

**Observation relating
to the December
2009 BCBS Paper
“International
framework for
liquidity risk
measurement,
standards and
monitoring”**

**Summary and
comments**

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Version control

Author	Date	Revision
Selwyn Blair-Ford	10 February 2010	Initial draft
Lauren Dearmer	27 April 2010	Reformatting and editing
Rebecca Bond	10 May 2010	Final editing

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1 Introduction

This paper summarises the main issues raised by the Basel Committee on Banking Supervision (BCBS) paper entitled “International Framework for Liquidity Risk Measure, Standards and Monitoring”. It describes the new liquidity tools, including the Liquidity Coverage Ratio, the Net Stable Funding Ratio, and the monitoring tools. It then comments on these new measures.

In December 2009, as part of the continuing process of the lessons learned from the recent financial crisis, the Basel Committee on Banking Supervision (BCBS) released a consultation paper entitled “International Framework for Liquidity Risk Measure, Standards and Monitoring”. This paper is to be read in conjunction with September 2008 paper “Principles for Sound Liquidity Risk Management and Supervision” and the December 2009 consultation document “Strengthening the Resilience of the Banking Sector”. Together they represent a significant increase in the level of regulatory reporting that will be required from firms working in the global financial sector. These most recent papers are also in response to calls from the G20, and as such there is an almost unprecedented determination to have this global liquidity framework implemented.

2 What is the BCBS paper?

The paper BCBS paper has the following structure:

- Summary of the regulatory standards
- Regulatory standard, Liquidity Coverage Ratio (LCR)
- Regulatory standard, Net stable Funding Ratio
- Monitoring Tools
 - Contractual Maturity Mismatch
 - Concentration of Funding
 - Available Unencumbered Assets
 - Market-Related Monitoring Tools
- Application issues and annexes

The objective of the BCBS consultation paper is to establish a single global framework to monitor and measure liquidity. These represent the minimum international standard to which internationally active financial firms should adhere to.

Here the BCBS clarifies the relationship between this paper and the Principles for Sound Liquidity Risk Management and Supervision paper published in September 2008. This earlier paper was about getting firms to improve the risk management and control of their liquidity risks including:

- Board and senior management oversight;
- The establishment of policies and risk tolerances;
- The use of liquidity risk management tools such as comprehensive cash flow forecasting, limits and liquidity scenario stress testing;
- Development of robust contingency funding plans;
- The maintenance of a sufficient cushion of high quality liquid assets to meet contingency needs.

The purpose of this most recent paper is to establish international measurement and performance standards, and a framework for supervisory comparison.

3 To whom does it apply?

This framework is designed to measure the liquidity status of large internationally active financial concerns and as such it will impact those firms. It is the case that in many jurisdictions the authorities are likely to insist that not only the international firms but larger domestic concerns should also be subject to this new framework. In some other jurisdictions regulators may feel it prudent to insist all financial concerns are subject to an enhanced liquidity framework. We can conclude this is an industry-wide initiative that will directly or indirectly impact all financial firms.

These standards also place many obligations on banking supervisors. The requirements on supervisors are not only around the completeness and effectiveness of the relevant data gathering, but also with regards to the appropriate stress testing that will need to be performed. As such, this paper represents a considerable amount of work for financial regulators.

4 The new regulatory standards

The BCBS framework includes three new measures to measure firm's liquidity status.

- Liquidity Coverage Ratio
- Net Stable Funding Ratio
- Monitoring Tools

These are discussed in detail below.

4.1 Liquidity coverage ratio

The liquidity coverage ratio (LCR) is defined as

$$\text{LCR} = \frac{\text{Stock high quality liquid assets}}{\text{Net cash outflows over a 30 day period}}$$

The LCR must be equal to or greater than 100% or the net cash outflow is less than zero (i.e. no net outflow over the observed period). It is based on measures used within banks to assess exposure to contingent liability events.

4.1.1 Stock of liquid assets

These are highly liquid unencumbered assets that firms will be required to hold. The intention is to incentivise financial institutions to hold sufficiently conservative funding profiles. The assets held as liquid assets will have the following characteristics

- **Low credit and market risk:** Includes assets with high credit ratings, low degree of subordination, duration low volatility and inflation risk.
- **Ease and certainty of valuation:** Easy pricing formula, publicly available inputs
- **Low correlation with risky assets:** No wrong way risk, e.g. assets that fail due to the same factors that are causing the firm financial stress.
- Listed on a developed and recognised exchange
- **Active and sizable market:** Large number of participants, good market breadth and depth (outright and/or repo market)
- **Presence of committed market makers:** quotes always available
- **Low market concentration:** diverse group of buyers and sellers
- **Flight to quality:** Assets the market tends to hold in time of crisis

Assets that are deemed to meet these criteria include cash, central bank reserves that can be drawn, marketable assets guaranteed by sovereigns, central banks, public sector entities IMF and World Bank, European Commission and multilateral development banks.

