Shadow Banking—Measures for Monitoring and Mitigating?

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Main takeaways

- Measuring shadow banking is hard, but we are making progress ...
  - Mainly on issues of size and locations/types of institutions and markets
- We need to step up the efforts on ...
  - Measures of risks, especially leverage and interconnectedness
  - Catching buildups of vulnerabilities earlier by being more flexible and using market intelligence
  - Connecting our measures to actual tools of mitigation

What do we want to measure and monitor?

- GOAL: “Shadow banking” risks that could become “systemic” and harm the economy
- The location of the risks/where they reside
  - Institutions
  - Markets
- The size of the risks
- The nature of the risks/how they transmit
- The likelihood that the risks materialize

Basic systemic risks of concern

- Excessive leverage
  - Procyclicality of margin/collateral valuation
- Overly-large maturity mismatches between assets and liabilities
  - Especially illiquid assets financed by short-term, wholesale liabilities
- Potential (liquidity) runs and associated knock-on effects (including solvency)
  - Long chains of intermediaries, often leading to runs (or “flight to quality”—types of contagion)
  - Interactions between funding and market liquidity (funding difficulties + fire-sales)

Status of measurement and monitoring

- Location of risks
  - Known institutions: B-Ds, MMF, SIVs/Conduits, insurance (some activities)
  - Questionable institutions: hedge funds, asset managers, finance companies, other
  - Known markets: repo markets, securities lending, ABCP
  - Questionable markets: “private” lending, leveraged loans

Status of measurement and monitoring

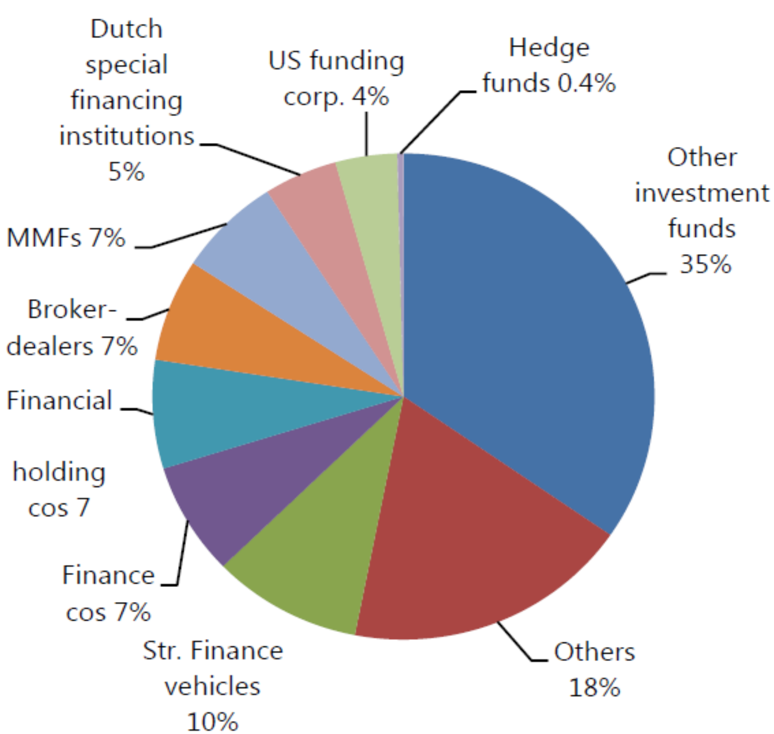
- Size of risks (E.g., FSB Monitoring Report)
  - National Flow of Funds data
  - BIS bank data
  - IMF Coordinated Portfolio survey
  - Other data sources/piecemeal approach
  - Market intelligence

2012 FSB Monitoring Exercise: OFIs

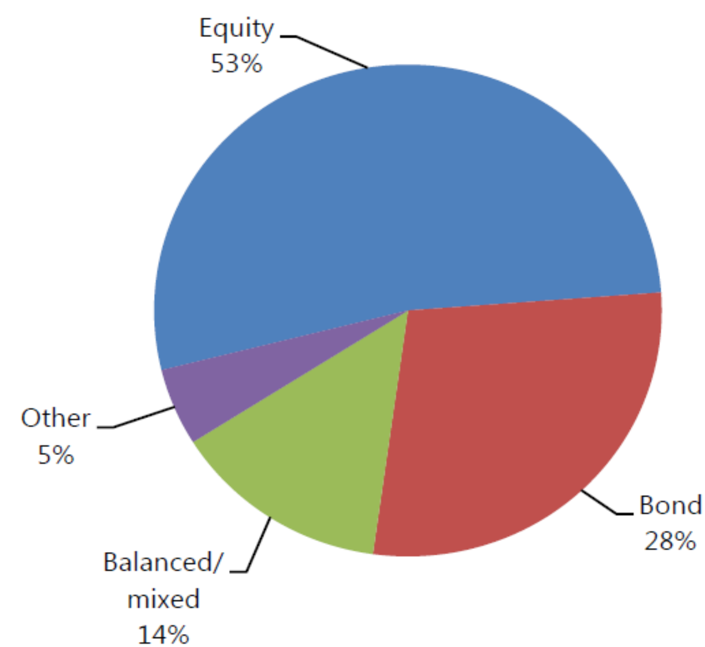
Sub-sectors of non-bank financial intermediaries (OFIs)

