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[BCBS - LIQUIDITY SUMMARY]

This document summarises the key aspects of the "*Sound Principles*" and "*Basel III – Liquidity*" documents published by BCBS. This document also analyses the likely impact of the Basel-III rules in light of the existing FSA liquidity rules.

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Glossary

BSBS – Basel Committee on Banking Supervision

FSA – Financial Services Authority (UK's Financial Regulator)

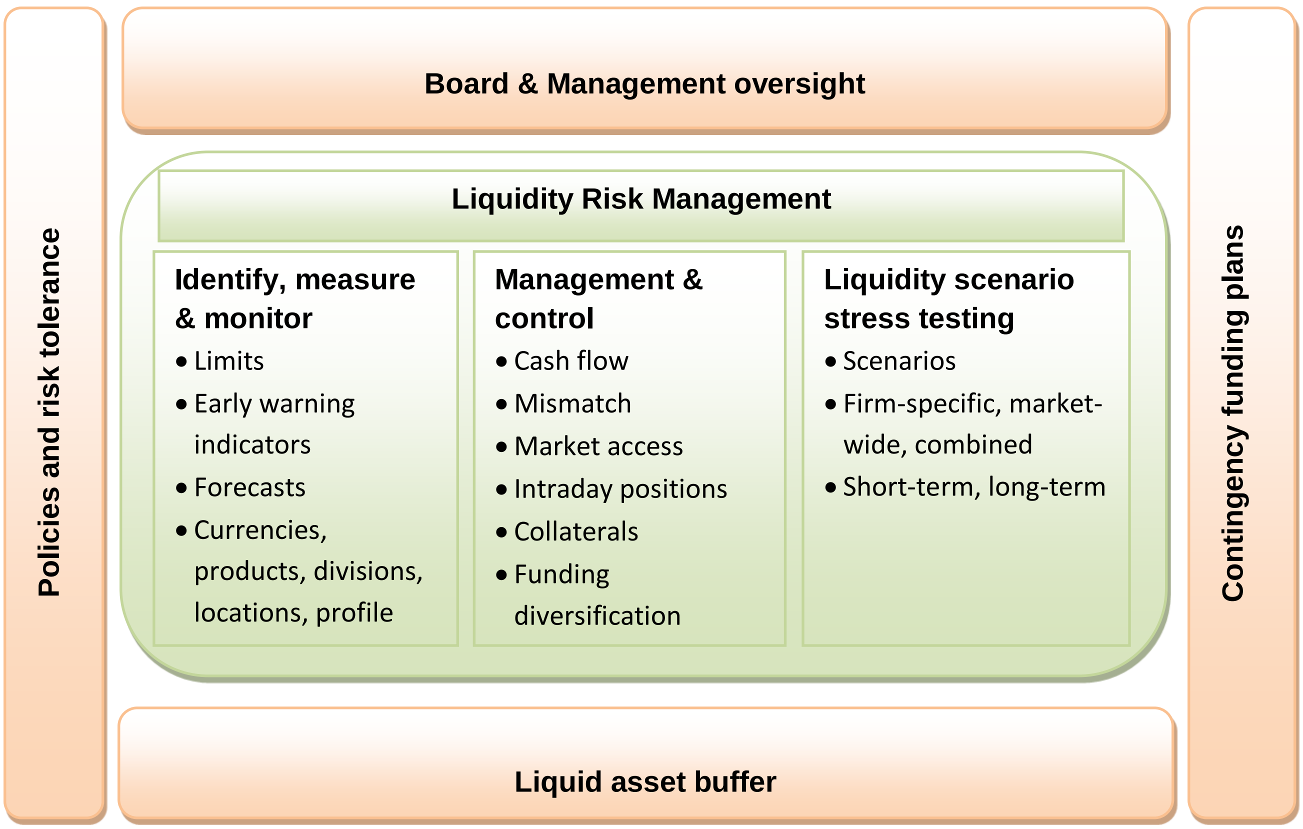
LCR – Liquidity Coverage Ratio

NSFR – Net Stable Funding Ratio

1 Introduction

In December 2010, the Basel Committee on Banking Supervision (Basel Committee) published '*Basel III: International framework for liquidity risk measurement, standards and monitoring' ("Basel III – Liquidity")*; in which the committee has developed two minimum standards for measuring liquidity risk and defined a set of monitoring tools to be used for on-going monitoring of liquidity risk exposure.

