

Grant Spencer: Comments on the Basel liquidity standards and central bank operations

Remarks by Mr Grant Spencer, Deputy Governor and Head of Financial Stability of the Reserve Bank of New Zealand, at the tenth Asia-Pacific High-Level Meeting on Banking Supervision, Auckland, 27 February 2014.

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Introduction

While sourced in sub-prime credit losses, the Global Financial Crisis (GFC) was felt by most countries, including Asia Pacific countries, as a massive liquidity shock. This was felt in banking systems as a loss of market liquidity (ability to sell assets) and as a loss of funding liquidity (ability to issue securities).

The immediate policy response was for central banks to provide large doses of liquidity to the banks and for governments to provide guarantees on bank debt securities. Most of these measures were subsequently pulled back as market and funding liquidity was restored in 2009.

The longer term policy response to the unprecedented liquidity shock of the GFC has been two-fold: central banks have strengthened and broadened their capability as system liquidity providers, and prudential regulators have begun to strengthen liquidity requirements for banks. Central banks have become better prepared to respond to systemic liquidity shocks in their various forms, and at the same time new prudential standards are requiring banks to be better prepared to withstand liquidity shocks on their own account.

The topic I wish to discuss here is the extent to which the new Basel liquidity requirements may have implications for central banks' policy operations, and vice versa. I will discuss the extent of alignment between the two policy arms as well as some potential implications of the Basel III standards for central banks' policy operations.

Basel III liquidity standards

The maintenance of prudential liquidity standards is fully consistent with the central bank's public policy function of system liquidity support. Banks left to their own devices may hold liquidity buffers that are less than socially optimal, due to:

1. banks not allowing for systemic externalities that can result from liquidity shortages; and
2. banks potentially relying on the central bank to offset systemic liquidity shocks, thereby creating moral hazard effects.

New Basel III standards will start to be introduced from January 2015¹ with the Liquidity Coverage Ratio (LCR), to be followed in January 2018 by the Net Stable Funding Ratio (NSFR). These standards are intended to strengthen banks' ability to independently withstand liquidity shocks, by holding sufficient liquid assets to withstand a 30-day name

¹ The LCR will be phased in from 2015. For January 2015, banks will be required to have an LCR greater than 60 per cent. The minimum requirement will increase by 10 percentage points each year until fully implemented by January 2019.

crisis (the LCR) and to reduce the inherent maturity mismatch in banks' balance sheets (NSFR)²

In specifying the LCR, the Basel Committee on Banking Supervision (BCBS) has focussed on the need for banks to hold high quality liquid assets (HQLAs) that will remain liquid in private markets, even in a crisis situation. This essentially means that the bulk of LCR assets must be public sector securities that are "traded in large, deep and active repo or cash markets." The aim clearly is to base the standard on the best available liquid assets and to achieve cross-border consistency for internationally active banks.

However, for many countries, this model does not fit. In Australia, South Africa and Norway, for example, government securities are relatively limited in supply, and they are often locked away in long-term investment portfolios, thus further limiting the liquidity of secondary markets.

The BCBS has considered situations where the market for HQLA might not be large enough to support LCR requirements and has developed alternative liquidity arrangements (ALAs). Permissible ALAs include:

3. the use of a contractual committed liquidity facility (CLF) provided by the relevant central bank for a fee. So far, Australia and South Africa have adopted this option;
4. the use of foreign currency HQLA to cover domestic liquidity needs, with haircuts to cater for currency risk. It appears Hong Kong and Singapore may adopt this option.
5. the additional use of Level 2A assets, such as high quality corporate debt and covered bonds, i.e. going above the 40 percent cap for Level 2 assets, but with higher haircuts.

The BCBS state that the use of ALAs is only available where a jurisdiction can demonstrate and justify that an issue of insufficiency in HQLA genuinely exists. Additionally, the jurisdiction implementing the ALAs faces ongoing obligations relating to supervisory monitoring and reviews.

