Bringing Shadow Banking into the Light:  
*Opportunity for Financial Reform in China*

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HSBC-CELP Programme, London
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I. Emergence of Global Shadow Banking
II. Chinese Shadow Banking – Nature & Characteristics
III. Risks Inherent in Shadow Banking
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Introduction

1. Global Financial System since 1980s has changed dramatically due to financial innovation, deregulation, globalization and technology

2. 2007-2009 GFC revealed key role of shadow-banking that was under-regulated, opaque with risks borne by banking system through complex financial derivatives

3. Chinese shadow banking system has similar traits, but evolved because private sector or local government borrowers sought credit by willingness to pay higher interest rates than official rates. The Chinese characteristics are ever-greening and bundling of risks, so that private sector borrowers obtain credit by binding risks with banks and SOEs through trust company packaging of wealth management products (WMP)
Global Shadow Banking

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

Highly leveraged and interconnected through toxic products and leveraged institutions
Global Banking is highly networked: Top 100 countries in global banking network (2007)
US Shadow Banking Map – NY Fed 2010
Banking Assets - Half of global financial assets, shadow banking one quarter and central banks one-eighth

Source: National flow of funds data.

Overall Financial System became over-leveraged

Ratio of Debt to GDP Among Selected Advanced Economics  
(In percent, GDP-weighted, 1987=100)

The fundamental problem is overconsumption through over-leveraging of finance
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 monetary tightening

Source: CEIC
Key Interest Rates rising relative to official rates (2008-2014)

Source: CEIC
Chinese Micro-credit Business Model

- Micro-credit lending rate ≈ 20-24% p.a.
- Less credit guarantee fee – (3%) p.a.
- Cost of funds (from selling to trust co) 11% p.a.
  - Profit on lending to SME ≈ 10% p.a.
- Trust co/Asset manager margin from packing into WMP (3%)
- Legal fees & admin (2%)

= Interest on WMP by investor ≈ 6% p.a.

Official deposit rate on 1 yr FD 3.5%
Most Chinese Shadow Banking Activities Interconnected with Banks, 2012

Bank WMPs
- Total assets: RMB 7.1tn
- Total credits: RMB 1.8tn
- Supervised by CBRC

1. shift deposit back and forth
2. securitize loans as a channel to banks
3. generate fee income for banks

Entrusted loans
- Total credits: RMB 5.7tn
- No regulation limit on capital
- Firms lend to each other

1. not account for credit quota
2. work as bridge loans of corporates to repay/rollover bank loans

Informal loans
- Total size: About RMB 4.5tn

1. work as bridge loans of SMEs/property firms to repay/rollover bank loans

Official Banking System
Commercial banks
- Banks, group financing companies, financial leasing firms
  - Assets: RMB 131tn
  - Loans: RMB 67tn

1. banks distribute trust and make fee income

Corporation bonds (incl. LGP bonds)
- Total size: RMB 7tn

1. about 52% bonds bought by banks and their WMPs
2. A significant part underwritten by banks

Trust companies
- Total AUM: RMB 7tn
- Total credits: RMB 5.3tn
- Supervised by CBRC

1. securitize loans as a new channel to banks

Brokers’ asset mgmt.
- Total credits: RMB 1tn
- Capital regulation similar to trusts’

Source: Gao Hua Securities Research estimates.
Trust companies act as key intermediary between banks and savers through wealth management products (WMP)

Source: JP Morgan.
Bank WMPs by Scale – Reached as high as RMB 14 trn, end-May 2014

Source: JP Morgan quoting CBRC statistics.
Shadow Banking must be seen within perspective of National Balance Sheet, 2011

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and government net worth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government deposits with central bank</td>
<td>Central government debt</td>
</tr>
<tr>
<td>FX reserve assets</td>
<td>Sovereign debt</td>
</tr>
<tr>
<td>Land and natural resource assets</td>
<td>Local government debt from non-financing platform enterprises</td>
</tr>
<tr>
<td>State-owned assets of administrative units and agencies</td>
<td>Local government financing platform debt</td>
</tr>
<tr>
<td>Net assets of state-owned non-financial enterprises (NFEs)</td>
<td>Debt of state-owned non-financial enterprises (excluding local government debt from financing platform)</td>
</tr>
<tr>
<td>Net assets of state-own financial institutions</td>
<td>Debt of policy banks</td>
</tr>
<tr>
<td></td>
<td>Bank Non-performing assets</td>
</tr>
<tr>
<td></td>
<td>Debts from clearing bank non-performing assets</td>
</tr>
<tr>
<td>Net assets of state-owned social security funds</td>
<td>Implicit debt of pension and retirement funds</td>
</tr>
<tr>
<td>Total assets</td>
<td>Total liabilities</td>
</tr>
<tr>
<td></td>
<td>Government net worth</td>
</tr>
</tbody>
</table>