The Basel III framework builds on the *Principles for Sound Liquidity Risk Management and Supervision ("Sound Principles")*, published in September 2008, which provides detailed principle based guidelines on liquidity risk management.



A simplified view of the "Sound Principles" guidelines published by the Basel Committee

This document summarises the key aspects of the "*Sound Principles*" and "*Basel III – Liquidity*" documents.

2 Regulatory Standards

The Basel Committee has defined two minimum standards, Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) to measure short term and long term resilience of the liquidity risk profile of banks.

The Liquidity Coverage Ratio (LCR) promotes short term resilience by ensuring that banks maintain sufficient high quality liquid assets to survive a significant stress scenario lasting 30 calendar days. The Net Stable Funding Ratio (NSFR) measures long term (over one year) resilience by promoting banks to fund their activities with more stable sources of funding on an on-going basis.

2.1 Liquidity Coverage Ratio (LCR)

$$\frac{\textbf{Stock of high-quality liquid assets}}{\textbf{Total net cash outflow over the next 30 days (under stress)}} \quad \mathbf{> 100\%}$$

Banks will have to hold a stock of high quality liquid assets as a defence against the potential onset of severe liquidity stress. The LCR should be reported at least once a month under normal circumstances and weekly/daily in a stressed situation.

The firm should consider scenarios under a combined idiosyncratic and market-wide stress situation to evaluate this ratio. The stress scenarios to be considered are:-

a) the run-off of a proportion of retail deposits;
b) a partial loss of unsecured wholesale funding capacity;
c) a partial loss of secured, short-term financing with certain collateral and counterparties;
d) additional contractual outflows that would arise from a downgrade in the bank's public credit rating by up to and including three notches, including collateral posting requirements;
e) increases in market volatilities that impact the quality of collateral or potential future exposure of derivative positions and thus require larger collateral haircuts or additional collateral, or lead to other liquidity needs;
f) unscheduled draws on committed but unused credit and liquidity facilities that the bank has provided to its clients; and
g) the potential need for the bank to buy back debt or honour non-contractual obligations in the interest of mitigating reputational risk

2.1.1 Stock of high-quality assets

Under stress, the stock of high-quality liquid assets should be liquid and marketable. The key characteristics of these high-quality assets are outlined below:-

Fundamental characteristics

a) Low credit and market risk – assets that are less risky tend to have higher liquidity
b) Ease and certainty of valuation – assets liquidity increases if market participants are more likely to agree on its valuation
c) Low correlation with risky assets – these assets should not be subject to wrong-way (highly correlated) risk
d) Listed on developed and recognised exchange market – being listed increase transparency

Market-related characteristics

a) Active and sizable market – the assets should have an active market at all times
b) Presence of committed market makers – quotes will most likely be available
c) Low market concentration – a diverse group of buyers and sellers
d) Flight to quality – historically, in a systemic crisis, market tend to move into these assets

These high-quality liquid assets are categorised in to two levels. Level-1 assets can comprise of an unlimited share of the stock, whereas Level-2 assets can only comprise up to 40% of the stock. A summary of the items included in Level-1 and Level-2 and their weight age is shown the in the table below:-

Item	**Factor (%) (that can be included in the stock of high-quality assets)**	**Current FSA reports capturing this information**
A. Level 1 assets		
Cash	100%	FSA047/48: Row 19, 21, 22 (Row 21,22 require further refinement)
Qualifying marketable securities from sovereigns, central banks, public sector entities, and multilateral development banks (qualifying for 0% risk weighting under Basel II Standardised Approach)	100%	FSA047/48: Row 6
Qualifying central bank reserves	100%	FSA048: Row 19
Domestic sovereign or central bank debt in domestic currency	100%	Not applicable as UK sovereign currently qualifies for 0% risk weighting.
Domestic sovereign debt for non-0% risk weighted sovereigns, issued in foreign currency	100%	Not applicable as UK sovereign currently qualifies for 0% risk weighting.