New Zealand liquidity standards

The Reserve Bank of New Zealand (RBNZ) introduced very similar, but non-Basel conforming, liquidity requirements in August 2010. The high dependence of the New Zealand banks on short term wholesale funding (mostly from offshore) was shown in the GFC to be a significant vulnerability of the banking system and we were keen to reduce this risk as soon as possible. Our aim was to be in line with Basel thinking but we wanted to move promptly and did not wait for final decisions on the Basel standards. It was also evident early on that the Basel emphasis on HQLAs was going to be an issue in New Zealand where some two thirds of government securities are held offshore, contributing to a general lack of liquidity in debt markets.

The RBNZ's Liquidity mismatch ratio³ is very similar in concept to the LCR. We have a one-week ratio which requires banks to hold sufficient primary liquid assets⁴ to meet net outflows under a one week name crisis. There is also a one month mismatch ratio requirement where primary and secondary liquid asset holdings must be sufficient to meet potential outflows under a 30-day crisis. There is a close alignment between the eligibility of assets to meet the RBNZ liquidity standards and the eligibility of those assets as collateral in RBNZ operations.

² The NSFR is designed to ensure that banks maintain a **stable** funding profile in relation to the characteristics of their on- and off-balance sheet activities. In particular, the NSFR limits over-reliance on short-term wholesale funding, encourages better assessment of funding risk, and promotes funding stability. BIS *"Basel III: The Net Stable Funding Ratio" January 2014.*

³ See Appendix 2 for definitions.

This acknowledges the role of central bank eligibility in underpinning private market liquidity as well as the central bank's ultimate role as lender of last resort to the banking system. Restrictions are placed on holdings of the lower quality "secondary" liquid assets in order to ensure that banks hold a majority of primary rather than secondary liquid assets.

More importantly, from an overall funding risk perspective, RBNZ introduced a Core Funding Ratio⁴ (CFR) similar to the proposed NSFR. The current minimum requirement of 75 percent was phased in over a three year period. The CFR requirement has promoted a significant improvement in the stability of the New Zealand banks' funding base, with short term wholesale funding falling from 35 percent of total funding in 2008 to 15 percent in 2013. While the CFR was introduced as a micro-prudential requirement, the RBNZ has more recently nominated the CFR as a potential macro-prudential instrument. This means that the CFR could be adjusted through the financial cycle with a view to increasing funding resilience and average funding costs in the upturn, and taking pressure off funding costs in the downturn. I will come back to this a bit later in the context of the interaction between liquidity standards and monetary policy.

Central bank liquidity facilities

Cecchetti and Disyatat (2009)⁵ differentiate between three kinds of potential liquidity shortage, relating to central bank cash, the funding of institutions, and the liquidity of key markets. In normal times, the central bank targets a supply of settlement cash consistent with maintaining short term market rates in line with the official policy rate. During the crisis, this approach was insufficient to restore stability. It was also necessary to introduce new funding facilities, and to broaden existing facilities in terms of the counterparties dealt with and the range of assets accepted as collateral.

While most of the special funding facilities have been curtailed since the GFC, some countries have found it necessary to maintain direct funding facilities, for example the BOE's funding for lending scheme. Further, it is probably fair to say that many of the special facilities used during the GFC effectively remain on standby, i.e. they could easily be re-activated in a new crisis situation.

Many central banks have also retained the broader scope of their mainstream liquidity facilities. Examples here include BOE, BOJ, RBA, and RBNZ. These more permanent changes reflect lessons learned in the GFC about the different dimensions of financial system liquidity. Many central banks appear to have broadened their perspective on the "Lender of Last Resort" function and what this implies for central bank policies in normal times as well as during a crisis.

One aspect of this broader approach is seen in central banks being more explicit about the key markets they will support⁶. This might involve a prior commitment to directly support particular markets in a crisis, (eg. the FX market, the interbank market, the short term repo market). It might also involve an ongoing commitment to accept certain securities as eligible collateral. During the GFC, the market liquidity of debt securities became critically dependent on their collateral eligibility at the central bank. Central banks adjusted their credit standards

⁴ See Appendix 2 for definition.

