



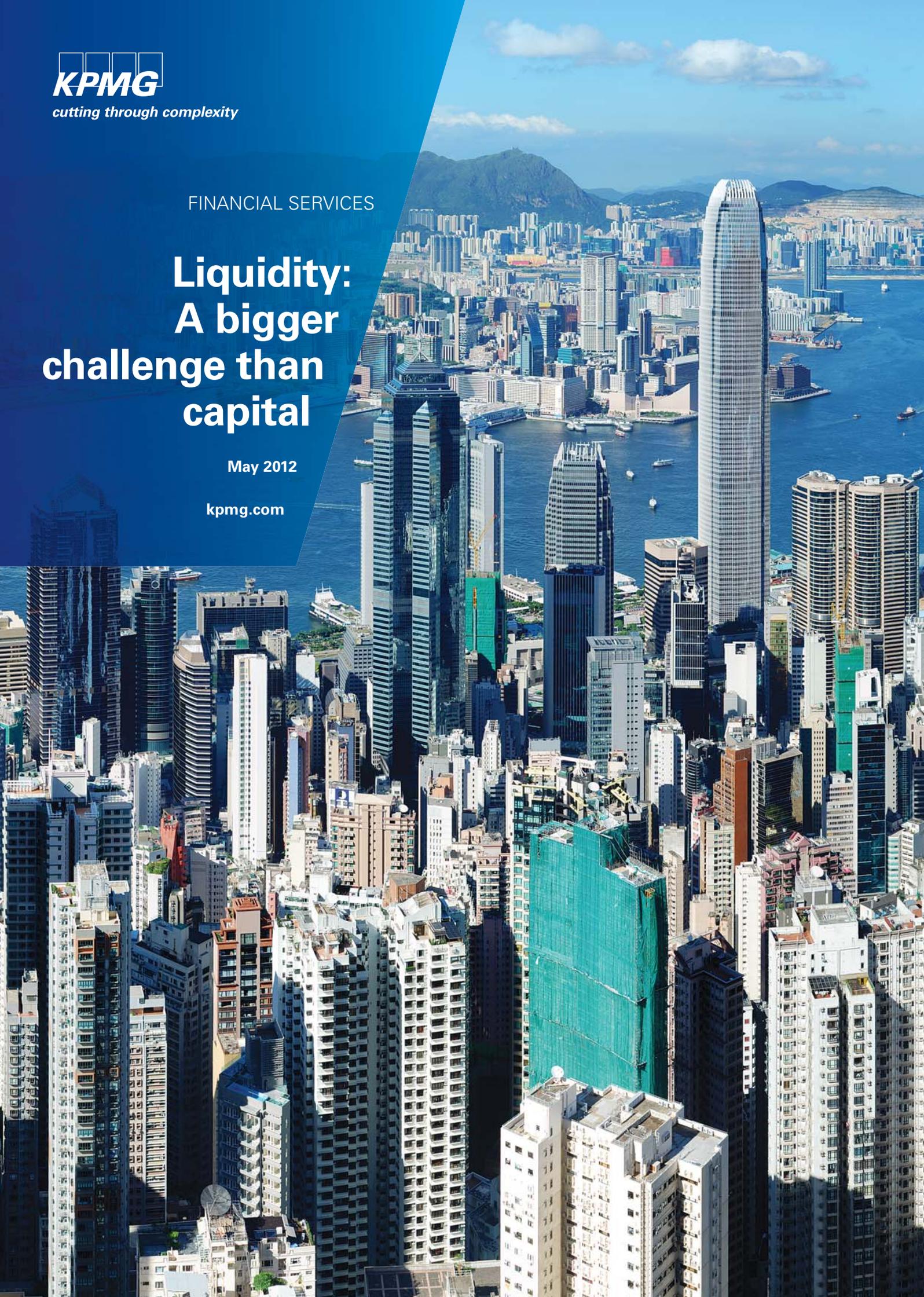
cutting through complexity

FINANCIAL SERVICES

# Liquidity: A bigger challenge than capital

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# Liquidity:

## A bigger challenge than capital

The Basel Committee on Banking Supervision (Basel Committee) has introduced two new liquidity ratios for banks. A major issue during the crisis was caused by banks being unable to roll over short-term financing. Investor confidence plummeted, leading to a liquidity squeeze within some financial institutions. By introducing the new ratios, the Basel Committee aims to strengthen banks against adverse shocks; eliminate structural mismatches between assets and liabilities; and encourage more stable sources of funding – medium and long-term rather than short-term options.

The liquidity requirements set by the Basel Committee are likely to prove an even bigger challenge than those on capital. For many banks, these requirements are 'the iceberg below the water'. Until recently, the main focus had been on the challenges posed by capital requirements, but these additional standards will necessitate operational, financial and structural change and a move away from short-term wholesale funding towards a longer-term funding strategy.

