ASIA GLOBAL INSTITUTE
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Launch of
SHADOW BANKING IN CHINA
An Opportunity for Financial Reform

Andrew Sheng and Ng Chow Soon
Editors

11 July 2016

Hong Kong

(continued from front flap)

- Likely scenarios for shadow banking non-performing loans for selected industries based on different assumptions of economy-wide stress
- Guidance for a more sustainable and inclusive financial system through diversifying China's bank-dominated financial sector to address structural maturity and debt-equity mismatches

Understanding China's present-day economy and forecasting its future requires a clear and thorough explanation of shadow banking and its interrelationship with formal banking and other sectors. *Shadow Banking in China* is the ground-breaking reference to turn to if you have any financial interests in the world's second largest economy.

ANDREW SHENG is chief adviser to the China Banking Regulatory Commission, former chairman of the Securities and Futures Commission, Hong Kong and deputy chief executive in HKMA.

NG CHOW SOON is the former director of the governor's office, Bank Negara Malaysia and a Harvard Mason Fellow.

THE AUTHORITATIVE GUIDE TO THE RISE OF CHINESE SHADOW BANKING AND ITS SYSTEMIC IMPLICATIONS

"The Chinese economy has experienced explosive growth in debt since 2009: total gross debt reached 282% of GDP in 2014, comparable to the developed economies. Particularly striking was the increase in non-financial sector corporate credit. Non-bank lending played a significant role in that build-up. In this important volume, the authors bring this complex and opaque system into the light and put it under a magnifying glass. They identify the opportunities for expanded equity and debt funding of businesses that will drive growth in the rapidly evolving Chinese economic structure. But they also highlight the risks of improperly priced risk, poor credit cultures, implicit guarantees relying on the state balance sheet, and lax regulation. It is essential reading for those seeking to understand the evolving structure of the financial system in China and the key reforms that are urgently required at this stage."

—**A. Michael Spence,** Nobel laureate; Professor of economics, New York University Leonard N. Stern School of Business

"How serious is China's shadow banking issue? What Chinese characteristics does it have? Will it trigger the next financial crisis in China or globally? What policy measures should be adopted to address the risks in the shadow banking system? These are among a few of the most important questions examined in this book entitled *Shadow Banking in China: An Opportunity for Financial Reform*, edited by Andrew Sheng and Ng Chow Soon. This important book not only puts recent developments in China's shadow banking sector into proper perspective and context and identifies key Chinese characteristics underpinning the rapid growth of Chinese shadow banks, but also offers fresh insights on the interconnectivities and vulnerabilities at the sectoral level. It also provides useful policy recommendations at the macro and structural levels. The analyses are solid and comprehensive, and the conclusions are insightful and useful. I strongly recommend this top quality book to any reader interested in gaining a deeper understanding of the key risks rooted in China's shadow banking and how to sort them out, from the academic, policy and investment perspectives."

—**Haizhou Huang,** Managing Director, China International Capital Corporation

"Andrew Sheng, an experienced regulator with a complex systems view of finance, leads a team that investigates and sheds light for both Western and Eastern thinkers on the shadows (banks) of the Chinese financial markets. Read, learn, and marvel at how Sheng's creative mind, rigorous observation, and deep insights rise to the challenge to diagnose the fault lines of financial instability and to prescribe remedies to manage the dangers of these mysterious financial innovations in China."

—**Robert Johnson,** President, Institute for New Economic Thinking (INET); Senior Fellow and Director, Franklin and Eleanor Roosevelt Institute

"Rapid financial and technological innovation is entangling regulators everywhere in an ongoing game of 'whack-a-mole' as they struggle to keep pace with burgeoning developments in shadow banking. Nowhere is this more true than in China, and nowhere are the information flows more opaque. Sheng and Ng's study is a must for those trying to seek truth from facts."

—**Simon Ogus,** Founder and CEO, DSG Asia Limited

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Cover Image: © Liufuyu/Getty Images

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SHADOW BANKING IN CHINA

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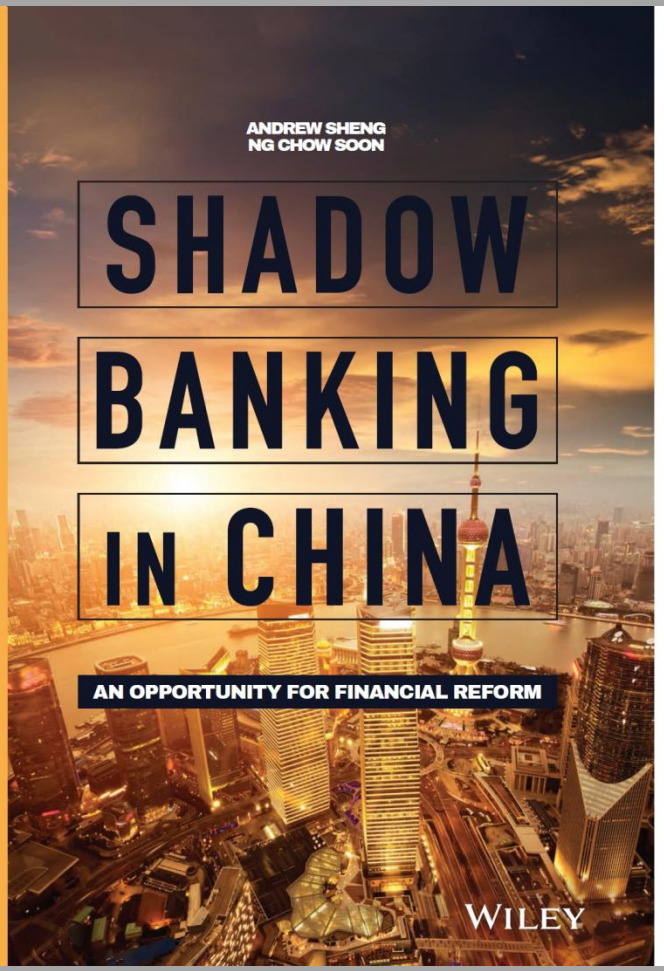


Despite the nefarious name, shadow banks are not fearsome, toxic creations to be regulated out of existence. These special non-bank financial institutions are an integral part of the global financial system that provide financial services to underserved sectors. However, slowing world growth and trade in addition to potential Chinese real estate adjustments could escalate financial risks and indirectly create contagion effects on formal banks and investors. *Shadow Banking in China* takes a candid and never-before seen look at shadow banking issues in the Chinese economy and offers a comprehensive financial system blueprint to address the potential risks of this growing sector.

