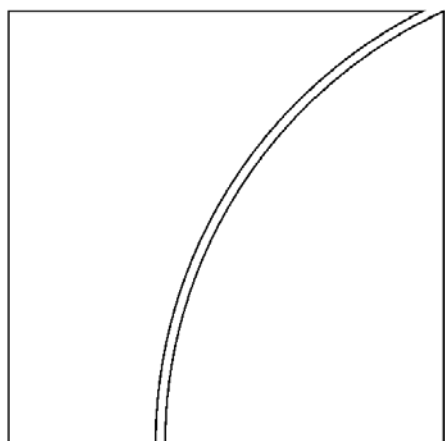


Basel Committee on Banking Supervision



Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools

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List of Abbreviations

ABCP	Asset-backed commercial paper
ALA	Alternative Liquidity Approaches
CD	Certificate of deposit
CDS	Credit default swap
CFP	Contingency Funding Plan
CP	Commercial paper
ECAI	External credit assessment institution
HQLA	High quality liquid assets
IRB	Internal ratings-based
LCR	Liquidity Coverage Ratio
LTV	Loan to Value Ratio
NSFR	Net Stable Funding Ratio
OBS	Off-balance sheet
PD	Probability of default
PSE	Public sector entity
RMBS	Residential mortgage backed securities
SIV	Structured investment vehicle
SPE	Special purpose entity

Introduction

1. This document presents one of the Basel Committee's¹ key reforms to develop a more resilient banking sector: the Liquidity Coverage Ratio (LCR). The objective of the LCR is to promote the short-term resilience of the liquidity risk profile of banks. It does this by ensuring that banks have an adequate stock of unencumbered high-quality liquid assets (HQLA) that can be converted easily and immediately in private markets into cash to meet their liquidity needs for a 30 calendar day liquidity stress scenario. The LCR will improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy. This document sets out the LCR standard and timelines for its implementation.

2. During the early "liquidity phase" of the financial crisis that began in 2007, many banks – despite adequate capital levels – still experienced difficulties because they did not manage their liquidity in a prudent manner. The crisis drove home the importance of liquidity to the proper functioning of financial markets and the banking sector. Prior to the crisis, asset markets were buoyant and funding was readily available at low cost. The rapid reversal in market conditions illustrated how quickly liquidity can evaporate, and that illiquidity can last for an extended period of time. The banking system came under severe stress, which necessitated central bank action to support both the functioning of money markets and, in some cases, individual institutions.

3. The difficulties experienced by some banks were due to lapses in basic principles of liquidity risk management. In response, as the foundation of its liquidity framework, the Committee in 2008 published *Principles for Sound Liquidity Risk Management and Supervision* ("*Sound Principles*").² The *Sound Principles* provide detailed guidance on the risk management and supervision of funding liquidity risk and should help promote better risk management in this critical area, but only if there is full implementation by banks and supervisors. As such, the Committee will continue to monitor the implementation by supervisors to ensure that banks adhere to these fundamental principles.

4. To complement these principles, the Committee has further strengthened its liquidity framework by developing two *minimum* standards for funding liquidity. These standards have been developed to achieve two separate but complementary objectives. The first objective is to promote short-term resilience of a bank's liquidity risk profile by ensuring that it has sufficient HQLA to survive a significant stress scenario lasting for one month. The Committee developed the LCR to achieve this objective. The second objective is to promote resilience over a longer time horizon by creating additional incentives for banks to fund their activities with more stable sources of funding on an ongoing basis. The Net Stable Funding Ratio (NSFR), which is not covered by this document, supplements the LCR and has a time horizon of one year. It has been developed to provide a sustainable maturity structure of assets and liabilities.

¹ The Basel Committee on Banking Supervision consists of senior representatives of bank supervisory authorities and central banks from Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. It usually meets at the Bank for International Settlements (BIS) in Basel, Switzerland, where its permanent Secretariat is located.

² The *Sound Principles* are available at www.bis.org/publ/bcbs144.htm.

5. These two standards are comprised mainly of specific parameters which are internationally “harmonised” with prescribed values. Certain parameters, however, contain elements of national discretion to reflect jurisdiction-specific conditions. In these cases, the parameters should be transparent and clearly outlined in the regulations of each jurisdiction to provide clarity both within the jurisdiction and internationally.

6. It should be stressed that the LCR standard establishes a *minimum* level of liquidity for internationally active banks. Banks are expected to meet this standard as well as adhere to the *Sound Principles*. Consistent with the Committee’s capital adequacy standards, national authorities may require higher minimum levels of liquidity. In particular, supervisors should be mindful that the assumptions within the LCR may not capture all market conditions or all periods of stress. Supervisors are therefore free to require additional levels of liquidity to be held, if they deem the LCR does not adequately reflect the liquidity risks that their banks face.

7. Given that the LCR is, on its own, insufficient to measure all dimensions of a bank’s liquidity profile, the Committee has also developed a set of monitoring tools to further strengthen and promote global consistency in liquidity risk supervision. These tools are supplementary to the LCR and are to be used for ongoing monitoring of the liquidity risk exposures of banks, and in communicating these exposures among home and host supervisors.

8. The Committee is introducing phase-in arrangements to implement the LCR to help ensure that the banking sector can meet the standard through reasonable measures, while still supporting lending to the economy.

9. The Committee remains firmly of the view that the LCR is an essential component of the set of reforms introduced by Basel III and, when implemented, will help deliver a more robust and resilient banking system. However, the Committee has also been mindful of the implications of the standard for financial markets, credit extension and economic growth, and of introducing the LCR at a time of ongoing strains in some banking systems. It has therefore decided to provide for a phased introduction of the LCR, in a manner similar to that of the Basel III capital adequacy requirements.

10. Specifically, the LCR will be introduced as planned on 1 January 2015, but the minimum requirement will be set at 60% and rise in equal annual steps to reach 100% on 1 January 2019. This graduated approach, coupled with the revisions made to the 2010 publication of the liquidity standards,³ are designed to ensure that the LCR can be introduced without material disruption to the orderly strengthening of banking systems or the ongoing financing of economic activity.

	1 January 2015	1 January 2016	1 January 2017	1 January 2018	1 January 2019
Minimum LCR	60%	70%	80%	90%	100%

11. The Committee also reaffirms its view that, during periods of stress, it would be entirely appropriate for banks to use their stock of HQLA, thereby falling below the minimum. Supervisors will subsequently assess this situation and will give guidance on usability

³ The 2010 publication is available at www.bis.org/publ/bcbs188.pdf

according to circumstances. Furthermore, individual countries that are receiving financial support for macroeconomic and structural reform purposes may choose a different implementation schedule for their national banking systems, consistent with the design of their broader economic restructuring programme.

12. The Committee is currently reviewing the NSFR, which continues to be subject to an observation period and remains subject to review to address any unintended consequences. It remains the Committee's intention that the NSFR, including any revisions, will become a minimum standard by 1 January 2018.

13. This document is organised as follows:

- Part 1 defines the LCR for internationally active banks and deals with application issues.
- Part 2 presents a set of monitoring tools to be used by banks and supervisors in their monitoring of liquidity risks.

Part 1: The Liquidity Coverage Ratio

14. The Committee has developed the LCR to promote the short-term resilience of the liquidity risk profile of banks by ensuring that they have sufficient HQLA to survive a significant stress scenario lasting 30 calendar days.

