Corporate Default Risk and Loan Pricing Behavior in China

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Motivation

- After more than 30 years' economic reform, the Chinese economy becomes more market-oriented. A key feature of a market economy is that price plays a central role in resource allocation and risk is priced in during the process

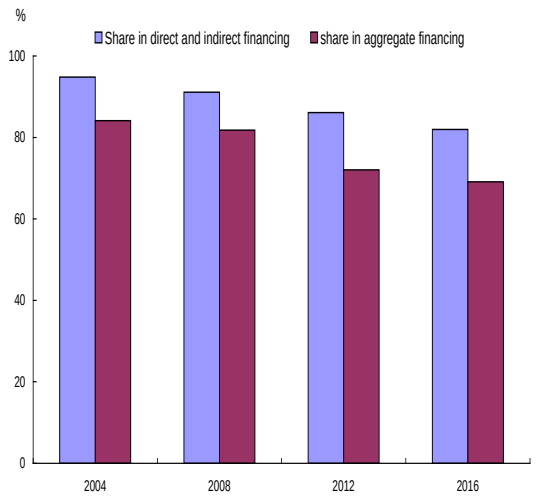
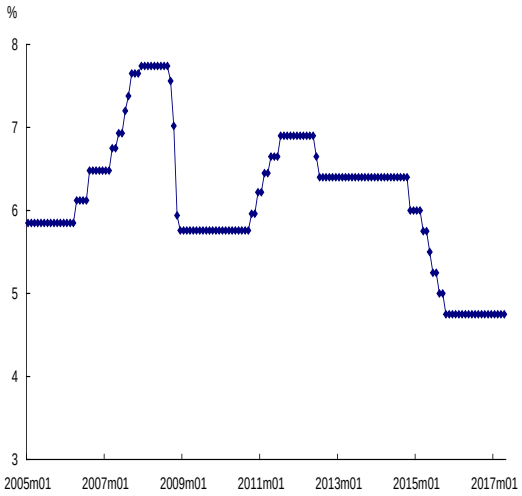
- In bank leading, this means banks will charge a interest rate based on a loan's risk profile, firm's ability to pay, etc.

- In this study, we try to study the pricing behaviour of Chinese banks on their loans. We analyse whether banks price in the default risk of firms when they give out loans. We use firm-level data to analyse banks' pricing behaviour.

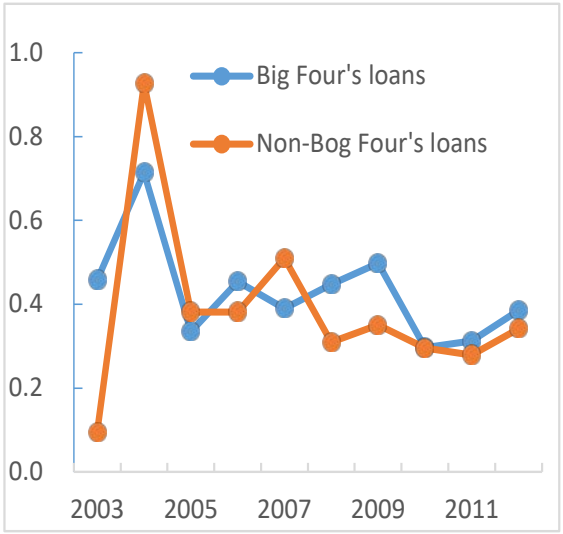
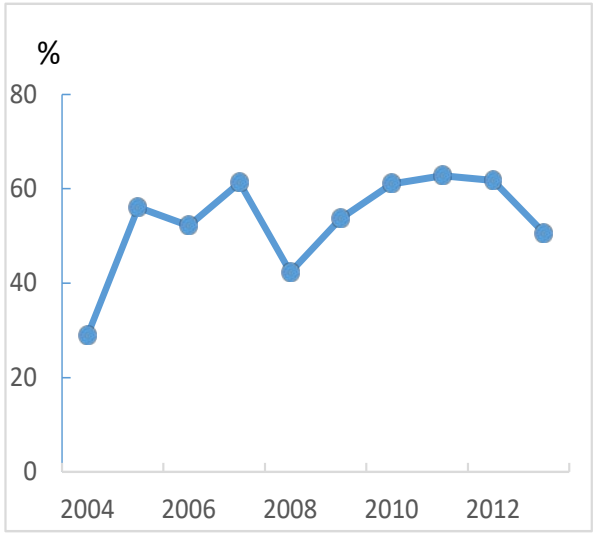
- Given that State Owned Enterprises(SOEs) receive a large part of bank loans, we also study whether banks price loans to SOEs differently from to Non-SOEs, separating big four State Owned Banks from Non Big four banks