Item	Factor (%) (that can be included in the stock of high-quality assets)	Current FSA reports capturing this information
B. Level 2 assets		
Sovereign, central bank, and PSE assets qualifying for 20% risk weighting	85%	FSA047/48: Row 7,8
Qualifying corporate bonds rated AA- or higher (excluding financial institutions)	85%	FSA047/48: Row 15
Qualifying covered bonds rated AA- or higher	85%	FSA047/48: Row 11
Note: Level 2 assets after haircut are capped at 40% of the total stock of high quality liquid assets.		

2.1.2 Total net cash outflows

The total net cash is defined as the total expected cash outflows less the total expected cash inflows in the specified stress scenario for the subsequent 30 calendar days. The total expected cash inflows is capped at 75% of the outflows.

Total net cash outflows over the next 30 calendar days = outflows – Min {inflows; 75% of outflows}

The outflows are categorised on various factors and the stress percentages used are also different. The details of stress percentages (outflow/inflow) are listed in the table below:-

Cash outflow Items	Outflow % considered	Current FSA reports capturing this information
A. Retail deposits		
Demand deposit and qualifying term deposits with residual maturity or notice period within 30 days		
stable deposits (Type-B)	5% (minimum)	FSA048: Row 55
less stable deposits (Type-A)	10% (minimum)	FSA048: Row 54
Term deposit with residual maturity greater than 30 days with a withdrawal with a significant penalty, or no legal right to withdraw	0%	FSA048: Row 54/55
B. Unsecured wholesale funding		
Stable small business[1] customers	5% (minimum)	FSA048: Row 53 (require further refinement)
Less stable small business customers	10% (minimum)	FSA048: Row 53 (require further refinement)
Legal entities with operational relationships[2]	25%	New rows required.
Portion of corporate deposits with operational relationships covered by deposit insurance – same treatment as for stable retail deposits	5% (minimum)	New rows required.

[1] The total aggregated funding raised from one small business customer is less than €1 million (on a consolidated basis) - paragraph 70

[2] Operational relationship refers to clearing, custody or cash management relationships with the customer. Correspondent banking or prime brokerage services cannot be considered as an operational relationship.

Cash outflow Items	Outflow % considered	Current FSA reports capturing this information
Cooperative banks in an institutional network	25%	New rows required.
Non-financial corporates, sovereigns, central banks and PSEs	75%	FSA047/48: Row 47, 49, 52
Other legal entity customers	100%	FSA047/48: Row 44, 45, 46, 48
C. Secured funding		**(Repo cash flows)**
Secured funding transactions backed by Level 1 assets, with any counterparty	0%	FSA047/48: Row 34
Secured funding transactions backed by Level 2 assets, with any counterparty	15%	FSA047/48: Row 35 to 39 (require further refinement)
Secured funding transactions backed by assets that are not eligible for the stock of highly liquid assets, with domestic sovereigns, domestic central banks, or domestic public sector entities as a counterparty	25%	FSA047/48: Row 35 to 39 (require further refinement)
All other secured funding transactions	100%	FSA047/48: Row 35 to 39 (require further refinement)
D. Additional requirements		
Liabilities related to derivative collateral calls related to a downgrade of up to 3-notches	100% of collateral – for 3 notch downgrade	FSA048: Row 70 to 73
Market valuation changes on derivatives transactions	To be determined by FSA	
Currently undrawn portion of committed credit and liquidity facilities[3] to:		
retail and small business clients	5%	FSA048: Row 66, 67
non-financial corporates, sovereigns and central banks, and PSEs; credit facilities	10%	FSA048: Row 65 (require further refinement)
non-financial corporates, sovereigns and central banks, and PSEs; liquidity facilities	100%	New rows required
other legal entity customers, credit and liquidity facilities	100%	FSA048: Row 59 to 69 (require further refinement)
Other contingent funding liabilities (such as guarantees, letters of credit, revocable credit and liquidity facilities, derivative valuations, etc.)	To be determined by FSA	FSA048: Row 59 to 69 (require further refinement)
Any additional contractual outflows[4]	100%	New rows required
Net derivative payables	100%	FSA048: Row 74 to 75