15. The LCR should be a key component of the supervisory approach to liquidity risk, but must be supplemented by detailed supervisory assessments of other aspects of the bank's liquidity risk management framework in line with the *Sound Principles*, the use of the monitoring tools included in Part 2, and, in due course, the NSFR. In addition, supervisors may require an individual bank to adopt more stringent standards or parameters to reflect its liquidity risk profile and the supervisor's assessment of its compliance with the *Sound Principles*.

I. Objective of the LCR and use of HQLA

16. This standard aims to ensure that a bank has an adequate stock of unencumbered HQLA that consists of cash or assets that can be converted into cash at little or no loss of value in private markets, to meet its liquidity needs for a 30 calendar day liquidity stress scenario. At a minimum, the stock of unencumbered HQLA should enable the bank to survive until Day 30 of the stress scenario, by which time it is assumed that appropriate corrective actions can be taken by management and supervisors, or that the bank can be resolved in an orderly way. Furthermore, it gives the central bank additional time to take appropriate measures, should they be regarded as necessary. As noted in the *Sound Principles*, given the uncertain timing of outflows and inflows, banks are also expected to be aware of any potential mismatches within the 30-day period and ensure that sufficient HQLA are available to meet any cash flow gaps throughout the period.

17. The LCR builds on traditional liquidity "coverage ratio" methodologies used internally by banks to assess exposure to contingent liquidity events. The total net cash outflows for the scenario are to be calculated for 30 calendar days into the future. The standard requires that, absent a situation of financial stress, the value of the ratio be no lower than 100%⁴ (ie the stock of HQLA should at least equal total net cash outflows) on an ongoing basis because the stock of unencumbered HQLA is intended to serve as a defence against the potential onset of liquidity stress. During a period of financial stress, however, banks may use their stock of HQLA, thereby falling below 100%, as maintaining the LCR at 100% under such circumstances could produce undue negative effects on the bank and other market participants. Supervisors will subsequently assess this situation and will adjust their response flexibly according to the circumstances.

18. In particular, supervisory decisions regarding a bank's use of its HQLA should be guided by consideration of the core objective and definition of the LCR. Supervisors should exercise judgement in their assessment and account not only for prevailing macrofinancial conditions, but also consider forward-looking assessments of macroeconomic and financial conditions. In determining a response, supervisors should be aware that some actions could

⁴ The 100% threshold is the *minimum* requirement absent a period of financial stress, and after the phase-in arrangements are complete. References to 100% may be adjusted for any phase-in arrangements in force.

be procyclical if applied in circumstances of market-wide stress. Supervisors should seek to take these considerations into account on a consistent basis across jurisdictions.

- (a) Supervisors should assess conditions at an early stage, and take actions if deemed necessary, to address potential liquidity risk.
- (b) Supervisors should allow for differentiated responses to a reported LCR below 100%. Any potential supervisory response should be proportionate with the drivers, magnitude, duration and frequency of the reported shortfall.
- (c) Supervisors should assess a number of firm- and market-specific factors in determining the appropriate response as well as other considerations related to both domestic and global frameworks and conditions. Potential considerations include, but are not limited to:
 - (i) The reason(s) that the LCR fell below 100%. This includes use of the stock of HQLA, an inability to roll over funding or large unexpected draws on contingent obligations. In addition, the reasons may relate to overall credit, funding and market conditions, including liquidity in credit, asset and funding markets, affecting individual banks or all institutions, regardless of their own condition;
 - (ii) The extent to which the reported decline in the LCR is due to a firm-specific or market-wide shock;
 - (iii) A bank's overall health and risk profile, including activities, positions with respect to other supervisory requirements, internal risk systems, controls and other management processes, among others;
 - (iv) The magnitude, duration and frequency of the reported decline of HQLA;
 - (v) The potential for contagion to the financial system and additional restricted flow of credit or reduced market liquidity due to actions to maintain an LCR of 100%;
 - (vi) The availability of other sources of contingent funding such as central bank funding,⁵ or other actions by prudential authorities.
- (d) Supervisors should have a range of tools at their disposal to address a reported LCR below 100%. Banks may use their stock of HQLA in both idiosyncratic and systemic stress events, although the supervisory response may differ between the two.
 - (i) At a minimum, a bank should present an assessment of its liquidity position, including the factors that contributed to its LCR falling below 100%, the measures that have been and will be taken and the expectations on the potential length of the situation. Enhanced reporting to supervisors should be commensurate with the duration of the shortfall.

⁵ The *Sound Principles* require that a bank develop a Contingency Funding Plan (CFP) that clearly sets out strategies for addressing liquidity shortfalls, both firm-specific and market-wide situations of stress. A CFP should, among other things, "reflect central bank lending programmes and collateral requirements, including facilities that form part of normal liquidity management operations (eg the availability of seasonal credit)."

- (ii) If appropriate, supervisors could also require actions by a bank to reduce its exposure to liquidity risk, strengthen its overall liquidity risk management, or improve its contingency funding plan.
 - (iii) However, in a situation of sufficiently severe system-wide stress, effects on the entire financial system should be considered. Potential measures to restore liquidity levels should be discussed, and should be executed over a period of time considered appropriate to prevent additional stress on the bank and on the financial system as a whole.
- (e) Supervisors' responses should be consistent with the overall approach to the prudential framework.

II. Definition of the LCR

19. The scenario for this standard entails a combined idiosyncratic and market-wide shock that would result in:

- (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.

20. In summary, the stress scenario specified incorporates many of the shocks experienced during the crisis that started in 2007 into one significant stress scenario for which a bank would need sufficient liquidity on hand to survive for up to 30 calendar days.

21. This stress test should be viewed as a minimum supervisory requirement for banks. Banks are expected to conduct their own stress tests to assess the level of liquidity they should hold beyond this minimum, and construct their own scenarios that could cause difficulties for their specific business activities. Such internal stress tests should incorporate longer time horizons than the one mandated by this standard. Banks are expected to share the results of these additional stress tests with supervisors.

22. The LCR has two components:

- (a) Value of the stock of HQLA in stressed conditions; and
- (b) Total net cash outflows, calculated according to the scenario parameters outlined below.

Stock of HQLA	≥ 100%
Total net cash outflows over the next 30 calendar days	

A. Stock of HQLA

23. The numerator of the LCR is the “stock of HQLA”. Under the standard, banks must hold a stock of *unencumbered* HQLA to cover the total net cash outflows (as defined below) over a 30-day period under the prescribed stress scenario. In order to qualify as “HQLA”, assets should be liquid in markets during a time of stress and, ideally, be central bank eligible. The following sets out the characteristics that such assets should generally possess and the operational requirements that they should satisfy.⁶

1. Characteristics of HQLA

24. Assets are considered to be HQLA if they can be easily and immediately converted into cash at little or no loss of value. The liquidity of an asset depends on the underlying stress scenario, the volume to be monetised and the timeframe considered. Nevertheless, there are certain assets that are more likely to generate funds without incurring large discounts in sale or repurchase agreement (repo) markets due to fire-sales even in times of stress. This section outlines the factors that influence whether or not the market for an asset can be relied upon to raise liquidity when considered in the context of possible stresses. These factors should assist supervisors in determining which assets, despite meeting the criteria from paragraphs 49 to 54, are not sufficiently liquid in private markets to be included in the stock of HQLA.