### Key issues for firms

- Banks that rely too heavily on short-term wholesale funding or do not hold sufficient high quality liquid assets will face high costs of adjustment to meet these new minimum ratios.
- Many banks will find it difficult – not least in terms of reduced profitability. It will be costly for banks to adjust their balance sheets by holding more (relatively low yield) high quality liquid assets; raising more expensive retail deposits; raising additional medium and long-term wholesale funding; and reducing long-term lending.
- These challenges will be compounded because many banks will be seeking to make similar adjustments at the same time – so the market will be moving against them. The Basel 3 requirements affect all banks, with varying severity depending on the type and size of bank, and they will all need to act at the same time to ensure compliance.
- Global banks will find it more difficult to manage their liquidity centrally, as local requirements constrain their ability to move funding and liquidity from one centre to another.
- Many banks also face significant costs in meeting other aspects of the new liquidity requirements, such as:
  - Assembling and reporting the necessary data;
  - Running a wide range of stress and scenario tests;
  - Modelling cashflows;
  - Monitoring and assessing their maturity mismatches, concentrations of funding and the availability of unencumbered assets;
  - Holding additional liquidity to meet 'Pillar 2' requirements; and
  - Putting in place more robust recovery plans to cover both capital and liquidity.
- For many banks, these costs – combined with the impact of other regulatory changes – will force changes in business model and organisational structure.

## The Basel 3 liquidity proposals

The Basel 3 package of tougher capital and liquidity standards<sup>1</sup> will impose two new liquidity requirements on banks – the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR)<sup>2</sup>. Banks that rely too heavily on short-term wholesale funding will struggle to meet both ratios.

The LCR is designed to **strengthen the ability of banks to withstand adverse shocks**. It will require banks to hold sufficient high quality liquid assets (cash, government bonds and other liquid securities) to meet a severe cash outflow for at least 30 days. The stressed cash outflow includes the withdrawal of a proportion of retail deposits and the withdrawal of all wholesale funding due to mature in the next 30 days – although banks can offset part of this outflow of wholesale funding by an assumed inflow of funds they have placed with other banks that mature in the next 30 days. The LCR requirement will apply on a currency by currency basis, so that banks can survive shocks that also cause sharp exchange rate movements or disrupt currency convertibility.

The NSFR is a more **structural measure**, intended to ensure that banks hold sufficient stable funding (capital and long-term debt instruments, retail deposits and more than one year maturity wholesale funding) to match their medium and long-term lending.

### Monitoring and re-calibrating these measures...

The Basel Committee has acknowledged that further calibration and fine-tuning of these requirements is likely, although it has stressed that any modifications will only cover 'a few key aspects', without changing the overall approach. The Basel 3 package therefore recognises that the exact specification and calibration of these two ratios will benefit from further study of the positions of different types of bank, and of different banking market characteristics across countries; and that banks should be allowed time to adjust their balance sheets and business activities in order to meet these new ratios.

### Implementation timetable

The Basel 3 implementation timetable allows for an 'observation period', during which banks report their positions under the two ratios to their national supervisors, before the ratios are finalised and become regulatory requirements. The LCR observation period runs until 2014, after which the LCR will become a minimum standard from 1 January 2015; while the NSFR observation period runs until 2017, with the NSFR becoming a minimum standard from 1 January 2018.

In addition, the Basel Committee has:

- Emphasised in its *Sound practices of liquidity risk management*, the importance of banks modelling their cashflows and running stress tests and scenarios to identify and address vulnerabilities;
- Included in the Basel 3 package a range of supplementary factors that banks and their supervisors should monitor and assess on a routine basis. These include maturity mismatches, the concentration of funding, the availability of unencumbered assets, and market conditions; and
- Endorsed the introduction of 'Pillar 2' liquidity requirements, under which supervisors can require individual banks to hold additional liquidity over and above meeting the minimum LCR and NSFR ratios. This might be used where an individual bank's liquidity risks are not captured adequately by the standard LCR and NSFR ratios, or where a bank's risk governance and risk management standards have material weaknesses in the evaluation, monitoring and control of its liquidity risks.

These additional requirements will be challenging for all banks, and new for many banks.

Most countries are introducing (or have already introduced) a 'temporary' minimum liquidity requirement, pending the finalisation and implementation of the two Basel 3 liquidity ratios (see *Regional Perspectives - Implementation* box on pages 7-8). Many of these temporary requirements are based closely on the LCR 30 day survival period. Many supervisory authorities are therefore not only 'observing' banks' LCR ratios but are discussing with banks how (where necessary) they will adjust in order to meet this ratio. In effect, the LCR is already close to becoming a current minimum requirement.

