Comments on:
Liquidity Regulation and Unintended Financial Transformation in China

1st Research Workshop on China’s Economy
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Disclaimer: These views represent my own views and do not necessarily reflect the views of my colleagues, the management of the IMF, or its Executive Board.
Big Picture Questions

- Why are we concerned about financial transformation in China?

- What are the risks of “poor” or “inadequate” regulation?
  - Excessive maturity and liquidity mismatches
  - “Run” risk and contagion

- What are the implications for supervision and regulation and sequencing of reforms?
  - Can the model help us make policy?
Shadow Banking Definition

- Definition: “credit intermediation involving entities and activities outside the regular banking system” (Financial Stability Board (FSB), 2013a) ...
- Add “and lack of a public backstop or safety net.”
- Prefer to distinguish shadow banking from “market-based” financing, which is a broader concept.
  - Example: equity financing = market-based financing ≠ credit intermediation
What Are We Worried About?

Worried about systemic risks related to:

- Maturity transformation
- Liquidity transformation—promise immediate withdrawals of funds but assets held in less liquid (less marketable) instruments
- Leverage
- Credit risk transfer (transfers the risk of default from one party to another)
What Are We NOT Worried About?

- Growth of market-based financing of credit
- Financial access: savers and borrower using alternative means or institutions to execute transactions.
- Healthy risk-sharing across entities (households and corporates).
- Unleveraged transactions and investments (e.g., pass-through mutual fund with variable net asset value (NAV)).
- “Pure” payment systems with well-constructed infrastructures.
Role of Banks and Non-banks

(Narrow) banks
- take deposits and make loans—intermediate between savers and borrowers and collect valuable information about borrowers that depositor cannot obtain
- Provide payments services/safe store of cash

Non-banks
- Take money from investors and intermediate it to other households and businesses—mostly without principal guarantees
- May act as intermediary between businesses
- Provide “credit” (say corporate debt) through a capital markets context
Role of Liquidity Management

- Limit leveraged borrowing
  - Bank Tool: Loan-to-deposit ratio
  - Bank Tool: Limit funds for lending (e.g., reserve requirements)
  - General Tool: Capital
  - Outcome: slower credit growth and hence slower real output

- Limit run risk
  - Bank Tool: Liquid asset ratio
  - Bank Tool: Deposit insurance
  - General Tool: Various liability restrictions (limit use of wholesale funding)
  - General Tool: Limit maturity mismatch
Basel III: Liquidity Management

- **LCR – Liquidity coverage ratio**
  - Like a liquid asset ratio to prevent run risk
  - Combines various liquid assets against funding needs in the short run

- **NSFR**
  - Balances future funding needs with liabilities so that maturities are generally balanced
  - Lowers maturity mismatches

- China adopted the LCR in Dec 31, 2015

- NSFR still under development; BCBS agreed date of implementation Jan 2018.
Shadow Banking: China View …

- **Size:**
  - 39% of China’s GDP as of the end of 2012.
  - 32% annual growth rate between 2010-2012.

- **Forms (as of end 2012):**
  - Entrusted loans: 32%
  - Informal lending: 17%
  - Trust loans: 15%
  - Wealth management products: 14%
  - Credit by financial guaranty companies: 11%

Source: Moody’s 2013 report
Drivers of Shadow Banking

- So what are the drivers of shadow banking in general?
  - GDP Growth
  - Banking sector size
  - Institutional investor size
  - Term spread
  - Capital stringency (e.g., regulatory arbitrage)

- Do they apply to China?

Possible Drivers in China

- Strict banking regulations
  - Deposit rate ceiling
  - Loan-to-Deposit Ratio
  - Restrictions on official financing
  - Sectoral lending limits

- Excess liquidity
  - Low nominal interest rates
  - Excess cash in some successful corporations
  - Capital inflows from abroad

- Insufficient alternatives for investors

- Other drivers specific to China
  - Pressure for infrastructure and real estate development, especially through LGFVs
Framing for the Paper

Paper tackles one part of the issue of (excessive?) credit growth and interbank rate volatility

- Could usefully provide some backdrop—how do we think about excessive credit growth and what is the appropriate amount of interbank rate volatility?