- We separate the sample into before the Global Financial Crisis(GFC) and after the GFC to see if Banks' pricing behaviour is different. We also check for sectoral difference to see if banks price loans differently for real estate sector or government supported sector

Motivation

Figure 1: Size of commercial loans	Figure 2: China's 5-year lending rate
	
Source: CEIC and staff estimates	Source: CEIC and staff estimates

Motivation

Figure 3: Loans to SOEs relative to Non-SOEs	Figure 4: Share of loans to government-supported firms
	
Source: WIND and staff estimates	Source: WIND and staff estimates

Main Results

- We find in general Chinese banks do price in default risk when they give out loans. The market-oriented banking reform seems to be effective
- SOEs are perceived to have implicit government guarantee. They generally enjoy better interest rate when borrowing from banks. Our empirical analysis shows that banks generally ignore default risk when lend to SOEs, whether before or after the Global Financial Crisis
- Non-SOEs are subjected to market discipline. Banks generally price in their default risk when giving out loans. However, after the GFC, with the government stimulus package, banks relaxed their lending standard, the default risk is not statistically significant in loan pricing
- Big four banks, ICBC, CCB, BOC and ABC are more inclined to lend to SOEs. Before the GFC, big four banks priced in the default risk of SOEs, but not necessary of the Non-SOEs. After the GFC, big four banks ignore the default risk of SOEs, but price in default risk of Non-SOEs.
- Non Big Four banks are more aggressive in giving out loans to SOEs, they simply ignore the default risk. But for Non-SOEs, they price in the default before the GFC, but not after the GFC.
- Overall, the increasing share of Non-SOEs makes banks more sensitive to default risk. The SOEs still enjoy better terms when borrowing from banks. This have financial stability implications.

Literature Review

- Large literature on loan pricing and default risk (Strahan(1999), Bharath et al(2008), Machauer and Weber(1998), etc.). They generally find that loan rate and firm default risk has positive and significant relationship

- Regarding loans contract in China, Sun and Liu(2011) finds that loan allocation is significantly associated with firm financial-related characteristics and agency cost, and banks do not differentiate between SOEs and Non-SOEs.

- Cull and Xu (2003) report a positive correlation between SOE profitability and bank financing in the 1980s, but that correlation weakened in the 1990s

- Li et al(2009) find that SOEs have better access to long-term debt and enjoy more leverage

Contribution of the Literature

- We study banks' loan pricing behavior in China by using contract-specific data, collected manually from the financial reports of the listed firms
- We estimate the firms' default risk indicator based on Black-Scholes-Merton structural model
- We study banks' loan pricing behavior not only in terms of ownership structure, but also in terms of bank types
- We analyse banks' loan pricing behavior before and after the Global Financial Crisis

The Model

$$Lrate_{it} = \beta_0 + \beta_1 DLI_{it-1} + \beta_2 Lsize_{it} + \beta_3 Brate_{t-1} + \beta_4 Lterm_{it} + \gamma X + \varepsilon_{it} \qquad (1)$$

where the dependent variable, $Lrate_{it}$, is the interest rate for loan i issued at time t. Among the explanatory variables, β_0 is a constant, DLI_{it-1} is the default likelihood for the firm who receives loan i at time t-1, with amount of $Lsize_{it}$ and maturity of $Lterm_{it}$, $Brate_{t-1}$ is the benchmark interest rate prevailing at time t-1, and X is the vector of the control variables, including macro indicators and firm characteristics.

