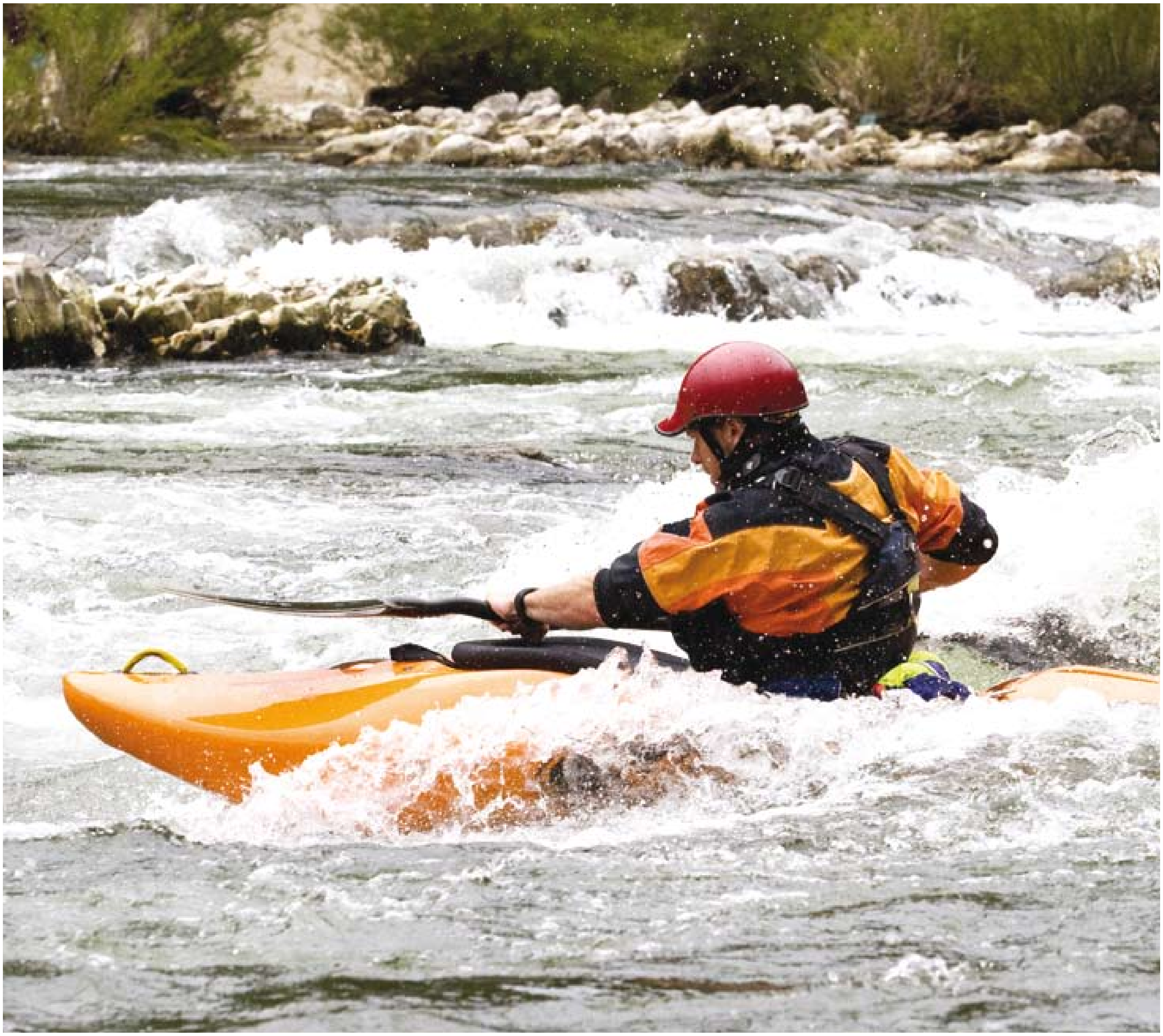
# Liquidity risk management



by Richard Barfield and Shyam Venkat



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It is not listed on any exchange. Nor is it a line item on any financial institution's balance sheet. Nonetheless, confidence is the financial system's and every financial institution's most valuable asset.

The financial markets cannot hope to recover until confidence is restored. Banks need to recover their faith in each other and rebuild their reputations across their stakeholder base. They must also regain the trust of the regulators.

For that to happen, banks must achieve two things. First, they will have to show that they have learned lessons from the liquidity crunch. Second, they will have to demonstrate that they are putting those lessons to good use. Simply going through the motions will not suffice: banks will have to prove that they are genuinely effecting change.

In our view, this should be done against a clear strategy for liquidity risk management. This requires taking a longer-term perspective, detached from the day-to-day firefighting and conference calls that are currently consuming the days of most treasurers.

