Managing liquidity in a new regulatory era

The tactical and strategic challenges for banks
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During their meeting in Seoul in November 2010, to strengthen the resilience of the global financial industry, the G-20 countries approved the new rules for banking regulation known as Basel III. Since then, industry leaders have hotly debated the capital and risk management aspects of the new rules, and banks in many jurisdictions have taken steps to increase their capital bases and enhance risk management frameworks. Less discussed have been the equally important provisions governing bank funding and liquidity management. These rules will have a more fundamental impact on banks’ business models than many executives expect.

First, there are tactical and operational measures that banks’ treasury departments need to consider. These include managing the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR) set by Basel III.

Second are strategic funding issues. Before the crisis, liquidity was generally so cheap and available that banks could easily fund new business. That is no longer the case. At many banks, funding has become a significant brake on new business generation. Banks need to analyze the impact of the new liquidity environment on their ability to pursue their business models. It’s not only the regulators that are forcing banks to rethink their funding strategies; key stakeholders such as investors, rating agencies, and business partners increasingly expect banks to demonstrate sufficient and reasonably priced funding.

Those banks that fail to develop alternative sources of funding will need to adjust their business models significantly. In the pre-crisis era, banks had the luxury of pursuing purely asset-driven business models, but we expect to see a widespread switch toward liability-driven business models. On both the tactical and strategic fronts, Strategy& proposes several options for banks to consider.
The Basel Committee on Banking Supervision (BCBS) issued a global regulatory framework, known as Basel III, in December 2010 to create more resilient banks and banking systems.

Although Basel III’s new liquidity management requirements phase in over several years, with some portions not coming into effect until 2018, time is growing short. The capital markets expect banks to comply with the new regulations far ahead of the official regulatory deadlines. This means that the treasury departments in many financial services institutions must adjust their operations as soon as possible.

Basel III requires that a bank meet both short-term and longer-term liquidity ratios. These ratios measure the bank’s potential cash outflows against hypothetical inflows from assets considered repossessable or salable. *Exhibit 1, next page*, shows the domains that the BCBS established for changes to the liquidity management framework.

**The liquidity coverage ratio (LCR)**

To determine LCR, the shorter-term measure, the bank compares its highly liquid assets (HLAs) to its total net cash outflow (TNCO) over 30 calendar days. The TNCO represents all expected cash flows from the bank’s outstanding balances (liabilities or off balance sheet commitments) that mature within 30 days multiplied by expected runoff/drawdown rates.

The overall TNCO ratio is expressed as follows:

\[
\frac{\text{highly liquid assets}}{\text{total net cash outflows over the next 30 calendar days}} > 100\%
\]

Under the new framework, HLAs can be neither encumbered nor re-hypothecated. They are assumed to be easily converted into cash, with
## Exhibit 1
### BCBS global liquidity management framework

<table>
<thead>
<tr>
<th>Regulatory standards</th>
<th>Monitoring tools</th>
<th>Further implementation guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liquidity coverage ratio</strong></td>
<td>- Monitors potential currency mismatches</td>
<td></td>
</tr>
<tr>
<td>- Promotes short-term resilience for severe liquidity stress scenario</td>
<td></td>
<td><strong>Frequency of calculation and reporting</strong></td>
</tr>
<tr>
<td>- Requires adequate level of unencumbered liquid assets to cover net cash outflows during 30-day period</td>
<td></td>
<td>- Reporting of LCR at least monthly—weekly or daily reports during stressed situations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Maximum permissible reporting time lag of two weeks</td>
</tr>
<tr>
<td><strong>Net stable funding ratio</strong></td>
<td>- Indicates potential use of assets as collaterals during liquidity/funding stress scenarios</td>
<td><strong>Scope of application</strong></td>
</tr>
<tr>
<td>- Enhances long-term resilience of banking institution and reduces funding mismatches</td>
<td></td>
<td>- All international banks on a consolidated basis (as set out in Part I of Basel II)</td>
</tr>
<tr>
<td>- Ensures funding of long-term assets with a minimum amount of stable liabilities in relation to their liquidity risk profiles</td>
<td></td>
<td>- Differences in home/host liquidity requirements to be included</td>
</tr>
<tr>
<td><strong>Available unencumbered assets</strong></td>
<td></td>
<td><strong>Liquid asset pool composition</strong></td>
</tr>
<tr>
<td>- Serves as early warning indicators for liquidity difficulties</td>
<td></td>
<td>- Currency composition of liquid asset pool needs to reflect operational footprint of bank</td>
</tr>
<tr>
<td><strong>Contractual maturity mismatch</strong></td>
<td>- Identifies gaps within contractual inflows and outflows</td>
<td><strong>Observation periods and transitional arrangements for standards</strong></td>
</tr>
<tr>
<td>- Identifies liquidity problems due to withdrawal of funding</td>
<td></td>
<td>- LCR and NSFR to be reported as of January 1, 2012</td>
</tr>
<tr>
<td><strong>Concentration of funding</strong></td>
<td></td>
<td>- Revisions of LCR at the latest by mid-2013 and of the NSFR by mid-2016</td>
</tr>
<tr>
<td>- Indicates potential use of assets as collaterals during liquidity/funding stress scenarios</td>
<td></td>
<td>- LCR becomes minimum requirement in 2015, NSFR in 2018</td>
</tr>
</tbody>
</table>