[3] The undrawn portion of these facilities/commitments are calculate net of any high-quality liquid assets that have been already posted as collateral by the counterparty to secure the facilities (paragraph 94)

[4] Any other contractual cash outflows within the next 30 calendar days should be captured (e.g., dividends). Outflows related to operating costs are not included in this standard (paragraph 104)

Cash inflow Items	**Inflow % considered**	**Current FSA reports capturing this information**
Reverse repos and securities borrowing, with the following as collateral:		
• Level 1 assets	0%	FSA047/48: Row 25 (require further refinement)
• Level 2 assets	15%	FSA047/48: Row 26, 27, 28 (require further refinement)
• All other assets	100%	FSA047/48: Row 29, 30 (require further refinement)
Operational deposits held at other financial institutions	0%	FSA048: Row 21, 22 (require further refinement)
Deposits held at centralised institution of a network of co-operative banks	0%	New rows required
Other inflows by counterparty:		
• Amounts receivable from retail counterparties	50%	FSA048: Row 32
• Amounts receivable from non-financial wholesale counterparties, from transactions other than those listed in the inflow categories above.	50%	FSA048: Row 31, 23 (Row 23 will require further refinement)
• Amounts receivable from financial institutions, from transactions other than those listed in the inflow categories above.	100%	FSA048: Row 21,22,23 (Row 23 will require further refinement)
Net derivative receivables	100%	FSA048: Row 76 to 77
Credit or liquidity facilities (received)	0%	FSA048: Row 58
Other contractual cash inflows	To be determined by FSA	
Total inflows = MINIMUM [total cash inflows;75% of gross outflows]		

2.2 Net Stable Funding Ratio (NSFR)

Available amount of stable funding
-- **> 100%**
Required amount of stable funding

Stable funding is defined as the portion of those types and amounts of equity and liability financing expected to be reliable sources of funds over a one-year time horizon under conditions of extended stress. NSFR should be reported at least once a quarter.

2.2.1 Available Stable Funding (Sources)

Item	**Availability factor**	**Current FSA reports capturing this information**
Tier-1 and Tier-2 capital instruments[5]	100%	FSA047/48: Row 1,41
Other preferred shares and capital instruments in excess of Tier 2 allowable amount having an effective maturity of one year or greater	100%	New rows required
Other liabilities with an effective maturity of one year or greater	100%	FSA047/48: Row 40 to 56 (excluding Row 41)
Stable deposits of retail and small business customers (non-maturity or residual maturity < 1yr)	90%	FSA048: Row 53 to 55 (Row 53 will require further refinement)
Less stable deposits of retail and small business customers (non-maturity or residual maturity < 1yr)	80%	FSA048: Row 53 to 55 (Row 53 will require further refinement)
Wholesale funding provided by non-financial corporate customers, sovereign central banks, multilateral development banks and PSEs (non-maturity or residual maturity < 1yr)	50%	FSA047/48: Row 44, 47, 49, 52
All other liabilities and equity[6] not included above	0%	FSA047/48: Row 50, 51, 56

2.2.2 Required Stable Funding (Uses)

Item	**Availability factor**	**Current FSA reports capturing this information**
Cash	0%	FSA047/48: Row 19, 21, 22 (Row 21,22 require further refinement)
Short-term unsecured actively traded instruments (<1 yr)	0%	FSA047/48: Row 23
Securities with exactly offsetting reverse repo	0%	FSA047/48: Row 23
Securities with remaining maturity < 1 yr	0%	FSA047/48: Row 25 to 30

[5] After deductions
[6] Mostly funding received from the financial institutions that have residual maturity of less than one year