Data

- This study uses data from listed companies only. We extract data from their quarterly financial report from 2003Q2 to 2013Q2. The data consist of three parts: (a) firm's default likelihood, (b) firm's loan features, and (c) macro indicators and firm characteristics

- DLI is estimated based on Black-Scholes-Merton model proposed by Duan(1994). It contains both historical accounting information and forward-looking market price information

- Firm's loan features include loan size (Lsize, in logs), lending rate (Lrate), and loan term (Lterm), which are manually collected from firm financial statements in WIND database

- The macro indicators include the benchmark interest rate (Brate) and the required reserve ratio (RRR). Firm characteristic variables, such as tangible assets (Tangble), the market-to-book ratio (MTB), and leverage (Lev) are constructed based on firm financial statements

Empirical Results

Table 3: Benchmark Regressions for loan pricing

	RegA1	RegA2	RegA3
DLI	0.154**	0.119*	0.138**
	(0.0638)	(0.0647)	(0.0656)
Lsize	-0.0376***	-0.0375***	-0.0382***
	(0.0111)	(0.0110)	(0.0109)
Brate	0.488***	0.490***	0.484***
	(0.0263)	(0.0263)	(0.0263)
Lterm	0.00529	0.00587	0.00678*
	(0.00367)	(0.00368)	(0.00366)
RRR		0.0382***	0.0409***
		(0.0108)	(0.0109)
Tangble			-0.780***
			(0.227)
MTB			-3.846*
			(2.301)
Lev			-0.278***
			(0.0818)
Observations	10,944	10,944	10,898
R-squared	0.491	0.492	0.495

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Empirical Results

Table 4: Pricing of loans to SOE and Non-SOEs

	RegB1	RegB2	RegB3	RegB4
	SOEs	SOEs	Non-SOEs	Non-SOEs
DLI	0.0463	-0.00261	0.193**	0.161**
	(0.116)	(0.117)	(0.0766)	(0.0798)
Lsize	-0.0864***	-0.0805***	-0.0179	-0.0215
	(0.0158)	(0.0159)	(0.0143)	(0.0140)
Brate	0.494***	0.483***	0.484***	0.483***
	(0.0542)	(0.0542)	(0.0302)	(0.0302)
Lterm	0.00435	0.00357	0.00718	0.00937*
	(0.00512)	(0.00519)	(0.00512)	(0.00508)
RRR		0.0547***		0.0422***
		(0.0175)		(0.0136)
Tangble		-1.687***		-0.429
		(0.448)		(0.267)
MTB		8.299**		-7.487***
		(3.327)		(2.638)
Lev		-0.127		-0.289***
		(0.135)		(0.0973)
Observations	3,173	3,162	7,771	7,736
R-squared	0.498	0.505	0.503	0.508

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Empirical Results

Table 5: Loan pricing before and after financial crisis

	RegC1	RegC2	RegC3	RegC4	RegC5	RegC6
	Whole T<2008Q2	Whole T>2008Q1	SOEs T<2008Q2	SOEs T>2008Q1	Non-SOEs T<2008Q2	Non-SOEs, T>2008Q1
DLI	0.353***	0.0283	0.314	-0.0606	0.468***	0.0853
	(0.119)	(0.0826)	(0.211)	(0.146)	(0.147)	(0.0983)
Lsize	-0.0672***	-0.0291**	-0.098***	-0.0483**	-0.0578**	-0.0156
	(0.0169)	(0.0128)	(0.0273)	(0.0197)	(0.0224)	(0.0158)
Brate	0.235***	0.568***	0.656***	0.539***	0.00523	0.573***
	(0.0799)	(0.0371)	(0.150)	(0.0686)	(0.0888)	(0.0440)
Lterm	0.00711	0.0197***	-0.0249**	0.0207***	0.0263***	0.0181***
	(0.00608)	(0.00441)	(0.0102)	(0.00623)	(0.00726)	(0.00586)
RRR	0.0175	0.0804***	-0.0598	0.101***	0.0606*	0.0849***
	(0.0291)	(0.0164)	(0.0490)	(0.0257)	(0.0360)	(0.0198)
Tangble	-1.935***	-0.704**	-2.579***	-2.368***	-1.538***	-0.0716
	(0.430)	(0.355)	(0.710)	(0.671)	(0.561)	(0.409)
MTB	5.862	-13.00***	9.978	7.588*	5.459	-19.15***
	(3.633)	(4.784)	(9.258)	(4.366)	(4.239)	(5.848)
Lev	-0.0313	-0.304***	0.219	-0.302	-0.116	-0.276**
	(0.165)	(0.110)	(0.241)	(0.206)	(0.263)	(0.120)
Observations	3,051	7,814	1,111	2,041	1,939	5,773
R-squared	0.512	0.548	0.572	0.509	0.495	0.575

