Financial Stability Institute

BANK FOR INTERNATIONAL SETTLEMENTS

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Stress Testing Liquidity

FSI Seminar - Financial Stability and Stress Testing

Basel

7 May 2014

Iman van Lelyveld

Deputy Head International Data Hub

The usual disclaimer applies

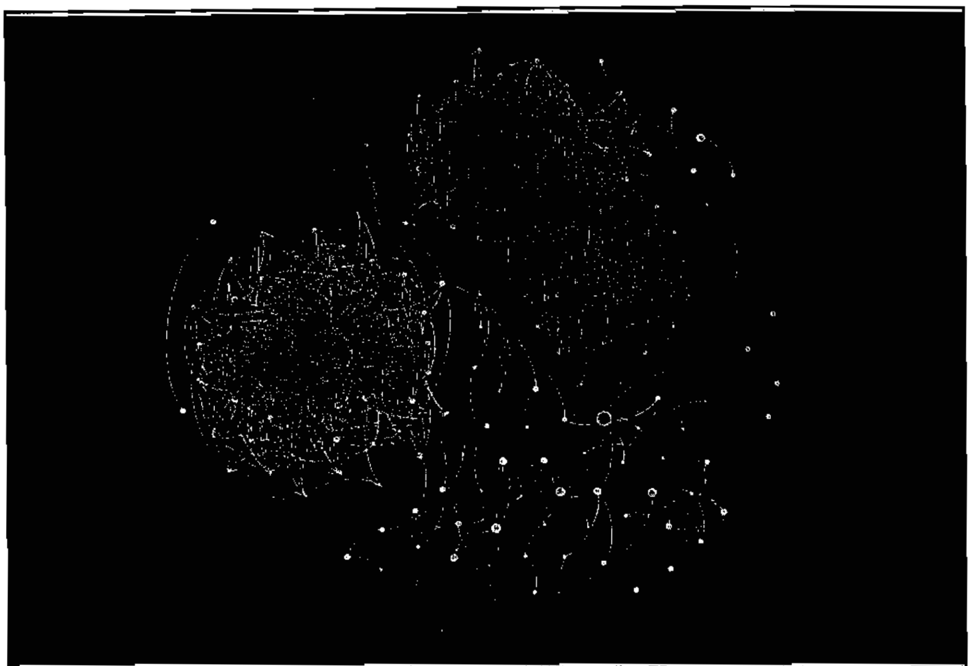
What are we going to talk about

1. What is liquidity risk?
2. What is BCBS doing about it
3. Where can Liquidity Stress Tests (LST) add?

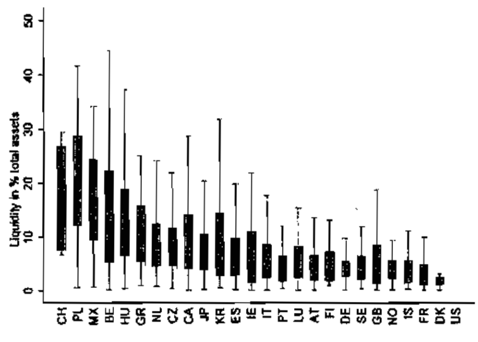
What is liquidity risk?

- Maturity transformation
- Funding vs Market liquidity
- Difference between ***Solvency*** and ***Liquidity***
- Asymetric information and uncertainty

Shin, H. S. (2009) *Journal of Economic Perspectives, 23*(1), 101–19.



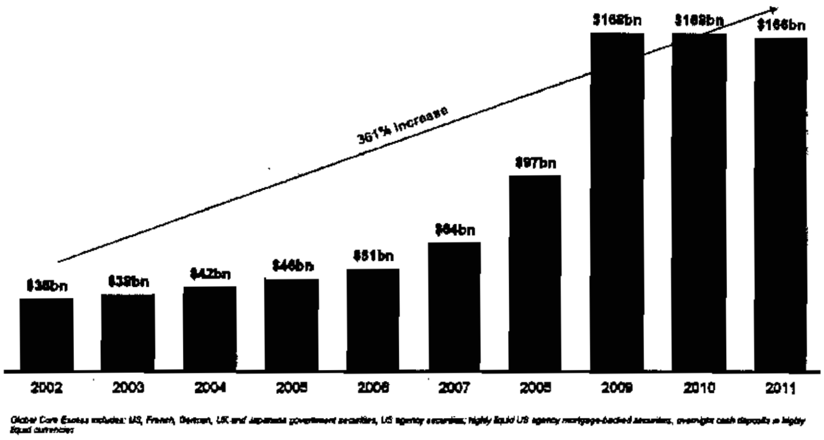
How much liquidity do banks hold?



