

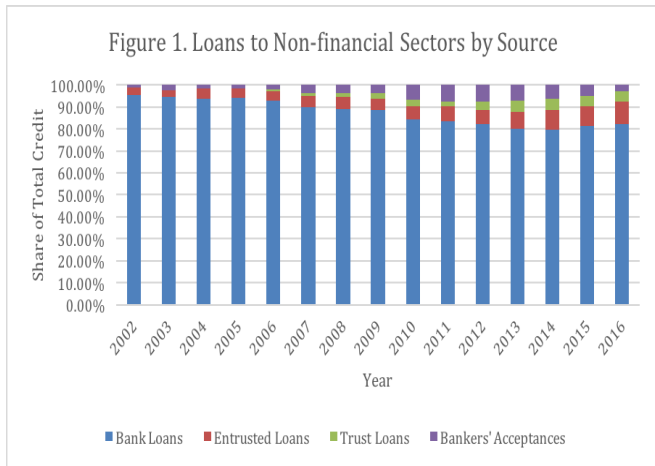
The Varying Shadow of China's Banking System

Xiaodong Zhu

University of Toronto

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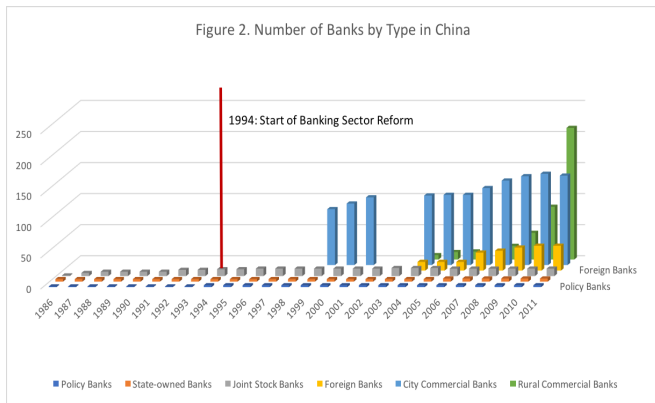
Recent growth of shadow banking activities in China



Questions about shadow banking in China

- What drives the recent growth of shadow banking?
 - Private sector demand for credits?
 - Local governments' financing needs?
- Is shadow banking really a new phenomenon?
 - Most researchers think that it appeared after the 4 trillion fiscal stimulus in 2008-2009
- How do shadow banking activities affect capital allocation in China
 - Improve the efficiency of capital allocation or result in misallocation of capital?

China's formal banks



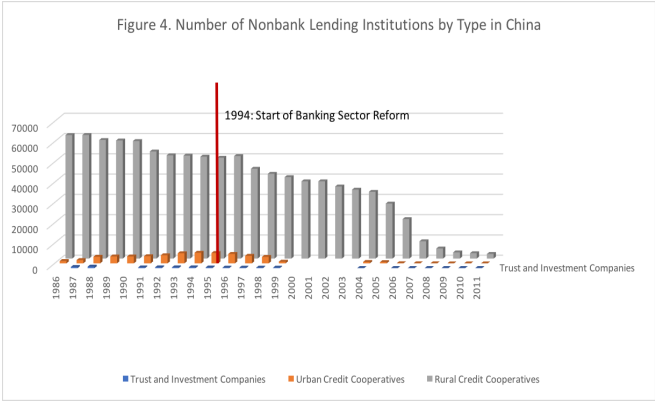
The formal banking system has steadily become more diversified and possibly more competitive

Capital misallocation in China



Yet, misallocation of capital has gotten worse since the launch of banking sector reform in 1994

China's shadow banks



Since 1994, most nonbank lending institutions were either closed down or consolidated into large city and rural commercial banks

The role of shadow banks in credit allocation

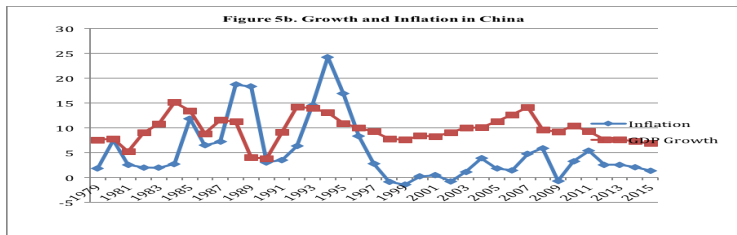
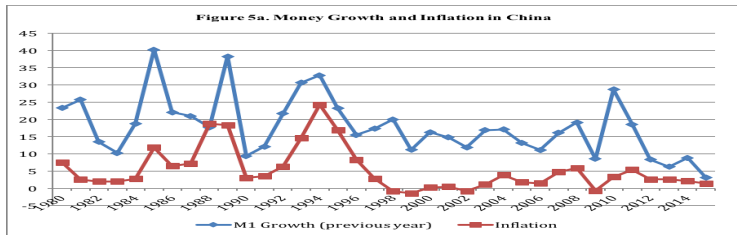
Table: Nonbank Financial Institutions' Shares of Total Credit