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1. *A global regulatory framework for more resilient banks and banking systems*, Basel Committee of Banking Supervisors, December 2010. See also KPMG's publication, *Basel 3: The pressure is building*.

2. The detail of these two measures is set out in Appendix 1 - *In the detail: The Basel 3 liquidity proposals*.

**“The NSFR is a more structural measure, intended to ensure that banks hold sufficient stable funding to match their medium and long-term lending.”**



## Impacts of the new liquidity ratios

The Basel Committee and the European Banking Authority (EBA) have undertaken studies of the impact of the full Basel 3 package. The most recent studies have used banks' data for end June 2011. These studies were conducted before the key EuroCrisis issues of Q4 2011 – in particular the Greek default – and therefore may not be a realistic representation of the current figures.

The most recent Basel Committee study showed that the large internationally active banks face significant shortfalls against the two liquidity ratios, with this group of banks reporting (on average) a 90 percent LCR and a 93 percent NSFR. The smaller banks in the sample were, on average, further from meeting the two ratios, at 83 percent for the LCR and 94 percent for the NSFR. In actual cash terms, these gaps are significant. For all banks in the sample, this equates to a shortfall of US\$1.76 trillion of holdings of high quality liquid assets and US\$2.78 trillion of stable funding.

The EBA study showed that European banks were further away from meeting the two new Basel 3 liquidity ratios than the wider international sample of banks covered by the Basel Committee study. Major European banks had, on average, a 71 percent LCR and an 89 percent NSFR as at end of June 2011,

with smaller European banks showing very similar results, at 70 percent for the LCR and 89 percent for the NSFR. The worse position (on average) of the European banks reflects their much greater dependence on short-term deposits – from both other financial institutions and from non-financial corporates – although this position may have improved, albeit temporarily, as a result of the long-term refinancing operations undertaken by the European Central Bank (ECB) in December 2011 and February 2012.

The Basel Committee and the EBA also noted that the reported LCR and NSFR shortfalls varied widely across the individual banks in each group; that both ratios remain under review, so the final specifications could change the amount and distribution of any shortfalls across banks; and that banks facing a shortfall will have a lengthy period within which to adjust in order to meet both ratios. Banks need to be mindful of the full requirements and not be misled by the fact that these percentages seem to be close to the required figures. The ratio requirements will be difficult to meet for many.

Banks may also need to hold a buffer of liquidity over and above meeting the 100% ratio for the LCR and NSFR, as a result of:

- A bank's own view of how much additional liquidity it needs to hold to

protect itself against shocks and against balance sheet movements arising from lending growth or the imminent maturity of long-term funding;

- Supervisors applying an additional Pillar 2 liquidity requirement to a bank; and
- A bank having to meet a higher than 100% liquidity ratio at group level because some of its liquidity cannot be transferred easily around the group.

## Impacts on banks

Banks which fall short of meeting these two liquidity ratios will need to adjust their balance sheets. On the asset side, this could take the form of holding more high quality liquid assets and shortening the maturity of some lending, so that it falls under the one-year maturity cut-off point that is critical to the NSFR calculation of the quantity of assets that require stable funding. On the liabilities side, this could take the form of holding more retail deposits and more longer-term wholesale funding.

These measures will reduce the yield on banks' assets and increase the cost of their liabilities<sup>3</sup>.

3. Appendix 2 on pages 14-15 presents a simple example, which may help to illustrate the impact of the LCR and NSFR on a typical bank, showing how this could have a significant negative impact on a bank's profitability.

Additional costs may arise for banks seeking to improve – or indeed simply to maintain – their liquidity positions, because many banks will be attempting to take similar actions at the same time. Banks may therefore find the market moving against them as they try to adjust their positions.

#### Key issues:

- The amount of retail deposits in an economy tends to grow at a modest rate, in line with nominal income. Historically, the total amount of retail deposits was usually price-inelastic, which meant that it responded only marginally to changes in the interest rates paid by banks on retail deposits. So as banks compete more aggressively for retail deposits – because of the ‘value’ placed on such deposits as a means of meeting both the LCR and the NSFR – the overall result may be to make retail deposits both more expensive and less ‘stable’ as retail depositors chase the best rates.
- An increased demand for more than one year maturity wholesale funding may also have the effect of making such funding more expensive, and making it even more difficult for many smaller banks to access longer maturity wholesale funding at any price.
- Separate proposals for the ‘resolution’ of failing banks include giving the authorities powers to ‘bail in’ (write off or convert into equity) unsecured and uninsured liabilities. If – as seems likely – long-term wholesale funding is first in line (after equity and subordinated debt) to be subject to ‘bail in’ when a failing bank is put into resolution by the authorities, then there will be further adverse impacts on the cost and availability of such funding. The possibility of such ‘bailing in’ is already causing the providers of long term funding to banks to demand a higher price for such funding; making them less willing to provide such funding at any price; and leading them to demand that banks raise funding on a secured or collateralised basis, in order to avoid the prospect of funding being bailed in. This will in turn have an adverse impact on the position of unsecured creditors – and thus on the cost of unsecured funding.
- Banks will have to respond to tougher requirements on establishing credible and effective recovery plans, including plans to restore liquidity under stressed conditions. This will put upward pressure on the cost of contingency liquidity arrangements.
- Moves by many national supervisors to ‘ring fence’ branches and subsidiaries of foreign banks may force bank groups to hold more liquidity across the group than would be required under a purely group-wide calculation of the LCR and NSFR. Many national supervisors are requiring banks to be locally self-sustainable in terms of liquidity, rather than being used to send funding around the group or relying on intra-group funding from the rest of the group.