Source: Basel Committee on Banking Supervision
no substantial losses, during a 30-day time horizon. HLAs are divided into level 1 and level 2 assets, as follows:

Level 1 assets include cash and available central bank reserves and liquid marketable government-type assets with a zero risk weighted assets (RWA) component as defined by Basel II’s standard. Level 1 assets do not include debt issued by other banks and must make up at least 60 percent of a bank’s HLAs.

Level 2 assets are limited to 40 percent of a bank’s HLAs after adjustments and have a minimum 15 percent haircut. Level 2 assets have a 20 percent Basel II risk weight and meet specifically defined criteria.

With this rule, the regulators’ goal for banks is to build balance sheets on which highly liquid assets minus total net cash outflows is greater than zero. In other words, to comply with Basel III, the quotient \( LCR = \frac{HLAs}{TNCO} \) should not be less than 100 percent. In practice, however, many banks might want a safety buffer — some amount above 100 percent.

**Tactics to improve LCR**

Once a bank department (such as the treasury) is assigned responsibility for ensuring compliance with the Basel III LCR, an LCR target must be defined. For example, the bank agrees to “never let the LCR drop below 100%+b.” The set of admissible transactions must then be articulated. Finally, the cost of the various purchases and sales to adjust the LCR ratio needs to be spelled out ahead of time, along with the plan for splitting those costs among departments.

To improve its LCR, a bank could increase the numerator (HLAs) and/or decrease the denominator (TNCO). Unfortunately, some measures that improve one side of the fraction can have detrimental effects on the other side. We therefore recommend looking at possible changes of the bank’s balance sheet with an eye toward all parts of the system (see Exhibit 2, next page). Some examples of this holistic approach might include the following:

A bank increases its current balance sheet by purchasing additional HLA-eligible assets and refinances them. The HLAs increase the numerator, while their redemption flows do not affect the TNCO and thus leave the denominator unchanged. The bank decreases its current balance sheet. It sells assets to repay liabilities that would otherwise mature within 30 days and thus would detrimentally affect the outflows. The benefit depends on the 75 percent cap. To reflect the
Exhibit 2
Tactical improvements of the LCR

LCR = HLA/TA

- Purchase additional HLA
- Refinancing of purchased HLA
- Exchange existing asset
- Decrease total net outflow
- Possible decrease of HLA
- Decrease existing assets
- Increase existing liabilities

- Non-HLA
- Level 2
- Sell repo
- New liabilities
- Level 1
- Shorten tenor
- Extend tenor

Source: Basel Committee on Banking Supervision
uncertain nature of inflows, the sum of these inflows is capped at 75 percent of the actual outflows per day. Thus, in the best case the TNCO is fully enhanced by the sold amount. The bank leaves its balance sheet size unchanged. It can sell existing non-HLAs in exchange for new HLAs. As no new liabilities originate, the TNCO remains unchanged. Or the bank can pay back existing liabilities that mature within 30 days and purchase longer-term liabilities, thus improving the TNCO. Of course, this depends on existing counterparties’ willingness to accept an early redemption of the funds and the bank’s ability to acquire longer-term liabilities.