Year	Trust Companies	Urban Credit Cooperatives	Rural Credit Cooperatives	Total
1986	2.61	0.23	6.81	9.65
1991	5.68	1.48	8.47	15.63
1996	3.82	4.00	10.41	18.23
2001	2.22	N/A	10.66	N/A
2006	1.12	0.45	9.18	10.74
2009	1.32	0.05	8.05	9.42

Intermediation by Diversion in Pre-1996 Period

- Before 1996, most nonbank lending institutions had strong connections with banks
 - except for some trust and investment companies that were set up by local governments/SOEs
- Banks used the affiliated/connected nonbank lending institutions to divert funds outside the central governments' credit plans
 - efficiency of credit and capital allocation improved, high TFP and GDP growth,
 - but also larger funding gaps to fulfill the credit plans, money creation by the PBC and higher inflation
- The central government's restriction on credit diversion by banks and nonbank lendings fluctuate between lax (indicative plan) and strict (administrative plan), depending on how much it worried about inflation problem

Growth and inflation in China



Regime change around 1996

- Zhu Rong Ji became the governor of PBC in late 1993
- Banking sector reform started in 1994
 - Urban credit cooperatives and rural credit cooperatives were gradually consolidated to form city commercial banks, with local governments as the main stakeholders of these banks
 - All the trust companies affiliated with the state-owned banks were forced to be closed
 - The remaining trust companies were mainly those controlled by local governments and large SOEs
- More independent central bank
- Reduced the size of the state sector
- Redistribution through fiscal rather than monetary channels

How do recent shadow banking activities affect investment allocation?

Table 3: Entrusted Loan, Trust Loan and Bank Acceptance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Real Estate	Infrastructure	State	Private	Real Estate	Infrastructure	State	Private
Entrusted_Loan (t)	0.338*** (0.105)	-0.0109 (0.0683)	-0.000193 (0.105)	-0.107 (0.0979)				
Trust_Loan (t)	0.0414 (0.0838)	0.124** (0.0547)	0.307*** (0.0840)	-0.218*** (0.0783)				
BankAcceptance_Loan (t)	-0.00722 (0.126)	-0.0879 (0.0822)	-0.163 (0.126)	-0.0360 (0.118)				
Entrusted_Loan (t-1)					0.379*** (0.0992)	-0.0926 (0.0656)	-0.141 (0.104)	-0.0623 (0.0989)
Trust_Loan (t-1)					-0.0287 (0.0660)	0.0680 (0.0436)	0.167** (0.0691)	-0.123* (0.0658)
BankAcceptance_Loan (t-1)					-0.110 (0.116)	-0.122 (0.0770)	-0.211* (0.122)	0.0852 (0.116)
log_GDP_pc (t/t-1)	0.0655* (0.0389)	-0.0818*** (0.0254)	-0.139*** (0.0390)	0.0119 (0.0363)	0.0459 (0.0376)	-0.0708*** (0.0249)	-0.118*** (0.0394)	0.00275 (0.0375)
Constant	-0.511 (0.410)	1.113*** (0.267)	1.783*** (0.411)	0.195 (0.383)	-0.300 (0.394)	1.017*** (0.261)	1.583*** (0.413)	0.290 (0.393)
Obs	62	62	62	62	62	62	62	62
R-sq	0.279	0.261	0.345	0.139	0.325	0.289	0.332	0.083

Summary

- Higher entrusted loan share in a province is associated with higher investment share in real estate
- Higher trust loan share in a province is associated with higher investment share of infrastructure/SOEs
- Higher bankers' acceptances share in a province is associated with lower investment share of the state sector (though not statistically significant)
 - Ho, Li, Tian and Zhu (2017) found similar result using loan-level data of a state-owned bank: After the fiscal stimulus, regular loans clearly favored the SOEs, but no ownership bias in the bank's lending through bankers' acceptances

Conclusions

- Shadow banking arises from the need to get around government's lending restrictions
- Not a new phenomenon: There were significant shadow banking activities in China before 1994
- Two types of shadow banking activities
 - initiated by the banks: *efficiency enhancing*
 - initiated by the local governments or SOEs: *misallocation of capital*
- The recent shadow banking activities have been dominated by local governments and SOEs