## Industry challenges

Banks will face a number of pressures in meeting the requirements of the new regulatory agenda. There is a danger of ‘being squeezed from all sides’. It is therefore important for banks to have a holistic view of the full suite of regulatory changes and the potential impacts on their business in order to manage the challenges ahead.

Banks are not the only ones who will feel the heat. The liquidity requirements, in addition to those from within the Basel package and other regulations, will have a knock-on effect on other parts of the financial sector, e.g., asset managers and insurers, and the finance industry as a whole. Infrastructure and mortgage lending will feel the strain of reduced funding and an overall lack of liquidity.

**“Additional costs may arise for banks seeking to improve – or indeed simply to maintain – their liquidity positions because many banks will be attempting to take similar actions at the same time.”**



## Regional Perspectives - Implementation

### European Union

The proposed Capital Requirement Regulation (CRR) that will implement Basel 3 in the EU essentially copies out the Basel 3 liquidity framework. CRR sets out detailed reporting requirements for the new LCR and NSFR ratios during the 'observation periods' for these ratios, ahead of the LCR and NSFR being fully implemented according to the Basel 3 timetable in 2015 and 2018 respectively.

CRR also makes clear that the introduction of harmonised reporting and quantitative minimum liquidity standards across the EU will require a shift to greater home country responsibility for assessing whether a credit institution with branches in other EU countries meets these new requirements. Provision is also made for the introduction of a Pillar 2 type regime for liquidity.

Ahead of the LCR and NSFR becoming minimum requirements, CRR introduces an over-arching rule which will apply from 2013 when CRR takes legislative effect across the EU. This rule will require banks to maintain liquidity buffers which are adequate to meet net liquidity outflows under stressed conditions over a short period of time. National authorities will therefore have to apply either the LCR or similar national requirements on firms to hold a buffer of high quality liquid assets ahead of full LCR implementation in 2015.

### US

The Federal Reserve Bank has announced that it intends to require large US bank holding companies to meet specific quantitative liquidity requirements consistent with the Basel 3 LCR and NSFR liquidity rules. However, the Federal Reserve Bank has not yet consulted on the detail of the liquidity rules it will eventually apply.

In the meantime, the Federal Reserve Bank published a set of draft prudential rules for consultation on 20 December 2011. These will apply to US bank holding companies with total consolidated assets of \$50 billion or more. On liquidity, these companies would be required to take a number of steps to manage liquidity risk, including:

- **To meet specified corporate governance requirements around liquidity risk management.** These would include the Board establishing the company's liquidity risk tolerance at least annually, approving the liquidity risk management strategies, and overseeing the liquidity risk management policies, procedures and processes;

- **To project cash flow needs over various time horizons.** Short-term cash flow projections would be required daily, and long-term cash flows would be required to be updated at least monthly. The cash flows would be required to be comprehensive and provide sufficient detail to reflect the company's capital structure, risk profile, complexity, activities and size;

- **To undertake regular stress testing.** The cash flow projections would be required to be stress tested at least monthly to measure liquidity needs at 30-day, 90-day and one-year intervals during times of instability in the financial markets. Stress testing must incorporate a range of stress scenarios, including separate stress scenarios to account for bank-specific stress, market stress, and a combination of the two. The results of the stress testing would be used to determine the size of the liquidity buffer and to contribute to the quantitative component of the contingency funding plan;

- **To establish internal limits on certain liquidity metrics.** Specific limits would be required for concentrations of funding (by instrument type, single counterparty, counterparty type, secured and unsecured funding, and other liquidity risk identifiers); the amount of specified liabilities that mature within various time horizons; and off-balance sheet exposures and other exposures that could create funding needs during liquidity stress events;

- **To maintain a liquidity buffer,** composed of highly liquid assets, sufficient to cover 30-day stressed net cash outflows under the internal stress scenarios; and

- **To maintain a liquidity buffer,** composed of highly liquid assets, sufficient to cover 30-day stressed net cash outflows under the internal stress scenarios; and

- **To maintain a contingency funding plan** that identifies potential sources of liquidity strain and alternative sources of funding when usual sources of liquidity are unavailable. The plan would be required to include four components: quantitative assessment, event management, monitoring and testing.

