Bank Liquidity and Funding Risk Management

Extracted from “The Principles of Banking”
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Agenda

- Principles of bank liquidity
- A robust funding model
- Optimum asset-liability balance sheet principles
Principles of liquidity and funding

- A bank’s funding structure should be assessed on an aggregate balance sheet approach
  - The quality and adequacy of the funding structure (liabilities) should be measured alongside the capital and asset side of the balance sheet
  - This gives a more holistic picture of the robustness and resilience of the funding model, under BAU and in stress
  - One of the original liquidity principles (see Ch. 12 PoB): robustness of funding is almost as much a function of the liquidity, maturity and product type of the asset base as it is of the type and composition of the liabilities

- Stylised illustration
  - Liquid assets versus illiquid share
  - How much illiquid funded by unstable and/or short-term liabilities
  - Breakdown of liabilities:
    - Retail deposits: stable and less stable
    - Wholesale funding: secured, senior unsecured
    - Capital: subordinated / hybrid; equity
Liquidity risk and funding model

- Structural pressures beyond types of funding in place arise because:
  - Need for more secured funding, which creates..
  - ...more asset encumbrance
  - ...for some, difficulty in issuing senior unsecured (and no sub-debt)
- Rising asset encumbrance creates its own liquidity pressures (also indirectly leads to higher funding cost on unsecured side as LGD for the bank rises)
- In EU, the ranking of depositors *parri passu* with senior unsecured creditors may be reviewed
  - Brings senior unsecured more into firing line in event of default. Raises cost of that debt type…
Liquidity risk and funding model...

- Funding cost can be expected to rise
  - At the wholesale level, but feeding thru into the entire liability side, funding costs are driven by the banks default probability (PD) and loss given default (LGD)
  - Higher PDs can be expected from continuing balance sheet weakness low capital buffer levels), low robustness of funding model as given by liq metrics like LDR etc remaining unconservative, low profitability, and continuing low or deteriorating asset quality
  - The need to meet NSFR metric calls for long-term wholesale debt issuance but as noted this can also be expected to rise in cost
  - Competitive pressures from need to attract more “Type B” deposits
  - Mitigants in EU: ECB action and surplus euros
The funding model

- Best-practice principles for a robust and sustainable funding model
  - A genuine understanding of the balance sheet such that the bank can draft a set of best-practice principles that mitigates liquidity risk (arising due to firm-specific or market-wide stress)
    - Generally a set of policy documents updated regularly including Liq Risk Policy, CFP, etc
  - An holistic balance sheet approach, encompassing Assets and Liabilities, that monitors funding and interest-rate gap and ensures it stays manageable thru the cycle
    - For example: medium-to-long term funding that exceeds medium-to-long term assets (a kind of NSFR); more short-term assets than short-term wholesale funding, etc etc
  - An articulated funding strategy that is coherent and forward looking, but also dynamic and adaptable to events
    - Includes stress testing; but also projected funding needs, income trends, balance sheet growth (loans and depos)
    - Monitor and anticipate extent of contingent liabilities and risks of market disruption, liquidity characteristics of assets
  - Liabilities ideally should be
    - Diverse, stable, understandable (from behaviour characteristics view)
## Policy guide for A-L mix

<table>
<thead>
<tr>
<th><strong>Assets</strong></th>
<th><strong>Liabilities</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong asset quality, based on resilience of (i) borrowers and (ii) collateral value</td>
<td>Diversity of funding by (i) investors (ii) instruments (iii) geography (iv) currency where appropriate</td>
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<tr>
<td>Adequate share of genuinely liquid assets (liquid in times of stress)</td>
<td>Stability of retail and wholesale investor base, based on (i) their investment constraints and preference (ii) their resilience (iii) their behaviour</td>
</tr>
<tr>
<td>Reduced / limited leverage</td>
<td>Maintaining mismatches by (i) maturity and (ii) currency between assets and liabilities to what is manageable through the cycle. Know the risk</td>
</tr>
<tr>
<td>Minimum asset encumbrance &quot;Simple&quot; assets and appropriate disclosure / documentation</td>
<td>High level of capital and deposits Minimise use of complex funding instruments</td>
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(Source: IMF)
The funding model...