Item	Availability factor	Current FSA reports capturing this information
Non-renewable loans to financials with remaining maturity < 1 yr	0%	FSA047/48: Row 20, 21, 22
Debt issued or guaranteed by sovereigns, central banks, BIS, IMF, EC, non-central government, multilateral development banks with a 0% risk weight under Basel II standardised approach	5%	FSA047/48: Row 6
Unencumbered non-financial senior unsecured corporate bonds and covered bonds rated at least AA-, and debt that is issued by sovereigns, central banks, and PSEs with a risk-weighting of 20%; maturity ≥ 1 yr	20%	FSA047/48: Row 11, 15 (Row 11 will require further refinement)
Unencumbered listed equity securities or non-financial senior unsecured corporate bonds (or covered bonds) rated from A+ to A-, maturity ≥ 1 yr	50%	New rows required
Gold	50%	New rows required
Loans to non-financial corporate clients, sovereigns, central banks, and PSEs with a maturity < 1 yr	50%	FSA047/48: Row 31
Unencumbered residential mortgages of any maturity and other unencumbered loans, excluding loans to financial institutions with a remaining maturity of one year or greater that would qualify for the 35% or lower risk weight under Basel II standardised approach for credit risk	65%	New rows required
Other loans to retail clients and small businesses having a maturity < 1 yr	85%	FSA047/48: Row 31 (will require further refinement)
All other assets	100%	
Off Balance Sheet Exposures		
Undrawn amount of committed credit and liquidity facilities	5%	FSA047/48: Row 59 to 69 (will require further refinement)
Other contingent funding obligations	To be determined by FSA	FSA047/48: Row 59 to 69 (will require further refinement)

3 Monitoring tools

In addition to the liquidity standards (LCR and NSFR) defined in the previous section, the Basel committee has also defined a few monitoring tools that can be used by banks and regulators to evaluate the liquidity risk of a bank.

3.1 Contractual maturity mismatch

The contractual mismatch analysis provides insight into the extent which the bank relies on maturity transformation under its current contracts.

Maturity mismatch involves the analysis of: contractual cash and security inflows and outflows from all on- and off-balance sheet items, mapped to defined time bands based on their respective maturities.

Banks should conduct the mismatch analysis, based on going-concern behavioural assumptions of the inflows and outflows of funds in both normal situations and under stress. This analysis should be done on the banks strategic and business plans. Banks should also prepare a clear funding plan to bridge any identified gaps.

3.2 Concentration of funding

Banks should identify those sources of wholesale funding that are of such significance that withdrawal of this funding could trigger problems.

$$\frac{\textbf{Funding liabilities sourced from each significant counterparty}^{7}}{\textbf{The bank's balance sheet total}}$$

$$\frac{\textbf{Funding liabilities sourced from each significant product/instrument}^{8}}{\textbf{The bank's balance sheet total}}$$

List of assets and liabilities by significant currency[9]

[7] Significant counterparty is defined as a single counterparty/group accounting for more than 1% of the bank's total balance sheet. This information is currently captured by the report FSA051 (Funding Concentration).
[8] Significant instrument/product is defined as a single instrument/product accounting for more than 1% of the bank's total balance sheet.
[9] A significant currency is a currency accounting to 5% or more of the bank's total liabilities. This information is currently captured by the report FSA054 (Currency Analysis).

These metrics should be reported separately for the time horizons of less than one month, 1-3 months, 3-6 months, 6-12 months and for longer than 12 months.

3.3 Available unencumbered assets

This metrics provides data about the quality and key characteristics, including currency denomination[10] and location, of the firm's available unencumbered assets. These assets are potential sources of liquidity and can be used as collateral to raise additional funding the secondary markets and/or eligible at central banks. Currently, part of the information required is captured in the report FSA050 (Liquid Buffer Qualifying Securities).

3.4 LCR for significant currency

The standards are defined to be met in a single reporting currency, firms should also analyse the LCR in significant currencies. For the net cash outflow component, firms should also consider the foreign exchange cash flows.

The foreign currency LCR is not a standard but a monitoring tool. This tool can be used to track potential short-term currency mismatches under a stress scenario.

3.5 Market related monitoring tools

Firms should also use market-wide information, information on the financial sector and bank-specific information to monitor and analyse impact on the firm's liquidity.

[10] Significant currency is defined as any currency that constitutes 5% or more of the total amount of unencumbered assets.