Other instruments are being considered including certain types of corporate bonds can covered bonds, but with deep haircuts assigned by credit weight.

Net cash outflows over a 30 day period: The net cash outflow over a 30 day period will be determined using a stress scenario that incorporates many of the shocks experienced during the 2008 financial crisis. It will be a combined idiosyncratic and market wide stress which includes a three notch credit downgrade, a run-off of a proportion of retail deposits, loss of wholesale funding markets, loss of secured short-term funding, increased market volatilities, increased collateral requirements, the drawing down of unused credit facilities, need to fund balance sheet growth to cover reputational risk.

The parameters for this stress test will be set by the financial supervisors. It is clear that supervisors need to take care when constructing stress test as this measure will be used to compare across jurisdictions.

$$\text{Net cash outflow} = \text{Cash outflow} - \text{Cash inflow}$$

Net cash outflow is taken to be the cumulative expected cash outflows less the expected cash inflow for the period under consideration.

4.1.2 Calculation of cash outflow

Cash outflows are to be calculated by looking at each source of funding then applying a run-off factor to each item to calculate the outflow over the period. The exact size of the run-off factor may be determined by the supervisor who derives the factor from the above mentioned stress test.

So for example stable retail deposits may have a run-off factor of 7.5% (that is 7.5% x balance sheet stable retail deposit value give the retail deposit cash outflow).

Wholesale funding by small business may have a factor of 15%, and non-financial corporate a run off of 25%. Note in the case of wholesale funding the run-off factor is applied only to the amounts due to be rolled over in the 30 day period.

To account for outflow due to credit deterioration, any contract which includes downgrade triggers have to assume an additional 100% collateral. Committed credit lines will be assumed to be will have roll-off factors between 10 and 100% dependent on line of business.

National supervisors will need to consider how to appropriately deal with market valuation changes on derivative transactions, and the resulting collateral movements. The same is true of other contingent funding lines.

4.1.3 Calculation of cash inflow

Cash inflows are calculated on a contractual basis over the 30 days, unless the firm has reason to believe a party will default. No rollover of repo transactions are to be assumed, but neither are reverse repos expected to be renewed.

4.1.4 Net stable funding ratio

The objective of this measure is to promote safe medium term and longer term funding of assets; it will also act as a minimum enforcement mechanism which complements the liquidity coverage ratio. It encourages firms to maintain a funding profile to ensure they remain viable for at least one year even under stressed conditions.

The Net Stable Funding Ratio (NSFR) is defined as

$$\text{NSFR} = \frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}}$$

Where the NSFR should always be greater than 100%

Available Stable Funding (ASF): This is defined as capital, preferred stock, liabilities with maturities over one year, and the stable portion of term and non-maturing deposits. When calculating the amount of available stable funding, some items have an ASF factor applied which reduces the total funding pool. So for example 100% of tier one and tier two capital would count towards the ASF whereas only 85% of stable retail funding and 50% of unsecured wholesale funding would apply.

Required stable funding (RSF): The amount of required stable funding is the sum of the asset value of assets held and funded multiplied by a RSF factor applied to each asset type plus off balance sheet exposure multiplied by a RSF factor. The method of arriving at the off balance sheet exposure is to be given by the national supervisors. The RSF factor estimates the amount of the asset that could not be monetised under prolonged stress conditions. Hence the RSF factor for cash is 0%, for corporate bonds are given at 20% and for equity securities 50%.

4.2 The monitoring tools

The following outlines the monitoring tools needed to measure a firm's liquidity status.

4.2.1 Contractual maturity mismatch

This tool identifies the gaps between the contractual inflows and outflows for defined time bands. The report contains both security flows and cash flows, and at a minimum should detail seven day, 14 day, one, two, three and six months, one, three, five years+ time buckets. Assets should be reported according to their latest cash flow, liabilities according to their earliest. It also assumed that penalty clauses would not stop creditors withdrawing funds.

4.2.2 Concentration of funding

The following ratios have been defined to measure the funding concentration.

$$\text{A. } \frac{\text{Funding liabilities sourced from each significant counterparty}}{\text{The Firm's total balance sheet}}$$

Funding liabilities sourced from each significant product/instrument

B. -----

The Firm's total balance sheet

C. List of asset and liability amounts by significant currency

Significant counterparties are defined using similar rules as large exposure reporting for capital solvency. Significant product/instrument is a product or instrument which aggregates to more than 1% of the financial institution's total liabilities.