Written by two world-class experts in Chinese banking, including the chief advisor to the China Banking Regulatory Commission and former chairman of the Securities and Futures Commission in Hong Kong, this one-of-a-kind resource reveals first-hand perspectives on the scale of shadow banking in China by correcting disparate data, inaccuracies and overblown risks due to definitional and measurement differences. This authoritative examination provides a rare and illuminating study on the subject using Chinese data sources and research studies not available in English, as well as up-to-date national balance sheet and flow of funds data. By using a stock-flow approach, the authors shed light on the relationships between the different components of shadow banking and formal banking, including interconnectivities and vulnerabilities at the sectoral level. Whether you've been engaged in China for years or intend to jump into this burgeoning economy, you can gain a competitive advantage quickly with:

- Quality assessments and potential risks of the four major categories of borrowers, including large state-owned enterprises, private sector small and medium enterprises, real estate companies and Local Government Financing Platforms (LGFPs)

(continued on back flap)

Overview – 1

- This book is part of a FGI trilogy, covering RMB Rising (Overholt 2015) and Story of Foshan (Xiao, forthcoming)
- Sheds light on scale of China shadow banking risks by eliminating definitional issues of double-counting and under-counting
- Using original Chinese sources (e.g. China National Balance Sheet & flow of funds data), book reveals inter-connectivities & vulnerabilities in bank-shadow bank nexus
- Examines scale of potential NPL risks in four sectors – large SOEs, private sector SMEs, real estate, and local government financing platforms (LGFPs)

Overview – 2

- Likely scenarios for shadow banks' NPLs for selected industries (working with Oliver Wyman) show 20%-40% of such NPLs 'transferable' to formal banking system – pushing banking NPL towards 7% under "disaster" scenario
- Systemic crisis is unlikely as China has adequate resources and policy space to address domestic debt problem
- 2007/9 Global financial crisis revealed under-regulated G-7 shadow banking risks interlinked with formal banks via financial derivatives
- China's shadow banks evolved to meet market demand for credit by SMEs and depositors' search for yield
- Chinese shadow banking risks = ever-greening and bundling of risks via trust company packaging of wealth management products (WMPs)

Overview – 3

- While less leveraged / sophisticated by global standards, sharp rise in China's shadow credit since 2007 threatens systemic stability
- Key risks = corporate leverage and opaque bundling of credit risks between shadow and formal banks
- Sharp slowdown + property price correction can trigger higher NPLs and liquidity pressures in weakest sectors
- Reforms must bring shadow banking to light, removing moral hazard of state bail-out
- Golden opportunity for holistic approach for financial reforms, restore credit discipline and accountability
- Book offers a comprehensive financial system blueprint with detailed immediate and longer-term policy proposals

Section 1 Global Shadow Banking

Credit creation off-balance sheet, off-shore and under-regulated

Highly leveraged and interconnected to regulated banks through toxic products and derivatives

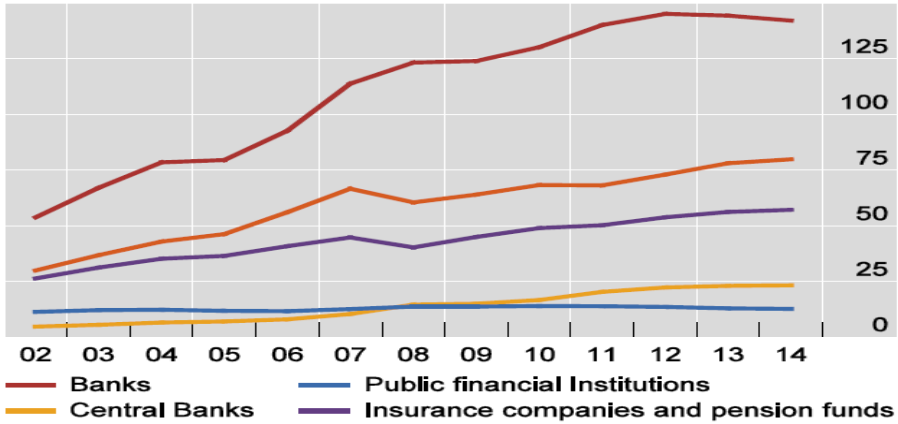
Reasons for Rise of Shadow Banking

1. Financial repression with official rates lower than real sector demand – transitional demand for liquidity
2. Search for yield – corporations and households searching for higher returns
3. Financial innovation – embedded leverage in derivatives
4. Capital efficiency – banks seek to reduce risk accounting through netting, off-balance sheet reporting, SIVs, etc.
5. Regulatory arbitrage – moving credit to un-regulated or under-regulated entities e.g., shadow banks
6. Tax arbitrage – moving offshore where tax is lowest
7. Risk hedge to other counterparties (e.g., insurers), but conduits (buyback guarantees) came back to haunt issuers
8. Overall effect is Higher Gross Leverage, under-estimated by market and regulators alike

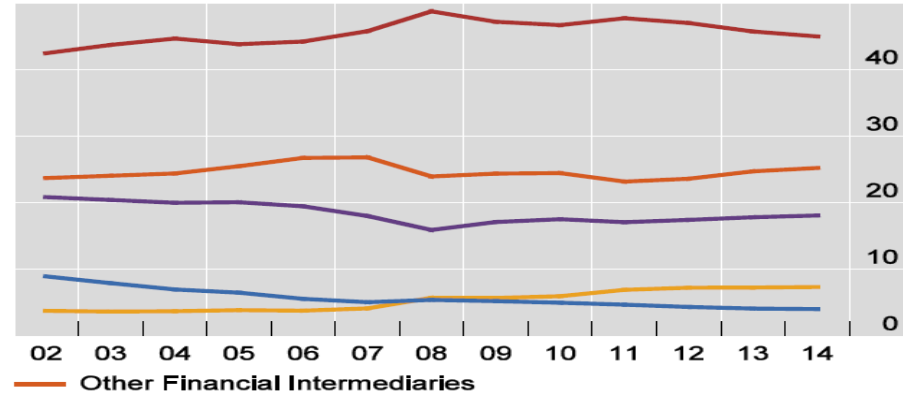
FSB: Banking Assets = 1/2 of Global Financial Assets, Shadow Banking = 1/4 and Central Banks = 1/8

Assets of financial intermediaries: 20 jurisdictions and euro area

Total financial assets (USD trillion)

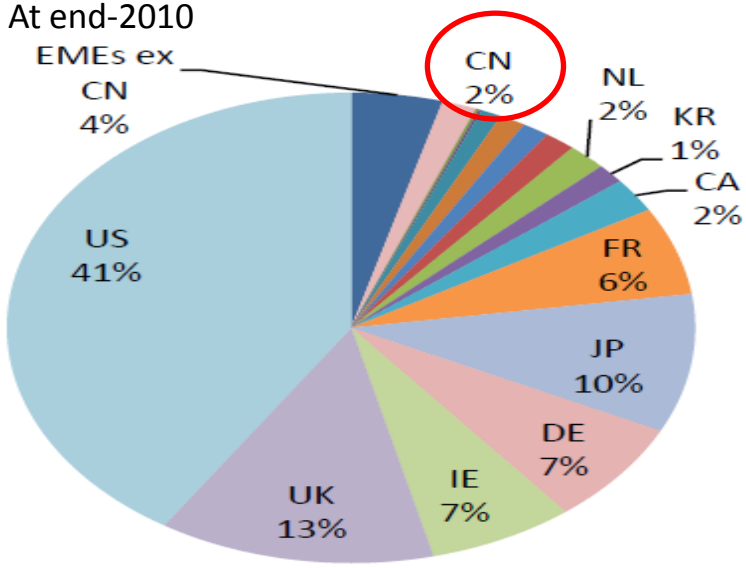


Share of total financial assets (%)

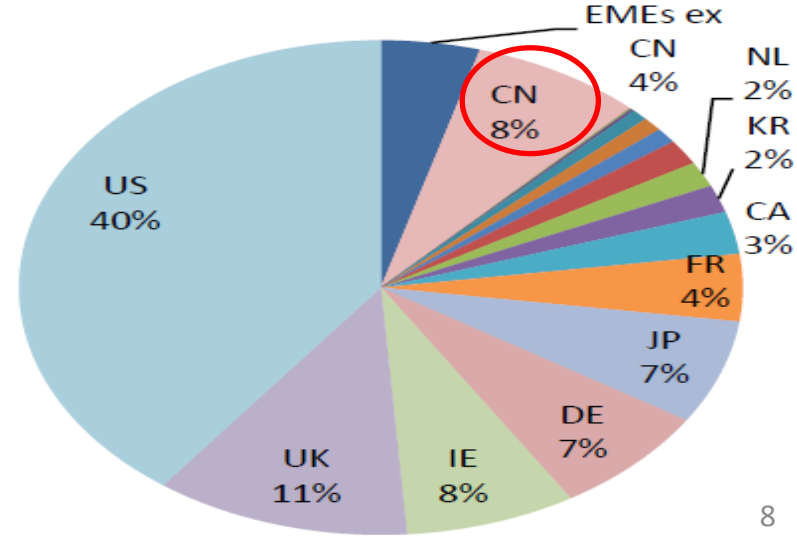


Share of shadow banking assets, 2010 - 2014 (China = 2-8%)

At end-2010



At end-2014



Source: FSB. 2015. "*Global Shadow Banking Monitoring Report 2015*."

