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Liquidity Risk: Thinking Beyond Compliance
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Executive Overview

As liquidity risk moves to the forefront of the regulatory agenda, financial institutions face a new compliance and business reality. While final details remain in flux, there is no question that Basel III and Dodd-Frank will bring more structured and stringent liquidity requirements as well as greater compliance complexity to the industry. Further, the focus on high-quality assets to fulfill liquidity requirements will drive up costs and limit options for many institutions.

Financial institutions are gearing up to address new liquidity risk management challenges. A top priority is to extend their risk management frameworks and procedures to ensure compliance with impending regulations. The challenge does not end there, however, as banks look to balance compliance requirements without impairing their ability to optimize liquidity across the enterprise or jeopardizing profitability.

Both objectives are important priorities as financial services organizations begin to assess and rethink their liquidity risk management environment. Those that create a framework that supports compliance and optimization stand to gain an important competitive advantage in the years ahead.

Introduction

The impact of the global financial downturn has changed the liquidity risk landscape for financial services organizations, especially for banks. Basel III is prescribing the path forward, introducing a liquidity coverage ratio (LCR) that will require banks to maintain a stock of “high-quality liquid assets” sufficient to cover net cash outflows for a 30-day period under a prescribed stress scenario. In addition, the accord proposes a net stable funding ratio (NSFR) test that will require banks to lengthen their funding profiles to better support their balance sheets. While U.S. legislators and regulators continue to debate the specifics of Dodd-Frank, many still expect that the law's requirements for liquidity risk will align with Basel III.

Banks face two distinct sets of challenges when addressing liquidity risk requirements. First, they must work to achieve compliance – setting up the operational infrastructure and policies that support ratio calculation, capital realignment, and reporting requirements. The second, and arguably more daunting challenge, is the ability to optimize liquidity. With the cost of liquidity steadily increasing, banks seek ways to become more efficient in how they manage liquidity, given various constraints emanating from the regulatory landscape and market
variability. When setting a liquidity management policy and creating the infrastructure required
to support it, banks should resist the urge for “quick fixes.” Instead, it is critical to consider
short- and long-term goals – compliance followed by optimization – a strategy that can
preserve and extend a financial institution’s competitive advantage. Equally important,
financial institutions must create an infrastructure that can enable them to identify and analyze
the interaction and correlations between liquidity and other risk categories, including market,
credit, and operational risk.

Competing Challenges

The financial crisis and ensuing regulatory reform are transforming the industry’s approach to liquidity
management. Receiving minimal attention prior to the financial crisis, liquidity has moved to the
forefront of regulatory efforts, including Basel III and Dodd-Frank, and is creating new compliance
and business challenges for banks.

Under the proposed regulations, financial institutions should not depend on volatile, short-term
wholesale funding as a means to manage their liquidity. Instead, under Basel III, they must hold
greater quantities of higher-quality liquid assets — such as cash, treasury bonds, and other liquid
securities — that they can convert into cash rapidly at little or no loss in value (See Figure 1.) and
establish more stable, longer-term funding to support balance sheet activities. Banks also face new,
tougher capital requirements for leveraging their balance sheets to raise funding, and this will have a
major impact on securitization programs.

### Basel III Asset Categories for Liquidity Risk

<table>
<thead>
<tr>
<th>Level 1 Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
</tr>
<tr>
<td>Qualifying marketable securities from sovereigns, central banks, public sector entities, and multilateral development banks</td>
</tr>
<tr>
<td>Qualifying central bank reserves</td>
</tr>
<tr>
<td>Domestic sovereign or central bank debt in domestic currency</td>
</tr>
<tr>
<td>Domestic sovereign debt for non-0% risk weighted sovereigns, issued in foreign currency</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 2 Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sovereign, central bank and public sector entity (PSE) assets qualifying for 20% risk weighting</td>
</tr>
<tr>
<td>Qualifying corporate bonds rated A- or higher</td>
</tr>
<tr>
<td>Qualifying covered bonds rated AA- or higher</td>
</tr>
</tbody>
</table>

Source: Association for Financial Markets in Europe (AFME)

Figure 1
Given new, tougher global margin requirements for derivatives and a higher burden for continuous compliance with the LCR, it is highly likely that the supply of eligible high-quality collateral will not keep pace with demand. Some estimates put the shortfall at up to US$7 trillion.

In addition, banks, in their efforts to maintain a strong liquidity position, will face significant operational burdens with regard to calculating, monitoring, and reporting the new ratios – most of which translate to a data management issue.