(i) Fundamental characteristics

- **Low risk:** assets that are less risky tend to have higher liquidity. High credit standing of the issuer and a low degree of subordination increase an asset’s liquidity. Low duration,⁷ low legal risk, low inflation risk and denomination in a convertible currency with low foreign exchange risk all enhance an asset’s liquidity.
- **Ease and certainty of valuation:** an asset’s liquidity increases if market participants are more likely to agree on its valuation. Assets with more standardised, homogenous and simple structures tend to be more fungible, promoting liquidity. The pricing formula of a high-quality liquid asset must be easy to calculate and not depend on strong assumptions. The inputs into the pricing formula must also be publicly available. In practice, this should rule out the inclusion of most structured or exotic products.
- **Low correlation with risky assets:** the stock of HQLA should not be subject to wrong-way (highly correlated) risk. For example, assets issued by financial institutions are more likely to be illiquid in times of liquidity stress in the banking sector.
- **Listed on a developed and recognised exchange:** being listed increases an asset’s transparency.

⁶ Refer to the sections on “*Definition of HQLA*” and “*Operational requirements*” for the characteristics that an asset must meet to be part of the stock of HQLA and the definition of “unencumbered” respectively.

⁷ Duration measures the price sensitivity of a fixed income security to changes in interest rate.

(ii) *Market-related characteristics*

- **Active and sizable market:** the asset should have active outright sale or repo markets at all times. This means that:
 - There should be historical evidence of market breadth and market depth. This could be demonstrated by low bid-ask spreads, high trading volumes, and a large and diverse number of market participants. Diversity of market participants reduces market concentration and increases the reliability of the liquidity in the market.
 - There should be robust market infrastructure in place. The presence of multiple committed market makers increases liquidity as quotes will most likely be available for buying or selling HQLA.
- **Low volatility:** Assets whose prices remain relatively stable and are less prone to sharp price declines over time will have a lower probability of triggering forced sales to meet liquidity requirements. Volatility of traded prices and spreads are simple proxy measures of market volatility. There should be historical evidence of relative stability of market terms (eg prices and haircuts) and volumes during stressed periods.
- **Flight to quality:** historically, the market has shown tendencies to move into these types of assets in a systemic crisis. The correlation between proxies of market liquidity and banking system stress is one simple measure that could be used.

25. As outlined by these characteristics, the test of whether liquid assets are of “high quality” is that, by way of sale or repo, their liquidity-generating capacity is assumed to remain intact even in periods of severe idiosyncratic and market stress. Lower quality assets typically fail to meet that test. An attempt by a bank to raise liquidity from lower quality assets under conditions of severe market stress would entail acceptance of a large fire-sale discount or haircut to compensate for high market risk. That may not only erode the market’s confidence in the bank, but would also generate mark-to-market losses for banks holding similar instruments and add to the pressure on their liquidity position, thus encouraging further fire sales and declines in prices and market liquidity. In these circumstances, private market liquidity for such instruments is likely to disappear quickly.

26. HQLA (except Level 2B assets as defined below) should ideally be eligible at central banks⁸ for intraday liquidity needs and overnight liquidity facilities. In the past, central banks have provided a further backstop to the supply of banking system liquidity under conditions of severe stress. Central bank eligibility should thus provide additional confidence that banks are holding assets that could be used in events of severe stress without damaging the broader financial system. That in turn would raise confidence in the safety and soundness of liquidity risk management in the banking system.

27. It should be noted however, that central bank eligibility does not by itself constitute the basis for the categorisation of an asset as HQLA.

⁸ In most jurisdictions, HQLA should be central bank eligible in addition to being liquid in markets during stressed periods. In jurisdictions where central bank eligibility is limited to an extremely narrow list of assets, a supervisor may allow unencumbered, non-central bank eligible assets that meet the qualifying criteria for Level 1 or Level 2 assets to count as part of the stock (see *Definition of HQLA* beginning from paragraph 45).

2. Operational requirements

28. All assets in the stock of HQLA are subject to the following operational requirements. The purpose of the operational requirements is to recognise that not all assets outlined in paragraphs 49-54 that meet the asset class, risk-weighting and credit-rating criteria should be eligible for the stock as there are other operational restrictions on the availability of HQLA that can prevent timely monetisation during a stress period.

29. These operational requirements are designed to ensure that the stock of HQLA is managed in such a way that the bank can, and is able to demonstrate that it can, immediately use the stock of assets as a source of contingent funds that is available for the bank to convert into cash through outright sale or repo, to fill funding gaps between cash inflows and outflows at any time during the 30-day stress period, with no restriction on the use of the liquidity generated.

30. A bank should periodically monetise a representative proportion of the assets in the stock through repo or outright sale, in order to test its access to the market, the effectiveness of its processes for monetisation, the availability of the assets, and to minimise the risk of negative signalling during a period of actual stress.

31. All assets in the stock should be unencumbered. "Unencumbered" means free of legal, regulatory, contractual or other restrictions on the ability of the bank to liquidate, sell, transfer, or assign the asset. An asset in the stock should not be pledged (either explicitly or implicitly) to secure, collateralise or credit-enhance any transaction, nor be designated to cover operational costs (such as rents and salaries). Assets received in reverse repo and securities financing transactions that are held at the bank, have not been rehypothecated, and are legally and contractually available for the bank's use can be considered as part of the stock of HQLA. In addition, assets which qualify for the stock of HQLA that have been pre-positioned or deposited with, or pledged to, the central bank or a public sector entity (PSE) but have not been used to generate liquidity may be included in the stock.⁹

32. A bank should exclude from the stock those assets that, although meeting the definition of "unencumbered" specified in paragraph 31, the bank would not have the operational capability to monetise to meet outflows during the stress period. Operational capability to monetise assets requires having procedures and appropriate systems in place, including providing the function identified in paragraph 33 with access to all necessary information to execute monetisation of any asset at any time. Monetisation of the asset must be executable, from an operational perspective, in the standard settlement period for the asset class in the relevant jurisdiction.

33. The stock should be under the control of the function charged with managing the liquidity of the bank (eg the treasurer), meaning the function has the continuous authority, and legal and operational capability, to monetise any asset in the stock. Control must be evidenced either by maintaining assets in a separate pool managed by the function with the sole intent for use as a source of contingent funds, or by demonstrating that the function can monetise the asset at any point in the 30-day stress period and that the proceeds of doing so are available to the function throughout the 30-day stress period without directly conflicting

⁹ If a bank has deposited, pre-positioned or pledged Level 1, Level 2 and other assets in a collateral pool and no specific securities are assigned as collateral for any transactions, it may assume that assets are encumbered in order of increasing liquidity value in the LCR, ie assets ineligible for the stock of HQLA are assigned first, followed by Level 2B assets, then Level 2A and finally Level 1. This determination must be made in compliance with any requirements, such as concentration or diversification, of the central bank or PSE.

with a stated business or risk management strategy. For example, an asset should not be included in the stock if the sale of that asset, without replacement throughout the 30-day period, would remove a hedge that would create an open risk position in excess of internal limits.

34. A bank is permitted to hedge the market risk associated with ownership of the stock of HQLA and still include the assets in the stock. If it chooses to hedge the market risk, the bank should take into account (in the market value applied to each asset) the cash outflow that would arise if the hedge were to be closed out early (in the event of the asset being sold).

35. In accordance with Principle 9 of the *Sound Principles* a bank “should monitor the legal entity and physical location where collateral is held and how it may be mobilised in a timely manner”. Specifically, it should have a policy in place that identifies legal entities, geographical locations, currencies and specific custodial or bank accounts where HQLA are held. In addition, the bank should determine whether any such assets should be excluded for operational reasons and therefore, have the ability to determine the composition of its stock on a daily basis.