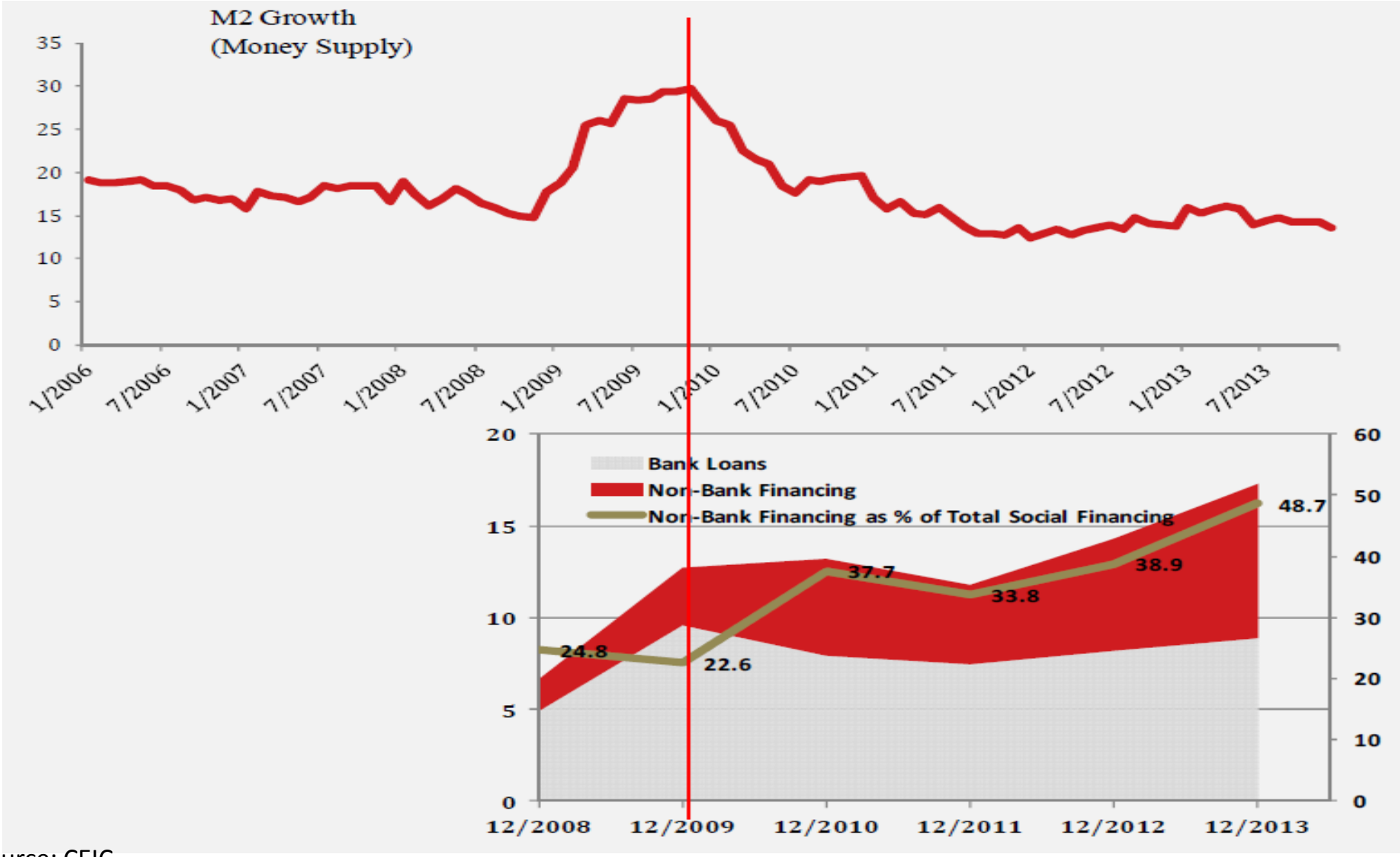
Section 2 Shadow Banking in China

Nature and special characteristics

Domestic interest rate arbitrage

Trusts, WMPs and bundling of risks with banks

Shadow Banking Emerged After 2007 and MP Tightening (SMEs Starved of Credit, Depositors' Search for Yield)



Source: CEIC.

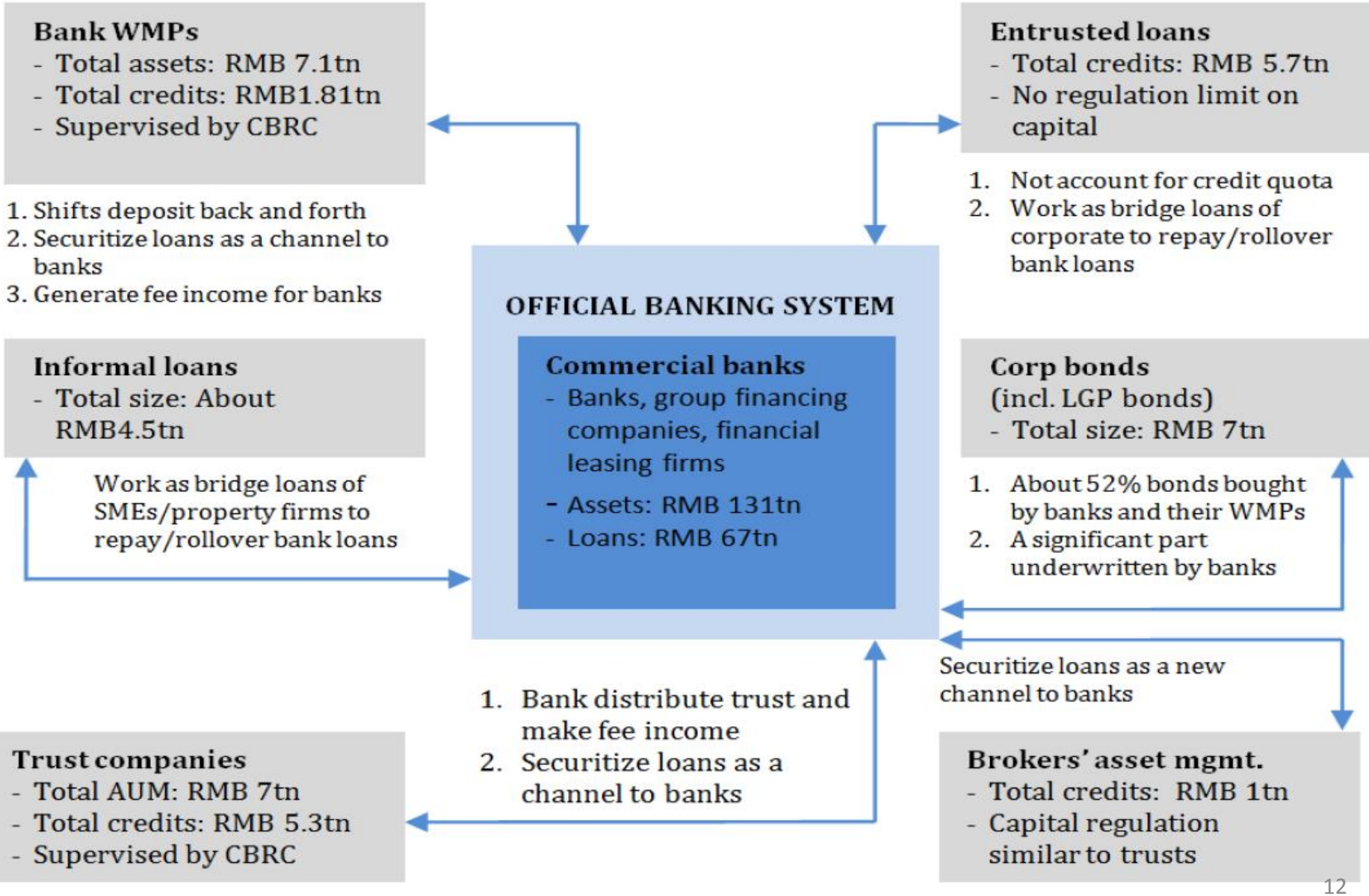
Since 2007, Most Credit went to Large Enterprises and LGFPs