4 Early warning indicators

Banks should develop Early Warning Indicators to identify the emergence of increased risk or vulnerabilities in its liquidity risk position or potential funding needs. These Early Warning Indicators can be used to identify negative trends and trigger potential management action in order to mitigate the bank's exposure to the emerging risk.

Early warning indicators can be qualitative or quantitative in nature and may include but are not limited to:

• rapid asset growth, especially when funded with potentially volatile liabilities

• growing concentrations in assets or liabilities

• increases in currency mismatches

• a decrease of weighted average maturity of liabilities

• repeated incidents of positions approaching or breaching internal or regulatory limits

• negative trends or heightened risk associated with a particular product line, such as rising delinquencies

• significant deterioration in the bank's earnings, asset quality, and overall financial condition

• negative publicity

• a credit rating downgrade

• stock price declines or rising debt costs

• widening debt or credit-default-swap spreads

• rising wholesale or retail funding costs

• counterparties that begin requesting or request additional collateral for credit exposures or that resist entering into new transactions

• correspondent banks that eliminate or decrease their credit lines

• increasing retail deposit outflows

• increasing redemptions of CDs before maturity

• difficulty accessing longer-term funding

• difficulty placing short-term liabilities (eg commercial paper)

5 Difference between FSA's liquid asset buffer and Basel-III high-quality liquid asset requirement

The FSA's liquidity rule requires firms to maintain a stock of high quality liquid asset buffer. The liquid asset buffer should consist of only high quality (i.e., credit rating of AA- and above) securities issued by central banks or governments[11] and multi-national development banks.

The FSA's liquid asset buffer requirement is calculated as given below:-

Liquid asset buffer requirement = Wholesale requirement + Retail requirement + Off-balance sheet requirement + Intra-day requirement + Downgrade trigger requirement

Wholesale buffer requirement	Net cumulative wholesale funding position day on day after applying appropriate roll-over assumptions (capped at zero so that the net wholesale component can only result in a buffer requirement)
Retail requirement	impact of the immediate (on the first working day) withdrawal of the firms entire retail deposits across all maturity bands, after applying roll over assumptions (range of 10% to 20% withdrawal)
Off-balance sheet requirement	impact of off-balance sheet inflows and outflows across all the periods after applying roll over assumptions (range of 5% to 100% drawdown)
Intra-day requirement	the peak intra-day collateral used for settlement and clearing for the prior period
Downgrade requirement	impact of downgrades by 1 notch and 2 notch on asset put-backs, conditional liabilities, contingent liabilities and OTC derivatives after applying appropriate roll over assumptions

The Basel-III rules arrive at the high-quality liquid asset requirement based on the Liquid Coverage Ratio (LCR) calculation (see section 2.1 for details).

[11] Only securities issued by .EEA states, USA, Canada, Australia, Japan or Switzerland

In addition to the overall methodology and inflow/outflow assumptions, the key differences between the FSA's current liquid asset buffer requirement and the Basel-III high-quality liquid asset requirement are:-

	FSA liquid asset buffer	**Basel-III high quality asset**
Duration for which inflows and outflows are calculated	Wholesale flows – over a period of 3 months Retail flows – over the entire deposit base (irrespective of the period)	30 calendar days only 30 calendar days only
Composition of the liquid buffer	Only highly liquid assets (credit rating of AA- and above) for central bank/government[12] and multi-lateral development banks can be included	A wider range of assets can be included after taking specific hair-cuts (see section 2.1.1)
Interest paid and received	Not included	Included (for next 30 calendar days)
Additional non-operational cash flows (e.g., Dividend)	Not included	Included (for next 30 calendar days)

[12] Only EEA states, USA, Canada, Australia, Japan or Switzerland

6 Katalysys contact information

For additional information about the new FSA liquidity regime or to develop an internal liquidity monitoring process please contact:

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Katalysys (www.katalysys.com) specialises in delivering solutions and consulting services to subsidiaries and branches of small and medium-sized banks operating in the UK. We have assisted our clients in building liquidity risk management framework, FSA liquidity reports, reconciliation of the liquidity reports to the balance sheet and liquidity metrics as per the new Financial Services Authority (FSA) guidelines (PS09/16).