/GDP$_{c,t-1}$		2.525**		2.434**
		(1.163)		(1.143)
size$_{f,t-1}$		-0.271***		-0.267***
		(0.069)		(0.068)
leverage$_{f,t-1}$		0.434**		0.428**
		(0.175)		(0.173)
ROA$_{f,t-1}$		-0.104***		-0.102***
		(0.012)		(0.011)
tangibility$_{f,t-1}$		-0.074		-0.069
		(0.195)		(0.192)
log(issuance amount$_b$)		0.012		0.006
		(0.024)		(0.024)
years to maturity$_{b,t}$		0.073***		0.078***
		(0.007)		(0.007)
bond issuer FEs	Yes	Yes	Yes	Yes
province×time and sector×time FEs	Yes	Yes	Yes	Yes
bond category×time FEs	Yes	Yes	Yes	Yes
R^2	0.625	0.632	0.630	0.637
N	166935	163455	166935	163455

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A13: City-level Commercial Environment

Notes: This table reports the results after controlling for city's commercial environment in the previous year. The indices for commercial environment are sourced from *Blue Book: China City Commercial Credit Environment Index* that are available for year 2010, 2011, 2012, 2015, 2017 and 2019. We use the latest available observation if the index is missing in any year for a specific city. Standard errors are clustered at city level.

	Bond Spread$_{b,t}$	
	(1)	(2)
SpecialCourt$_{c,t}$	-0.194***	-0.174***
	(0.052)	(0.052)
CEI$_{c,t-1}$	-0.023*	-0.022*
	(0.012)	(0.012)
log(GDP$_{c,t-1}$)		-0.088
		(0.253)
govt. deficit/GDP$_{c,t-1}$		3.479***
		(1.251)
size$_{f,t-1}$		-0.257***
		(0.065)
leverage$_{f,t-1}$		0.364**
		(0.165)
ROA$_{f,t-1}$		-0.097***
		(0.011)
tangibility$_{f,t-1}$		-0.024
		(0.189)
log(issuance amount$_b$)		0.012
		(0.025)
years to maturity$_{b,t}$		-0.012*
		(0.007)
bond issuer FEs	Yes	Yes
province×time and sector×time FEs	Yes	Yes
bond category×time FEs	Yes	Yes
R^2	0.580	0.583
N	163014	161056
Mean of dependent variable	2.349	2.341

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$