## Asia Pacific

Several regulators in the region (most notably Australia, China and Hong Kong) have already announced how, in principle, they propose to implement the new LCR, although some details are not yet fixed. Many regulators in the region are adopting a 'wait and see' attitude until there is more clarity on how these issues can be resolved.

The Australian proposals are of particular interest because they take account of the relatively limited supply of national government bonds and a relatively limited supply of capital market instruments. The Australian Prudential Regulation Authority (APRA) and the Reserve Bank of Australia (RBA) therefore propose to allow an authorised deposit-taking institution to use a secured committed liquidity facility with the RBA, for payment of a fee determined by the RBA, to cover any shortfall in Australian dollars between the firm's liquidity needs and its holdings of high quality liquid assets.

The Australian proposals also limit the branches of foreign banks from taking account of committed funding lines from their head office, by requiring such branches to have sufficient locally held high quality liquid assets to survive a stress event for 15 days.

In Hong Kong, preliminary proposals put out for consultation by the Hong Kong Monetary Authority (HKMA) propose a two-tiered approach to the application of the LCR and the NSFR. These two new ratios will apply only to those authorised institutions at the core of the Hong Kong banking system. The HKMA's initial thinking is to classify as 'core' institutions those that undertake significant maturity transformation in their operations (and which hence potentially pose a higher level of liquidity risk), and/or which play a significant role in the local banking sector (for example in terms of market share, payment system involvement and retail banking activities). If these criteria are adopted, most of the local banks and some branches of foreign banks that are significant to the Hong Kong markets will be classified as 'core' authorised institutions for this purpose.

The HKMA also proposes to retain and to modify the existing and simpler minimum liquidity ratio (MLR), which requires an authorised institution to hold sufficient 'liquefiable assets' to cover at least 25% of its 1-month 'qualifying liabilities'. The MLR is essentially a broad-brush liquidity buffer designed to cover unexpected withdrawals or other day-to-day liquidity contingencies.

The HKMA proposes:

- (i) to update the MLR to make it more consistent with the LCR while preserving its simplicity – this may include changes to the definition of 'liquefiable assets', and allowing some offset for cash inflows in the calculation of 'qualifying liabilities';
- (ii) to apply the modified MLR to 'non-core' authorised institutions, and to allow these institutions to seek supervisory approval to adopt the LCR and the NSFR voluntarily; and
- (iii) to apply a version of the MLR to 'core' authorised institutions in addition to the LCR and NSFR, so these institutions would also have to hold a floor amount of high quality liquid assets equal to at least 25% of the institution's 1-month qualifying liabilities (net of deductions) as calculated under the MLR.

**“Several regulators in the region (most notably Australia, China and Hong Kong) have already announced how, in principle, they propose to implement the new LCR, although some details are not yet fixed.”**

## What are banks doing in response?

### Systems, reporting and monitoring

The first action for banks has been to establish data and reporting systems that allow them to calculate, report and monitor their LCR and NSFR ratios. Banks should be monitoring closely their positions against the LCR and NSFR, in addition to whatever liquidity requirements are currently in place for their domestic and overseas operations. These new ratios require a significant widening in the scope of data collection and reporting, and therefore significant changes to business processes and technology systems for many banks.

Banks should also be putting in place the data, processes and systems required to undertake these calculations using a range of stresses and behavioural assumptions, including for example different estimates of the rates at which retail and corporate deposits might be withdrawn following a firm-specific or market-wide shock (or a combination of the two).

Banks will also need to put in place systems that allow for forward-looking assessments of these liquidity ratios, including the dynamic tracking of the 'cliff edge' effect of large deposits or bond issues as the remaining maturity falls to below one year – at which point they will be of less value to the bank as 'stable' medium term funding – and of the ability of a bank to maintain its liquidity ratios during a period of balance sheet growth or restructuring.

Banks should also be developing systems that enable them to assess the options available to them to adjust their liquidity positions, and to assess the potential impact of a possible recalibration of the LCR and NSFR by the Basel Committee and by national authorities before the ratios become binding minimum requirements.

### Adjusting

Many banks are considering and implementing the available 'quick wins' and relatively easy fixes that would enable them to meet (or move towards being able to meet) the LCR and NSFR requirements. These include:

#### • Liabilities:

- Extending the maturity of liabilities where possible;
- Shifting the balance of deposits towards retail deposits, towards 'stable' rather than 'less stable' retail deposits, and towards medium-term funding through the wholesale market and through issuing bonds and other securities.