## Invisible risk

The collapses of Northern Rock and Bear Stearns prove that profitability and capital are no defence against liquidity risk. Both made profits in the quarter before they disappeared. Both were well-capitalised businesses. And yet, as a result of their failure to deal with their liquidity risk issues, they were simply swept away.

Of course, Northern Rock and Bear Stearns were not the only banks with their minds elsewhere. The fact is, no one talked much about liquidity risk until last year. Although the regulators may have monitored banks' management of the issue, they rarely raised serious challenges. As a result, liquidity was largely an invisible risk for many firms.

Risk is managed in silos in many institutions. It is typically split into categories – such as liquidity risk, credit risk, market risk and operational risk – each of which is seen as separate and distinct. Recent events have shown, however, that different types of risk can and do impact on each other. In fact, during times of financial crisis, risks have repeatedly shown a tendency to transform from one type to another with breathtaking speed. We have seen, for example, how mistrust of asset values due to credit default risk can generate liquidity risk. So, going forward, banks will need to place greater emphasis on developing an integrated view of risk across all the risk types.

Asset and Liability Committees (ALCOs) are set to play a pivotal role. Their challenge will be to build a comprehensive, joined-up perspective of their institutions' asset and liability risk.

To achieve this, ALCOs will need to ensure that fundamental challenges are addressed. Are relevant roles and responsibilities clearly defined and understood? Are management information systems functioning as they should be? In particular, are those systems operating on a 'real time' basis that enables up-to-date information to be provided at the right time? Are the interrelationships between market, credit and liquidity risk understood and monitored? As ever, quality rather than quantity is the critical factor, so Key Performance Indicators and Key Risk Indicators need to be in place to allow managers to cut through the mountains of data to the critical facts. Without these, early insight and timely action cannot be achieved.

## Diversified funding sources

The nationalisation of Northern Rock underlined the need for banks to diversify their funding sources. A sizeable bank that was adequately capitalised, Northern Rock came unstuck as a result of its excessive reliance on the wholesale money market to fund its business.

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Following a significant fall in that market's liquidity, Northern Rock was not in a position to meet its payment obligations as they fell due.

The tenor of banks' funding also needs to be diversified. Banks should stagger their sources of lending to avoid having to make too many debt repayments at any one time. This is easy to say but, when term funding has virtually disappeared, it is difficult to address if the mitigants are not already in place.

Inevitably, utilising a multiplicity of sources will drive up cost. However, as the case of Northern Rock proves, a failure to diversify may ultimately result in a far higher price being paid. Moreover, by using a wider range of lending sources – and by being transparent about those sources – banks can help regenerate confidence.

## Risk appetite

The new economic landscape presents some huge challenges. Deposit rate variability has squeezed – and, in some cases, destroyed – net interest margins. While funding can still be found, it is only available for shorter periods and at a higher price.

Time periods are now severely compressed. Until recently, long-term lending might involve periods of five or even ten years. Today, when people discuss long-term money market, they may not be talking about anything more than a month, although tenors on wholesale funding are starting to lengthen for good names.

Lending timescales will, of course, eventually lengthen. When they do, banks will need to think hard about the extent to which they wish to lock in longer-term funding. Each will have to come to its own conclusion based on its appetite for risk and, in particular, the balance it wishes to strike between cost and certainty.

This is never an easy task. By receiving capital injections from sovereign wealth funds and portfolio investors some institutions have achieved certainty of funding without requiring government support. However, some observers have suggested that these deals might ultimately prove too expensive. Before the crisis, critics had accused other banks of excessive caution or the crime of using 'lazy capital'. These banks may well feel that their conservative approaches to liquidity risk and high capital ratios risk have now proved more than justified.

The events of the last 12-18 months will no doubt cause all banks to review risk appetite. As they do so, they should consider how they want to express that appetite in relation to liquidity risk and funding risk. In the past, banks have been reluctant to be explicit, with the result that there was always leeway for individuals to exercise their own judgement. The credit crisis has shown that banks need to define risk appetite in much tighter terms.

## A new era

Liquidity risk management is entering a new – and much more demanding – era. In the last few months, papers by the Committee of European Banking Supervisors, the Basel Committee on Banking Supervision and the International Institute of Finance have set high hurdles in terms of principles and recommendations. The UK Financial Services Authority (FSA), meanwhile, will soon be publishing its proposals for reinvigorating its liquidity risk regulations.