Not an insignificant part of credit, but now not the shadow banking causing commentators the most angst (e.g., entrusted loans, MMF)

- Could link banks to entrusted loans via a reputational effect?
Technical Questions

- Story suggests big four banks want to maintain market share of deposits
  - If goal is market share why do they maximize profits as their objective function?
- Role of reserve requirements is (only) as liquidity management tool, what about monetary policy and sterilization?
  - Can model be reformulated to accommodate multiple goals/trade-offs?
  - What about macropru/financial stability goal?
Benefits to the paper

- Ability to alter the model and see what would happen *ex ante* could be very helpful
  - Now that the deposit rate is free and the L/D ratio is not constrained, how much credit growth would the model predict, keeping the non-competitive interbank market?
  - How much would volatility decline if the interbank market were an inner and outer fringe rather than a monopoly? (See Pritsker 2012)
  - How would the outcomes change if the banking sector was competitive?
Benefits for the policy debate

- Model can help us think about policy options
  - Should China maintain price-based liquidity tools (e.g., reserve requirements)?
  - Should China rely on quantity constraints (e.g., lending limits, concentration limits)?
  - Should China restructure its banking system? Downsize or privatize state-owned banks?
  - Address TBTF issues of the large banks? If so, through what means?
  - Limit links between banks and nonbanks? (As FSB recommends)
  - Strengthen deposit insurance against run risk?
Conclusions

- China’s shadow banking sector is the 5th largest globally and growing the fastest.
- China’s banking structure affects its ability to intermediate credit. Perhaps sub-optimally?
- Paper takes one aspect and models the behaviors to help us understand a set of facts that, in turn, affect the financial transformation.
- This type of work is important and should be continued.
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Entrusted Loans

- Entrusted loans are loans made by a non-bank party to another, using a bank as a servicing agent.
- The largest component of shadow banking activities in China.
  - PBC reports: 2,547B RMB in 2013, 15% of total financing.
- Lenders of non-affiliated loans pursue immediate profits, while firms use affiliated loans to support their affiliates.

Entrusted Loan Amounts

Source: PBC
Industry Distribution of Borrowers

- Top 5 borrowing industries of entrusted loans:
  - coal and mining (37.2% of total amount),
  - utilities (19.0%),
  - real estate and construction (14.4%),
  - auto and auto parts (6.7%),
  - transportation (4.6%).

- Largest net borrowing industry (borrowing minus lending):
  - real estate and construction (46.6 billion, 6.7% of total loan amount)
  - The industry accounts for 15% of GDP, 25% of fixed-asset investment, and 20% of bank loans.

Industry Distribution of Borrowers

A much larger percentage of money for non-affiliated loans flows into the real estate and construction industry.

- Borrowing: 46% of the total amount of the non-affiliated loans
- Net borrowing: 37% of the total amount of the non-affiliated loans

Source: Allen et. al., (2015)
China: Wealth Management Products

1. Number of WMPs Issued and Bank Size
   - Total number of WMPs issued vs. Bank size
   - Large banks vs. Small banks

2. Number of WMPs Issued and Bank Leverage
   - Total number of WMPs issued vs. Bank leverage multiplier

3. Average WMP Maturity and Bank Size
   - Average maturity (days) vs. Bank size

4. Gross Monthly WMP Issuance by Expected Return
   - Number of products vs. Percent per year
   - Yield categories: Undisclosed, Average expected yield, More than 8%, 5-8%, 3-5%, 2-3%, 0-2%
Risks of WMPs

- Risks to the banking system? LESS THAN AT FIRST GLANCE.
  - Until recently, large banks issued most WMPs (Panel 1); but the higher WMP issuance was associated with less bank leverage—more capital (Panel 2).
  - Larger banks have WMPs with longer maturities with less rollover risk (Panel 3).
  - Many WMPs have underlying loans to public sector companies with guarantees (Panel 4).

- Risks to investors? PERHAPS
  - More city, rural, and commercial bank issuance to (perhaps) less financially educated investors.
Risks of WMPs

- Mixed conclusions ...
  - Perhaps less (actual) risk to large banks than originally thought.
  - But the *perception* of risk may still be present if a large failure occurs.
  - New issuers of WPMs may be the weaker banks.
  - Information and disclosure on risks to investors may still be poor.
  - If local government loans are in WPMs (being used to remove loans from banks balance sheets), and if local governments are highly indebted could be problematic.