4.2.3 Available unencumbered assets

This measure includes available unencumbered assets that are marketable as collateral in secondary markets and/or eligible for central banks standing facilities.

Financial firms are required to report the currency denomination, location and amount of their unencumbered assets. Significant currency is defined as currencies whose value is greater than 1% of total liabilities. Firms must also report the amount of haircut required by the central bank for the asset to be accepted as collateral, and the amount of money that can be expected to be received

4.2.4 Market-related monitoring tools

Supervisors can be expected to monitor:

- Market wide information: Level and direction of the markets and potential impact on the financial sector
- Information on the financial sector: Is the financial sector in line with the broader market or is it experiencing sector specific difficulties.
- Bank specific information: Monitor market confidence in a particular firm.

5 Comments and observations

This document both reinforces the recent liquidity developments in the UK, Australia, Netherlands and other jurisdictions and extends it with additional measures. There are however some issue and comments that we should raise regarding some of the suggested measures and their overall impact on the financial sector.

5.1 Supervisors role in specifying stress testing

The supervisors select a run-off factor in the LCR based on their own stress test. In doing so the supervisors' stress test will act as a benchmark against which other stress testing will be measured. This may not be a desirable state of affairs, as in the event a stress test proved not to be stringent enough, the financial sector will legitimately be able to point at the regulator to show their failed assumptions were reasonable. Policy makers have to ensure that the responsibility for the appropriateness of the stress test reside firmly with the financial institution, and not any other body.

5.2 Appropriateness of the LCR measure

The LCR measures liquidity over 30 days. However 30 days will be more appropriate for some business models than others. Financial firms should be encouraged to publish the LCR for a time period that best fits their business model alongside the standard 30 day LCR where they differ. A short written explanation with regards to the appropriateness of the non-standard measure should also be included.

5.3 Net stable funding

The methodology around the NSFR assumes to some measure, it is possible to determine in advance what is stable funding. The method then uses discount factor, presumably because we accept there is uncertainty in determining what will actually be stable. It has also been the experience of many that whole classes of funding displayed signs of liquidity stress at the same time. Because we cannot be certain how the next crisis will affect funding it does not seem prudent to include items that require a high discount factor. The preference in the context of liquidity would be not to use any item that needed a discount factor. However, given that this may not be feasible, and the supply of liquid assets which does not require discounting may not be enough, one should perhaps exclude those items with a discount factor lower than 70%.

5.4 Stock of high quality assets

There is the suggestion in this document that highly liquid assets should be acceptable as collateral at the central bank. In this suggestion is embedded the idea is that the central bank will have a role to play in any future liquidity crisis. This introduces a degree of moral hazard¹ in the liquidity process, which works against the idea that the industry needs to be self-sufficient with regards to liquidity. Confidence in the quality of liquid assets should not reference the central bank because central banks make no explicit commitments to accept any particular asset in a liquidity crisis.

¹ Moral Hazard: Financial Institutions may take greater risks than they would do without it because they know they are protected

In some cases (for example for corporate and covered bonds), discounts have to be applied for the inclusion as a liquid asset. The assumption is that given the uncertainty that these items will be liquid when needed, the framework chooses to recognise only part of the value. But in a crisis it can be that liquidity is either there or it is not. The application of a discount factor indicates a lack of confidence these items will be liquid when needed, and hence should not be included in any prudent measure of stock of high quality liquid assets. Instead the existence of these items should be used to demonstrate that the likelihood of the stock of high quality assets needing to be used is very much reduced. Perhaps they should be separately disclosed as applicable assets, but not as part of a stock of high quality liquid assets.

5.5 Concentration of funding

The timing of funding is important to determine how critical a particular funding source is. As such the measures suggested should be given by time bucket, not just as per current balance sheet. This will allow observers to weight not only by size of funding but also by immediacy of refunding needs.

Lastly, the requirement that firms may need to report on a weekly or even daily basis implies very large structural changes for financial institutions. Firms need to take this opportunity to appraise their entire reporting process and eliminate potential blocking issues as soon as possible.

6 Conclusion

This paper represents a large step in the development of an industry wide liquidity framework. Participants should be in no doubt that much of what is contained in this paper will be implemented. Therefore, financial firms need to be preparing the groundwork for implementation now, alongside existing longer term regulatory projects. If we consider the changes in regulation that relate to capital structure, counter cyclical buffers, securitisations, capital and solvency stress testing, credit risk and central counterparties etc., then it is clear that firms should not only be addressing the needs arising from this paper. What is needed is an overall strategic approach to how firms will cope with this new regulatory environment, and in particular the infrastructure that must be in place in order to satisfy all current and future regulatory requirements. We can look forward to a very busy time.