Instead of waiting to be told what to do by the regulators, leading banks are getting into shape now. By the time the regulator comes around, these banks will be ready to demonstrate that their senior management has a clear understanding of and a genuine involvement with their firm's liquidity risk management. As a result of the collapse of Lehman Brothers and the demise of other storied financial houses that have since been absorbed by stronger institutions, banks will need



to be clear on the liquidity implications of their firms' legal structures. Regulators are very likely to place greater emphasis on local liquidity risk positions and place less faith in group support. Banks should review their liquidity policy statements and contingency funding plan (see Figure 1) and should challenge the assumptions that underpin their behavioural modelling, their mismatch guidelines and their expectations of parental support.

Since they are a vital part of the liquidity risk management toolkit, banks should pay greater attention to their stress tests (see Figure 2). Regulators will want to see that these have been properly developed and well executed and that senior management has been fully involved. To avoid any possibility of misinterpretation, banks should take great care over how they communicate the results of stress tests to regulators.

In assessing the required improvements to their liquidity risk management approach and to develop their strategic view, banks should undertake a gap analysis against best practice. This analysis should evaluate liquidity risk management in the following areas – risk definition; governance and oversight; liquidity management; measurement and reporting; stress testing; contingency funding plan; and public disclosure.

**Figure 1: Credible contingency funding plan**

- Adequate management and reporting framework
  - Act upon the early warning signs
  - Avoid or mitigate possible crises promptly
- Clearly documented management action plan
  - Alternative sources of liquidity
  - Trigger levels for action
- Evaluate a wide range of possible scenarios
- Communication plan
  - Internal and external communications
  - Prevent further escalation or contagion
- Regular sources of liquidity supplemented with contingent sources
- Board approved and wider management involved

Source: PricewaterhouseCoopers

**Figure 2: Liquidity stress-testing approach – example**

| Identify liquidity risk drivers | Design stress scenarios (and probabilities) | Model stress tests |
| --- | --- | --- |
| Erosion in value of liquid assets<br>Additional collateral requirements<br>Evaporation of funding<br>Withdrawal of deposits<br>etc. | **External scenarios:** Emerging markets crisis, systemic shock in main centres of business, market risk<br>**Internal scenarios:** Operational risk, ratings downgrade<br>**Ad-hoc scenarios:** e.g. country/industry specific | **Step 1:** Quantify liquidity outflows in all scenarios for each risk driver<br>**Step 2:** Identify cash inflows to mitigate liquidity shortfalls identified<br>**Step 3:** Determine net liquidity position under each scenario |

Source: PricewaterhouseCoopers

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## Communication will be key

Banks should recognise that they need to think long and hard about what they want to say and how they are going to say it. In particular, how much and what information do they want to disclose?

Greater transparency and enhanced communications will be central to strengthening trust. In the past, there has been considerable disparity in the levels of banks' liquidity risk disclosures. Figure 3 provides a simple indicator of the extent that banks report liquidity risk relative to other risks and risk disclosures in total. For example, HSBC devotes 97 pages in its 2007 annual report to risk and 6 of these to liquidity risk. As one can see the range of disclosure varies considerably for these well regarded institutions. Now that liquidity risk is under the spotlight, banks are likely to need to provide a much greater volume of information. Moreover, that information will need to be more detailed and specific.

Banks will inevitably be reluctant to provide information that might place them at a competitive disadvantage or make them vulnerable to the actions of predatory market participants such as certain hedge funds. For example, no bank will wish to disclose its internal view of the liquidity buffers that it believes it needs.

Under Pillar 2 of Basel II regulators might choose to impose higher capital requirements on banks whose liquidity risk management fails to match the required standards. Such a move would at the very least provide such banks with a strong financial incentive to get their houses in order.

**Figure 3: Liquidity disclosure 'page test'**

| | Total | Risk | Credit | Market | Liquidity |
|---|---|---|---|---|---|
| Barclays | 296 | 78 | 40 | 12 | 6 |
| HBOS | 228 | 25 | 6 | 6 | 7 |
| HSBC | 476 | 97 | 45 | 12 | 6 |
| Lloyds TSB | 166 | 30 | 7 | 4 | 7 |
| RBS | 252 | 35 | 12 | 10 | 9 |
| | | | | | |
| Goldman Sachs | 154 | 17 | 2 | 6 | 7 |
| Morgan Stanley (10-k) | 199 | 38 | 18 | 11 | 16 |

Source: 2007 Annual Reports, PricewaterhouseCoopers analysis.

## Back to the future

The financial world has already begun to change in response to the seismic events of the last few months. We have seen, for example, leverage levels drop dramatically and capital ratios grow significantly. While it seems inevitable that banks will become a lot smaller and less complex than they have been, little else is certain.

Now is a good time to refocus on fundamentals. By proving to the external world that they truly understand their businesses and the potential risks to those businesses, banks can show that they run themselves prudently. If they can do that, they will have taken a huge step towards rebuilding confidence and restoring the health of the financial system.