25 jurisdictions; at end-2011 Exhibit 4-1

Decomposition by sub-sector



Other investment funds by type from ICI statistics[1]



[1] Sample: 25 jurisdictions minus Indonesia, Saudi Arabia, Hong Kong, Singapore, for which data is not available.

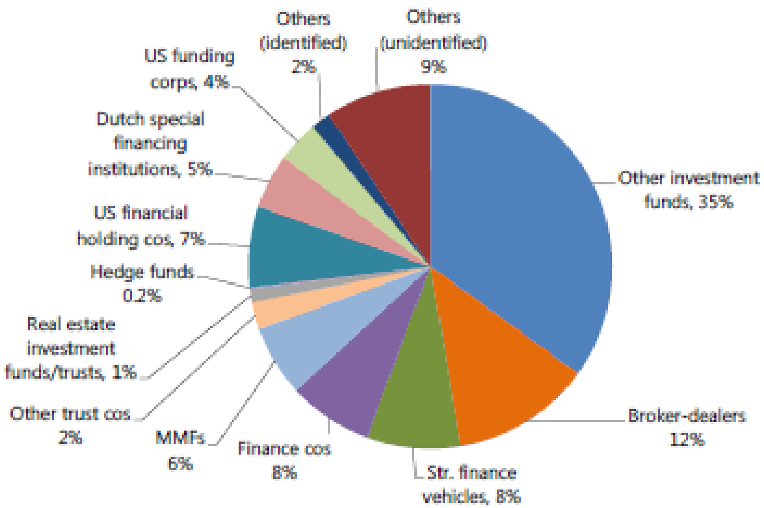
Sources: National Flow of Funds data; Investment Company Institute (ICI).

2013 FSB Monitoring Exercise: OFIs

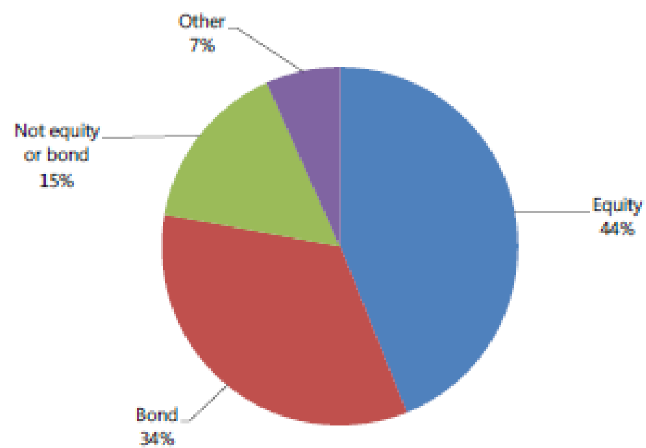
Sub-sectors of non-bank financial intermediaries

25 jurisdictions, at end-2012 — Exhibit 4-1

Decomposition by sub-sector[1]



Other investment funds by type



[1] Adding the results published in the 2013 IOSCO Hedge Fund Survey Report and the number reported by participating jurisdictions in the FSB exercise would increase the share of hedge funds to 3%.

Sources: National flow of funds data; other national sources.

Status of measurement and monitoring

- Nature of risks, transmission mechanisms
  - Combining BIS bank data/supervisory data
  - Trade repositories
  - Global flow of funds (in progress)
- The likelihood that the risks materialize
  - Rule-of-thumb threshold analysis
  - Vulnerability measures (a few systemic liquidity measures)
  - Some options-type models (CCA)

