Shadow Banking in China: Implications for Financial Stability and Economic Rebalancing

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1. Fast Growth and Increasing Size of Shadow Banks;
2. Shadow Banks: Major Institutions and Activities;
3. Causes of Shadow Banking Growth;
4. Shadow Banking, Credit Expansion and Financial Fragility;
5. Shadow Banking and Macroeconomic Rebalancing;
6. Conclusions
Estimates of China’s Shadow Banks

<table>
<thead>
<tr>
<th>Bank</th>
<th>Date</th>
<th>RMB (tn)</th>
<th>USD (tn)</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>GF Securities</td>
<td>12/17/12</td>
<td>30</td>
<td>4.8</td>
<td>57%</td>
</tr>
<tr>
<td>Citi Research</td>
<td>1/11/13</td>
<td>28</td>
<td>4.5</td>
<td>54%</td>
</tr>
<tr>
<td>Barclays</td>
<td>Dec. 2012</td>
<td>25.6</td>
<td>4.1</td>
<td>49%</td>
</tr>
<tr>
<td>Hua Tai Securities</td>
<td>12/14/12</td>
<td>25</td>
<td>4</td>
<td>48%</td>
</tr>
<tr>
<td>UBS</td>
<td>10/16/12</td>
<td>13.7-24.4</td>
<td>2.2-3.9</td>
<td>26-46%</td>
</tr>
<tr>
<td>ANZ Bank</td>
<td>End 2013</td>
<td>30</td>
<td>4.9</td>
<td>51%</td>
</tr>
<tr>
<td>Bank of America</td>
<td>7/6/12</td>
<td>14.5</td>
<td>2.3</td>
<td>28%</td>
</tr>
</tbody>
</table>

Source: Federal Reserve of San Francisco (2013); The Economist (2014)
Although the size of the shadow banks is still relatively small, the sector has experienced immense growth since 2008;

Shadow banks have quadrupled since 2008, with an annualized growth rate of 34% since the end of 2010. According to Financial Stability Board (2013), the size (as a percent of GDP) of China’s non-bank financial intermediary (a proxy for “shadow banks”) grew by 45% in 2012, the highest among all 25 countries/areas it examines.
Shadow Banks: Major Institutions and Activities

- Shadow banking system consists of a web of specialized financial institutions that conduct credit, maturity, and liquidity transformation without direct, explicit access to public backstops (Adrian et al 2013).

- Shadow banks include:
  - Bank off-balance-sheet activities: undiscouned bank acceptance bills, informal securitized loans and other credit-based assets through wealth management products (WMPs);
  - Bank acceptance bills are issued by banks (upon the request of firms) that provide unconditional payment to the holder of the bills at maturity;
  - Trusts and trust-bank cooperation: trust loans, entrusted loans, WMPs;
  - Trust loans are loans arranged by trust companies and entrusted loans are lending from one company to another through the intermediaries of banks or trusts;
  - Numerous others: leasing companies, finance companies, loan guarantee companies; micro finance lenders; underground banks; person to person lending; and pawn shops.

- “Total Social Financing” by the official account provides an imperfect measure of shadow banks (Borst 2011).
Growth of Total Social Financing, by Components, 2013&2014

Note: Total TSF in 2013 and 2014 are $17.3 and $16.4 trillion yuan, respectively.
Source: People’s Bank of China
Trusts: now second largest non-bank financial institutions, asset under management (AUM) has increased fivefold since 2010 to reach 12.5 tn yuan as of 2014Q2. Trust loans made up for 11% of TSF in 2013 (fell to 3% at end-2014). Trust also intermediate “entrusted loans” and accounted for a total of 40% WMP distributions during 2004-14. Trusts rely on bank lending, and use banks to distribute trust products (fivefold increase during 2007-9). Banks use trusts to arrange “entrusted loans” and invest in trust products (in some cases, engage in “disguised” interbank lending).

Wealth Management Product (WMP): informal securitization of loans and other credit-based assets to attract and retain deposits and to evade loan-to-deposit and capital requirements in order to expand lending. As of 2013Q3, outstanding WMP reached 9.9 trillion yuan, or 18% of GDP.
An Illustration of Bank-Trust Cooperation

- **Bank depositors** (individual investors)
- **Qualified wealthy individual investors**
- **Institutional investors, SOEs, LGFV, banks**

**Deposit**
- Bank-issued WMPs
- Trust Products

**Trust assets**
- Loans
- Stocks, bonds, ETFs, PEs...
- Indirect credit extension

**Real sector**
- LGFV
- Real estate developers
- SMEs
- SOEs
- Households

**Informal lending**

**Entrusted loans**
- Purchase bank acceptance bills

**Invest**
- Purchase

**Figure 8: An illustration of trust companies’ business model**
Outstanding Wealth Management Products (RMB Billions) and as Percentage of GDP
3. Causes of Shadow Bank Development

- “Financial Repression”? WMPs are often considered as safe as bank deposits. As long as WMPs are offered by banks and pay a higher interest rate than bank deposits (2X-4X), there will be demand. So even if interest rates are liberalized, there will be still high demand for WMPs. So financial repression is not the only answer.