⁵ Cecchetti, Stephen G. and Disyatat, Piti, Central Bank Tools and Liquidity Shortages (February 1, 2009). Economic Policy Review, Vol. 16, No. 1, p.29, August 2010. Available at SSRN: <http://ssrn.com/abstract=1678162> or <http://dx.doi.org/10.2139/ssrn.1678162>.

⁶ "Lessons from the Use of Extraordinary Central Bank Liquidity Facilities" *Stéphane Lavoie, Alex Sebastian and Virginie Traclet* Bank of Canada Review, Spring 2011.

"Central Bank Liquidity Provision and Core Funding Markets" *Grahame Johnson and Eric Santor* paper presented at Reserve Bank of Australia 2013 Conference – Liquidity and Funding Markets.

in order to accommodate the broader range of collateral instruments, albeit with larger haircuts to mitigate the risk. By maintaining broader ranges of eligible collateral, central banks are effectively continuing to support the liquidity of a range of debt markets.

So in the post-GFC environment, central banks are generally now better prepared and more willing to support financial system liquidity in its various forms, through existing facilities, through dormant special funding facilities that can be reactivated as necessary, and through ongoing commitments to support liquidity in key financial markets, including by accepting a broader range of collateral instruments.

Alignment of Basel standards and central bank liquidity policies

The first point I would make here is that an increased preparedness by central banks to support system liquidity is totally consistent with a more rigorous approach to prudential liquidity standards. Externalities associated with liquidity shocks were clearly evident in the GFC, highlighting the need for banks to be prepared for both local and systemic liquidity shocks. Further, more active central bank liquidity support may accentuate the moral hazard problem by reducing incentives on banks to self-insure against liquidity shocks. There is thus a clear case for stronger prudential liquidity standards to ensure banks are better able to withstand liquidity pressures, notwithstanding the role of the central bank as underwriter of system-wide liquidity.

However, it is difficult to say that the new Basel III liquidity standards have been aligned with the developments in central bank liquidity policies. First, the Basel III initiative is attempting to promote a convergence across countries towards a single international liquidity standard, whereas central bank liquidity policies have if anything become more diverse since the crisis. Second, the Basel III standards have focussed on safe haven liquid assets that are expected to retain their value and liquidity in a crisis, irrespective of central bank liquidity policies. While this approach may work in the major developed economies, it does not recognise the crucial role that central bank liquidity policies can play in smaller economies, particularly where there is no deep government security market.

Of course, during the consultation process, the Basel III standards have been modified to accommodate certain local conditions through the alternative liquidity arrangement (ALA) provisions. In particular, the Committed Liquidity Facility (CLF) variation has been designed to accommodate countries where there is a shortage of Government stock (such as Australia and South Africa). This is a positive move in that it recognises the essential role of the central bank in liquidity provision during a crisis. However, the other variations under ALA, while allowing a wider range of LCR-eligible assets, do not link these to local central bank liquidity policies. For example, while there is an expectation that level 2A assets should be eligible central bank collateral instruments, there is no such expectation for level 2B assets.

In the broader scheme, this issue comes down to a trade-off between international cross-border consistency and regulatory efficiency on a country-by-country basis. For the home countries of internationally active banks, the former is clearly important to avoid regulatory arbitrage. But for countries hosting predominantly domestic banking businesses, the need for international consistency is probably less important than the local characteristics of domestic markets when it comes to designing efficient liquidity standards.

Basel III impact on central bank operations

As I mentioned earlier, minimum prudential liquidity standards, including the Basel III standards, are essentially complementary to central bank liquidity policies. The more prepared banks are to meet liquidity shocks, the less work will need to be done by central banks. However, there may be implications for central bank liquidity operations in two respects.