RMB bn

	2007	2008	2009	2010	2011	2012
Large and mid-sized enterprises	15,339	17,521	21,159	22,643	24,722	30,269
Small business	5,597	6,360	8,484	12,301	15,489	17,274
LGFP	3,563	4,400	7,380	8,468	9,100	9,300
Consumers	3,275	3,723	5,537	7,511	8,878	10,444
Total bank loans	**27,774**	**32,004**	**42,560**	**50,923**	**58,189**	**67,287**
Percentage of loan to large & mid-size, and small enterprises (%)						
Large and medium enterprises	55.23	54.75	49.72	44.47	42.49	44.98
Small enterprises	20.15	19.87	19.93	24.16	26.62	25.67
Total bonds	**6,647**	**8,163**	**10,484**	**12,727**	**14,472**	**17,024**
Total alternative financing	**6,923**	**8,271**	**8,938**	**15,329**	**19,639**	**28,417**
YoY growth of bank loans		15.23	32.98	19.65	14.27	15.64
YoY growth of alternative financing		19.47	8.06	71.50	28.12	44.70

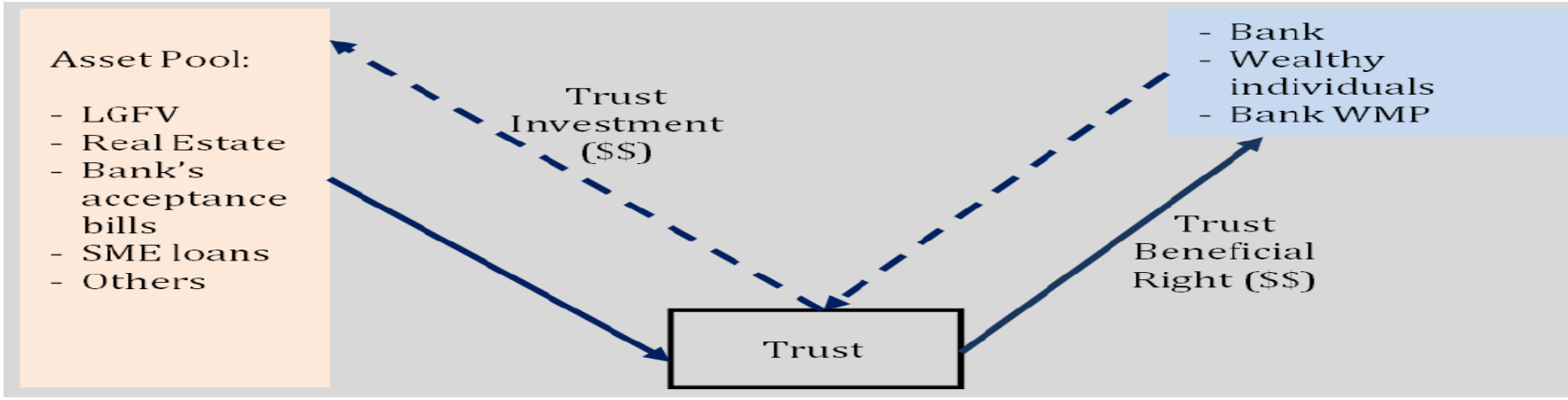
Source: Morgan Stanley; FGI Calculation.

Chinese Shadow Banking – Banking Nexus



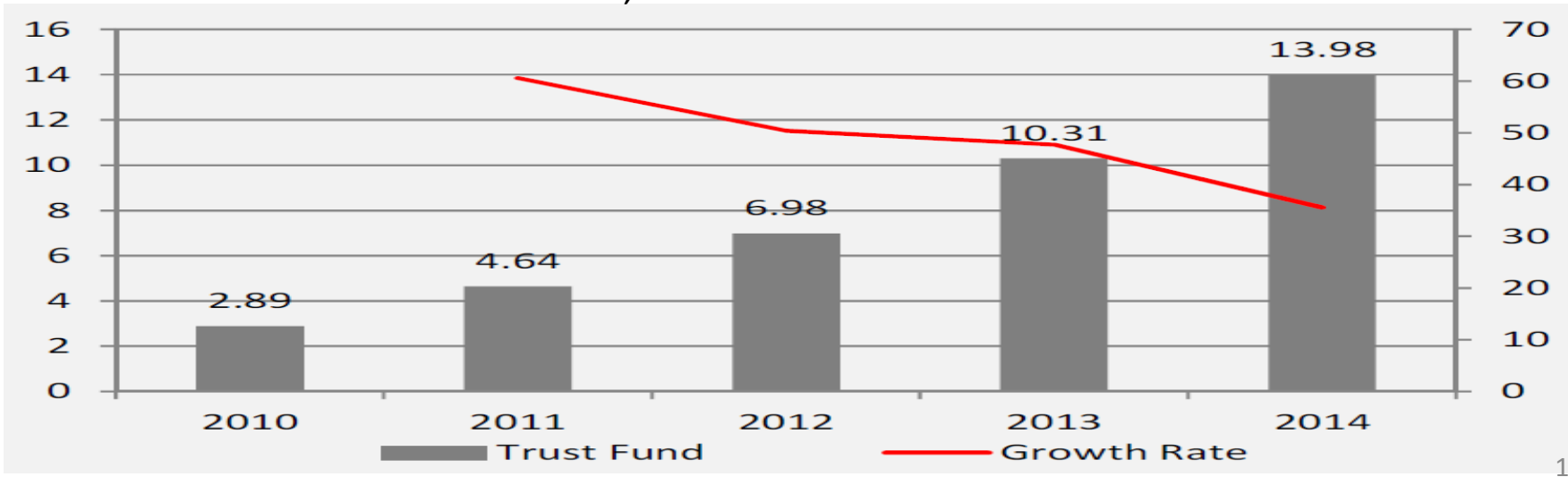
Source: Gao Hua Securities Research estimates. 2012.