**The net stable funding ratio (NSFR)**

A longer-term measure, the NSFR requires a bank to compare assumptions about its required stable funding (RSF) and its available stable funding (ASF) in a one-year time horizon. The ratio is expressed as follows:

\[
\frac{\text{available amount of stable funding}}{\text{required amount of stable funding}} > 100\%
\]

The ASF is the bank’s current liabilities that are assumed to be available to the bank within one year. Regulators have categorized these liabilities as shown in Exhibit 3, next page.

The bank must assign its equity and liabilities to one of these categories, determine the current total amount for each category, and multiply by its corresponding ASF factor.

The RSF comprises the bank’s current assets and off balance sheet (OBS) exposures. They are categorized by their assumed ability to fund themselves, as shown in Exhibit 4, page 11.

As with the ASF, to determine RSF the bank needs to assign its assets and OBS items to a category, determine the current total amount for each category, and multiply this by the corresponding RSF factor.

**Tactics to improve NSFR**

If the bank’s NSFR is too low, the average maturity of its liabilities might be too short. Unfortunately, it is difficult to lengthen these liabilities, since capital is a very small portion of a bank’s balance sheet and savings deposits already amount to 90 percent of the face value and thus almost match-fund the attributed assets. For example, at the end
**Exhibit 3**
Available stable funding (ASF)

<table>
<thead>
<tr>
<th>Category</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital (Tier 1 and 2)</td>
<td></td>
</tr>
<tr>
<td>Preferred stock ≥ 1 year</td>
<td>100%</td>
</tr>
<tr>
<td>Liabilities with effective maturity ≥ 1 year</td>
<td></td>
</tr>
<tr>
<td>Non-maturing / term deposits (&lt; 1 year) – definition as in the LCR</td>
<td></td>
</tr>
<tr>
<td>Stable</td>
<td>90%</td>
</tr>
<tr>
<td>Less stable</td>
<td>80%</td>
</tr>
<tr>
<td>Stable portion of wholesale funding (&lt;1 year)</td>
<td>50%</td>
</tr>
<tr>
<td>Rest</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Basel Committee on Banking Supervision
**Exhibit 4**  
**Required stable funding (RSF)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unencumbered assets ≤ 1 year and securities in a reverse repo</td>
<td>0%</td>
</tr>
<tr>
<td>Unencumbered marketable securities</td>
<td></td>
</tr>
<tr>
<td>0% Basel II risk weight</td>
<td>5%</td>
</tr>
<tr>
<td>20% Basel II risk weight</td>
<td>20%</td>
</tr>
<tr>
<td>Unencumbered corporate/covered bonds (≥ AA - &amp; ≥ 1 year)</td>
<td></td>
</tr>
<tr>
<td>Unencumbered gold, equities, and other corporate/covered bonds</td>
<td>50%</td>
</tr>
<tr>
<td>Unencumbered residential mortgages</td>
<td></td>
</tr>
<tr>
<td>Unencumbered other (non-official) loans (≤ 35% risk weight in Basel II)</td>
<td>65%</td>
</tr>
<tr>
<td>Unencumbered retail/small business loans</td>
<td>85%</td>
</tr>
<tr>
<td>Conditionally (ir-)revocable credit and liquidity facilities</td>
<td>5%</td>
</tr>
<tr>
<td>Other contingent funding obligations/x% tbd by national supervisors</td>
<td>X/x%</td>
</tr>
<tr>
<td>Rest</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Basel Committee on Banking Supervision
of the third quarter of 2011, Deutsche Bank reported assets of €2,282 billion and capital of €51.8 billion — a ratio of less than 2.3 percent.

On the asset side, a low NSFR might be caused by illiquid assets or assets that are not adequate collateral for secured borrowing. Unfortunately, changing the asset mix is difficult without changing the business model. Purchasing additional assets with a low RSF factor might be an option for a liability-driven bank (which would otherwise have bought assets with less liquidity but higher return). But banks that focus on small business loans cannot suddenly switch to residential mortgages, even if their RSF factor would improve from 85 to 65 percent.