First, with banks required to hold their best quality liquid assets to meet the LCR requirement, they may offer lower quality liquid assets to the central bank in its regular market operations. This would result in central banks having to manage their credit risk more carefully, including paying closer attention to haircuts and securities pricing. This effect would likely persist in a crisis even though supervisors would be able to “release” the LCR requirement. Banks will tend to hoard high quality assets in a crisis, even though the LCR requirement may be reduced. A variation of this effect is for central banks, in the face of a high quality collateral shortage, to move away from sole reliance on reverse repos for injecting system liquidity. An obvious alternative instrument for this purpose, and one which we use extensively in New Zealand, is FX swaps.

Second, for countries adopting the CLF as an alternative to HQLA, there is a question about how this will affect central bank liquidity operations in a stress situation. Typically, under existing arrangements, the central bank can closely control the quantum of system liquidity injections, given that standing (on-demand) facilities have a penalty margin attached. In the case of the CLF however, banks will be free to fully access funds to the extent of the committed credit lines. This could potentially make it more difficult for the central bank to manage the quantity and price of short term funds in a crisis situation.

Interaction between prudential liquidity standards and monetary policy

Another area where the Basel liquidity standards might affect central bank policies is the transmission of monetary policy. This interaction arises in the context of the NSFR or, in New Zealand, the Core Funding Ratio (CFR). These requirements are being introduced as micro-prudential measures, intended to improve banks’ resilience to liquidity shocks by reducing the maturity mismatch between assets and liabilities. The main impact of this policy, as observed with the CFR in New Zealand, will be for the banks to increase the average term of their funding, incurring some increase in average funding costs as a result of the term premium.

My point here is that if the stable funding requirement is treated as a “set and forget” prudential standard, it could have pro-cyclical characteristics⁷ that influence the transmission of monetary policy. The particular situation of concern is in a cyclical downturn when a fixed NSFR will require banks to continue to roll over term debt at a time when term premiums are increasing, rather than allowing the banks to moderate the cyclical impact on their funding costs by shortening the average term of their borrowing. This could cause a weakening of the monetary policy transmission mechanism in that bank cost of funds might not reduce to the same extent as usual following a monetary policy easing in a cyclical downturn.

If this pro-cyclical effect is significant then monetary policy adjustments to official interest rates may need to be more vigorous, potentially in both the upturn and the downturn, to achieve the same effect on bank cost of funds, and thereby bank lending rates.

An obvious way to avoid this pro-cyclical effect of the NSFR would be to adjust the NSFR through the cycle, which would effectively make it a macro-prudential tool. This is indeed the approach that RBNZ is intending to take by including the Core Funding Ratio in its macro-prudential “toolkit”⁸. However, no countercyclical adjustments have yet been made to the CFR.

⁷ See for example “[The macroeconomic effects of a stable funding requirement](#)”, A. Munro, C. Bloor and R. Craigie, Reserve Bank of New Zealand Discussion Paper 2012.

⁸ The MoU between the Minister of Finance and the Governor of the RBNZ is available at http://www.rbnz.govt.nz/financial_stability/macro-prudential_policy/5266657.html.

Conclusion

The GFC has rightly led to: 1) A new emphasis on liquidity standards for banks; and 2) A more comprehensive approach to the management of banking system liquidity by central banks. These two policy arms are complementary.

However, while the Basel III liquidity regime has been created with the aim of achieving common liquidity standards for internationally active banks, the post-GFC evolution of central bank liquidity policies has been diverse and very local in character, making it difficult to achieve alignment between the two policy arms. Alignment has not been assisted in my view by the approach that has been taken to allowable variations in the Basel III standards. While the alternative CLF arrangement brings the central bank explicitly into the scope of the LCR for countries adopting that variant, the important role of central bank policies is not recognised more broadly.

Regarding the implications of the Basel III liquidity standards for central bank operations, the main impact is likely to be on the quality of assets that central banks may need to accept in reverse repo operations. Banks are more likely to hoard their higher quality liquid assets to meet LCR requirements, including in a crisis situation. This will reinforce the need for central banks to improve their credit assessment capabilities, including closer attention to pricing and haircut requirements.