Unit: RMB trillion

Source: Li Yang (2013), CASS Table 3-1, pg. 37
## China Shadow Banking Still Small by Global Standards, Relative to GDP and Banking System Assets (2012)

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>US</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US$ Trn</td>
<td>% GDP</td>
<td>% bank assets</td>
</tr>
<tr>
<td>FSB</td>
<td>2.1</td>
<td>26</td>
<td>10</td>
</tr>
<tr>
<td>FGI</td>
<td>4.2</td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>JP Morgan</td>
<td>5.8</td>
<td>70</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: FSB, J.P. Morgan, FGI estimates, IMF
“China’s shadow banking is not a global threat”

Net International Investment Position (NIIP) China vs US

<table>
<thead>
<tr>
<th>Country</th>
<th>Item</th>
<th>In USD trn.</th>
<th>In % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2007</td>
<td>2013</td>
</tr>
<tr>
<td>China</td>
<td>NIIP</td>
<td>1.2</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Assets</td>
<td>2.4</td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td>Liabilities</td>
<td>(1.2)</td>
<td>(4.0)</td>
</tr>
<tr>
<td>US</td>
<td>NIIP</td>
<td>-1.3</td>
<td>-5.4</td>
</tr>
<tr>
<td></td>
<td>Assets</td>
<td>20.7</td>
<td>23.7</td>
</tr>
<tr>
<td></td>
<td>Liabilities</td>
<td>(22.0)</td>
<td>(29.1)</td>
</tr>
</tbody>
</table>

Chinese Enterprises have High Debt, but also High Deposits: Key Exposure is Inter-Enterprise credit (credit bundling)

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>% of GDP</th>
<th>2013</th>
<th>% of GDP</th>
<th>USA 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (RMB trn)</td>
<td>26.6</td>
<td>100.0%</td>
<td>56.9</td>
<td>100.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Non-financial corporate sector</td>
<td>19.5</td>
<td>73.3%</td>
<td>51.2</td>
<td>90.0%</td>
<td>11.4%</td>
</tr>
<tr>
<td>deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NF Corporate loans</td>
<td>22.7</td>
<td>85.3%</td>
<td>60.0</td>
<td>105.4%</td>
<td>76.3%</td>
</tr>
<tr>
<td>Net credit</td>
<td>3.2</td>
<td>12.0%</td>
<td>8.8</td>
<td>15.4%</td>
<td>64.9%</td>
</tr>
<tr>
<td>Deposits as % of loans</td>
<td>85.9%</td>
<td></td>
<td>85.3%</td>
<td></td>
<td>14.9%</td>
</tr>
<tr>
<td>Household deposits</td>
<td>n.a.</td>
<td>n.a.</td>
<td>46.7</td>
<td>82.1%</td>
<td></td>
</tr>
</tbody>
</table>

Section 3

Risk inherent in Chinese Shadow Banking

Evergreening and bundling of risks
Uncertainty as to who pays for losses
Credit with Chinese Characteristics

- Banks like to lend to large corporations with **collateral and 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, **evergreening** (borrow from Peter to pay Paul) occurs. Hence low NPL ratio as debt paid on expiry
- **Bundling of credit risks** through (a) inter-corporate guarantees and (b) corporate purchase of WMPs that contain other corporate risks
Ultimate exposure of Banking and Shadow Banking in Enterprises, Real Estate and LGFVs

Richard Xu, Morgan Stanley

Source: CEIC, WIND, Morgan Stanley Research
Net risks of bank+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 (LGFP) (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
2. LGFP – National Audit results – largely domestic sovereign debt issue

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

3. Real Estate value 253% of GDP in 2011 impacts on almost every sector

Source: Zhang et al. May 2014. HKIMR Working paper No.11/2014: “How strong are the linkages between real estate and other sectors in China”.
NPL vulnerable to sharp drop in real estate prices