#### • Assets:

- Switching out of less liquid securities and other assets into government bonds and other instruments that count as high quality liquid assets;
- Entering into liquidity swaps, for example with insurance companies, to exchange less liquid assets for high quality liquid assets. It is important to note that this is only to the extent permitted by national supervisors – some local regulators are pushing back against these measures;
- Reducing the maturity of some lending so that it falls below the one year cut-off point that is so critical to the NSFR.

#### • Related actions:

Banks may also be taking actions to meet other regulatory requirements that are beneficial for their liquidity positions. These include:

- Raising new capital;
- The sale of long-term assets;
- Issuing medium-term unsecured wholesale funding that could be 'bailed in' as part of the resolution of a failing bank.

These adjustments all come at a cost – be it having to pay a higher interest rate on liabilities or receiving a lower yield on assets. Some banks have very limited access to longer-term funding at any price. And in some countries the availability of high quality liquid assets and of long-term funding may be constrained, either because these markets are underdeveloped, or because governments have not run deficits and therefore have not had to issue government bonds to finance deficits. Some banks will therefore not have the ability and capacity to make relatively inexpensive adjustments in order to meet the LCR and NSFR requirements.

In addition, some banks will have found that their progress towards meeting the LCR and NSFR ratios was undermined by the worsening of liquidity conditions in many countries during 2011. Indeed, these shifts in the cost and availability of liquidity – and the rapidity and magnitude of these shifts – demonstrate the need for banks to maintain a buffer of liquidity over and above the minimum requirements, irrespective of whether their supervisors specify any buffer requirements.

Similarly, the availability of sources of longer-term funding may change abruptly over time. One example is the effective closure of securitisation markets in 2007 and 2008, followed by a partial re-opening as investor sentiment became more positive for good quality and transparent securitisations.

**“Many banks are considering and implementing the available 'quick wins' and relatively easy fixes that would enable them to meet (or move towards being able to meet) the requirements.”**

Another example is the response of central banks, and in particular the European Central Bank, to liquidity shortages. As part of its long-term refinancing operations the ECB lent €489bn of three year funds to 523 European banks in December 2011 against various types of collateral, and a further €530bn to 800 European banks at the end of February 2012. This was used by banks in part to replace other maturing funds from the ECB, and in part to replace bank bonds set to mature during 2012. But such long-term funding at low interest rates also enables banks to undertake 'carry trades', by using these funds to purchase government bonds.

Both the funding and the purchase of high quality liquid assets can assist banks in meeting both the LCR and the NSFR. However, banks will need to manage carefully the possibility of a large amount of ECB medium-term funding maturing at the same time and not being rolled over, since the ECB will be seeking to wind down its provision of liquidity when market conditions improve.

### Reconsidering

Some banks have therefore found - or will discover as they monitor closely their positions against the LCR and NSFR – that they need to undertake more fundamental adjustments, including changes in their business model and strategy. This might require:

- A reduction or slower growth of assets – in particular those with a maturity of over one year – to reduce the pressure on funding;
- Exiting from some business lines because the cost of funding is too high, for example where the marginal cost of funding reflects the costs of competing more aggressively for retail deposits or raising additional medium term wholesale funding;
- Reducing or removing the 'core funding gap' and moving back towards customer deposits funding customer lending;
- Restructuring the balance sheet to reduce long maturity assets and to increase retail and longer-term wholesale and bond market funding; and

- Linking these primarily liquidity-focused actions with the impact on business models, strategies and organisational and operational structures of other regulatory initiatives. These initiatives include capital requirements, recovery and resolution planning, the introduction of 'bail in' debt, and the use by the authorities of macro-prudential tools.

## Remaining issues

### Bank concerns

In response to the sector-wide and individual bank shortfalls against the LCR and NSFR as currently calibrated, banks have been suggesting changes that would make it easier for them to meet these ratios and to overcome some country-specific constraints. These concerns and suggestions have focused mostly on the LCR to date, and have included:

### High quality liquid assets

- There may not be enough high quality liquid assets in some countries, because of the absence of government debt and less well developed capital markets. This is a particularly important issue in the Asian Pacific and Middle East regions. The Basel Committee is aware of this and is reviewing the options to address this issue.
- Some banks are arguing for the inclusion of a wider range of assets within the definition of high quality liquid assets, such as equities, gold, other trading book liquid assets, and assets that are eligible at central banks as collateral for liquidity provision (especially at the ECB which lends against a wider range of assets than other central banks). These assets have remained highly liquid during the financial crisis (even if proper account should be taken of their price volatility), and since the nature of future liquidity pressures cannot be predicted with certainty there may be value in allowing for a more diverse set of liquid assets, albeit with limits on the value (haircuts) and amount (as a proportion of total liquid assets) of these assets that could be included as high quality liquid assets.