Tier one banks, with their multi-currency balance sheets, might be quite proficient in terms of managing funding requirements across the group as a whole. However, managing liquidity at local levels, as prescribed in the Basel III proposals, presents a much greater challenge. Banks should have the ability to view their liquidity profiles at multiple consolidation levels and currencies and be prepared to accommodate country-by-country variations in liquidity ratio requirements and reporting.

Basel III calls for banks to report, manage, and maintain local LCRs as per the agreed levels, and group entities need to demonstrate that they have the ability for intra-group movement of liquidity across jurisdictions. Banks require full visibility into the underlying data on positions and exposures, price fluctuations, asset performance, and credit needs. They also must have insight into what assets they may need to transfer and any potential restrictions to moving them across groups and individual entities. Banks must manage this information centrally so that the institution can get an accurate picture of the environment, requirements, available assets, and restrictions on how they are applied.

A Costly Proposition

What will the new liquidity requirements mean for banks?

Quite simply, the cost of liquidity will increase as banks look to lengthen their funding maturity profiles, move away from volatile short-term wholesale funding, and adjust their balance sheets with higher-quality assets that are traditionally more expensive and historically lower yielding. To satisfy NSFR requirements, banks may have to issue large amounts of longer-term debt at much higher costs to a smaller investor market. In addition, income will suffer as banks reduce long-term lending as they work to fulfill NSFR commitments.

Under the LCR, the stock of high-quality assets is tightly defined, and one can expect to see a sustained escalation in the price of high-quality government and corporate bonds as demand for these asset classes increases. Furthermore, the cost of obtaining stable and reliable retail funds has been steadily rising since the credit crisis. In the United Kingdom, for example, checking accounts historically have paid interest of just above 0%. Today, they are paying upwards of 2%, representing a significant cost for many banks.
A 2010 report by McKinsey & Company attempts to quantify the impact of Basel III’s liquidity requirements, and the results are striking. The report’s authors estimate that the industry would have to hold an additional €2 trillion in highly liquid assets and €3.5 trillion to €5.5 trillion in long-term funding. Of this, the top 16 banks would need to raise €700 billion in highly liquid assets and €1.8 trillion in long-term funding. Equally important, McKinsey projects that new costs for additional capital and funding could lower the industry’s return on equity (ROE) in 2012 by five percentage points or 30% of the industry’s long-term average 15% ROE.

It is important to note that these figures are just the capital costs associated with achieving compliance. One also must consider operational expenses — such as investment in stress test development and execution, analysts and analysis, regulatory reporting, and monitoring the ratio — across the enterprise to meet individual country requirements. The list continues to grow.

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Banks are taking stock of the magnitude of this challenge. According to Ernst & Young’s 2012 study “Progress in Financial Services Risk Management: A Survey of Major Financial Institutions,” liquidity and capital management are at the top of senior management agendas for survey participants, which included 69 banks and six insurance companies. The study, conducted by the Institute of International Finance, revealed that 65% of executives surveyed said they are evaluating their portfolios to understand how new LCR requirements will impact each segment and product, and 54% predict the proposed LCR requirements will significantly impact the cost of doing business. “Almost half (45%)

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of all respondents indicated that they are moving away from complex, less liquid instruments into more stable asset-based funding sources. One-third (30%) of respondents, particularly in Europe, report they are exiting or selling part of their business to reduce the impact of the new rules. Some are exiting certain countries and moving business back to their home countries. Others note the importance of diversifying into new investor bases, such as retail banking and new global markets, to tap new capital and funding sources for long-term planning.” In addition, 49% of study respondents report they are now including the cost of the liquidity buffer in their internal pricing, which means that businesses will experience up-front charges for generating risks that contribute to the buffer.\(^2\)

Looking Long-Term

When one considers the cost of acquiring and managing liquidity, optimization becomes essential moving forward.

To continue to compete profitably, banks must gain the ability to play out and assess various liquidity scenarios and options in terms of direct and opportunity costs, as well as risks—just as they are beginning to do with stress testing today. With this insight, they can confidently assess each scenario and evaluate the associated impact of each of its strategies on the liquidity profile.

Banks, in their endeavors to optimize their liquidity, will need a critical appreciation of the interaction of market, credit, and operational risk, and how these factors translate into liquidity risk. Operationally, this requires a significant volume of market data and a range of risk factors that need to be integrated onto a single data platform coupled with an adaptive analytical layer, which allows the bank to model and analyze the underlying risks in a more transparent and efficient manner.