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Empirical Results

Table 6: Loan pricing by the Big-Four banks

	RegD1	RegD2	RegD3	RegD4	RegD5	RegD6
	SOEs	Non-SOEs	SOEs	SOEs	Non-SOEs	Non-SOEs
			T<2008Q2	T>2008Q1	T <2008Q2	T >2008Q1
DLI	0.0666	0.209*	0.401**	0.113	0.0113	0.258**
	(0.210)	(0.121)	(0.198)	(0.154)	(0.190)	(0.121)
Lsize	-0.0694***	-0.036***	-0.0743**	-0.0250	-0.0351	-0.0313*
	(0.0221)	(0.0129)	(0.0342)	(0.0215)	(0.0246)	(0.0177)
Brate	0.620***	0.545***	0.543***	0.619***	0.259**	0.559***
	(0.0428)	(0.0250)	(0.171)	(0.0609)	(0.112)	(0.0518)
Lterm	-0.0167*	-0.00484	-0.0232*	-0.00441	-0.00169	0.00404
	(0.00870)	(0.00608)	(0.0126)	(0.00655)	(0.00909)	(0.00592)
RRR	0.0593*	-0.00339	0.0148	0.127***	-0.00510	0.0292
	(0.0316)	(0.00892)	(0.0589)	(0.0287)	(0.0418)	(0.0204)
Tangble	-0.705*	-1.040***	-2.409***	-1.031**	-1.706**	-0.667**
	(0.410)	(0.336)	(0.807)	(0.522)	(0.786)	(0.329)
MTB	10.11*	-0.329	3.585	12.31**	6.813	-5.804**
	(5.390)	(2.415)	(13.93)	(4.998)	(5.214)	(2.776)
Lev	0.0340	-0.154	-0.251	0.252	-0.495	-0.160
	(0.241)	(0.143)	(0.271)	(0.265)	(0.306)	(0.141)
Observations	1,875	4,222	726	1,141	1,195	3,001
R-squared	0.590	0.573	0.615	0.594	0.528	0.603

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Empirical Results

Table 7: Loan pricing by the Non-Big-Four banks

	RegE1	RegE2	RegE3	RegE4	RegE5	RegE6
	SOEs	Non-SOEs	SOEs	SOEs	Non-SOEs	Non-SOEs
			T<2008Q2	T>2008Q1	T <2008Q2	T >2008Q1
DLI	0.403	0.0631	1.074	0.373	1.155***	-0.0753
	(0.280)	(0.233)	(0.760)	(0.239)	(0.294)	(0.166)
Lsize	-0.0275	0.0140	-0.122**	0.0201	0.0309	0.0365
	(0.0447)	(0.0336)	(0.0484)	(0.0409)	(0.0515)	(0.0283)
Brate	0.284***	0.454***	1.055***	0.399**	-0.167	0.624***
	(0.0907)	(0.0766)	(0.329)	(0.170)	(0.172)	(0.0753)
Lterm	0.0200*	-0.00807	-0.0471**	0.0351***	0.0304**	-0.0172
	(0.0105)	(0.0131)	(0.0191)	(0.0119)	(0.0134)	(0.0108)
RRR	0.0477	0.0737***	-0.284***	0.147***	0.0790	0.103***
	(0.0360)	(0.0270)	(0.107)	(0.0547)	(0.0724)	(0.0371)
Tangble	-3.099*	-0.350	-3.906*	-3.226**	-2.611**	0.261
	(1.583)	(0.539)	(2.209)	(1.277)	(1.115)	(0.742)
MTB	18.95**	-2.207	34.75**	11.69	20.97***	-3.278
	(7.691)	(5.194)	(13.75)	(7.666)	(7.173)	(6.787)
Lev	-0.501	-0.630**	0.720	-0.987***	0.863*	-0.545**
	(0.465)	(0.293)	(0.595)	(0.331)	(0.520)	(0.250)
Observations	1,307	3,726	396	903	872	2,831
R-squared	0.509	0.488	0.526	0.555	0.482	0.543