A more substantive implication of the Basel III liquidity standards relates to the potential for the NSFR to have a pro-cyclical impact on banks' cost of funds. Such effects could arise if banks are prevented from modifying the term structure of their debt in response to large changes in the interest rate term premium. In this regard, the prudential and monetary authorities may find that the NSFR cannot be treated as a "set and forget" policy ratio.

Appendix 1: Alternative liquidity approaches under the LCR

The following describes how some countries are implementing Alternative Liquidity Approaches under Basel III.

Australia – the RBA and APRA have introduced a "Committed Liquidity Facility" (CLF) that provides an insurance overlay to otherwise "low quality" liquid assets, at a cost of 15 basis points per annum. The CLF will be sufficient in size to cover the shortfall between a bank's holdings of HQLA and its LCR needs. Qualifying collateral for the facility will comprise all assets eligible for repurchase transactions with the RBA under normal market operations and other assets the RBA deems appropriate (including self-securitisations). Banks will be required to demonstrate that they have taken all reasonable steps towards meeting their LCR requirements through their own balance sheet management, before relying on the CLF. APRA will be reviewing each ADI's liquidity risk management framework and management practices as the basis for approving the CLF for LCR purposes.

South Africa – The South African Reserve Bank has approved the provision of a CLF and the utilisation of statutory cash reserves as part of HQLA for liquidity regulation purposes. South Africa has a limited availability of Level 1 HQLA and virtually no Level 2 assets that satisfy the Basel III criteria. The CLF will be provided for an amount up to 40 per cent of any particular bank's liquidity requirements. The commitment fee is scaled so that the fees charged increase as the reliance on the CLF increases. There is also a drawdown rate of 100 basis points and drawdowns will be for a period of 30 days.

Norway – Norwegian authorities acknowledge that the LCR requirements will pose a challenge to Norwegian banks due to lack of Government bonds, but also due to strict cash-flow run-off assumptions imposed by the Basel III requirements. Net cash outflows in a crisis forms the denominator of the LCR equation. Where the strict rules around the run-off of cash-flows do not align with the characteristics of the underlying assets and liabilities, the required net cash outflow assumptions may be overstated and the required HQLA will

consequently be higher. At this point Norwegian authorities have not stated their final policy position.

Malaysia – also have issues with the Basel III approach to the proposed cash flow assumptions, particularly as they relate to institutional savings schemes. In Malaysia, these schemes are dominated by pension funds, which predominantly manage household savings. However, the LCR cash outflow assumptions for investments from institutional funds are more severe than for investments for retail funds, even though the underlying savings are from households in both cases. As a result, HQLA requirements for banks are higher than might be expected.

Hong Kong SAR – Given the limited supply of HQLA denominated in Hong Kong dollars, the HKMA expects Hong Kong to be a jurisdiction which needs to adopt alternative arrangements for LCR purposes. HKMA have stated that they are likely to use option 2 for alternative arrangements, which allows the use of Level 1 foreign currency HQLA to cover local currency liquidity needs.

Appendix 2: Basel III Liquidity Coverage Ratio (LCR)

$$\frac{\text{Stock of HQLA}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

Definition of HQLA

There are two categories of assets that can be included in the stock of High Quality Liquid Assets. “Level 1” assets can be included without limit, while “Level 2” assets can only comprise up to 40% of the stock. Supervisors may also choose to include within Level 2 an additional class of assets (Level 2B assets). If included, they will be within the 40 percent limit on Level 2 assets and comprise no more than 15 percent of the total stock of HQLA.

