

Political Connection and Chinese Bond Market

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Abstract

In recent years, the default of bond market defaults has aroused widespread concern. Under this circumstance, how the investors react to the bond pricing as well as how government guarantees economic stability is crucial. It is well-known that, in China, SOEs have huge financing benefits from their natural ownership. However, the paper would like to explore that if the private company with political connections could also enjoy the preferential treatment in China. Therefore, the paper conducts a event study around the first SOE default case to explore the causality between political connection and the corporate bond risk premium. The paper finds that the political connection exists as the government implicit guarantees (IGG) in the bond market, weakening the “risk-benefit” mechanism of the bond market.

Keywords: corporate bond pricing, political connection, DID, “Risk-Return” Mechanism;

1 Introduction

In US, it is well-known that the government will help large financial companies when they are in trouble. This phenomenon is described as “Too Big To Fail” (TBTF), as well as “Implicit Government Guarantee” (IGG). Acharya et al. (2016) proved that large companies in the American financial sector, called Systemic Important Banks (SIBs), have numerous of implicit government guarantees. Additional research has shown that real-sector firms have IGG effect as well (Faccio, Masulis, and McConnell, 2006). In China, this IGG effect is known as the “soft budget constraint” (Lin and Tan, 1999) which previously existed largely in State-Owned Enterprises (SOEs) with political connections. Due to political considerations and policy burdens, SOEs are more likely to receive financial support when they are facing financial crisis.

However, after the Chinese decentralization reform, the local governments have more autonomy. In[], the Tax-sharing Reform cut down extensively the local fiscal revenue, non-SOEs became more likely to afford larger portion of the local tax and are more able to promote local employment (Liu, 2016). For political reasons as well as the social burdens of the companies, the paper conjecture that the local governments have more motivations to not to let local non-SOEs fail.

At the beginning of May, Dunan Holding Group Co. LTD, a private company in the Zhejiang province, incurred a severe shortage of liquidity and was nearly unable to repay the debt. At this time, it turned to the Zhejiang government, who helped solve the liquidity crisis because they thought its failure would cause significant systemic risk.

In this paper, I would like to explore the political connections among SOE and non-SOE. Prior studies focus primarily on the relationship between political connections in SOE companies, and mostly select only the ownership of the companies (Jin, 2022). However, besides the companies’ ownership, the private companies also connect to the government in different ways. At the same time, how the political connection can help the companies also depends on the fiscal condition of the local governments. For this study, I define political

connection separately from SOEs and non-SOEs. SOEs have the natural political connections due to their ownership. Meanwhile, non-SOEs could also get different level of political connections by having different number of board members who worked for the government before, which give the different level of political connection.

Based on analysis above, we find it can be hard to say what kind of companies will have the government's guarantee in financial crisis. The Baoding Tianwei Group (a SOE) defaulted on domestic debt in 2015, and a private company - Dunan Holding Group has received the help when it was in trouble. Therefore, this paper aims to interpret political connections in a more comprehensive way in order to figure out its different channels of influence. We use the issue pricing of credit spreads as the dependent variable to observe the impacts of political connections from a group of bond-issuing listed companies including SOEs and non-SOEs. As a complement to the previous research, the paper adopted the first default case of a SOE as a natural experiment, and observed a heterogeneous reactions among companies with different level of political connections. Meanwhile, this paper explored the risk-taking behavior under different level of political connections. In the end, the paper conducted a series robustness tests.

This paper contributes to 1) political connections; 2) IGG; 3) empirical asset pricing. Understanding the effects of political connections on bond prices is important and relevant not only for debt investors who pay close attention to the value of the default risks of the corporate bonds, but also policymakers who devote efforts to the sustainable growth of the economy. The paper takes advantage of a quasinatural experiment in China to build causal inferences of political connections on bond issuing pricing and the explore its impacts on market discipline.

The reminder of the paper is organized as follows: the Section II is the literature review; the section III describes the data and empirical methodology; in Section IV, the empirical results will be presented; the section V will include the robustness tests; in the end, the section VI will be the conclusion.

2 Literature Review

At present, literature uses the following methods to measure the political connections: dividing by industry ranking and company size (Tsesmelidakis, 2013; Jin et al., 2017; Molyneux et al., 2010); Calculated based on information published by rating agencies (Brandao-Marques et al., 2018; Duchin, 2014), and empirically measured (Jin et al., 2017; Lambert et al., 2014; Hett et al., 2017; Klimek et al., 2015), divided based on the government's financial capacity and the systemic risk of enterprises (Tsesmelidakis, 2013; Mariathasan et al., 2014).