36. As noted in paragraphs 171 and 172, qualifying HQLA that are held to meet statutory liquidity requirements at the legal entity or sub-consolidated level (where applicable) may only be included in the stock at the consolidated level to the extent that the related risks (as measured by the legal entity’s or sub-consolidated group’s net cash outflows in the LCR) are also reflected in the consolidated LCR. Any surplus of HQLA held at the legal entity can only be included in the consolidated stock if those assets would also be freely available to the consolidated (parent) entity in times of stress.

37. In assessing whether assets are freely transferable for regulatory purposes, banks should be aware that assets may not be freely available to the consolidated entity due to regulatory, legal, tax, accounting or other impediments. Assets held in legal entities without market access should only be included to the extent that they can be freely transferred to other entities that could monetise the assets.

38. In certain jurisdictions, large, deep and active repo markets do not exist for eligible asset classes, and therefore such assets are likely to be monetised through outright sale. In these circumstances, a bank should exclude from the stock of HQLA those assets where there are impediments to sale, such as large fire-sale discounts which would cause it to breach minimum solvency requirements, or requirements to hold such assets, including, but not limited to, statutory minimum inventory requirements for market making.

39. Banks should not include in the stock of HQLA any assets, or liquidity generated from assets, they have received under right of rehypothecation, if the beneficial owner has the contractual right to withdraw those assets during the 30-day stress period.¹⁰

40. Assets received as collateral for derivatives transactions that are not segregated and are legally able to be rehypothecated may be included in the stock of HQLA provided that the bank records an appropriate outflow for the associated risks as set out in paragraph 116.

¹⁰ Refer to paragraph 146 for the appropriate treatment if the contractual withdrawal of such assets would lead to a short position (eg because the bank had used the assets in longer-term securities financing transactions).

41. As stated in Principle 8 of the *Sound Principles*, a bank should actively manage its intraday liquidity positions and risks to meet payment and settlement obligations on a timely basis under both normal and stressed conditions and thus contribute to the smooth functioning of payment and settlement systems. Banks and regulators should be aware that the LCR stress scenario does not cover expected or unexpected intraday liquidity needs.

42. While the LCR is expected to be met and reported in a single currency, banks are expected to be able to meet their liquidity needs in each currency and maintain HQLA consistent with the distribution of their liquidity needs by currency. The bank should be able to use the stock to generate liquidity in the currency and jurisdiction in which the net cash outflows arise. As such, the LCR by currency is expected to be monitored and reported to allow the bank and its supervisor to track any potential currency mismatch issues that could arise, as outlined in Part 2. In managing foreign exchange liquidity risk, the bank should take into account the risk that its ability to swap currencies and access the relevant foreign exchange markets may erode rapidly under stressed conditions. It should be aware that sudden, adverse exchange rate movements could sharply widen existing mismatched positions and alter the effectiveness of any foreign exchange hedges in place.

43. In order to mitigate cliff effects that could arise, if an eligible liquid asset became ineligible (eg due to rating downgrade), a bank is permitted to keep such assets in its stock of liquid assets for an additional 30 calendar days. This would allow the bank additional time to adjust its stock as needed or replace the asset.

3. *Diversification of the stock of HQLA*

44. The stock of HQLA should be well diversified within the asset classes themselves (except for sovereign debt of the bank's home jurisdiction or from the jurisdiction in which the bank operates; central bank reserves; central bank debt securities; and cash). Although some asset classes are more likely to remain liquid irrespective of circumstances, ex-ante it is not possible to know with certainty which specific assets within each asset class might be subject to shocks ex-post. Banks should therefore have policies and limits in place in order to avoid concentration with respect to asset types, issue and issuer types, and currency (consistent with the distribution of net cash outflows by currency) within asset classes.

4. *Definition of HQLA*

45. The stock of HQLA should comprise assets with the characteristics outlined in paragraphs 24-27. This section describes the type of assets that meet these characteristics and can therefore be included in the stock.

46. There are two categories of assets that can be included in the stock. Assets to be included in each category are those that the bank is holding on the first day of the stress period, irrespective of their residual maturity. "Level 1" assets can be included without limit, while "Level 2" assets can only comprise up to 40% of the stock.

47. Supervisors may also choose to include within Level 2 an additional class of assets (Level 2B assets - see paragraph 53 below). If included, these assets should comprise no more than 15% of the total stock of HQLA. They must also be included within the overall 40% cap on Level 2 assets.

48. The 40% cap on Level 2 assets and the 15% cap on Level 2B assets should be determined after the application of required haircuts, and after taking into account the unwind of short-term securities financing transactions and collateral swap transactions maturing within 30 calendar days that involve the exchange of HQLA. In this context, short term transactions are transactions with a maturity date up to and including 30 calendar days. The details of the calculation methodology are provided in Annex 1.

(i) *Level 1 assets*

49. Level 1 assets can comprise an unlimited share of the pool and are not subject to a haircut under the LCR.¹¹ However, national supervisors may wish to require haircuts for Level 1 securities based on, among other things, their duration, credit and liquidity risk, and typical repo haircuts.

50. Level 1 assets are limited to:

- (a) coins and banknotes;
- (b) central bank reserves (including required reserves),¹² to the extent that the central bank policies allow them to be drawn down in times of stress;¹³
- (c) 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,¹⁴ and satisfying all of the following conditions:
 - assigned a 0% risk-weight under the Basel II Standardised Approach for credit risk;¹⁵
 - traded in large, deep and active repo or cash markets characterised by a low level of concentration;
 - have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions; and
 - not an obligation of a financial institution or any of its affiliated entities.¹⁶
- (d) where the sovereign has a non-0% 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

¹¹ For purpose of calculating the LCR, Level 1 assets in the stock of HQLA should be measured at an amount no greater than their current market value.

¹² In this context, central bank reserves would include banks' overnight deposits with the central bank, and term deposits with the central bank that: (i) are explicitly and contractually repayable on notice from the depositing bank; or (ii) that constitute a loan against which the bank can borrow on a term basis or on an overnight but automatically renewable basis (only where the bank has an existing deposit with the relevant central bank). Other term deposits with central banks are not eligible for the stock of HQLA; however, if the term expires within 30 days, the term deposit could be considered as an inflow per paragraph 154.

¹³ Local supervisors should discuss and agree with the relevant central bank the extent to which central bank reserves should count towards the stock of liquid assets, ie the extent to which reserves are able to be drawn down in times of stress.

¹⁴ The Basel III liquidity framework follows the categorisation of market participants applied in the Basel II Framework, unless otherwise specified.

¹⁵ Paragraph 50(c) includes only marketable securities that qualify for Basel II paragraph 53. When a 0% risk-weight has been assigned at national discretion according to the provision in paragraph 54 of the Basel II Standardised Approach, the treatment should follow paragraph 50(d) or 50(e).

¹⁶ This requires that the holder of the security must not have recourse to the financial institution or any of the financial institution's affiliated entities. In practice, this means that securities, such as government-guaranteed issuance during the financial crisis, which remain liabilities of the financial institution, would not qualify for the stock of HQLA. The only exception is when the bank also qualifies as a PSE under the Basel II Framework where securities issued by the bank could qualify for Level 1 assets if all necessary conditions are satisfied.

(e) where the sovereign has a non-0% 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.