The simplest but possibly most expensive measure to improve the NFSR is to match every asset with new funds until the end of its tenure. (In other words, every outflow would be mirrored with an accordant inflow.) The NFSR can be fixed with funding that is slightly longer than one year, but the positive effect will diminish when maturity drops below one year. The negative effect will be preserved until the asset matures, unless the borrowing is prolonged.

The specific impact of match-funding depends, of course, on the individual bank’s balance sheet. But generally speaking, the NFSR is enhanced if more stable funding replaces less stable funding and if assets that require more stable funding are replaced with assets that require less stable funding.

As a consequence, institutions that fail to adjust their funding structure to their business profile will have to adjust their business models and strategy. Given that institutions can no longer easily access liquidity to fund an asset-driven business model, we believe that many institutions will shift toward a liability-driven model in which the available funding mix determines the business portfolio they can execute on the asset side.
Beyond the tactical challenges described above, banks also face strategic challenges related to liquidity. They must find ways to guarantee access to unsecured funding at a reasonable cost. These issues are especially acute for non-retail banks without stable deposits, such as pure-play wholesale banks and commercial real estate lenders.

As major economies recover from the crisis and many emerging markets continue their growth, there are attractive opportunities in commercial lending. To capitalize on them, access to unsecured funding is key. Unfortunately, many banks face a strategic funding gap due to their limited ability to borrow in an unsecured way. The funding mix of banks has thus changed significantly since the crisis (see Exhibit 5, next page).

For instance, banks will find it increasingly difficult to issue long-term unsecured bonds. Because these bonds are not HLA-eligible, other banks will not buy them. In addition, three powerful trends are negatively influencing many banks’ ability to line up senior unsecured funding, and thus are causing this change in the funding mix.

The first trend is changes to the legal environment in many jurisdictions. For instance, according to the German Bank Restructuring Act, if regulators believe that a potential bank failure could threaten the overall stability of the financial system, they can order reorganization proceedings. In such a case, regulators might force the bank to restructure its obligations; this possibility has already dampened investors’ interest in buying bank obligations.

Second, the new regulations for insurance companies operating in the European Union, known as Solvency II, could diminish insurance companies’ appetite for bank debt. Insurers are usually one of the largest buyers of bank debt; in markets such as Germany, they invest about 50 percent of their assets directly into different forms of bank debt. But that may change. Under Solvency II, insurance companies must put aside more capital for bank bonds. This makes the bonds
Exhibit 5
Changes in a bank’s funding mix

Pre-crisis

Post-crisis

Source: Westimmo
Marktbericht Nr. 16;
Deutsche Bundesbank;
ECB; Strategy&
less attractive, both in absolute terms and in comparison to government bonds, which still require no capital.

Third, persistent uncertainty in the financial markets is prompting some insurance asset managers to reduce their exposure to the banking sector. A number of large insurers have actually stopped buying any new bank debt for more than a year.

Given this deteriorating funding environment, banks need to develop alternative sources of funding. But how? There are several promising funding options that asset-driven banks can use to align their business models and strategies with the new funding reality. We see three different approaches to broaden the funding mix:

1. **Acquire deposits to increase independence from wholesale funding**

Before the financial crisis, many considered the deposit business a slow-growth, rather unattractive business model. But the picture has changed dramatically, in part because of the way that resilient financial institutions with strong deposit businesses have performed. Now many institutions with little or no access to the retail market are studying how to tap the market. There are basically three options: buy a retail player, build a business, or expand a small existing operation. An acquisition can be especially compelling today, given low industry valuations. For instance, Deutsche Bank recently bought Deutsche Postbank.

If a bank would rather take the greenfield approach, one strategy is to set up a direct bank to offer accounts as well as term deposits. Commercial lenders IKB and Royal Bank of Scotland have taken this route recently, and others are working on similar initiatives. The approach can be very successful. At least one new direct banking franchise has acquired €3 billion in its first year of operation in the German market. This strategy is doubly attractive because it’s relatively simple to set up a retail direct bank. The key capabilities are product management and advertising; the rest can be outsourced to specialized providers.