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Empirical Results

Table 8: Loan pricing for the real estate sector

	RegF1 Whole sample	RegF2 T <2008Q2	RegF3 T >2008Q1
DLI	0.235***	0.355***	0.175**
	(0.0664)	(0.122)	(0.0804)
DLI_RET	-0.495**	-0.0385	-0.594***
	(0.200)	(0.491)	(0.222)
Lsize	-0.0387***	-0.0672***	-0.0305**
	(0.0109)	(0.0170)	(0.0127)
Brate	0.482***	0.234***	0.568***
	(0.0263)	(0.0800)	(0.0369)
Lterm	0.00652*	0.00711	0.0196***
	(0.00366)	(0.00608)	(0.00441)
RRR	0.0405***	0.0174	0.0798***
	(0.0109)	(0.0290)	(0.0163)
Tangble	-0.755***	-1.932***	-0.699**
	(0.228)	(0.427)	(0.355)
MTB	-4.227*	5.812*	-12.92***
	(2.309)	(3.460)	(4.768)
Lev	-0.263***	-0.0304	-0.275**
	(0.0823)	(0.165)	(0.111)
Observations	10,898	3,051	7,814
R-squared	0.496	0.512	0.549

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Empirical Results

Table 9: Loan pricing across industries

	RegG1	RegG2	RegG3	RegG4	RegG5	RegG6
	G-Support Whole sample	G-support T<2008Q2	G-support T>2008Q1	Others Whole sample	Others T<2008Q2	Others T >2008Q1
DLI	-0.0110	0.293*	-0.114	0.277***	0.432**	0.148*
	(0.107)	(0.158)	(0.148)	(0.0792)	(0.189)	(0.0873)
Lsize	-0.0493***	-0.0858***	-0.0244	-0.0401***	-0.0574***	-0.0434***
	(0.0171)	(0.0295)	(0.0212)	(0.0134)	(0.0213)	(0.0150)
Brate	0.407***	0.324***	0.503***	0.528***	0.310***	0.561***
	(0.0501)	(0.125)	(0.0728)	(0.0303)	(0.105)	(0.0429)
Lterm	0.0140***	0.0211***	0.00611	0.0114	-0.0559***	0.0533***
	(0.00423)	(0.00715)	(0.00573)	(0.00743)	(0.0167)	(0.00795)
RRR	0.103***	0.0458	0.136***	0.000505	-0.0425	0.0438**
	(0.0205)	(0.0450)	(0.0331)	(0.0123)	(0.0390)	(0.0173)
Tangble	-0.705**	-1.903***	-0.350	-0.358	-1.473**	-0.618*
	(0.350)	(0.597)	(0.595)	(0.290)	(0.733)	(0.372)
MTB	-1.146	7.216	-10.15**	-7.541*	2.843	-18.43*
	(2.535)	(4.802)	(4.015)	(4.549)	(4.565)	(11.02)
Lev	-0.412***	0.0685	-0.599***	0.0252	0.283	0.183
	(0.130)	(0.238)	(0.167)	(0.102)	(0.255)	(0.140)
Observations	4,067	1,153	2,898	6,829	1,896	4,914
R-squared	0.481	0.536	0.537	0.535	0.514	0.585

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Robustness Check

Table 10: Pricing of loans to SOE and Non-SOEs (50% cutoff)

	RegB1'	RegB2'	RegB3'	RegB4'
	SOEs	SOEs	Non-SOEs	Non-SOEs
DLI	0.0390	-0.0350	0.152**	0.142**
	(0.149)	(0.150)	(0.0699)	(0.0721)
Lsize	-0.0769***	-0.0738***	-0.0253*	-0.0279**
	(0.0181)	(0.0181)	(0.0134)	(0.0132)
Brate	0.387***	0.373***	0.520***	0.518***
	(0.0683)	(0.0691)	(0.0282)	(0.0283)
Lterm	0.0123*	0.0141**	0.00448	0.00609
	(0.00627)	(0.00643)	(0.00443)	(0.00444)
RRR		0.0902***		0.0302**
		(0.0212)		(0.0126)
Tangble		-1.063**		-0.729***
		(0.504)		(0.259)
MTB		7.588		-5.127**
		(5.305)		(2.446)
Lev		-0.323**		-0.263***
		(0.149)		(0.0949)
Observations	2,371	2,361	8,573	8,537
R-squared	0.523	0.530	0.491	0.495