<table>
<thead>
<tr>
<th>Drop in real estate prices</th>
<th>Incremental NPL ratio of real estate loans</th>
<th>Incremental NPL ratio of mortgages</th>
<th>Total increase in NPL ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;30</td>
<td>negligible</td>
<td>Negligible</td>
<td>0.1-0.2</td>
</tr>
<tr>
<td>30-40</td>
<td>1.4-2.8</td>
<td>0.6-1.3</td>
<td>1.9-3.8</td>
</tr>
<tr>
<td>40-50</td>
<td>2.8-4.2</td>
<td>1.3-1.9</td>
<td>3.8-5.6</td>
</tr>
<tr>
<td>&gt;50</td>
<td>&gt;5</td>
<td>&gt;2</td>
<td>&gt;7</td>
</tr>
</tbody>
</table>

Date source: Bank of Communications, Financial Research Center
4/5: Inter-enterprise credit and fraud

- **Inter-enterprise credit carries high risk** because of contagion – one failure triggers default to 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 and enterprise sorting out of NPL will be the best opportunity to clean up inter-enterprise debt and fraud cases.
Chinese Bank NPL dropped to below global standards since 2007
Chinese Bank NPLs very Low by international standards

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>China</strong></td>
<td>8.6</td>
<td>7.1</td>
<td>6.2</td>
<td>2.4</td>
<td>1.6</td>
<td>1.1</td>
<td><strong>1</strong></td>
<td><strong>1</strong></td>
<td><strong>1</strong></td>
</tr>
<tr>
<td><strong>Greece</strong></td>
<td>61.8</td>
<td>53.7</td>
<td>4.7</td>
<td>7</td>
<td>9.1</td>
<td>14.4</td>
<td>23.3</td>
<td>31.3</td>
<td></td>
</tr>
<tr>
<td><strong>Iceland</strong></td>
<td>1.1</td>
<td>0.8</td>
<td></td>
<td>14.1</td>
<td>18.3</td>
<td>11.6</td>
<td>6.4</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td><strong>Ireland</strong></td>
<td>0.5</td>
<td>0.5</td>
<td>0.6</td>
<td>1.9</td>
<td>9.8</td>
<td>12.5</td>
<td>16.1</td>
<td>24.6</td>
<td>24.6</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td>7</td>
<td>6.6</td>
<td>5.8</td>
<td>6.3</td>
<td>9.4</td>
<td>10</td>
<td>11.7</td>
<td>13.7</td>
<td>15.1</td>
</tr>
<tr>
<td><strong>Spain</strong></td>
<td>0.8</td>
<td>0.7</td>
<td>0.9</td>
<td>2.8</td>
<td>4.1</td>
<td>4.7</td>
<td>6</td>
<td>7.5</td>
<td>8.2</td>
</tr>
<tr>
<td><strong>United States</strong></td>
<td>0.7</td>
<td>0.8</td>
<td>1.4</td>
<td>3</td>
<td>5</td>
<td>4.4</td>
<td><strong>3.8</strong></td>
<td><strong>3.3</strong></td>
<td><strong>3.2</strong></td>
</tr>
</tbody>
</table>

Source: World Bank
Scenario Analysis: The Impact of Shadow Banking NPL on Banks’ NPL

<table>
<thead>
<tr>
<th>NPL of Shadow Banking</th>
<th>Optimistic Scenario</th>
<th>Stable scenario</th>
<th>Pessimistic scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15%</td>
<td>20%</td>
<td>30%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated Banks' NPL</th>
<th>Banks' current NPL (1.4%) + Shadow banking NPL's impact</th>
<th>Banks' current NPL (1.4%) + Provision (2.1%) + Shadow banking NPL's impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimistic Scenario</td>
<td>4% - 4.5%</td>
<td>6.1% - 6.6%</td>
</tr>
<tr>
<td>Stable scenario</td>
<td>5% - 5.5%</td>
<td>7.1% - 7.6%</td>
</tr>
<tr>
<td>Pessimistic scenario</td>
<td>6.5% - 7.5%</td>
<td>8.6% - 9.6%</td>
</tr>
</tbody>
</table>

Source: CEIC, FGI estimation
Chinese high NIM allows room for write off of NPLs

<table>
<thead>
<tr>
<th>Country</th>
<th>2012</th>
<th>Peak since 1970s</th>
<th>Year of peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>5.0%</td>
<td>5.0%</td>
<td>2012</td>
</tr>
<tr>
<td>USA</td>
<td>2.7%</td>
<td>2.7%</td>
<td>2010</td>
</tr>
<tr>
<td>Japan</td>
<td>1.7%</td>
<td>2.2%</td>
<td>1989</td>
</tr>
<tr>
<td>Germany</td>
<td>3.2%</td>
<td>3.5%</td>
<td>1983</td>
</tr>
</tbody>
</table>

Source: CEIC, Morgan Stanley Research
Section 5  Impact of Technology is Changing Finance Business Model
If Chinese banks do not change, then they will be forced to change!