Level 1 assets are limited to:

1. coins and banknotes;
2. central bank reserves (including required reserves);
3. marketable securities representing claims on or guaranteed by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank and European Community, or multilateral development banks, and satisfying certain conditions such as being assigned a 0 percent risk-weight under the Basel II Standardised Approach and traded in large, deep and active repo or cash markets characterised by a low level of concentration;
4. where the sovereign has a non-0 percent risk weight, sovereign or central bank debt securities issued in domestic currencies by the sovereign or central bank in the country in which the liquidity risk is being taken or in the bank’s home country; and
5. where the sovereign has a non-0 percent risk weight, domestic sovereign or central bank debt securities issued in foreign currencies are eligible up to the amount of the bank’s stressed net cash outflows in that specific foreign currency stemming from the bank’s operations in the jurisdiction where the bank’s liquidity risk is being taken.

Level 2A assets are limited to the following:

- (a) Marketable securities representing claims on or guaranteed by sovereigns, central banks, PSEs or multilateral development banks that satisfying certain conditions such as 20 percent risk weight under the Basel II Standardised Approach, traded in large, deep and active repo or cash markets characterised by a low level of concentration;

(b) Corporate (non-financial) debt securities (including commercial paper) and covered bonds that satisfy certain conditions around a satisfactory credit rating and traded in large, deep and active repo or cash markets characterised by a low level of concentration;

Level 2B assets are limited to the following:

- 1 Residential mortgage backed securities (RMBS) that satisfy certain conditions.
2. Corporate (non-financial) debt securities (including commercial paper) that satisfy certain conditions including a minimum credit rating
3. Common (non-financial) equity shares that satisfy certain conditions such as being exchange traded and centrally cleared, denominated in domestic currency and traded in deep markets.

Reserve Bank of New Zealand mismatch ratio

The Reserve Bank's mismatch ratio is akin to the LCR, although it is not compliant with Basel III requirements. All New Zealand incorporated registered banks are subject to minimum one-week and one-month mismatch ratios. The aim of the mismatch ratios is to reduce the risk that an individual bank is brought down by a short-term loss of confidence.

One-week mismatch ratio

$$\frac{\text{Primary liquid assets} + \text{net inflows} - \text{demand funding}}{\text{Total Funding}} \times 100 \geq 0$$

One-month mismatch ratio

$$\frac{\text{Primary} + \text{Secondary liquid assets} + \text{net inflows} - \text{demand funding}}{\text{Total Funding}} \times 100 \geq 0$$

Primary liquid assets contain the following classes of assets:

1. ESAS balances with the RBNZ
2. NZD currency demand balances with other NZ banks
3. Foreign currency notes and coins held by the bank, and foreign currency demand balances held with overseas banks, subject to a haircut;
4. NZ government securities denominated in NZD
5. Other securities with haircuts:
 1. High rated local authority securities
 2. High rated State owned Enterprise securities.
 3. High rated Kauris,
 4. High rated two-name and single-name RMBS

Secondary liquid assets have larger haircuts and contain the following classes of assets:

1. Local and Foreign government guaranteed securities
2. Lower rated local authority securities
3. Lower rated corporate securities
4. Asset back securities
5. Registered bank securities

Reserve Bank of New Zealand core funding ratio

The Reserve Bank's mismatch ratio is akin to the NSFR. The basic notion underlying the CFR is a comparison between an estimate of the funding of the bank that is stable and can be assumed to stay in place for at least one year ('core funding'), and the core lending business of the bank that needs to be funded on a continuing basis. The CFR is currently applied to locally incorporated banks. A bank must maintain its one-year core funding ratio at not less than the minimum specified in its conditions of registration, at the end of each business day. For most banks this is currently set at 75 percent.

One-year core funding ratio =

$$\frac{\text{One year core funding dollar amount}}{\text{Total loans and advances}} \times 100 \geq 75\%$$

Where the one year core funding dollar amount =

- *all* funding with residual maturity longer than one year, including subordinated debt and related party funding
- *plus* 50 percent of any tradable debt securities issued by the bank with original maturity of two years or more and with residual maturity at the reporting date of more than six months and not more than one year
- *plus* non-market funding that is withdrawable at sight or with residual maturity less than or equal to one year
- *plus* Tier 1 capital