The views expressed here are my own and do not necessarily represent the views of the Federal Reserve Bank of New York or the Federal Reserve System.
Liquidity Risk Issues Identified in the Crisis

• Despite significant amount of work by national supervisors on liquidity since publication of Principles for Sound Risk Management and Supervision in September 2008, key characteristic of financial crisis was inaccurate and ineffective analysis and management of liquidity risk.

• Key drivers of shortfall of liquidity buffers in relation to stress needs included:
  - Short-term wholesale funding of non-traditional and less liquid assets
  - Contingent liquidity underpriced and not well captured in liquidity risk management
  - Disruptions in secured funding markets reflecting uncertainty about counterparties and collateral

• Basel Committee Working Group on Liquidity mandated to strengthen international framework of liquidity risk regulation consistent with G-20 London Summit declaration:
  - “the BCBS and national authorities should develop and agree by 2010 a global framework for promoting stronger liquidity buffers at financial institutions, including cross-border authorities”
Background and Objectives

• Basel Committee seeking to promote financial stability by address two complementary objectives:
  o Enhance resilience of FIs to short-term, acute shocks to funding by requiring minimum pool of liquid assets institutions must hold
  o Effect longer-term structural changes in liquidity mismatches by requiring firms to finance more assets and activities with “core” or stable funding

• Two measures of liquidity risk developed to be implemented as minimum regulatory standards for internationally active banking organizations
  o Liquidity coverage ratio (LCR) -- risk sensitive, scenario-based measure to size a minimum pool of high-quality liquid assets
  o Net stable funding ratio (NSFR) -- structural measure that compares estimate of ‘reliable’ funding sources to estimate of required stable funding

• Transitional arrangements for liquidity standards include:
  o Introduction of LCR on 1 January 2015 and NSFR on 1 January 2018
  o Both standards will be subject to an observation period to ensure they do not result in unintended consequences
Timeline

**July 2009**
BCBS finalized Basel 2.5 market risk & banking book securitization frameworks

**December 2009**
BCBS finalized BIII framework and released QIS results
U.S. agencies released market risk NPR for public comment

**December 2010**
Public comment period ends on U.S. agencies’ market risk NPR

**April 11, 2011**
FRS completed CCAR BIII review

**December 31, 2011**
Expected U.S. implementation of Basel 2.5 market risk rules

**January 1, 2013**
Expected transition to BIII definition of capital & counterparty rules

**January 1, 2015**
Implementation of net stable funding ratio

**January 1, 2018**
Implementation of liquidity coverage ratio and BIII leverage ratio

**Basel III transition and observation period**

**December 31, 2011**
Expected U.S. implementation of Basel 2.5 market risk rules
Liquidity Coverage Ratio

- LCR compares stock of high-quality unencumbered liquid assets to projected net cash outflows over a 30-day horizon under supervisory specified scenario.
- High-quality liquid assets should be unencumbered, liquid in markets during a time of stress and, ideally, be central bank eligible.
- Measure of stressed net cash outflows designed to capture potential risks associated with contractual and behavioral responses related to on- and off-balance sheet positions.
  - Scenario reflects firm-specific shock during period of market stress.
- Short-term stress net cash outflows scenario includes:
  - Partial loss of retail deposits
  - Significant loss of unsecured and secured wholesale funding
  - Contractual outflows associated with a 3-notch rating downgrade
  - Substantial calls on off-balance sheet exposures
  - Haircut on contractual inflows and aggregate cap
- Calibration of scenario runoff rates reflects combination of historical experience during financial crisis, banks’ internal stress scenarios and existing regulatory and supervisory standards.
Net Stable Funding Ratio