Trust Companies = Key Intermediary between Banks & Savers through WMPs



Source: J.P. Morgan Research.

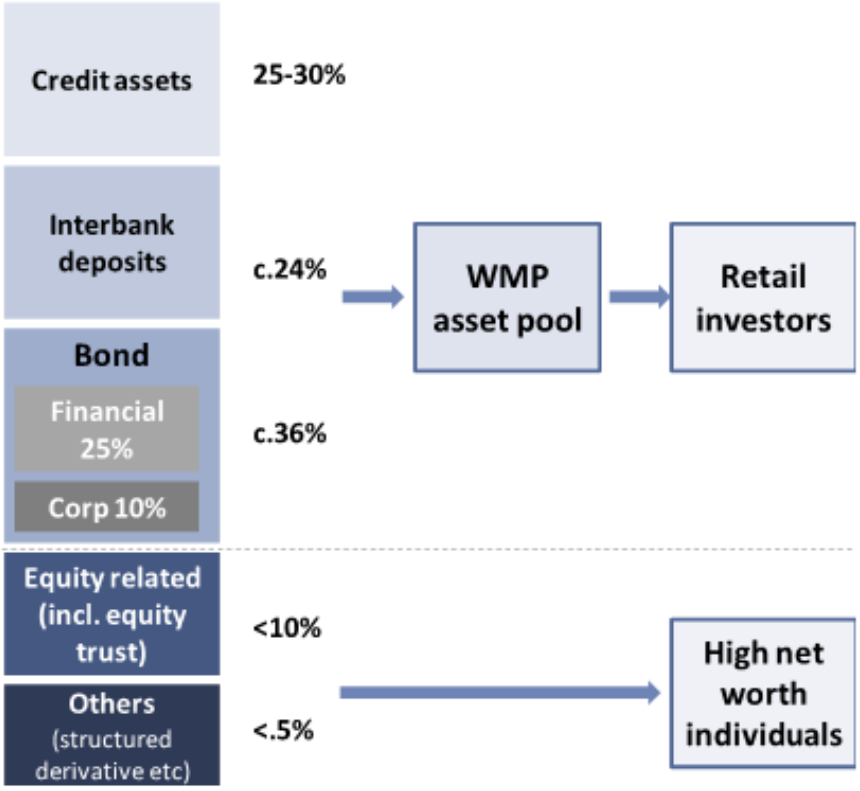
RMB TN Trust Fund Scale and Growth, 2010-2013 %



Source: CEIC.

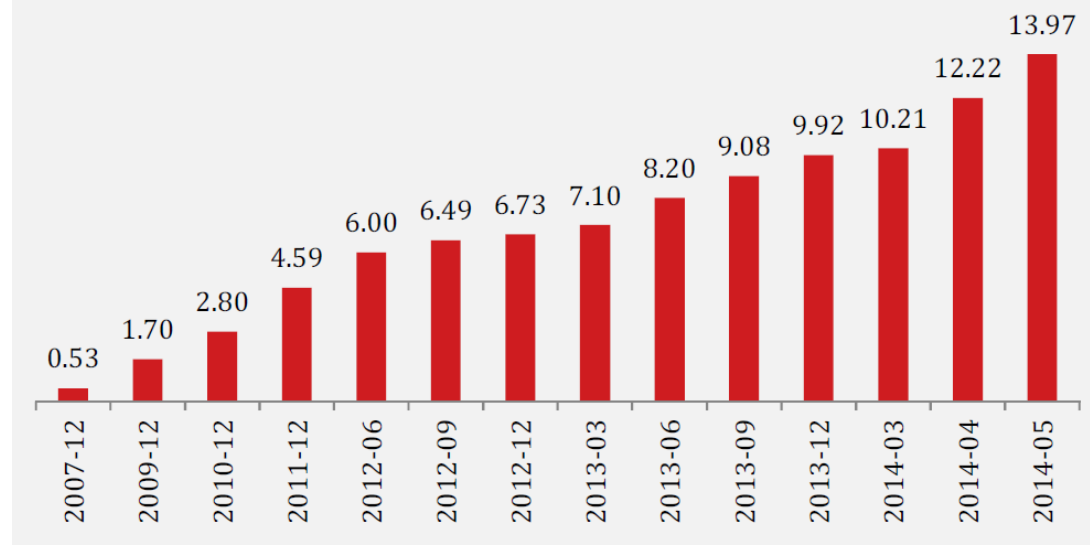
WMPs are Quasi-deposits, but Not All have High Credit Risks – Some Risks are Double Counted

Estimated around 35% credit assets in WMPs
(% of banks' total wealth management assets)



Source: Gao Hua Securities Research estimates.

WMPs reached peak of RMB 14 Tn in May 2014



Source: J.P. Morgan, based on CBRC statistics.

Shadow Banking Must be Seen within Perspective of National Balance Sheet

- China has net international investment position (net lender) equivalent to $1.7 trillion or 17% of GDP
- Credit risks are State-owned Banks lending to SOEs + LGFPs
- China's sovereign government balance sheet shows net asset position of RMB 103 trillion in 2013 (162% of GDP)
- State has ample net assets + policy space in fiscal and monetary policies to deal with any shadow banking problem
- However, any restructuring of debt must come with strong discipline to avoid moral hazard, restore credit culture and transparency of accountability

China's Net Assets of $57 trn Able to Re-write National Balance Sheet and Recapitalize System

Net assets by sector: China vs. U.S.

China	USD TN		%GDP		%Total*	
	2007	2013	2007	2013	2007	2013
National net assets	22	57	624	619	93	85
Households	12	32	335	344	50	47
Nonfinancial enterprises	6	20	165	218	25	30
Central govt	1	4	32	42	5	6
Local govt	5	11	135	123	20	17

US	USD TN		%GDP		%Total	
	2007	2013	2007	2013	2007	2013
National net assets	80	84	574	499	100	100
Of which: Households	67	79	478	472	83	95
Nonfinancial enterprises	12	8	82	48	14	10
Federal govt	-5	-11	-33	-67	-6	-13
State/local govt	7	8	49	45	8	9

* China's national net assets are not equal to the sum of sectoral net assets because there is methodological discrepancy in compiling balance sheets at different levels due to data availability and technical issues.

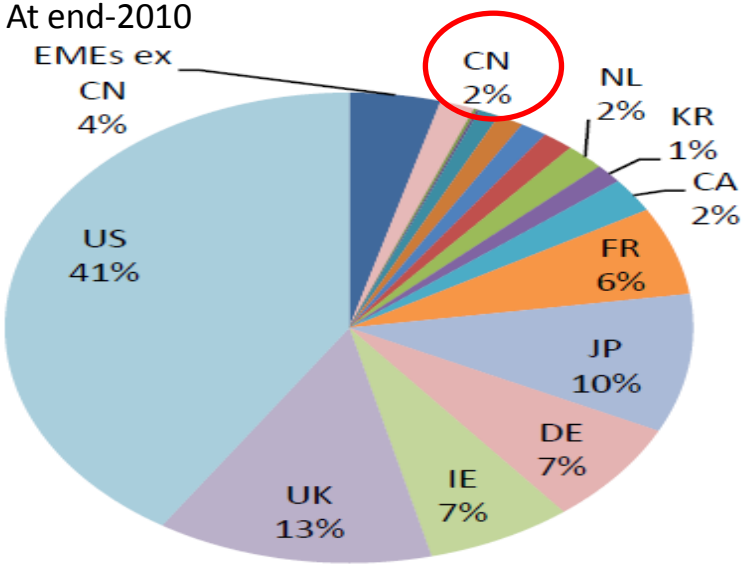
Data sources: Li *et. al*. 2013, 2015, FRB 2015, authors' calculations.