Source: Bonner, van Lelyveld and Zymek (2013)

- Share of cash, central bank reserves and government bonds in total assets
- Liquidity requirement does not imply higher liquidity buffers but lower volatility
- Banks in smaller countries and less used currencies have larger liquidity buffers

Liquidity holdings have gone up: eg Goldman Sachs



Source: Goldman Sachs

What is the BCBS doing about it

- Revision of *Principles for Sound Liquidity Risk Management and Supervision*
- Development of two internationally harmonised minimum standards for liquidity and funding:
  - The **Liquidity Coverage Ratio** (LCR) is a short-term ratio requiring financial institutions to hold enough liquid assets to withstand a 30-day stress scenario
  - The **Net Stable Funding Ratio** (NSFR) requires institutions to hold a sufficient amount of longer-term stable funding to fund their assets

The Liquidity Coverage Ratio

- $\dfrac{\text{Stock of high quality liquid assets}}{\text{Total net cash outflow over 30-day period}} >= 100\%$
- LCR assumes a severe stress scenario that combines idiosyncratic and market-wide shock ≡ a stress test
- Scenario's main features:
  - Partial loss of retail deposit and wholesale funding capacities
  - primary and secondary asset markets (incl. repo and securitizations) dry up, except for assets that are assumed liquid under this standard
  - 3-notch downgrade (triggers)
  - Additional collateral or other liquidity needs
  - Draw on credit and liquidity facilities offered to financial institutions
  - Need for buying back debt to mitigate reputational risk

The Liquidity Coverage Ratio

- Implications on the use of the pool and disclosure
  - Banks are expected to use their HQLA buffer in times of stress
  - 100% minimum not binding during stress
  - How will disclosure influence banks' decisions?
- Impact and role of central bank operations
  - List of liquid assets not equal across jurisdictions
  - Regulatory arbitrage by using central bank facilities?
- HQLA criteria and outflow assumptions
  - Is the list of liquid assets too narrow?
  - Are outflows on insured retail deposits too high?
- However, many of these issues are country-specific and are therefore difficult to answer by the BCBS

Not just short term liquidity: Net Stable Funding Ratio

- $\dfrac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} >= 100\%$

The Net Stable Funding Ratio

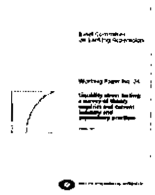
$$\frac{\textit{Available Stable Funding over the next year (ASF)}}{\textit{Required Stable Funding over the next year (RSF)}} \geq 100\%$$

- Formally released in December 2010, subject to revision
- Partially caused by BCBS decision of it being a structural ratio
- Designed to disincentivize excessive maturity and/or liquidity transformation and minimize pro-cyclical balance sheet contraction
- ASF: Funding that can be relied upon during the next year
  - Capital, liabilities and preferred equity with maturities > 1 year
  - Stable and less stable deposits as well as some wholesale funding with maturities < 1 year
- RSF: Part of the balance sheet that could not be monetized within 1 year
- Revision
  - Several options are under consideration
  - Could include a factor for total asset encumbrance as well as longer and shorter maturities
  - Due to it becoming a structural ratio, potentially changes to some risk factors
  - Intention to simplify the ratio

Myths about the LCR

- "...it will stop banks undertaking maturity transformation, that's what we do!"
- "... it unfairly penalises retail banks, wholesale investment banks caused the crisis!"
- "... it will restrict lending to the real economy."
- "... liquid assets should be those that are eligible at central banks"

Where can Liquidity Stress Tests (LST) add?



- BCBS Research Task Force – LST group
- Case studies
  - 12 banks and several country studies
- Literature review (WP25)
- Authorities' modeling efforts
- Industry efforts
  - Firms & vendors
- Other considerations
  - Network effects, Lender-of-last-resort

Key findings

- There is value added in LSTs ...
  - horizons, level of consolidation, currency and buffer composition
- ... which can be enhanced with system-wide LST
  - Systemic, second round effects
- Limit the role of central banks to standard monetary policy operations in LST
- Separate treatment of capital and liquidity understates aggregate bank risk
- Set supervisory expectations regarding the integration of LST results into banks' business practices.

Thank You!

Questions?

References

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