(ii) *Level 2 assets*

51. Level 2 assets (comprising Level 2A assets and any Level 2B assets permitted by the supervisor) can be included in the stock of HQLA, subject to the requirement that they comprise no more than 40% of the overall stock after haircuts have been applied. The method for calculating the cap on Level 2 assets and the cap on Level 2B assets is set out in paragraph 48 and Annex 1.

52. A 15% haircut is applied to the current market value of each Level 2A asset held in the stock of HQLA. 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 satisfy all of the following conditions:¹⁷

- assigned a 20% risk weight under the Basel II Standardised Approach for credit risk;
- traded in large, deep and active repo or cash markets characterised by a low level of concentration;
- have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions (ie maximum decline of price not exceeding 10% or increase in haircut not exceeding 10 percentage points over a 30-day period during a relevant period of significant liquidity stress); and
- not an obligation of a financial institution or any of its affiliated entities.¹⁸

(b) Corporate debt securities (including commercial paper)¹⁹ and covered bonds²⁰ that satisfy all of the following conditions:

- in the case of corporate debt securities: not issued by a financial institution or any of its affiliated entities;
- in the case of covered bonds: not issued by the bank itself or any of its affiliated entities;

¹⁷ Paragraphs 50(d) and (e) may overlap with paragraph 52(a) in terms of sovereign and central bank securities with a 20% risk weight. In such a case, the assets can be assigned to the Level 1 category according to Paragraph 50(d) or (e), as appropriate.

¹⁸ Refer to footnote 16.

¹⁹ *Corporate debt securities (including commercial paper)* in this respect include only plain-vanilla assets whose valuation is readily available based on standard methods and does not depend on private knowledge, ie these do not include complex structured products or subordinated debt.

²⁰ *Covered bonds* are bonds issued and owned by a bank or mortgage institution and are subject by law to special public supervision designed to protect bond holders. Proceeds deriving from the issue of these bonds must be invested in conformity with the law in assets which, during the whole period of the validity of the bonds, are capable of covering claims attached to the bonds and which, in the event of the failure of the issuer, would be used on a priority basis for the reimbursement of the principal and payment of the accrued interest.

- either (i) have a long-term credit rating from a recognised external credit assessment institution (ECAI) of at least AA-²¹ or in the absence of a long term rating, a short-term rating equivalent in quality to the long-term rating; or (ii) do not have a credit assessment by a recognised ECAI but are internally rated as having a probability of default (PD) corresponding to a credit rating of at least AA-;
- traded in large, deep and active repo or cash markets characterised by a low level of concentration; and
- have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions: ie maximum decline of price or increase in haircut over a 30-day period during a relevant period of significant liquidity stress not exceeding 10%.

(iii) Level 2B assets

53. Certain additional assets (Level 2B assets) may be included in Level 2 at the discretion of national authorities. In choosing to include these assets in Level 2 for the purpose of the LCR, supervisors are expected to ensure that such assets fully comply with the qualifying criteria.²² Supervisors are also expected to ensure that banks have appropriate systems and measures to monitor and control the potential risks (eg credit and market risks) that banks could be exposed to in holding these assets.

54. A larger haircut is applied to the current market value of each Level 2B asset held in the stock of HQLA. Level 2B assets are limited to the following:

- (a) Residential mortgage backed securities (RMBS) that satisfy all of the following conditions may be included in Level 2B, subject to a 25% haircut:
- not issued by, and the underlying assets have not been originated by the bank itself or any of its affiliated entities;
 - have a long-term credit rating from a recognised ECAI of AA or higher, or in the absence of a long term rating, a short-term rating equivalent in quality to the long-term rating;
 - traded in large, deep and active repo or cash markets characterised by a low level of concentration;
 - have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, ie a maximum decline of price not exceeding 20% or increase in haircut over a 30-day period not exceeding 20 percentage points during a relevant period of significant liquidity stress;
 - the underlying asset pool is restricted to residential mortgages and cannot contain structured products;

²¹ In the event of split ratings, the applicable rating should be determined according to the method used in Basel II's standardised approach for credit risk. Local rating scales (rather than international ratings) of a supervisor-approved ECAI that meet the eligibility criteria outlined in paragraph 91 of the Basel II Capital Framework can be recognised if corporate debt securities or covered bonds are held by a bank for local currency liquidity needs arising from its operations in that local jurisdiction. This also applies to Level 2B assets.

²² As with all aspects of the framework, compliance with these criteria will be assessed as part of peer reviews undertaken under the Committee's Regulatory Consistency Assessment Programme.

- the underlying mortgages are “full recourse” loans (ie in the case of foreclosure the mortgage owner remains liable for any shortfall in sales proceeds from the property) and have a maximum loan-to-value ratio (LTV) of 80% on average at issuance; and
 - the securitisations are subject to “risk retention” regulations which require issuers to retain an interest in the assets they securitise.
- (b) Corporate debt securities (including commercial paper)²³ that satisfy all of the following conditions may be included in Level 2B, subject to a 50% haircut:
- not issued by a financial institution or any of its affiliated entities;
 - either (i) have a long-term credit rating from a recognised ECAI between A+ and BBB- or in the absence of a long term rating, a short-term rating equivalent in quality to the long-term rating; or (ii) do not have a credit assessment by a recognised ECAI and are internally rated as having a PD corresponding to a credit rating of between A+ and BBB-;
 - traded in large, deep and active repo or cash markets characterised by a low level of concentration; and
 - have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, ie a maximum decline of price not exceeding 20% or increase in haircut over a 30-day period not exceeding 20 percentage points during a relevant period of significant liquidity stress.
- (c) Common equity shares that satisfy all of the following conditions may be included in Level 2B, subject to a 50% haircut:
- not issued by a financial institution or any of its affiliated entities;
 - exchange traded and centrally cleared;
 - a constituent of the major stock index in the home jurisdiction or where the liquidity risk is taken, as decided by the supervisor in the jurisdiction where the index is located;
 - denominated in the domestic currency of a bank’s home jurisdiction or in the currency of the jurisdiction where a bank’s liquidity risk is taken;
 - traded in large, deep and active repo or cash markets characterised by a low level of concentration; and
 - have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, ie a maximum decline of share price not exceeding 40% or increase in haircut not exceeding 40 percentage points over a 30-day period during a relevant period of significant liquidity.
- (iv) *Treatment for jurisdictions with insufficient HQLA*
- (a) *Assessment of eligibility for alternative liquidity approaches (ALA)*

55. Some jurisdictions may have an insufficient supply of Level 1 assets (or both Level 1 and Level 2 assets²⁴) in their domestic currency to meet the aggregate demand of banks with

²³ Refer to footnote 19.

²⁴ Insufficiency in Level 2 assets alone does not qualify for the alternative treatment.

significant exposures in this currency. To address this situation, the Committee has developed alternative treatments for holdings in the stock of HQLA, which are expected to apply to a limited number of currencies and jurisdictions. Eligibility for such alternative treatment will be judged on the basis of the qualifying criteria set out in Annex 2 and will be determined through an independent peer review process overseen by the Committee. The purpose of this process is to ensure that the alternative treatments are only used when there is a true shortfall in HQLA in the domestic currency relative to the needs in that currency.²⁵

56. To qualify for the alternative treatment, a jurisdiction should be able to demonstrate that:

- there is an insufficient supply of HQLA in its domestic currency, taking into account all relevant factors affecting the supply of, and demand for, such HQLA;²⁶
- the insufficiency is caused by long-term structural constraints that cannot be resolved within the medium term;
- it has the capacity, through any mechanism or control in place, to limit or mitigate the risk that the alternative treatment cannot work as expected; and
- it is committed to observing the obligations relating to supervisory monitoring, disclosure, and periodic self-assessment and independent peer review of its eligibility for alternative treatment.