On the downside, direct banks can be costly and riskier than a traditional branch-based retail business. New direct banks usually offer comparatively high interest rates to attract deposits. Even so, these deposits are not “sticky.” Online customers are bargain hunters who are quick to switch institutions for a better deal.

But launching a direct bank is not the only organic growth option. Banks that already have a retail operation could ramp up their deposit
gathering by introducing competitive pricing. For example, they could pay new customers higher interest rates or pay higher rates in the last month of a fixed-term deposit to increase the stickiness of funds.

Product differentiation and creative marketing are other ways to acquire retail deposits. Some banks offer nonfinancial benefits instead of simply raising rates. Others combine deposit products with broader product packages that include various financial and nonfinancial services as well as card products. In some countries, lotteries are being used to attract new deposits. Under these programs, customers who deposit a certain amount for a defined period of time can participate in a drawing for attractive prizes.

2. Develop secured financing instruments

Covered bonds, especially the German Pfandbrief, have proven to be resilient during the crisis because investors trusted the legal framework and the quality of the collateral — and perhaps because of the implicit guarantee by the government. In the midst of the crisis, spreads on covered bonds increased to 70 to 80 basis points above swap rates, but they quickly tightened to about 30 to 40 basis points.

We believe that covered instruments, at least as funding for commercial real estate, will remain an important refinancing tool for banks. Spreads between covered and unsecured instruments remain high (see Exhibit 6, next page), making covered bonds a relatively attractive funding option. In fact, more banks have recently applied for licenses to issue covered bonds.

This sustained spread has created an opportunity for a new hybrid instrument to fill the gap between covered and unsecured instruments. This new instrument could be collateralized by attractive assets a bank has on its balance sheet, such as a portfolio of commercial real estate financings. The idea is to create an instrument that is secured but less restrictive than a typical covered bond. Instead of issuing covered bonds governed by a special law, banks could issue asset-backed securities in order to pick up a better spread without being so strictly regulated. From an investor perspective, this hybrid is less risky than unsecured instruments while offering a more attractive yield than the typical covered bonds.

Depending on the availability of appropriate assets for collateral, this kind of secured financing could help banks address their funding needs and restart the vital securitization market in many jurisdictions. In France, for example, there are already two kinds of covered bond issuers: the issuers of “obligations foncières” (under the covered bond
Exhibit 6
Credit default swap spreads over covered bond spreads*

Spread (in basis points)

Indentative corridor for secured financing spreads

* The historic spread is calculated as an average of CDS spreads of selected German banks, minus Vdp-covered bond spreads.

Source: Bloomberg, VdP
law) such as CFF or Dexia, and the ones outside the covered bond law (“French covered bonds”) such as BNP Paribas.

3. Develop segment-specific investment products rather than funding instruments

The regulatory pressure to develop alternative sources of funding might have a silver lining. It could push banks to concentrate more on investors’ needs. Banks that analyze investors’ preferences and develop targeted solutions to address these needs could differentiate themselves in the funding market. If such products leverage the asset side of a bank’s balance sheet, that bank could further improve its ability to self-fund its lending business.

For instance, consider segment-specific investment products such as sustainable bonds, which are linked to green initiatives, and Sharia-compliant recurring income products, which some Muslim investors prefer. Such products fill specific investment needs for particular investors and thus offer value beyond risk and return.
The new regulatory regime’s impact on liquidity management poses significant challenges for banks. Notwithstanding the long transition period before the new Basel III standards are fully enforced, market pressure is growing on banks to comply with the new rules sooner rather than later. In response, banks should be thinking both tactically and strategically. On a tactical level, the treasury departments need to adjust their operations to conform to new, tougher liquidity ratios. On a strategic level, senior management must thoroughly assess the long-term implications of shifting from an asset-driven to a liability-driven business model and think creatively about how to develop alternative sources of funding. The transition won’t be easy for most banks, but the competitive advantage will be significant for those that strike the right balance and take early, appropriate action.
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