- Banks are also arguing that a wider range of liquid assets should be included within the 'level 1' category of highest quality liquid assets – for example, some European banks would like to see high quality covered bonds included here. Extending the range of the 'level 1' category will also become more important if at some point the capital and/or liquidity treatment of some government bonds is downgraded within the Basel context, following the sovereign debt problems in some eurozone countries.

- Many banks have expressed concerns that they may not be able to use their high quality liquid assets as a buffer during periods of stress, because their supervisors may not allow them to fall temporarily below the minimum LCR requirement. The Basel Committee has considered this and has clarified that during a period of stress, banks would be expected to use their pool of high quality liquid assets, thereby temporarily falling below the minimum LCR requirement. The Basel Committee will clarify the LCR rules text before the end of 2012 to state explicitly that liquid assets accumulated in normal times are intended to be used in times of stress, and will provide additional guidance on the circumstances that would justify the use of the pool.

### Net cash outflows

- Thirty days may not be the most appropriate time horizon for the LCR in Asia, because liquidity problems have historically emerged more quickly, such that banks and regulators in many markets focus on a much shorter time period, such as seven days.



**“There may not be enough high quality liquid assets in some countries, because of the absence of government debt and less well developed capital markets.”**

- The standard assumptions regarding run-off rates implicit in the LCR may be out of line with experience in some countries. In some cases the run-off rates may be too generous, because experience suggests that deposits may disappear more rapidly than is assumed, while in other cases the assumed run-off rates may be too draconian. Some banks have argued that it would be more appropriate to assume that 50% rather than 75% of corporate deposits maturing in the next 30 days will not be replaced; that less than 100% of liquidity lines to corporates will be drawn down within 30 days; and that lower run-off rates should be assumed for funding from counterparties with whom a bank has an operational relationship, and from other banks within a network of cooperative banks. The Basel Committee is reviewing this issue.
- A significant number of foreign banks in the Asia Pacific region and elsewhere are funded largely or partly intra-group, the treatment of which under the LCR (when local supervisors apply the LCR to the overseas subsidiaries of foreign banks) makes it difficult for the subsidiary to meet the 100% LCR coverage requirement.
- The currency composition of cashflows and liquidity holdings is an important issue in the Asia Pacific region and in some other countries where deposits and lending may be conducted in more than one currency (typically the US dollar in addition to the local currency, while in some Asian markets the renminbi is also becoming significant). Banks may find it difficult to meet the LCR separately for each of the currencies in which they transact material amounts of deposit and lending business.
- Many banks have argued that it is overly-restrictive to cap the amount of cash inflows due in the next 30 days at no more than 75% of cash outflows when calculating the LCR. The Basel Committee is reviewing this issue.

### **Taking action...**

There are a number of actions that banks should now take to adjust their operations and ensure they meet the requirements:

- Banks should already be reporting their positions under the two new liquidity ratios, and should therefore know how far short of the new requirements they are likely to fall.
- Some banks may be able to meet the new requirements through relatively modest adjustments to the structure of their liabilities and by switching into high quality liquid assets. Other regulatory requirements – for example to hold more capital and to hold medium-term debt that could be written down in the event of resolution – may also improve their liquidity positions.
- However, some banks may need to take more drastic action to change their business models and restructure their balance sheets, either to meet the new liquidity requirements or in response to a combination of these requirements and the wider regulatory reform agenda.

# Appendix 1

## In the detail: The Basel 3 liquidity proposals

### Liquidity coverage ratio

The LCR requirement is that a bank must hold sufficient unencumbered high-quality liquid assets to meet its liquidity needs for 30 days under conditions of severe stress.

The stress conditions are captured by assuming that a bank faces cash outflows for the next 30 days comprising:

- The withdrawal of a proportion of retail deposits (at least 5% of stable and 10% of less stable retail and SME deposits, depending on national and bank-specific circumstances). This applies to demand deposits and to deposits maturing within the next 30 days.
- A bank has to treat fixed-term deposits as demand deposits if they can be withdrawn without applying a significant penalty materially greater than loss of interest.
- The withdrawal of 25% of wholesale deposits where the bank has an operational relationship (clearing, custody, cash management) with the customer.
- The withdrawal of 75% of corporate and public sector deposits.
- The withdrawal of 100% of all other wholesale funding.
- 5% - 100% drawdowns of committed facilities granted by the bank.

- The partial loss of secured and collateralised funding.
- The impact of posting additional collateral in response to increased market volatility.
- The impact of a three notch downgrade in the bank's own credit rating, causing contractual outflows and a need to post additional collateral.