While most financial institutions are focused, first and foremost, on creating a foundation for achieving and managing their LCRs and NSFRs, it is important to avoid a “quick fix” approach when creating a platform to manage liquidity risk. Instead, banks should also look ahead and begin to plan for future optimization needs.

Liquidity risk management, and ultimately, optimization require a flexible IT infrastructure that can adapt to an ever-changing regulatory landscape and business objectives. To accurately calculate liquidity risk, as well as model options for how best to optimize it, banks must effectively integrate the liquidity risk framework and the governance of other risk, including credit and market risk via a unified

In addition to adopting an enterprise-platform approach, banks should consider the following to create an analytical environment that facilitates regulatory compliance and sets a solid foundation for future liquidity optimization.

- Does the bank have full and timely visibility into the balance sheet and all cash flows? A financial institution cannot manage or optimize risk until it has visibility into its entire balance sheet—spanning retail, commercial, and wholesale operations. As such, its risk management platform must capture this information daily to enable daily dynamic cash flow tracking, including identifying unexpected outflows or inflows. Moving forward, banks will need to view this data not only at the group level but also for individual entities.

- Does the bank have visibility into contingent exposures, including off balance sheet exposures? Tier one banks with significant collateralized off-balance-sheet exposures realize that increased market volatility will create additional margin requirements, which is a major drain on funding. Banks need to know, at the most granular level, what exposures they have on and off the balance sheet, by product, currency, counter-party, and more. They also must be able to see how changes in macroeconomic or other risk factors will impact the performance of a particular portfolio and the resultant liquidity requirements.

- Can the bank rapidly create liquidity risk stress testing scenarios? Stress testing is here to stay, and banks can count on it to be more rigorous and frequent, with regulators specifying much faster turnarounds. As such, financial institutions require analytical solutions that enable them to rapidly define scenarios, adapt them as needed, and store them for reuse. Scenario creation in many institutions, however, remains a largely manual process, requiring dozens of skilled analysts and multi-week development cycles. This approach and pace are simply not up to the rigor of the new regulatory environment. Ideally, banks should be working toward the ability to run on-demand stress testing, and they require a platform that can support this objective.

- Can the solution estimate liquidity gaps in business as usual (BAU) conditions, as well as under various extreme conditions scenarios? Banks are looking to define specific BAU and shock conditions at various levels of granularity and then apply them to contractual cash flows either as absolute values or percentages to estimate the liquidity gap under normal and extreme conditions. A bank’s risk management framework should support a wide range of assumptions, including rollovers, run-offs, prepayments, asset value changes, recoveries from delinquent accounts, and asset book growth. It also should provide flexibility to model and apply multiple shocks of varying magnitude to the BAU assumptions and then compare between scenarios to identify the most plausible conditions to use when making strategic decisions.

- Can the solution calculate liquidity ratios and funding concentrations enterprise-wide and for each currency, product, and counterparty? A liquidity risk management solution
should give financial institutions the flexibility to calculate the liquidity coverage ratio and net stable funding ratio using their specified parameters for liquidity horizon, liquidity haircuts, and funding factors to support compliance. Because Basel III will require banks to calculate LCR at both enterprise and local operations levels, banks must be able to produce the group level ratios while simultaneously outputting the local metrics and information on funding concentrations.

- Does the solution enable the bank to model and analyze various options to address liquidity shortfalls? Banks require the ability to model counterbalancing strategies to combat liquidity gaps under normal and stressed business conditions. With the ability to define multiple counterbalancing strategies on the same baseline and stressed liquidity gap reports and analyze them across multiple dimensions, banks can readily identify and adopt the optimal course of action as part of their liquidity management strategy.

- Does the bank's liquidity risk management framework create a foundation for analytical analysis that will enable banks to continually optimize liquidity under normal and stressed conditions?

  Flexibility, scalability, and a unified data model are essential to future optimization initiatives. To optimize liquidity options, organizations must be able to collate a wide spectrum of relationship data and process it rapidly to yield a set of strategies that reflect the dynamics of the current market environment. Essentially, a trader or risk manager requires the ability to quickly assess options regarding what action is deemed appropriate to steer the bank away from a liquidity crisis without having to incur punitive costs in doing so. Arriving at the correct decision is fraught with complexity, since an emerging liquidity strain could quickly develop into a full-blown crisis, as a result of a breakdown in relationships between risk factors, directly impacting pricing models and valuations.

Conclusion

When it comes to liquidity risk, the stakes are high for today's financial institutions. It is important that they create an infrastructure that not only meets short-term compliance requirements but also lays a foundation for future needs, including additional regulatory requirements, as well as the compelling desire to optimize liquidity management.