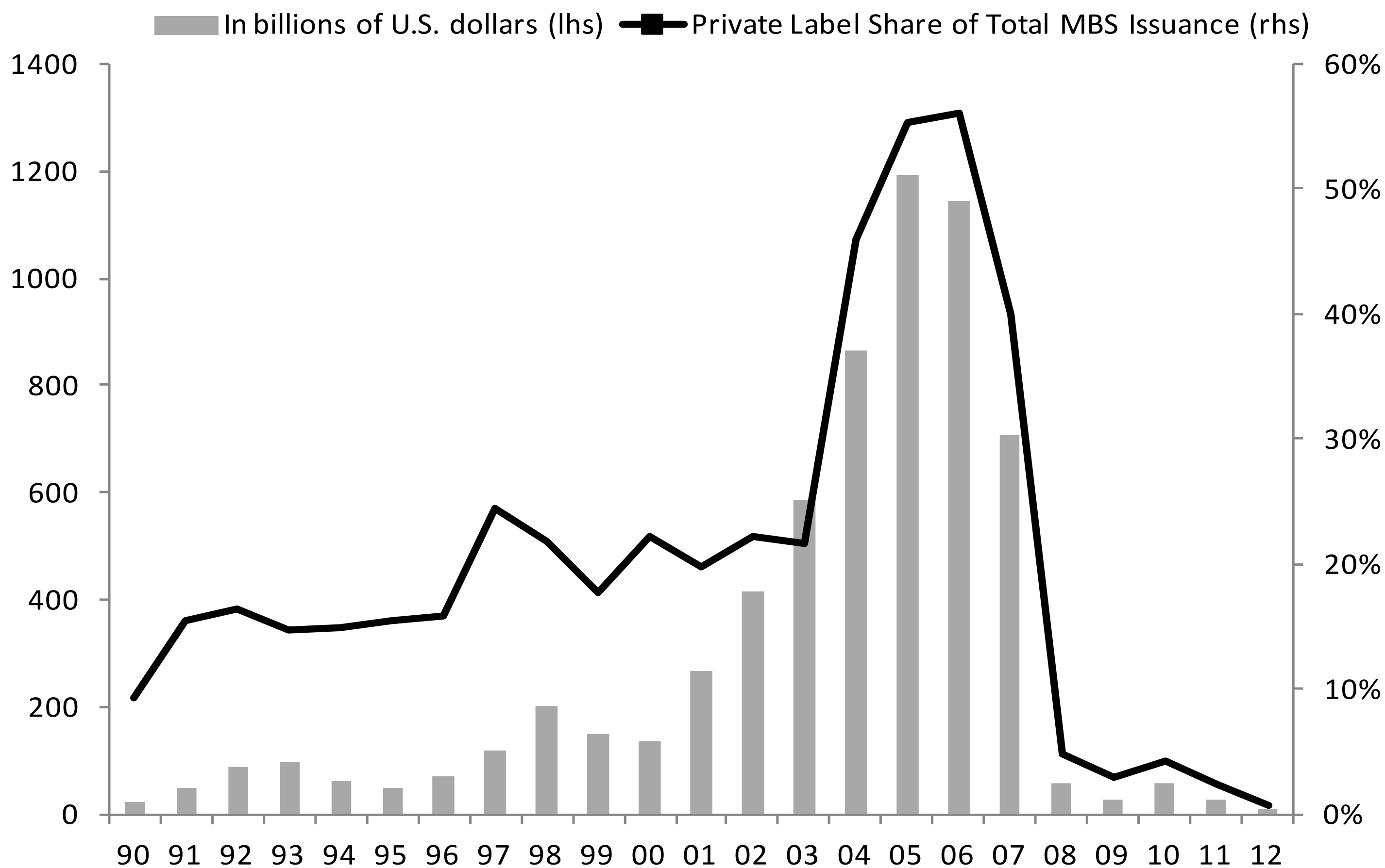
The future of measurement and monitoring

- Location
  - Institutions COMBINED with markets
  - Who is trading in which (possibly connected) markets
  - Ex: asset managers use of security lending
  - Ex: insurance company use of leveraged loans
- Size
  - Size COMBINED with growth
  - Size compared with what (financial sector? GDP?)