- NSFR complements the LCR and provides incentives for banks to maintain a sustainable maturity structure of assets and liabilities.
- Net stable funding ratio compares available amount of one-year stable funding to required amount of one-year stable funding.
  - Matches stable funding requirement with liquidity risk profile of assets and activities.
- Stable funding is defined as those types and amounts of equity and liability financing expected to be reliable sources of funds over a one-year time horizon under conditions of extended stress.
  - Liabilities assigned “stable funding” factor, ranging from 100% to 0%.
- Required amount of stable funding measured using supervisory assumptions on the characteristics of the liquidity risk profiles of an institution’s assets, off-balance sheet exposures & other selected activities.
  - Value of the assets held and funded by the institution multiplied by a specific required stable funding (RSF) factor for each particular asset type (ranging from 0% to 100%).
  - OBS activity (or potential liquidity exposure) multiplied by its associated RSF factor.
Quantitative Impact Assessment

• The Committee estimated impact of the liquidity standards -- assuming banks were to make no changes to their liquidity risk profile or funding structure, as of end-2009:
  o The average LCR for Group 1 banks was 83%; the average for Group 2 banks was 98%
  o The average NSFR for Group 1 banks was 93%; the average for Group 2 banks was 103%

• Committee observe material differences across institutions, business models and markets
### LCR outflows and inflows (as % of gross outflows)

<table>
<thead>
<tr>
<th>Category</th>
<th>Group 1</th>
<th>Group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outflows to</strong>...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Unsecured retail and small business customers</td>
<td>9.7%</td>
<td>18.1%</td>
</tr>
<tr>
<td>- Unsecured non-financial corporates</td>
<td>15.9%</td>
<td>21.4%</td>
</tr>
<tr>
<td>- Unsecured financial institutions</td>
<td>27.6%</td>
<td>26.3%</td>
</tr>
<tr>
<td>- Unsecured sovereign, central bank, &amp; PSEs</td>
<td>9.7%</td>
<td>6.6%</td>
</tr>
<tr>
<td>- Secured funding</td>
<td>2.4%</td>
<td>1.2%</td>
</tr>
<tr>
<td>- Collateral, securitizations and own debt</td>
<td>24.9%</td>
<td>10.9%</td>
</tr>
<tr>
<td>- Credit and liquidity facilities</td>
<td>2.3%</td>
<td>2.7%</td>
</tr>
<tr>
<td>- Other cash outflows including derivative payables</td>
<td>7.3%</td>
<td>12.8%</td>
</tr>
<tr>
<td><strong>Total outflows</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
</tr>
<tr>
<td><strong>Inflows from</strong>...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Retail and small business customers</td>
<td>2.5%</td>
<td>8.4%</td>
</tr>
<tr>
<td>- Non-financial corporates</td>
<td>3.2%</td>
<td>5.9%</td>
</tr>
<tr>
<td>- Financial institutions</td>
<td>7.8%</td>
<td>16.9%</td>
</tr>
<tr>
<td>- Secured lending</td>
<td>7.5%</td>
<td>6.1%</td>
</tr>
<tr>
<td>- Other cash inflows</td>
<td>8.2%</td>
<td>18.6%</td>
</tr>
<tr>
<td><strong>Total inflows</strong></td>
<td><strong>22.2%</strong></td>
<td><strong>40.5%</strong></td>
</tr>
</tbody>
</table>
Policy Questions

• Is the calibration of the Basel standards, including prescribed stress scenario and definition of liquid assets, consistent with banks’ internal measures? Historical experience? A regulatory minimum for each firm and for the system?

• To what degree should banks be required ex ante to self insure for “systemic risks”? To what degree should either firms’ stress tests or a regulatory minimum recognize official sector support?

• How will banks respond to the imposition of the liquidity standards? What impact will the liquidity standards have on the cost and availability of credit to businesses and households? What impact will the liquidity standards have on the macroeconomy?

• How will the design and implementation of the liquidity standards impact financial stability? What is the appropriate scope of application for the liquidity standards? What should the implications be of breaching the regulatory minimum? What is the right approach (composition, frequency) to required public disclosures?