All of the above criteria have to be met to qualify for the alternative treatment.

57. Irrespective of whether a jurisdiction seeking ALA treatment will adopt the phase-in arrangement set out in paragraph 10 for implementing the LCR, the eligibility for that jurisdiction to adopt ALA treatment will be based on a fully implemented LCR standard (ie 100% requirement).

(b) *Potential options for alternative treatment*

58. *Option 1 – Contractual committed liquidity facilities from the relevant central bank, with a fee:* For currencies that do not have sufficient HQLA, as determined by reference to the qualifying principles and criteria, Option 1 would allow banks to access contractual committed liquidity facilities provided by the relevant central bank (ie relevant given the currency in question) for a fee. These facilities should not be confused with regular central bank standing arrangements. In particular, these facilities are contractual arrangements between the central bank and the commercial bank with a maturity date which, at a minimum, falls outside the 30-day LCR window. Further, the contract must be irrevocable prior to maturity and involve no ex-post credit decision by the central bank. Such facilities are only permissible if there is also a fee for the facility which is charged regardless of the amount, if any, drawn down against that facility and the fee is set so that banks which claim the facility line to meet the LCR, and banks which do not, have similar financial incentives to reduce their exposure to liquidity risk. That is, the fee should be set so that the net yield on the assets used to secure the facility should not be higher than the net yield on a

²⁵ For member states of a monetary union with a common currency, that common currency is considered the “domestic currency”.

²⁶ The assessment of insufficiency is only required to take into account the Level 2B assets if the national authority chooses to include them within HQLA. In particular, if certain Level 2B assets are not included in the stock of HQLA in a given jurisdiction, then the assessment of insufficiency in that jurisdiction does not need to include the stock of Level 2B assets that are available in that jurisdiction.

representative portfolio of Level 1 and Level 2 assets, after adjusting for any material differences in credit risk. A jurisdiction seeking to adopt Option 1 should justify in the independent peer review that the fee is suitably set in a manner as prescribed in this paragraph.

59. *Option 2 – Foreign currency HQLA to cover domestic currency liquidity needs:* For currencies that do not have sufficient HQLA, as determined by reference to the qualifying principles and criteria, Option 2 would allow supervisors to permit banks that evidence a shortfall of HQLA in the domestic currency (which would match the currency of the underlying risks) to hold HQLA in a currency that does not match the currency of the associated liquidity risk, provided that the resulting currency mismatch positions are justifiable and controlled within limits agreed by their supervisors. Supervisors should restrict such positions within levels consistent with the bank's foreign exchange risk management capacity and needs, and ensure that such positions relate to currencies that are freely and reliably convertible, are effectively managed by the bank, and would not pose undue risk to its financial strength. In managing those positions, the bank should take into account the risks that its ability to swap currencies, and its access to the relevant foreign exchange markets, may erode rapidly under stressed conditions. It should also take into account that sudden, adverse exchange rate movements could sharply widen existing mismatch positions and alter the effectiveness of any foreign exchange hedges in place.

60. To account for foreign exchange risk associated with foreign currency HQLA used to cover liquidity needs in the domestic currency, such liquid assets should be subject to a minimum haircut of 8% for major currencies that are active in global foreign exchange markets.²⁷ For other currencies, jurisdictions should increase the haircut to an appropriate level on the basis of historical (monthly) exchange rate volatilities between the currency pair over an extended period of time.²⁸ If the domestic currency is formally pegged to another currency under an effective mechanism, the haircut for the pegged currency can be lowered to a level that reflects the limited exchange rate risk under the peg arrangement. To qualify for this treatment, the jurisdiction concerned should demonstrate in the independent peer review the effectiveness of its currency peg mechanism and assess the long-term prospect of keeping the peg.

61. Haircuts for foreign currency HQLA used under Option 2 would apply only to HQLA in excess of a threshold specified by supervisors which is not greater than 25%.²⁹ This is to accommodate a certain level of currency mismatch that may commonly exist among banks in their ordinary course of business.

62. *Option 3 – Additional use of Level 2 assets with a higher haircut:* This option addresses currencies for which there are insufficient Level 1 assets, as determined by reference to the qualifying principles and criteria, but where there are sufficient Level 2A

²⁷ These refer to currencies that exhibit significant and active market turnover in the global foreign currency market (eg the average market turnover of the currency as a percentage of the global foreign currency market turnover over a ten-year period is not lower than 10%).

²⁸ As an illustration, the exchange rate volatility data used for deriving the FX haircut may be based on the 30-day moving FX price volatility data (mean + 3 standard deviations) of the currency pair over a ten-year period, adjusted to align with the 30-day time horizon of the LCR.

²⁹ The threshold for applying the haircut under Option 2 refers to the amount of foreign currency HQLA used to cover liquidity needs in the domestic currency as a percentage of total net cash outflows in the domestic currency. Hence under a threshold of 25%, a bank using Option 2 will only need to apply the haircut to that portion of foreign currency HQLA in excess of 25% that are used to cover liquidity needs in the domestic currency.

assets. In this case, supervisors may choose to allow banks that evidence a shortfall of HQLA in the domestic currency (to match the currency of the liquidity risk incurred) to hold additional Level 2A assets in the stock. These additional Level 2A assets would be subject to a minimum haircut of 20%, ie 5% higher than the 15% haircut applicable to Level 2A assets that are included in the 40% cap. The higher haircut is used to cover any additional price and market liquidity risks arising from increased holdings of Level 2A assets beyond the 40% cap, and to provide a disincentive for banks to use this option based on yield considerations.³⁰ Supervisors have the obligation to conduct an analysis to assess whether the additional haircut is sufficient for Level 2A assets in their markets, and should increase the haircut if this is warranted to achieve the purpose for which it is intended. Supervisors should explain and justify the outcome of the analysis (including the level of increase in the haircut, if applicable) during the independent peer review assessment process. Any Level 2B assets held by the bank would remain subject to the cap of 15%, regardless of the amount of other Level 2 assets held.

(c) *Maximum level of usage of options for alternative treatment*

63. The usage of any of the above options would be constrained by a limit specified by supervisors in jurisdictions whose currency is eligible for the alternative treatment. The limit should be expressed in terms of the maximum amount of HQLA associated with the use of the options (whether individually or in combination) that a bank is allowed to include in its LCR, as a percentage of the total amount of HQLA the bank is required to hold in the currency concerned.³¹ HQLA associated with the options refer to: (i) in the case of Option 1, the amount of committed liquidity facilities granted by the relevant central bank; (ii) in the case of Option 2, the amount of foreign currency HQLA used to cover the shortfall of HQLA in the domestic currency; and (iii) in the case of Option 3, the amount of Level 2 assets held (including those within the 40% cap).

64. If, for example, the maximum level of usage of the options is set at 80%, it means that a bank adopting the options, either individually or in combination, would only be allowed to include HQLA associated with the options (after applying any relevant haircut) up to 80% of the required amount of HQLA in the relevant currency.³² Thus, at least 20% of the HQLA requirement will have to be met by Level 1 assets in the relevant currency. The maximum usage of the options is of course further constrained by the bank's actual shortfall of HQLA in the currency concerned.