The future of measurement and monitoring

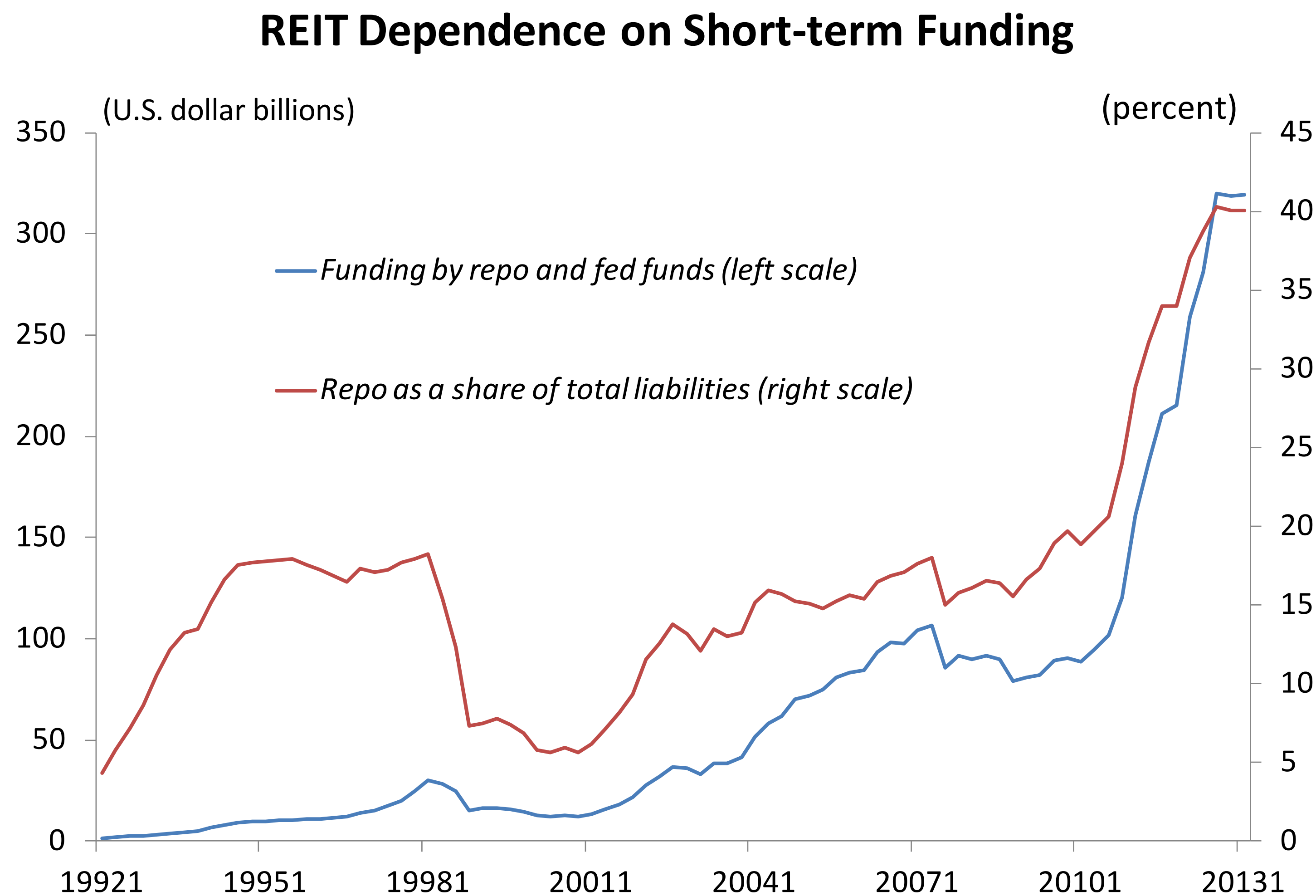
- Need to be able to collect the information
- Need to flexible and adaptive about what to collect
- Examples:
  - Private-label securitization no longer large and more highly regulated
  - U.S. REITS with agency MBS growing fast and contain maturity mismatches
  - Rapid growth of retail MMF in China