Source: Sheng & Ng. 2016. "*Shadow Banking in China* (forthcoming)." Wiley.

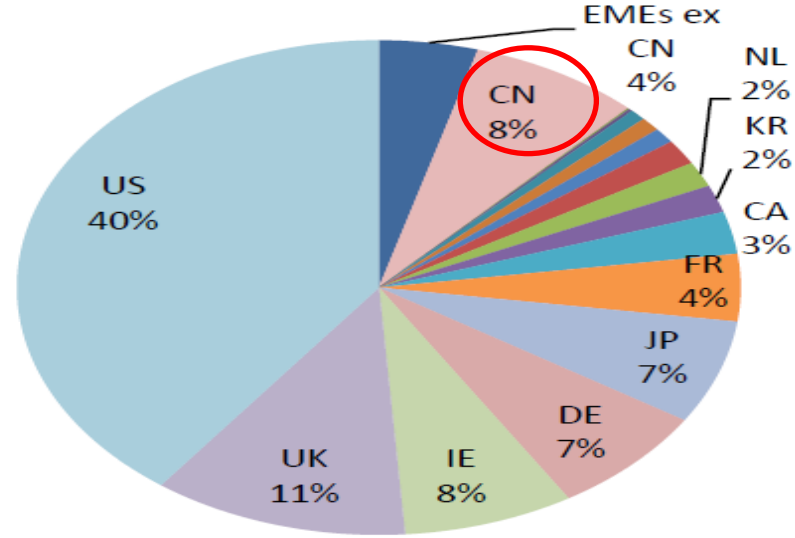
China's Shadow Banking Still Small by Global Standards, Relative to GDP and Banking System Assets (2012)

	China			US			World		
	US$ Trn	% GDP	% bank assets	US$ Trn	% GDP	% bank assets	US$ Trn	% GDP	% bank assets
FSB	2.1	26	10	26	167	172	71	117	61
FGI	4.2	50	20						
JP Morgan	5.8	70	27						

At end-2010



At end-2014



Source: FSB. 2015. "*Global Shadow Banking Monitoring Report 2015*."

Section 3 Risks Inherent in Chinese Shadow Banking

Ever-greening and bundling of risks

Uncertainty as to who pays for losses

Net Risks of Banks + Shadow Banks Boil Down to Credit Risks at 5 Levels

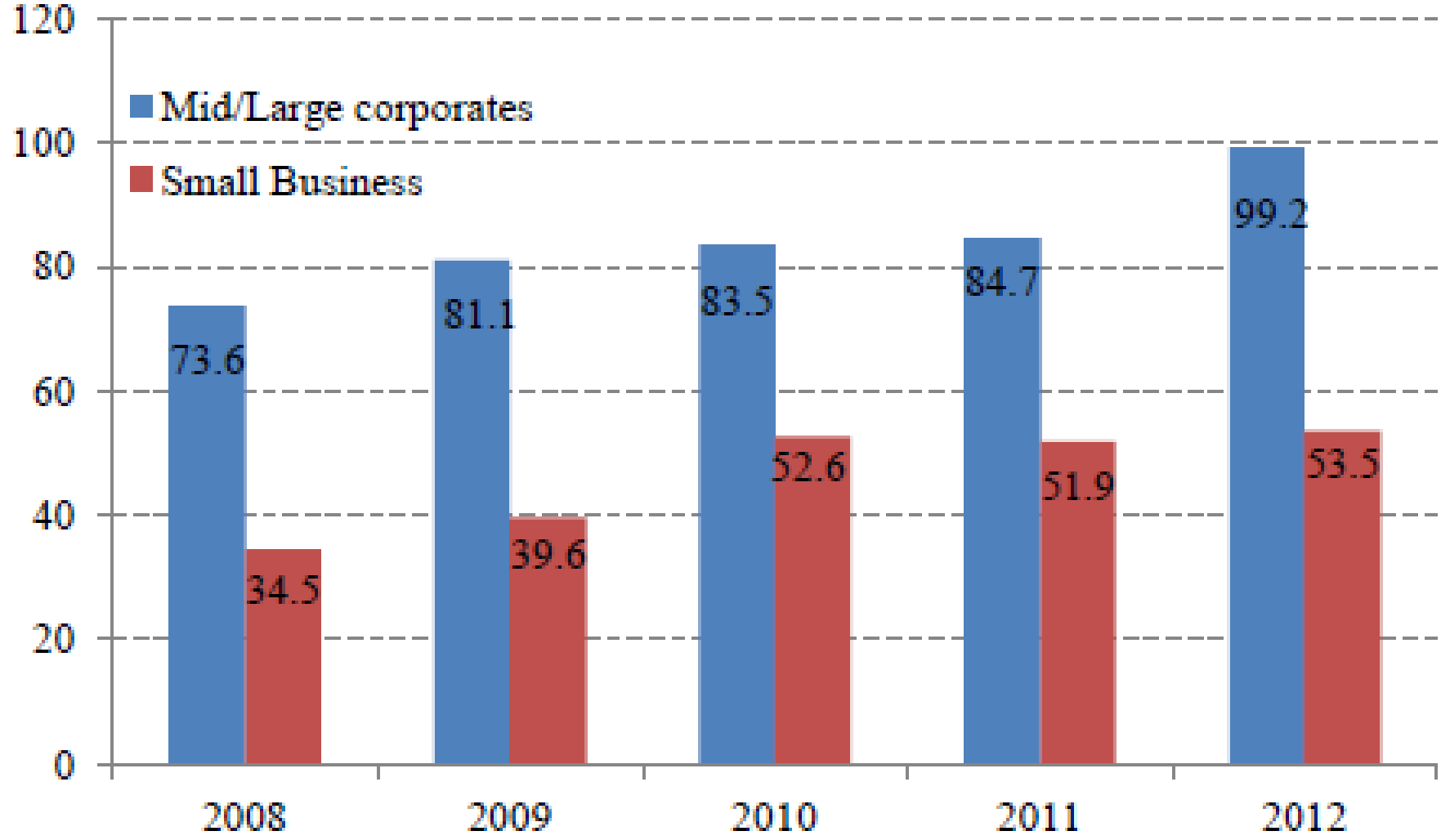
1. **Highly leveraged enterprises with excess capacity**/losses – creative destruction as China changes growth model
2. **Local Government Financing Platforms (LGFPs)** – strictly domestic sovereign debt
3. **Real estate companies** – consolidation in industry inevitable
4. Contagion due to **inter-enterprise credit and guarantees** which drag down relatively good companies
5. **Fraud** – this element cannot be under-estimated, involving collusion between different parties

Credit with Chinese Characteristics

- Banks like to lend to large corporations **(collateral /guarantees)**
- **Immediate drawdown, with loan credited to deposits** (explains high enterprise deposit base)
- They **require repayment before extending new loans** (creates need for bridge loans)
- In period of high credit growth, **ever-greening** (borrow from Peter to pay Paul) occurs. Hence low NPL ratio as debt paid on maturity
- **Bundling of credit risks** through (a) inter-corporate guarantees and (b) corporate purchase of WMPs that contain other corporate risks

(1/5) SOEs More Leveraged than SMEs

Debt/GDP ratio for enterprises (%)



Source: Morgan Stanley; CHina Banks 2013.