A bank is allowed to offset cash outflows by cash inflows due over the next 30 days:

- 50% of inflows due from retail and SME customers (to allow for granting of new loans, and meeting existing commitments).
- 50% of inflows due from non-financial corporates.
- 100% of inflows from financial institutions.

However, cash inflows are capped at 75% of outflows when calculating net cash outflows.

These stressed net cash outflows over the next 30 days have to be 100% covered by holdings of high quality liquid assets. The calculation of these assets is split into two levels.

The first level, which can be included without limit and at full value, comprises cash, central bank reserves and government bonds qualifying for a zero capital weight.

The second level, which is limited to no more than 40% of a bank's total high quality liquid assets, includes covered bonds, high quality non-financial corporate bonds (at least AA-rated),

and government bonds qualifying for a 20% capital weight. All of these second tier liquid assets are subject to a 15% haircut.

### Net stable funding ratio

The NSFR requirement is for a bank's available Stable Funding (calculated by applying a set of discounts on the bank's liabilities) to be at least equal to its Required Stable Funding (calculated by applying a set of weights to the bank's assets).

The required Stable Funding is calculated using the following weights on a bank's assets:

- 0% - cash, unencumbered short term (less than one year) securities, short-term lending to other financial institutions
- 5% - unencumbered government bonds
- 20% - unencumbered securities of one year or longer maturity and at least AA- rated (or 20% risk weighted)
- 50% - other securities
- 50% - less than one year maturity lending to corporates
- 65% - unencumbered mortgages
- 85% - unencumbered non-mortgage lending to retail and SMEs
- 100% - all other assets.

The available Stable Funding is calculated by applying the following discounts to a bank's liabilities:

- 100% - capital (tier 1 plus tier 2)
- 100% - any funding with one year or longer maturity
- 90% - stable retail and SME deposits
- 80% - less stable retail and SME deposits
- 50% - less than one year corporate and public sector deposits
- 0% - other less than one year deposits.



## Appendix 2

### Illustrative example of the impact of the new Liquidity requirements

Consider a bank with a balance sheet of 10,000, which is funded by 500 in equity, 5,500 in retail deposits, and 4,000 in wholesale funding at a range of maturities but mostly less than one year. The bank has a range of assets, including holdings of government bonds and other securities, short-term lending to other banks, and loans to the retail and corporate sectors.

Assets		Liabilities	
Government bonds	1,000	Equity	500
Other securities	500	Retail deposits	5,500
Short-term loans to other banks	1,500	Wholesale deposits	4,000
<i>Of which:</i>		<i>Of which:</i>	
<i>less than one month to maturity</i>	<i>750</i>	<i>less than one month to maturity</i>	<i>1,500</i>
		<i>1-12 months to maturity</i>	<i>2,100</i>
		<i>more than one year to maturity</i>	<i>400</i>
Loans to corporates (more than one year maturity)	3,000		
Mortgages (unencumbered)	4,000		
Total	10,000	Total	10,000

### LCR

#### LCR calculation

Retail outflow (Using 10% assumed withdrawal rate)	550
Net wholesale outflow (1500 outflow less 750 inflow)	750
<b>LCR requirement</b>	<b>1300</b>
High quality liquid assets (Assume 1000 government bonds and 50 other securities)	1050
<b>LCR shortfall</b>	<b>250</b>

### Meeting the LCR shortfall

Adjustment	Cost	Illustrative amount
Switch 250 from other assets into government bonds	Lower yielding assets	2% lower yield on 250 of assets = loss of income of 5  If the bank makes a profit of 60 (so return on equity of 12%), an additional cost of 5 means a reduction in return on equity from 12% to 11%.
Switch 250 from short-term (up to 30 days) wholesale funding into longer maturity wholesale funding	More expensive funding	1% higher cost of 250 of longer term funding = higher cost of 2.5

## NSFR

### NSFR calculation

	Cost		NSF available
Corporate lending of more than one year maturity (100% weighting)	3000	Equity (100% weighting)	500
Unencumbered mortgages (65% weighting)	2600	Retail deposits (80-90% weighting)	4600
Securities (50% weighting)	250	Wholesale funding of more than one year maturity (100% weighting)	400
Government bonds (5% weighting)	50		
<b>NSF requirement</b>	<b>5900</b>	<b>NSF requirement</b>	<b>5500</b>
<b>NSF Shortfall</b>	<b>400</b>		

### Meeting the NSFR shortfall

Adjustment	Cost	Illustrative amount
Switch from long term lending to less than one year lending, or into bonds and securities	Lower yielding assets	1% lower yield on 400 of assets = loss of income of 4
Switch 400 from less than one year wholesale funding to more than one year wholesale funding	More expensive funding	1% higher cost of longer term funding on 400 of deposits = higher cost of 4

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