U.S. Private-Label MBS Issuance



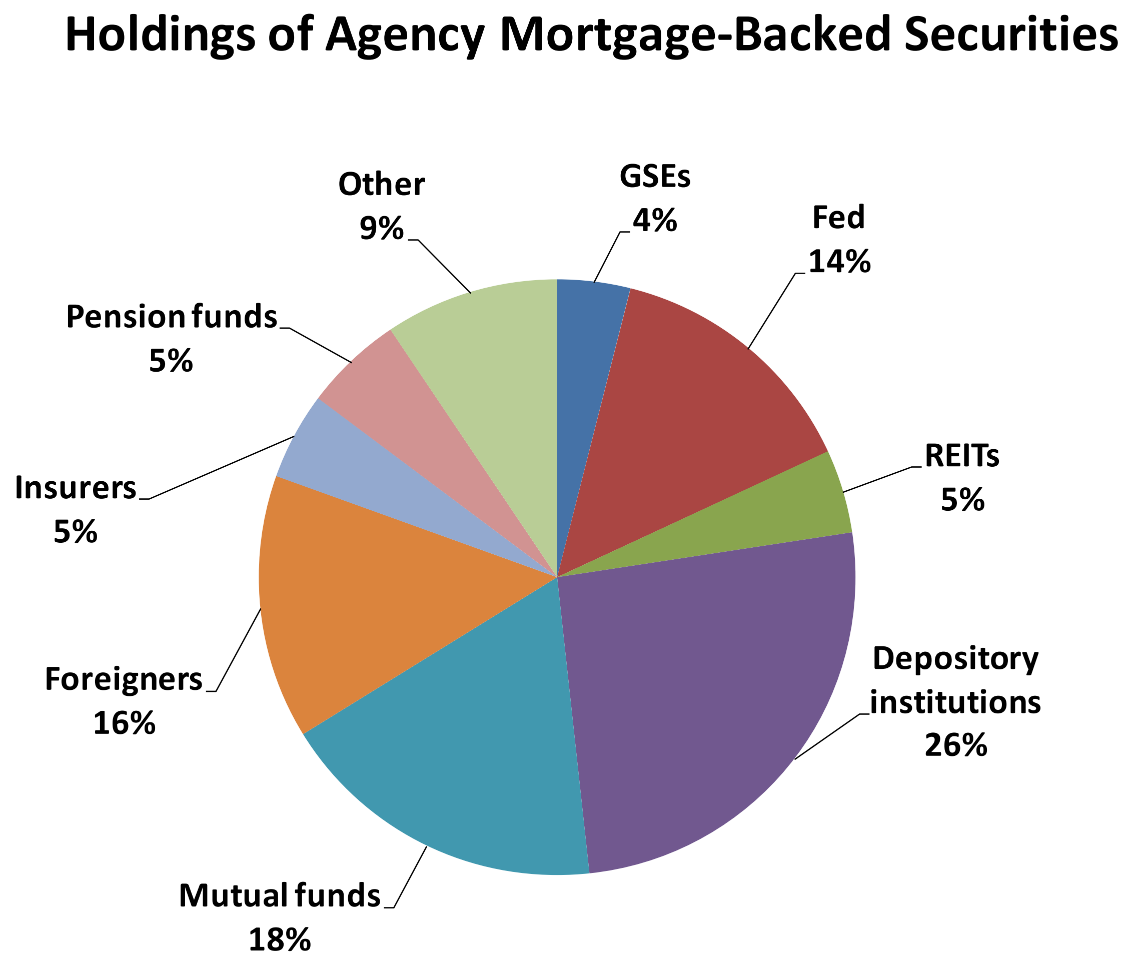
Source: Inside Mortgage Finance and IMF staff estimates

Example 1: U.S. REITs Funding



Sources: Federal Reserve; and IMF staff estimates.

Example 1: U.S. REITs Relative Size



Sources: Federal Reserve; and IMF staff estimates.
Note: Total may differ from 100 percent due to rounding. GSE = government-sponsored enterprise; REIT = real estate investment trust.

Example 2: Yu'E Bao in China

- China's first on-line investment fund for individuals (automated transfers between bank checking/Alibaba account/Yu'E Bao)
- Connected to Alipay, China's 3rd largest third-party payment platform with 800 m. customers
- Now largest MMF—RMB 55.7 billion ($9.2 billion)
- 13 million customers at end-Sept (launched in June)
- Interest rate is ~5% (vs 0.35% in bank deposits)
- Redemptions can be made at any time
- Apparently, investments are in government and corporate money markets

Future of Measurement and Monitoring

- Need better data and measures of:
  - Degree of leverage for non-banks
  - Degree of maturity mismatch
  - Degree of interconnectedness including cross-border transmission
- Need to develop models of the probability that risks materialize
  - More on “run risk” vulnerability
  - Triggers?

What is the IMF doing to help?

- Working on a global flow of funds (GFF) framework
- Working with FSB on developing the data architecture for collecting data on repos and securities lending
- Upgrading its CPIS (Coordinated Portfolio Investment Survey)
  - Will include more information about the sectors of non-resident issuers and holders of securities.
  - Increase frequency to semi-annual and decrease lag time to release
- Revising the FSI (Financial Soundness Indicators)
  - Will include measures of leverage consistent with Basel III
  - Will include maturity distribution and sectoral distribution of assets for MMFs

Next step: connect to mitigation tools

- Examples
  - Degree of interconnectedness/systemic importance proportional to capital surcharge (See Chapter 2 GFSR April 2011 for liquidity, Chapter 2 GFSR April 2010 for solvency)
  - A “tax” on the excessive use of non-core liabilities (e.g., Korea)
- Need to incentivize the reduction of the risks by matching the “cost” to the contribution to systemic “risk.”

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