(2/5) LGFP – Local Governments Borrowed to Finance Local Investments: National Audit Results

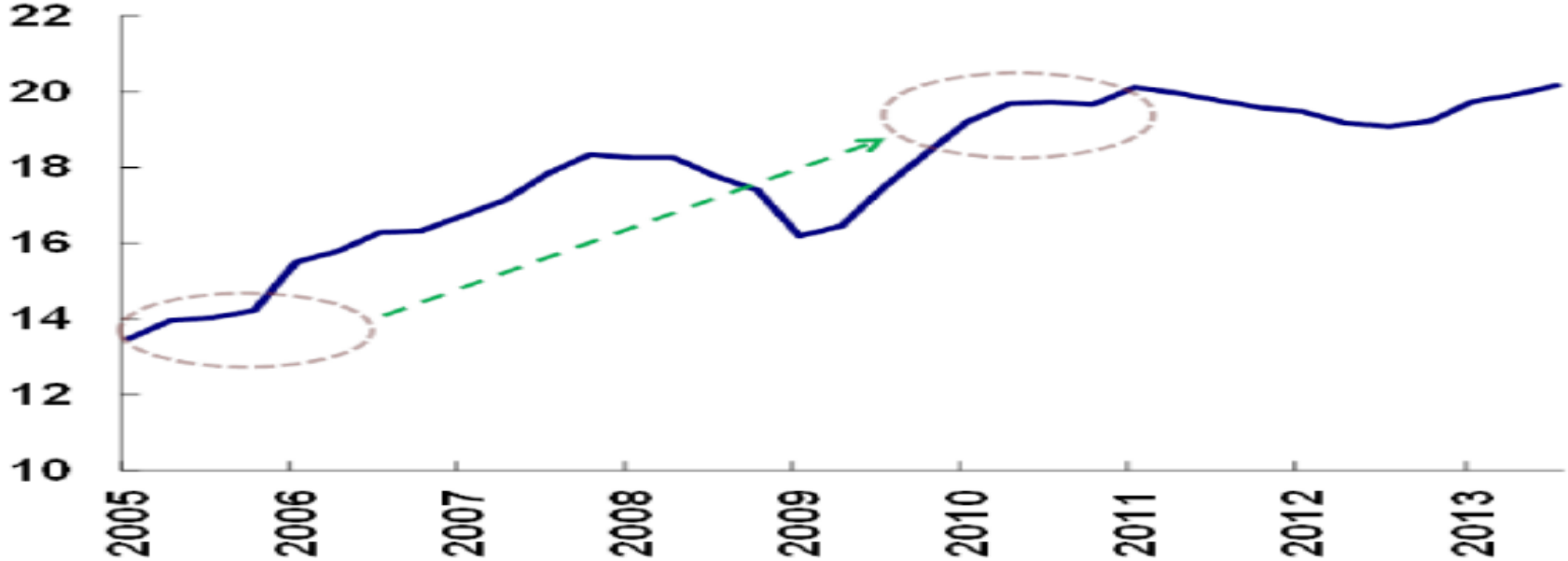
RMB BN

Entity	Debt for which govt has repayment responsibility	Debt guaranteed by govt	Other relevant debt (govt may rescue)
LGFPs	4,075.6	883.3	2,011.6
Govt departments and institutions	3,091.3	968.4	0.0
Institutions with govt subsidies	1,776.2	103.2	515.7
Govt- owned/controlled corporations	1,156.3	575.4	1,403.9
Independent institutions	346.3	37.8	218.5
Public institutions	124.0	83.1	0.0
Others	316.3	14.4	189.6
Total	10,885.9	2,665.6	4,339.4

Source: NDRC, Briefing on Local Government Debt, based on National Audit Commission survery, June 2013.

(3/5) Property Loans = +20% of Bank Loans, and Real Estate is Used Extensively in Collateral

% of financial institutions loans



Source: Zhang et al, How strong are linkages between real estate and other sectors in China, HKIMR Working Paper No. 11/2014, May 2014.

NPL vulnerable to sharp drop in real estate prices

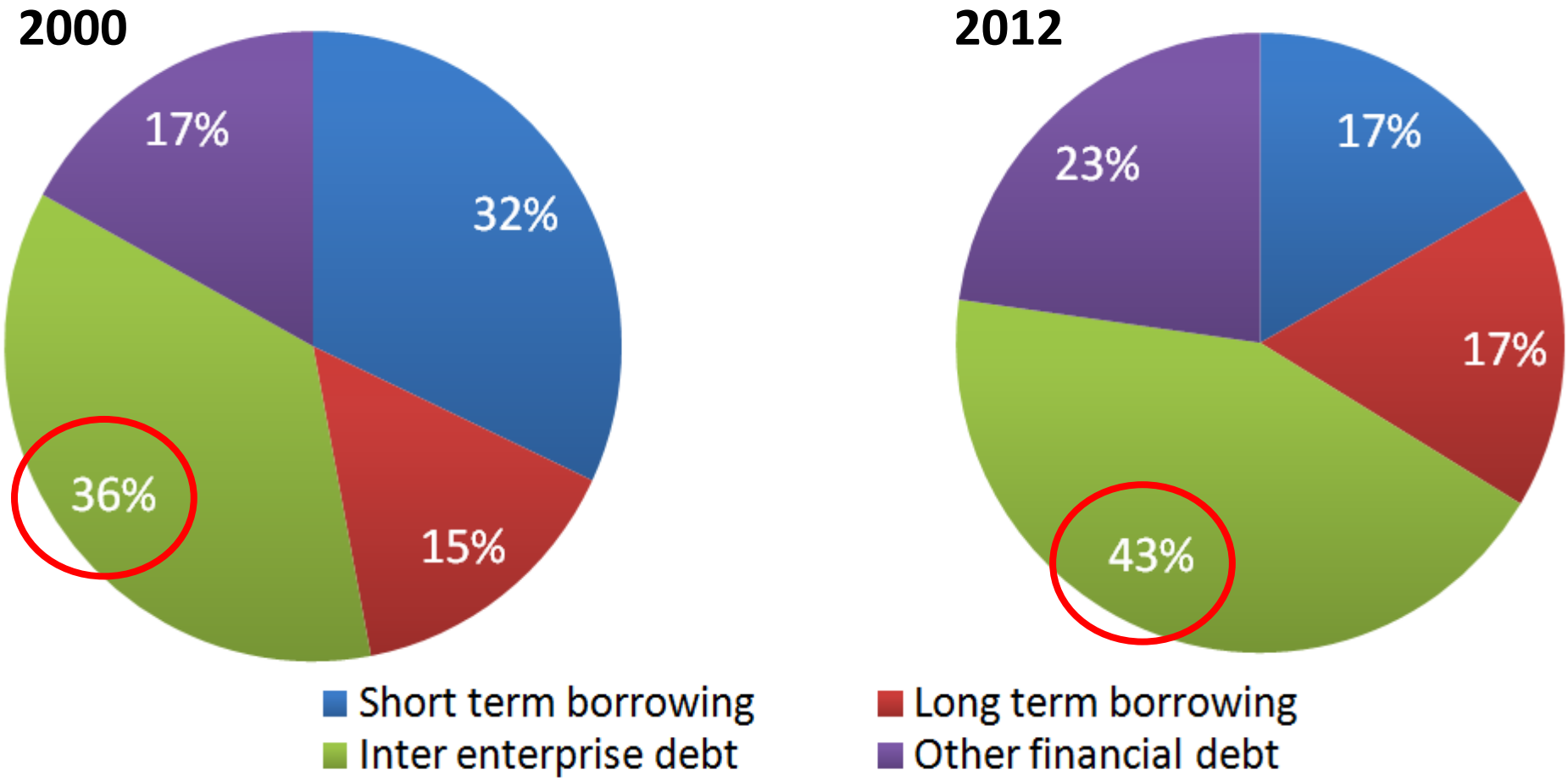
Drop in real estate prices	Incremental NPL ratio of real estate loans	Incremental NPL ratio of mortgages	Total increase in NPL ratio
<30	negligible	negligible	0.1-0.2
30-40	1.4-2.8	0.6-1.3	1.9-3.8
40-50	2.8-4.2	1.3-1.9	3.8-5.6
>50	>5	>2	>7