It can be seen that the current measurement of political connections by scholars mostly depends on third-party institutions and empirical results, and focuses more on the systemically important indicators of enterprises (such as asset size, industry ranking, systemic risk, etc.). Based on the actual chinese situation, the paper uses the number of board members who have worked for the government before.

The credit risk of bonds comes from many aspects, so when studying bond pricing, it is very important to select and control variables. Drawing on Flannery and Sorescu (1996) and Warburton et al. (2016) for the selection of variables that affect credit spreads, the article selects variables such as the issuance scale of the bond, the presence or absence of external guarantees, and the presence or absence of special terms at the bond level to control.

Although some scholars have conducted certain research and analysis on the impact of government implicit guarantees on corporate bond pricing (Fang Hongxing et al., 2013; Liu Zhengxiong, 2017; Ji Yang et al., 2018; Xue Liang, 2017; Wang Li and Chen Shiyi, 2015; Wang Boxen and Shi Dan, 2014), but they ignored the impact of government implicit guarantees on private enterprises, as well as the difference in the intensity of government implicit guarantees among private enterprises.

The paper firstly prove the existence of government implicit guarantees in bond pricing, and secondly, it further analyzes the impact of government implicit guarantees in corporate bonds of private enterprises; in addition, from previous research, we can find that the operating conditions of individual companies can send positive signals for the bonds issued

(Fang Hongxing et al., 2013; Wang Boxen and Shi Dan, 2014; Yan Yanyang and Liu Pengfei, 2014; Shi Dan and Jiang Guohua, 2013), thus reducing the risk of the bonds. Credit risk, in line with the market-based pricing mechanism, when the company’s operating conditions are better, the corresponding corporate bond issuance interest rate will be correspondingly lower, so the paper selects the company’s return on net assets ROE as the corporate bond market, the proxy variable of the pricing mechanism which is used to explore whether the ”risk-return” mechanism of the corporate bond market will be affected in the presence of implicit government guarantees.

3 Data

For my analysis, I included corporate bonds, excluding enterprise bond, Mid-term Note (MTN), Short Commercial Paper (SCP), Commercial Paper (CP), Private Placing Note (PPN), Asset-based security (ABS), or convertible bond, and etc. My sample of bond-issuing firms includes both listed public and private nonfinancial firms, and also exclude foreign firms for better clarifying the ownership structure of the companies. I collected bond characteristic data and financial information from annual financial reports for bond-issuing firms from the WIND database. Political connection of bond-issuing data is collected from the the Wind and China Stock Market & Accounting Research (CSMAR) Database. The local government revenue is collected from local fiscal general budget revenue in China City Statistical Yearbook. Marketization index data comes from ”Chinese Provincial Marketization Index Report 2016” caculated by previous researches.

My final sample contains 615 observations spinning from 2009 to 2018, including 320 SOE bonds and 295 non-SOE bonds. I winsorized all continuous variables at 1st and 99th percentiles to mitigate the influence of outliers. Table 1 presents the number of bonds from different years. All variables are defined in appendix A.

Firm type	Year				
	2009	2010	2011	2012	2013
SOEs	2	4	6	31	10
non-SOEs	0	0	0	3	1

Firm type	Year				
	2014	2015	2016	2017	2018
SOEs	21	24	87	49	86
non-SOEs	10	23	91	89	78
Sum	31	47	178	138	164

Table 1: Summary Statistics

4 Methodology

The first SOE bond default was unexpected that could be proved by the stable yield to maturity (YTM) curve of Tianwei’s MTNs before the default. The case provides us a quasi-natural experiment which guarantees the identification strategy for conducting the effects of political connections.

Different level of political connection could affect the strength of implicit government guarantee that companies are facing, which changes the perception of the default risks and issuing prices of the corporate bonds. After the Tianwei event, the default shock changed the perception of the whole markets including corporate managers and debt investors. The paper adopts an event study to examine the heterogeneous effects of the loss of implicit government guarantee during the default case on different level of political connection firms.

4.1 Event Study

To capture the real effect between political connection and bond return, I conduct an event study on the first SOE default (April 21, 2015). Given the limited dataset and annual granularity of political connection observations, I select a large even window - 1 year before to 1 year after the event date. This approach follows prior studies (Klein and Zur, 2011; Jin, et al., 2022).