- Demand-side: savers/investors seek high yield investment venues (underdeveloped bonds and equity markets); small- and medium-sized enterprises need financing;

- Supply-side: banks’ incentives to evade regulations (loan quota, capital requirements, sectoral exposures, etc.); cash rich SOEs (with access to cheap bank credit) engage in “carry trade”;

- Surge in shadow banking driven by credit expansion in 2009 then tightening in 2010.
4. Shadow Banks, Credit Expansion and Financial Fragility

- Institutional Risks: Trusts
  - Low capital requirement (200 mn yuan or 10% of net assets in 2010) to set up trusts; high leverage ratio (40X!) (IMF 2014); very opaque - only 29 (out of 66 registered trusts) disclose capital, and most (except for two publicly listed) failed to report returns (China Trustee Association);
  - Make risky investment to infrastructure, real estate, local gov’t funding vehicles (LGFVs) and industries with excess capacity;
  - Fund pooling and “ever-greening” WMPs - issue new WMPs and use the proceeds to either pay for previous obligations or continue lending to dodge non-performing loans.
Trusts: AUM to Equity Ratio

![Bar chart showing the AUM to Equity Ratio for trust investments from 2004 to 2012. The chart compares the data for all trusts and the top 10 by AUM.](chart.png)
Financial Fragility: Institutional Risks, Cont’d

- Bank WMPs:
  - Majority are loan-based (40-50% vs. Regulatory decree of 35%) and the number of loans is limited; so credit risk diversification is weak;
  - No rating system, no tranching based on credit risk, no secondary market; so liquidity risk is excessive;
  - Maturity of WMPs is shortening. In 2007, less than 10% were less than 90 days, and more than 50% were a year and above; by end 2010, about 40% were less than 90 days and <20% were a year or over; but funds raised could be invested in long term projects, e.g. real estate; so again, liquidity risk is excessive;
  - Banks often act alone in originating, distributing, custodying and managing WMPs; fund pooling; contagion risks are high – Xiao Gang “ponzi scheme”;
Financial Fragility: Systemic Risks

- China’s overall debt rose to 142 trillion yuan ($22.8 trillion), or 245% of GDP as of 2014Q1, up from roughly 150% in 2008 (Standard Chartered 2014);
- Shadow banks contributed greatly to credit expansion.

Growth Rate of Credit, by Type, y-o-y
Total Debt to GDP Ratio by Sector, 2000-2015e
Source: PBoC, Gao Hua Securities, Goldman Sachs
Chinese Corporate Sector Performance

Source: IMF (2013)

- Share of loss-making companies (based on negative RoA)
- Median return on assets (right scale)
Upper panel: Private Credit (in percentage of GDP) in Selected Countries, 2012 (or latest data available)

Lower Panel: Private Credit Growth (5 year change in private credit as % of nominal GDP) in Selected Countries
Systemic Risk

“5-30 rule”? China’s situation resembles 66 pp credit growth in Thailand and 40 pp growth in Malaysia five years prior to the Asian crisis; and 46 pp growth in the US in 2002-2007 (Goldman Sachs 2013);

Increasing indebtedness, coupled with potential slower growth and worsened corporate profitability, may make businesses more susceptible to financial distress and failure, and it also increases the level of non performing loans (NPLs) for the banking sector.
But still, China is unique

- State-owned banks dominate; central govt has the capacity to write off bad debt and recapitalize banks. Think the late 1990s;

- WMPs as the weakest link; but (ultimate) investors mostly purchase with own savings, low leverage and low risks of distress sales and debt deflation;

- Tight capital control; external debt is 7.5% of GNI; $3.4 trillion fx reserves. No external calls.
5. Shadow Banking and Macroeconomic Rebalancing

- Two “Merits” of shadow banks: (1) lending to SMEs (Companies borrowed 716 billion yuan via entrusted loans in 2014Q1; corporate bond issuance over the same period amounted to only 385 billion yuan (The Economist 2014)) and (2) WMPs boost HH income and hence consumption (Goldman Sachs 2013); or really??

- “Credit multiplier” (ratio of nominal GDP growth to total credit growth) decreased from an average of .8 in 2003-8 to .4 since 2009. Half of trust loans in 2012 were to finance new investment, the other half for refinancing old debt that funded past projects but were no longer contributing to economic growth;

- Sectoral exposure of shadow banking may further contribute to imbalances; local gov’t, property developers, and industries with surplus capacity accounted for 70% of trust loans in 2012 (KPMG 2012);

- Increasing financing costs and higher debt servicing costs reduce profitability and heighten refinancing needs. Zhang (2013): charge 24% annual rate and still have unlimited demand for loans; 4 times “prime” rate and much higher than the 15% average financing costs faced by SMEs.
Median EBIT/Interest Expense by Firm Leverage

Source: IMF (2013)

Rolling window of 200 companies ranked by debt/asset ratio (low → high)
Annual Growth Rates of Interest Expense (2008-12, 5 Year Average)

Source: IMF (2013)
Wealth effect may be insignificant: first, uneven distribution of WMP holdings; second, income effect is probably inferior to substitution effect; and third, riskiness of WMPs renders them a less desirable tool to boost consumption.

6. Conclusions

- Rising size of shadow banks and significant impacts on the financial and productive sectors; more research is called for;

- Regulatory options: prohibit shadow banks; patchwork, reactive and fragmented regulatory changes (currently implemented); assimilate shadow banks into traditional banking system (some failed experiments).