65. The appropriateness of the maximum level of usage of the options allowed by a supervisor will be evaluated in the independent peer review process. The level set should be consistent with the projected size of the HQLA gap faced by banks subject to the LCR in the currency concerned, taking into account all relevant factors that may affect the size of the gap over time. The supervisor should explain how this level is derived, and justify why this is supported by the insufficiency of HQLA in the banking system. Where a relatively high level

³⁰ For example, a situation to avoid is that the opportunity cost of holding a portfolio that benefits from this option would be lower than the opportunity cost of holding a theoretical compliant portfolio of Level 1 and Level 2 assets, after adjusting for any material differences in credit risk.

³¹ The required amount of HQLA in the domestic currency includes any regulatory buffer (ie above the 100% LCR standard) that the supervisor may reasonably impose on the bank concerned based on its liquidity risk profile.

³² As an example, if a bank has used Option 1 and Option 3 to the extent that it has been granted an Option 1 facility of 10%, and held Level 2 assets of 55% after haircut (both in terms of the required amount of HQLA in the domestic currency), the HQLA associated with the use of these two options amount to 65% (ie 10%+55%), which is still within the 80% level. The total amount of alternative HQLA used is 25% (ie 10% + 15% (additional Level 2A assets used)).

of usage of the options is allowed by the supervisor (eg over 80%), the suitability of this level will come under closer scrutiny in the independent peer review.

(d) *Supervisory obligations and requirements*

66. A jurisdiction with insufficient HQLA must, among other things, fulfil the following obligations (the detailed requirements are set out in Annex 2):

- Supervisory monitoring: There should be a clearly documented supervisory framework for overseeing and controlling the usage of the options by its banks, and for monitoring their compliance with the relevant requirements applicable to their use of the options;
- Disclosure framework: The jurisdiction should disclose its framework for applying the options to its banks (whether on its website or through other means). The disclosure should enable other national supervisors and stakeholders to gain a sufficient understanding of its compliance with the qualifying principles and criteria and the manner in which it supervises the use of the options by its banks;
- Periodic self-assessment of eligibility for alternative treatment: The jurisdiction should perform a self-assessment of its eligibility for alternative treatment every five years after it has adopted the options, and disclose the results to other national supervisors and stakeholders.

67. Supervisors in jurisdictions with insufficient HQLA should devise rules and requirements governing the use of the options by their banks, having regard to the guiding principles set out below. (Annex 3 includes additional guidance on banks' usage of ALA.)

- Principle 1: Supervisors should ensure that banks' use of the options is not simply an economic choice that maximises the profits of the bank through the selection of alternative HQLA based primarily on yield considerations. The liquidity characteristics of an alternative HQLA portfolio must be considered to be more important than its net yield.
- Principle 2: Supervisors should ensure that the use of the options is constrained, both for all banks with exposures in the relevant currency and on a bank-by-bank basis.
- Principle 3: Supervisors should ensure that banks have, to the extent practicable, taken reasonable steps to use Level 1 and Level 2 assets and reduce their overall level of liquidity risk to improve the LCR, before the alternative treatment can be applied.
- Principle 4: Supervisors should have a mechanism for restraining the usage of the options to mitigate risks of non-performance of the alternative HQLA.

(v) *Treatment for Shari'ah compliant banks*

68. *Shari'ah* compliant banks face a religious prohibition on holding certain types of assets, such as interest-bearing debt securities. Even in jurisdictions that have a sufficient supply of HQLA, an insurmountable impediment to the ability of *Shari'ah* compliant banks to meet the LCR requirement may still exist. In such cases, national supervisors in jurisdictions in which *Shari'ah* compliant banks operate have the discretion to define *Shari'ah* compliant financial products (such as *Sukuk*) as alternative HQLA applicable to such banks only, subject to such conditions or haircuts that the supervisors may require. It should be noted that the intention of this treatment is not to allow *Shari'ah* compliant banks to hold fewer HQLA. The minimum LCR standard, calculated based on alternative HQLA (post-haircut) recognised as HQLA for these banks, should not be lower than the minimum LCR standard applicable to other banks in the jurisdiction concerned. National supervisors applying such

treatment for *Shari'ah* compliant banks should comply with supervisory monitoring and disclosure obligations similar to those set out in paragraph 66 above.

B. Total net cash outflows

69. The term total net cash outflows³³ is defined as the total expected cash outflows minus total expected cash inflows in the specified stress scenario for the subsequent 30 calendar days. Total expected cash outflows are calculated by multiplying the outstanding balances of various categories or types of liabilities and off-balance sheet commitments by the rates at which they are expected to run off or be drawn down. Total expected cash inflows are calculated by multiplying the outstanding balances of various categories of contractual receivables by the rates at which they are expected to flow in under the scenario up to an aggregate cap of 75% of total expected cash outflows.

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

70. While most roll-off rates, draw-down rates and similar factors are harmonised across jurisdictions as outlined in this standard, a few parameters are to be determined by supervisory authorities at the national level. Where this is the case, the parameters should be transparent and made publicly available.

71. Annex 4 provides a summary of the factors that are applied to each category.

72. Banks will not be permitted to double count items, ie if an asset is included as part of the “stock of HQLA” (ie the numerator), the associated cash inflows cannot also be counted as cash inflows (ie part of the denominator). Where there is potential that an item could be counted in multiple outflow categories, (eg committed liquidity facilities granted to cover debt maturing within the 30 calendar day period), a bank only has to assume up to the maximum contractual outflow for that product.

1. Cash outflows

(i) Retail deposit run-off

73. Retail deposits are defined as deposits placed with a bank by a natural person. Deposits from legal entities, sole proprietorships or partnerships are captured in wholesale deposit categories. Retail deposits subject to the LCR include demand deposits and term deposits, unless otherwise excluded under the criteria set out in paragraphs 82 and 83.

74. These retail deposits are divided into “stable” and “less stable” portions of funds as described below, with minimum run-off rates listed for each category. The run-off rates for retail deposits are minimum floors, with higher run-off rates established by individual jurisdictions as appropriate to capture depositor behaviour in a period of stress in each jurisdiction.

³³ Where applicable, cash inflows and outflows should include interest that is expected to be received and paid during the 30-day time horizon.

(a) *Stable deposits (run-off rate = 3% and higher)*

75. Stable deposits, which usually receive a run-off factor of 5%, are the amount of the deposits that are fully insured³⁴ by an effective deposit insurance scheme or by a public guarantee that provides equivalent protection and where:

- the depositors have other established relationships with the bank that make deposit withdrawal highly unlikely; or
- the deposits are in transactional accounts (eg accounts where salaries are automatically deposited).

76. For the purposes of this standard, an “effective deposit insurance scheme” refers to a scheme (i) that guarantees that it has the ability to make prompt payouts, (ii) for which the coverage is clearly defined and (iii) of which public awareness is high. The deposit insurer in an effective deposit insurance scheme has formal legal powers to fulfil its mandate and is operationally independent, transparent and accountable. A jurisdiction with an explicit and legally binding sovereign deposit guarantee that effectively functions as deposit insurance can be regarded as having an effective deposit insurance scheme.