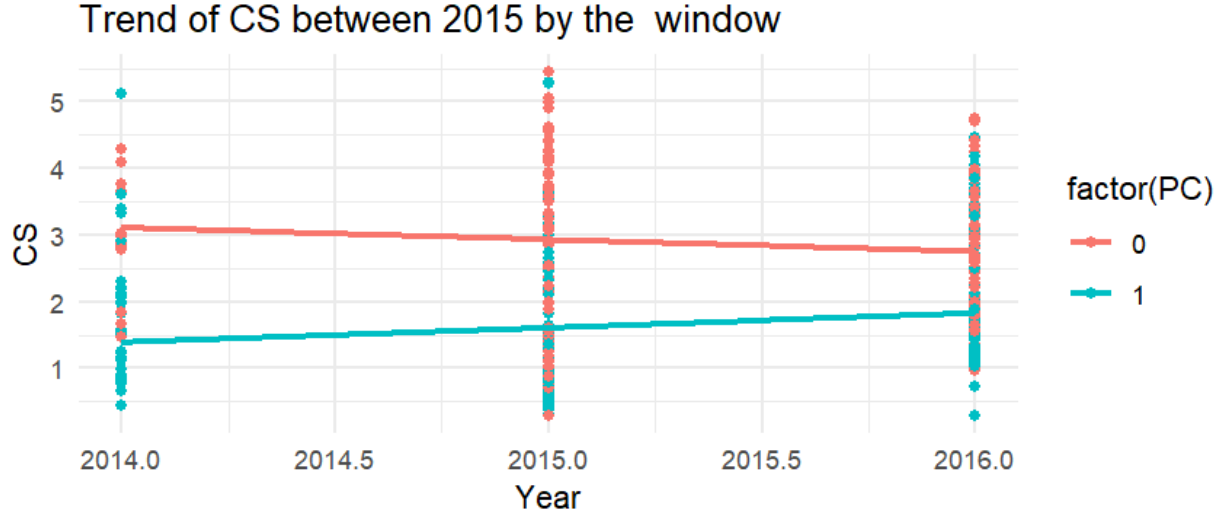


Figure 1: Trend of Credit Spread between 2014-2016

The paper estimate the DID model as follows:

$$CS_{i,b,t} = \alpha_0 + \alpha_1 PC_{i,t-1} * T_t + \alpha_2 ROE_{i,t-1} + \alpha_3 Controls_{i,b,t-1} + Y_t + I_i + \epsilon_{i,b,t} \quad (1)$$

Where CS is the credit spread of the issuing bonds; PC represents different level of political connections of firms in the dataset; T equals one for the one year after the first SOE default and zero for the one year period before that; Controls includes bond-level, firm-level, and macro-level control variables; Y_t represents annual time fixed effects, and I_i represents industry fixed effects; i indexes firms, b indexes individual bonds, and t indexes annual period. The coefficient of interest is α_1 , which captures the treatment effect with respect to the counterfactual control group.

4.2 Bond Pricing Mechanism

In order to test the political connections in non-SOEs, the paper bases on Campbell and Taksler (2003) model, constructing the regression as follow:

$$CS_{i,b,t} = \alpha_0 + \alpha_1 SOE_{i,t-1} + \alpha_2 Lnpeo_{i,t-1} + \alpha_3 Rev_{i,t-1} + \alpha_4 ROE_{i,t-1} + \alpha_5 Controls_{i,b,t-1} + Y_t + I_i + \epsilon_{i,b,t} \quad (2)$$

Where SOE equals to 1 representing if the company is a SOE, and equals to 0 representing if the company is a non-SOE. Lnpeo represents the Logarithm of total number of employees for the year. Rev represents the corresponding local fiscal revenue for the year. The coefficient of interest is α_1 , α_2 , α_3 , which respectively explain how the firm's ownership, number of employees, local fiscal conditions and firm's operation effect the bond pricing mechanism.

$$CS_{i,b,t} = \alpha_0 + \alpha_1 OverX_{i,t-1} + \alpha_2 Lnpeo_{i,t-1} + \alpha_3 Rev_{i,t-1} + \alpha_4 ROE_{i,t-1} + \alpha_5 Controls_{i,b,t-1} + Y_t + I_i + \epsilon_{i,b,t} \quad (3)$$

Where Over X = 2, 3, 4, depending on whether the number of board members who have political connections is higher than 2,3,4. The coefficient of interest are α_1 , α_2 , α_3 , which respectively explain how the political connection, number of employees, local fiscal conditions and firm's operation effect the bond pricing mechanism.