Data source: Bank of Communications, Financial Research Center.

(4/5) Inter-enterprise Credit and (5/5) Fraud

- **Inter-enterprise credit carries high risk** because of contagion – one default triggers default for other corporate guarantors. This can only be sorted out by proper corporate governance to ensure that companies do not authorize guarantees without proper board approval, and that banks do proper due diligence on the value of such guarantees
- Similarly, **fraud can only be controlled by proper corporate governance and enforced discipline** against those who engage in white collar fraud at both bank and corporate level
- Anticorruption exercise and bank restructuring of problem debts will be best opportunity to clean up inter-enterprise debt and fraud cases

Rise in Inter-enterprise Debt: 36% to 43% by 2012



Source: Li Yang 2013, Table 9-4, page 110.

Chinese Banks' NPLs Low by International Standards

Non-performing loans (% of total loans)

Country	2005	2006	2007	2008	2009	2010	2011	2012	2013
China	8.6	7.1	6.2	2.4	1.6	1.1	1.0	1.0	1.0
Greece	–	61.8	53.7	4.7	7.0	9.1	14.4	23.3	31.3
Iceland	1.1	0.8	–	–	14.1	18.3	11.6	6.4	5.1
Ireland	0.5	0.5	0.6	1.9	9.8	12.5	16.1	24.6	24.6
Italy	7.0	6.6	5.8	6.3	9.4	10.0	11.7	13.7	15.1
Spain	0.8	0.7	0.9	2.8	4.1	4.7	6.0	7.5	8.2
US	0.7	0.8	1.4	3.0	5.0	4.4	3.8	3.3	3.2

Source: World Bank.

Higher Risks in Shadow Banks' Credit

	(1) Total Credit Provided to Corporate (trn RMB)	(2) Exposure to higher risk credit (% of total credit)	(3) Exposure to higher risk credit (trn RMB)	(4) Banks' exposure to high risk* (trn RMB)	(5) Shadow Banks' exposure to high risk (trn RMB)
Manufacturing	20.5	16.9	3.46	0.32	3.14
Wholesale & Retail	17.0	11.6	1.97	0.22	1.75
LGFV	15.0	25	3.75	0.97	2.78
Real Estate	9.7	5.5	0.53	0.04	0.49
Mining	5.1	7.8	0.39	0.01	0.39
Construction	3.0	18.4	0.56	0.02	0.54
…					
Total	*92.2*	*12.1*	*11.2*	*1.7*	***9.4***
As % of GDP	*177.5*		*21.5*	*3.4*	*18.1*
As % of total loan	*151.1*		*18.3*	*2.9*	*15.4*

* Banks' exposure to high risk is measured by banks' overdue loans, which is generally Banks' NPL/0.7.
Source: CEIC, FGI estimates.

Scenario Analysis: Impact of Shadow Banks' NPL on Banks' NPL

Scenario:	Shadow Banks' NPL (%)	Estimated Banks' NPLs: Banks' current NPL (1.5%) + Shadow banks' NPL impact on banks	Estimated Banks' NPLs: Banks' current provision (2.8x1.5%=4.2%) + Shadow banks' NPL impact on banks
Optimistic	4.4	1.7% - 1.9%	4.2% - 4.2%
Base	10.0	2.2% - 2.7%	4.7% - 5.0%
Pessimistic	16.1	2.7% - 3.6%	5.1% - 5.9%
Disastrous	23.9	3.3% - 4.8%	5.8% - 7.1%

Sources: CEIC, Oliver Wyman, FGI estimation.

Chinese High NIM Allows Room to Write Off NPLs

Net interest income as % of GDP

	2012	Peak since 1970s	Year of peak
China	5.0%	5.0%	2012
US	2.7%	2.7%	2010
Japan	1.7%	2.2%	1989
Germany	3.2%	3.5%	1983

Source: CEIC; Morgan Stanley Research.

Section 4

Way Forward: Opportunity for Reform

Immediate and Longer-term Proposals

Blueprint for China's Long-term Financial Sector Development

- Financial system must be re-oriented to **serve China's changing needs**
- System is **currently bank and short-term debt-dominated**, without sufficient capital to deleverage and absorb risks for long-term investments
- Long-term financial inclusion and balanced growth requires **development of pension and insurance funds** and also equity/PE funding for SMEs
- Use technology to leap-frog restructuring of real economy to New Industrial Revolution and restructure finance
- Use **international standards** to facilitate integration with global economy and finance

Wealth and income creation must be higher than creative destruction and value subtraction in NPLs etc.

Opportunity to Reform: Immediate Priorities

- Implement deposit insurance & restructuring/exit mechanism
- Establish inter-agency task force to sort out inter-enterprise credit problem and improve credit accountability
- Implement Legal Entity Identifier (LEI) initiative to untangle bundling of risks between shadow and commercial banks
- Establish national registry to clarify property rights (use Blockchain technology)
- Strengthen credit culture via credit bureau, financial consumer education, higher disclosure and enforcement
- Clarify roles of regulators to minimize supervisory gaps
- Continue orderly financial liberalization to allow market forces to work

Longer-term Reform Priorities

- Diversify away from bank-dominated financial system to address structural maturity and debt-equity mismatches
- Deepen capital/equity markets, pension and insurance funds to address debt/equity mismatch and meet China's social security needs
- Promote Private Equity and equity funds to inject capital into innovative enterprises and deleverage borrowers
- Improve management of state assets & separate role of the state from ownership to promote competition, ROA and innovation
- Manage property market risks among local governments, e.g., via fiscal revenue sharing reforms, development of long-term municipal bond market & creation of secondary mortgage markets

Concluding Thoughts

- China's shadow banks are essentially domestic debt problem that can be managed
- Must untangle opaque bundling of risks and restore credit culture and accountability
- Opportunity for structural reform to strengthen long-term pension, insurance and capital markets and reduce over-dependence on bank debt financing
- Must leverage on FinTech, blockchain and crowdfunding to reduce transaction costs, improve credit discipline & transparency
- Need to acknowledge support of FGI-AGI community, corporate partners and contributing authors
- Recent events reinforce that messages of this book are on right track – we are embarking on new book on A-share market and RMB volatility to deepen understanding of China's financial reform and transition

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Thank you

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