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Robustness Check

Table 11: Loan pricing before and after financial crisis (50% cutoff)

	RegC1'	RegC2'	RegC3'	RegC4'	RegC5'	RegC6'
	Whole T<2008Q2	Whole T>2008Q1	SOEs T<2008Q2	SOEs T>2008Q1	Non-SOEs T<2008Q2	Non-SOEs, T>2008Q1
DLI	0.353***	0.0283	0.687**	-0.0543	0.321**	0.0847
	(0.119)	(0.0826)	(0.320)	(0.184)	(0.126)	(0.0909)
Lsize	-0.0672***	-0.0291**	-0.080***	-0.0352	-0.059***	-0.0255*
	(0.0169)	(0.0128)	(0.0306)	(0.0223)	(0.0210)	(0.0150)
Brate	0.235***	0.568***	0.841***	0.448***	0.0449	0.596***
	(0.0799)	(0.0371)	(0.183)	(0.0913)	(0.0832)	(0.0408)
Lterm	0.00711	0.0197***	-0.0320*	0.0217***	0.0156**	0.0218***
	(0.00608)	(0.00441)	(0.0163)	(0.00747)	(0.00649)	(0.00538)
RRR	0.0175	0.0804***	-0.121**	0.129***	0.0617*	0.0726***
	(0.0291)	(0.0164)	(0.0601)	(0.0309)	(0.0327)	(0.0188)
Tangble	-1.935***	-0.704**	-2.430***	-1.827**	-1.700***	-0.463
	(0.430)	(0.355)	(0.784)	(0.755)	(0.525)	(0.398)
MTB	5.862	-13.00***	27.59**	10.47	5.196	-16.19***
	(3.633)	(4.784)	(10.99)	(6.366)	(3.883)	(5.287)
Lev	-0.0313	-0.304***	0.0831	-0.455*	0.0126	-0.296**
	(0.165)	(0.110)	(0.269)	(0.236)	(0.243)	(0.118)
Observations	3,051	7,814	796	1,558	2,255	6,256
R-squared	0.512	0.548	0.659	0.506	0.471	0.566

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Robustness Check

Table 12: Loan pricing by Big Four banks (50% cutoff)

	RegD1'	RegD2'	RegD3'	RegD4'	RegD5'	RegD6'
	SOEs	Non-SOEs	SOEs T<2008Q2	SOEs T>2008Q1	Non-SOEs T <2008Q2	Non-SOEs T >2008Q1
DLI	0.0473	0.173*	0.911***	0.0488	-0.0137	0.276**
	(0.338)	(0.0959)	(0.263)	(0.188)	(0.154)	(0.113)
Lsize	-0.0621**	-0.043***	-0.0420	-0.0233	-0.0452*	-0.0335*
	(0.0246)	(0.0124)	(0.0386)	(0.0220)	(0.0234)	(0.0173)
Brate	0.503***	0.592***	0.606***	0.616***	0.296***	0.563***
	(0.0426)	(0.0262)	(0.209)	(0.0662)	(0.104)	(0.0485)
Lterm	-0.00177	-0.0130**	-0.0163	-0.00221	-0.00996	0.00245
	(0.00941)	(0.00636)	(0.0186)	(0.00675)	(0.00829)	(0.00561)
RRR	0.108***	-0.0106	-4.61e-05	0.130***	-0.00610	0.0300
	(0.0242)	(0.0116)	(0.0712)	(0.0308)	(0.0384)	(0.0196)
Tangble	-0.182	-1.169***	-1.949**	-0.792	-1.753**	-0.872***
	(0.473)	(0.301)	(0.827)	(0.544)	(0.752)	(0.322)
MTB	10.29	0.379	13.59	13.79**	6.316	-3.665
	(7.474)	(2.190)	(17.85)	(6.760)	(4.925)	(2.570)
Lev	-0.128	-0.0942	-0.368	0.216	-0.393	-0.147
	(0.211)	(0.145)	(0.284)	(0.271)	(0.282)	(0.141)
Observations	1,413	4,684	501	905	1,420	3,237
R-squared	0.657	0.553	0.722	0.624	0.496	0.595