5 Results

5.1 Event study

<i>Dependent variable:</i>	
	Credit Spread
Sample	Full
Model	(1)
PC*after_2015	0.638*** (4.154)
PC	-1.199*** (-9.537)
Lnpeo	-0.128*** (-3.756)
Rev	-1.967* (-2.000)
ROE	-1.253* (-2.236)
Constant	6.992*** (10.007)
Observations	615
Adjusted R ²	0.5468
F-value	24.9

Table 2: Empirical results of the event study

5.2 Bond Pricing Mechanism

<i>Dependent variable:</i>						
	Credit Spread					
Sample	Full	SOE	Non-SOE	Non-over4	Non-over3	Non-over2
Model	(2)	(2)	(2)	(3)	(3)	(3)
SOE	-0.992*** (-3.79)	0.024 (0.52)	-0.232*** (-4.18)	-0.214*** (-3.76)	-0.215*** (-3.67)	-0.235*** (-3.39)
Lnpeo	-0.128*** (-3.79)	0.024 (0.52)	-0.232*** (-4.18)	-0.214*** (-3.76)	-0.215*** (-3.67)	-0.235*** (-3.39)
Rev	-2.083*** (-2.12)	-4.572*** (-3.23)	-3.297** (-2.31)	-2.549* (-1.70)	-1.514 (-0.97)	-2.009 (-1.16)
ROE	-1.742*** (-3.10)	-1.176 (-1.44)	-2.106*** (-2.64)	-2.021** (-2.44)	-1.974** (-2.31)	-2.071** (-2.18)
Constant	6.422***	3.652***	8.414***	9.026***	9.034***	8.908***
Observations	615	320	295	268	247	209
Adjusted R ²	0.5500	0.4635	0.3918	0.4063	0.3987	0.3870
F-value	26.02	11.21	8.28	8.31	7.80	6.72

Table 3: Empirical results of pricing mechanism

6 Conclusion

From event study DID model, we can find that firms with political connections (PC) are more sensitive towards the default shock in 2015. Specifically, the firms with political connections will be influenced more by the first default case than the firms with lower or zero political connections. The result shows us the causality between political connection and corporate bond spread.

When we look further at the bond pricing mechanism, the full sample regression shows that the ownership of the company has a strong impact on bond pricing, so does the amount of employees which represents the systematic importance of the company. Besides, companies with higher local fiscal conditions could possess more risk premium when they issue bonds. At the same time, the coefficient of ROE tells that when investors evaluate the bond, the operation of the companies also matter.

From the sub-sample regression of SOE and non-SOE, we can find that for SOEs, the local fiscal conditions matters the most compare to the quality of the company, however, for non-SOEs, both the quality and the fiscal conditions matter.

Within the sample of non-SOEs, we have separately look at the result of regression—under different political connections. Along with the declining of the political connections, the importance of the local fiscal condition in bond pricing is going down. but the quality of the companies still dominate the bond pricing. It shows that political connection is also a importance consideration in bond market among the investors.

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Appendix A.I Variable Definition

- SOE: companies that are owned by stated or national government based on their ultimate controller of the equity chain; equals to 1 if they do, or equals to 0 if they don't.
- OverX: $X = 2, 3, 4$; dummy variables represent whether the number of board and senior management of a listed company is over 2, 3, 4.
- Lnpeo: logarithm of total number of employees for the year.
- Rev: represents the local fiscal condition; uses (local fiscal revenue of the year / local GDP of the year)
- ROE: net profit of the year / average net asset of the year
- Control variables:
 - Bond level controls:
 - * Lnam: logarithm of the amount of the bond issuance.
 - * Length: logarithm of the bond maturity.
 - * Gur: if the bond has any explicit guarantees, for example, mortgage or pledge.
 - * Itm: if the bond has other specialities, for example, putback provisions of bonds.
 - Firm level controls:
 - * FZ: Net cash flows from operating activities / Interest-bearing liabilities
 - Macro level controls:
 - * Rgdp: the provincial GDP of the year / national GDP of the year
 - * Mrk: the marketizational index calculated by previous scholars.