- Retail funding is not a catch-all panacea
  - A business model should reflect the strategic review of desired funding model ("optimum liabilities mix") and that should reflect the required/desired share of retail funding
  - Does not necessarily mean that is the solution or there should be exclusive reliance on it. Bear in mind: deposit runs, competition for Type B deposits driving rates up, behavioural assumptions becoming outdated as customers shift suppliers

- BIS guidance is all accepted good practice altho some can be critiqued...
  - Defined liq risk tolerance appetite
  - Maintenance of adequate liquidity plus an LAB
  - Correct and fit for purpose allocation of liq costs to business lines (FTP)
  - Identification and measurement of all liq risk exposures
  - Design and use of adequate stress testing policy and scenarios
  - CFP
  - Adequate risk management of intraday liquidity risk
  - Strong public disclosure to promote market discipline
Making funding model more robust

- Look on both sides of the balance sheet…
- …address PD and LGD in your bank
- Reducing bank’s PD takes time and is not straightforward:
  - Restructuring the balance sheet
  - Increase capital level
  - Divest poor quality assets
  - Set up robust liabilities profile
- Drilling down the first point…
Asset side of the BS...

- Increase liquid assets as share of balance sheet
  - The LCR is a 30-day metric. It should be seen as more of a minimum than the maximum. That said, there is an “optimum” share that addresses liq risk concerns and also returns/ROE concerns

- De-link the bank – sovereign risk exposure connection
  - The LCR doesn’t have to be sovereign debt. It could be cash (IMHO going down the CBs, RMBS and equity route is risky…)

- Beware relaxing loan origination standards as the cycle moves into bull market phase

- Address asset quality problems. Ring-fence NPLs and impaired loans? (A sort of “non-core” part of the balance sheet that indicates you are addressing the problem and looking at disposal

- Reduce leverage

- Consider reducing balance sheet size

- Saved best for last: review the bank’s operating model. Retail-wholesale mix? Franchise viability? Comparative advantage?

- Limit asset encumbrance: this contradicts pressure for secured funding
Liability side...

▷ Genuinely robust capital and funding management policy and procedure
  ▷ As we noted, higher cap levels will reduce PD and better quality balance sheet will reduce LGD, all improves funding costs

▷ Active liability management
  ▷ Debt buy-backs, especially more expensive instruments issued post-crash, and/or no longer qualify as Tier 2 capital
  ▷ Develop wider investor base
  ▷ Develop a private placement programme
  ▷ This isn't necessarily “sustainable” funding model but does allow term funding outlets and diversifies the liability base

▷ Note funding is not a substitute for capital!
Basel III LCR

January 2013 revisions
**LCR revisions**

**BCBS announced:**

1. **Clarification of the types of high quality liquid assets (HQLA) that may be held for LCR purposes.**

2. **Changes to the cash flow percentages**

3. **Phased glide path over 5 years from 1 January 2015 onwards**
   
   1. The required ratio will be 60% from 1st January 2015, rising by 10 percentage points per annum with 100% ratio required from 1 January 2019

**In times of stress, regulators will be able to allow banks to use HQLAs to meet cash outflows, thereby potentially causing the ratio to fall below 100%**

// The LCR is calculated as:

//

| High Quality Liquid Assets |
|--|---|

Total net cash outflows over the next 30 calendar days
LCR revisions...

- Basel has expanded the range of HQLAs that will be allowed:

- The aggregate of the following additional assets, after haircuts, will be subject to a 15% limit of the HQLAs
  - corporate debt securities rated A+ to BBB- (50% haircut)
  - “certain” unencumbered equities (50% haircut) (Equities assumed as index stocks, eg., FTSE 100, S&P500, DAX etc)
  - “certain” residential mortgage backed securities rated AA or better** (25% haircut)

- The 15% limit is the binding constraint in this analysis

- On Level 2 assets:
  - the use of local ratings scales and inclusion of qualifying commercial paper
  - The operation of the cap on Level 2 assets will be revised and improved
LCR revisions...

- **“Certain” insured deposits:**
  - outflow reduced from 5% to 3%

- **Non-financial corporates, sovereigns, central banks and public sector entities:**
  - outflow on fully-insured non-operational deposits reduced from 40% to 20%
  - outflow on committed liquidity facilities reduced from 100% to 30%
  - committed interbank credit and liquidity lines outflow reduced from 100% to 40%

- **Trade finance facilities:**
  - outflow expected to be in the range 0% - 5%

- **Maturing secured funding transactions with central banks:**
  - outflow reduced from 25% to 0%

- **Additional derivatives risk included with the LCR with a 100% outflow**
  - Relating to collateral substitution requirements and excess collateral situations)
Bibliography


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