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Robustness Check

Table 13: Loan pricing by Non-Big-Four banks (50% cutoff)

	RegE1'	RegE2'	RegE3'	RegE4'	RegE5'	RegE6'
	SOEs	Non-SOEs	SOEs T<2008Q2	SOEs T>2008Q1	Non-SOEs T <2008Q2	Non-SOEs T >2008Q1
DLI	0.441	0.0898	1.775*	0.419	0.946***	-0.0572
	(0.367)	(0.217)	(0.965)	(0.310)	(0.276)	(0.154)
Lsize	0.00699	-0.00295	-0.117**	0.0759	0.0242	0.0194
	(0.0529)	(0.0312)	(0.0547)	(0.0466)	(0.0480)	(0.0270)
Brate	0.176	0.457***	1.346***	0.273	-0.137	0.615***
	(0.138)	(0.0721)	(0.377)	(0.269)	(0.163)	(0.0692)
Lterm	0.0302**	-0.00598	-0.0476	0.0367**	0.0195*	-0.0114
	(0.0141)	(0.0113)	(0.0328)	(0.0175)	(0.0115)	(0.00918)
RRR	0.0473	0.0726***	-0.438***	0.179**	0.0928	0.101***
	(0.0479)	(0.0263)	(0.116)	(0.0699)	(0.0674)	(0.0348)
Tangble	-2.397	-0.822	-5.481**	-2.207	-2.418**	-0.324
	(2.140)	(0.508)	(2.406)	(1.672)	(1.044)	(0.692)
MTB	17.93	0.636	116.1**	14.24	20.30***	-1.751
	(18.58)	(5.133)	(51.77)	(12.08)	(6.639)	(6.151)
Lev	-0.605	-0.624**	0.368	-1.419***	0.822*	-0.504**
	(0.596)	(0.290)	(0.573)	(0.491)	(0.485)	(0.240)
Observations	965	4,067	305	656	963	3,078
R-squared	0.514	0.486	0.562	0.560	0.477	0.542

Note: Heteroskedasticity-robust standard errors are in parentheses. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Source: Authors' estimates.

Robustness Check

Table 14: Consistency check for risk premium after resampling

	consistency ratio
Resample for RegB3 relative to RegB1	16/30
Resample for RegB4 relative to RegB3	11/30
Resample for RegC2 relative to RegC1	26/30
Resample for RegC5 relative to RegC3	20/30
Resample for RegC6 relative to RegC4	28/30
Resample for RegC6 relative to RegC5	24/30
Resample for RegD2 relative to RegD1	6/30
Resample for RegD4 relative to RegD3	20/30
Resample for RegD5 relative to RegD3	28/30
Resample for RegD6 relative to RegD4	10/30
Resample for RegD6 relative to RegD5	8/30
Resample for RegE2 relative to RegE1	28/30
Resample for RegE5 relative to RegE3	28/30
Resample for RegE6 relative to RegE5	25/30
Resample for RegG4 relative to RegG1	28/30
Resample for RegG3 relative to RegG2	23/30
Resample for RegG6 relative to RegG3	13/30
Resample for RegG6 relative to RegG5	10/30

Source: Authors' estimates.

Conclusion

- Since the financial reform, Chinese banks generally price in firms' default risk when give out loans. This is mainly driven by increasing number of Non-SOEs. SOEs still enjoy better loan terms and loan pricing because of perceived implicit government guarantee

- The government stimulus package greatly changed the banks pricing behavior. Lending rates in general became insensitive to firms' default risk. This is mainly due to government encouragement for banks to relax lending standard to stabilize economic growth and employment

- For government support industries, they generally enjoy better loan pricing

- The increase in debt-asset ratio, especially by SOEs after the Global Financial Crisis, brings challenge for both banking and financial stability