MA YUN, chairman of Alibaba Group

Yu’E Bao, the biggest single public fund in China, is an example of how online wealth management products work. But note that fund products vary in such methods.

By He Yini / chinadaily.com.cn
Online Retailers’ Sales Surpassed Department Stores in China

billion RMB

Source: i-Research

E-commerce Sales Has Surpassed That of Department Stores in China
China Third-party Internet Payment Market Size Projection: 2010-2017

- Total Transaction (RMB 100mn)
- Growth Rate (%)

- 2010: 10104.8
- 2011: 22038.0
- 2012: 36589.1
- 2013e: 53729.8
- 2014e: 74368.9
- 2015e: 104066.3
- 2016e: 141439.6
- 2017e: 184804.4

Growth Rate (%):
- 2010: 100.1%
- 2011: 118.1%
- 2012: 66.0%
- 2013: 46.8%
- 2014: 41.6%
- 2015: 39.9%
- 2016: 35.9%
- 2017: 30.7%
Network Industries All Suffer Similar Business Model Challenges

**Airlines**

- Top-end luxury business subsidised by state (e.g. Gulf airlines)
- Middle segment under huge competition (e.g. Cathay Pacific)
- Low-end budget airlines take away market share (e.g. Air Asia)

**Banks**

- State-owned banks helped by state
- Privately-owned banks subject to more and more regulatory costs
- Low-end payments and business cannibalised by Financial Technology providers (e.g. Alibaba)
Section 6

The Way Forward: Opportunity for Reform

Immediate and medium-term Proposals
CBRC views on China Shadow Banking Regulation
YAN Qingmin, LI Jianhua “Supervision of China’s Shadow Banking”

❖ **Recommended Regulation Framework:**
  - Improve information disclosure, reduce information asymmetry
  - Build up firewall between banks and shadow banking sector to block risk transmission channels
  - Improve investor education; implement risk principle of “Caveat Emptor”
  - Clarify scope of “Lender of Last Resort”

❖ **Recommendations on Regulations of Specific Shadow Banking Sectors:**
  - **Bank WMP**: strengthen data monitoring, establish bankruptcy mechanism
  - **Trust**: Transfer the sector back to traditional trust business and wealth management business
  - **Microcredit company**: relax current regulations on microcredit, allowing them to obtain funds from financial markets
  - **Guarantors**: prohibit guarantors from engaging in deposits taking and making loans
  - **Internet finance**: specific regulations to enable parallel development of internet finance and traditional finance
  - **Private financing**: clearly define private capital, its rights and obligations, to ensure private capital’s function in supporting SME financing
Opportunity to Reform: Immediate Priorities

Third Plenum reforms in right direction

- Deposit insurance approved but not yet implemented
- Deposit interest rate liberalization (narrow gap with shadow rates)
- Exchange rate band widened + Shanghai FTZ

Flow approach to strengthening credit culture

- Change rules for loan classification, loss provisioning and interest suspension to capture ever-greening
- Survey and review inter-locking credit guarantees by enterprises and banks, especially due diligence processes
- Establish main bank system to monitor credit of conglomerates and related enterprises

Structural approach

- Implement exit resolution plan for failed bank/shadow banks
- Speed, transparency and predictability in failed enterprise resolution
- Create secondary mortgage corporation to start asset securitization market
Section 7  Concluding Remarks

Questions?
Concluding Thoughts

• China’s shadow banks are a market response to real sector need and regulatory arbitrage
• While still manageable as a domestic debt problem, its fast growth reflects lack of clarity in credit accountability and therefore is potentially very damaging due to moral hazard
• Must untangle opaque bundling of risks across shadow-commercial banks and restore credit culture and accountability
• Key is clarity of property rights, credit discipline and allowing failed enterprises and weak banks to exit
• Holistic/systemic National Balance Sheet approach helpful to have long-term view of opportunities to reform
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