77. The presence of deposit insurance alone is not sufficient to consider a deposit “stable”.

78. Jurisdictions may choose to apply a run-off rate of 3% to stable deposits in their jurisdiction, if they meet the above stable deposit criteria and the following additional criteria for deposit insurance schemes:³⁵

- the insurance scheme is based on a system of prefunding via the periodic collection of levies on banks with insured deposits;³⁶
- the scheme has adequate means of ensuring ready access to additional funding in the event of a large call on its reserves, eg an explicit and legally binding guarantee from the government, or a standing authority to borrow from the government; and

³⁴ “Fully insured” means that 100% of the deposit amount, up to the deposit insurance limit, is covered by an effective deposit insurance scheme. Deposit balances up to the deposit insurance limit can be treated as “fully insured” even if a depositor has a balance in excess of the deposit insurance limit. However, any amount in excess of the deposit insurance limit is to be treated as “less stable”. For example, if a depositor has a deposit of 150 that is covered by a deposit insurance scheme, which has a limit of 100, where the depositor would receive at least 100 from the deposit insurance scheme if the financial institution were unable to pay, then 100 would be considered “fully insured” and treated as stable deposits while 50 would be treated as less stable deposits. However if the deposit insurance scheme only covered a percentage of the funds from the first currency unit (eg 90% of the deposit amount up to a limit of 100) then the entire 150 deposit would be less stable.

³⁵ The Financial Stability Board has asked the International Association of Deposit Insurers (IADI), in conjunction with the Basel Committee and other relevant bodies where appropriate, to update its *Core Principles* and other guidance to better reflect leading practices. The criteria in this paragraph will therefore be reviewed by the Committee once the work by IADI has been completed.

³⁶ The requirement for periodic collection of levies from banks does not preclude that deposit insurance schemes may, on occasion, provide for contribution holidays due to the scheme being well-funded at a given point in time.

- access to insured deposits is available to depositors in a short period of time once the deposit insurance scheme is triggered.³⁷

Jurisdictions applying the 3% run-off rate to stable deposits with deposit insurance arrangements that meet the above criteria should be able to provide evidence of run-off rates for stable deposits within the banking system below 3% during any periods of stress experienced that are consistent with the conditions within the LCR.

(b) Less stable deposits (run-off rates = 10% and higher)

79. Supervisory authorities are expected to develop additional buckets with higher run-off rates as necessary to apply to buckets of potentially less stable retail deposits in their jurisdictions, with a minimum run-off rate of 10%. These jurisdiction-specific run-off rates should be clearly outlined and publicly transparent. Buckets of less stable deposits could include deposits that are not fully covered by an effective deposit insurance scheme or sovereign deposit guarantee, high-value deposits, deposits from sophisticated or high net worth individuals, deposits that can be withdrawn quickly (eg internet deposits) and foreign currency deposits, as determined by each jurisdiction.

80. If a bank is not able to readily identify which retail deposits would qualify as “stable” according to the above definition (eg the bank cannot determine which deposits are covered by an effective deposit insurance scheme or a sovereign deposit guarantee), it should place the full amount in the “less stable” buckets as established by its supervisor.

81. Foreign currency retail deposits are deposits denominated in any other currency than the domestic currency in a jurisdiction in which the bank operates. Supervisors will determine the run-off factor that banks in their jurisdiction should use for foreign currency deposits. Foreign currency deposits will be considered as “less stable” if there is a reason to believe that such deposits are more volatile than domestic currency deposits. Factors affecting the volatility of foreign currency deposits include the type and sophistication of the depositors, and the nature of such deposits (eg whether the deposits are linked to business needs in the same currency, or whether the deposits are placed in a search for yield).

82. Cash outflows related to retail term deposits with a residual maturity or withdrawal notice period of greater than 30 days will be excluded from total expected cash outflows if the depositor has no legal right to withdraw deposits within the 30-day horizon of the LCR, or if early withdrawal results in a significant penalty that is materially greater than the loss of interest.³⁸

83. If a bank allows a depositor to withdraw such deposits without applying the corresponding penalty, or despite a clause that says the depositor has no legal right to withdraw, the entire category of these funds would then have to be treated as demand deposits (ie regardless of the remaining term, the deposits would be subject to the deposit run-off rates as specified in paragraphs 74-81). Supervisors in each jurisdiction may choose to outline exceptional circumstances that would qualify as hardship, under which the exceptional term deposit could be withdrawn by the depositor without changing the treatment of the entire pool of deposits.

³⁷ This period of time would typically be expected to be no more than 7 business days.

³⁸ If a portion of the term deposit can be withdrawn without incurring such a penalty, only that portion should be treated as a demand deposit. The remaining balance of the deposit should be treated as a term deposit.

84. Notwithstanding the above, supervisors may also opt to treat retail term deposits that meet the qualifications set out in paragraph 82 with a higher than 0% run-off rate, if they clearly state the treatment that applies for their jurisdiction and apply this treatment in a similar fashion across banks in their jurisdiction. Such reasons could include, but are not limited to, supervisory concerns that depositors would withdraw term deposits in a similar fashion as retail demand deposits during either normal or stress times, concern that banks may repay such deposits early in stressed times for reputational reasons, or the presence of unintended incentives on banks to impose material penalties on consumers if deposits are withdrawn early. In these cases supervisors would assess a higher run-off against all or some of such deposits.

(ii) Unsecured wholesale funding run-off

85. For the purposes of the LCR, "unsecured wholesale funding" is defined as those liabilities and general obligations that are raised from non-natural persons (ie legal entities, including sole proprietorships and partnerships) and are **not** collateralised by legal rights to specifically designated assets owned by the borrowing institution in the case of bankruptcy, insolvency, liquidation or resolution. Obligations related to derivative contracts are explicitly excluded from this definition.

86. The wholesale funding included in the LCR is defined as all funding that is callable within the LCR's horizon of 30 days or that has its earliest possible contractual maturity date situated within this horizon (such as maturing term deposits and unsecured debt securities) as well as funding with an undetermined maturity. This should include all funding with options that are exercisable at the investor's discretion within the 30 calendar day horizon. For funding with options exercisable at the bank's discretion, supervisors should take into account reputational factors that may limit a bank's ability not to exercise the option.³⁹ In particular, where the market expects certain liabilities to be redeemed before their legal final maturity date, banks and supervisors should assume such behaviour for the purpose of the LCR and include these liabilities as outflows.

87. Wholesale funding that is callable⁴⁰ by the funds provider subject to a contractually defined and binding notice period surpassing the 30-day horizon is not included.

88. For the purposes of the LCR, unsecured wholesale funding is to be categorised as detailed below, based on the assumed sensitivity of the funds providers to the rate offered and the credit quality and solvency of the borrowing bank. This is determined by the type of funds providers and their level of sophistication, as well as their operational relationships with the bank. The run-off rates for the scenario are listed for each category.

(a) Unsecured wholesale funding provided by small business customers: 5%, 10% and higher

89. Unsecured wholesale funding provided by small business customers is treated the same way as retail deposits for the purposes of this standard, effectively distinguishing between a "stable" portion of funding provided by small business customers and different buckets of less stable funding defined by each jurisdiction. The same bucket definitions and associated run-off factors apply as for retail deposits.

³⁹ This could reflect a case where a bank may imply that it is under liquidity stress if it did not exercise an option on its own funding.

⁴⁰ This takes into account any embedded options linked to the funds provider's ability to call the funding before contractual maturity.

90. This category consists of deposits and other extensions of funds made by non-financial small business customers. "Small business customers" are defined in line with the definition of loans extended to small businesses in paragraph 231 of the Basel II framework that are managed as retail exposures and are generally considered as having similar liquidity risk characteristics to retail accounts provided the total aggregated funding⁴¹ raised from one small business customer is less than €1 million (on a consolidated basis where applicable).

91. Where a bank does not have any exposure to a small business customer that would enable it to use the definition under paragraph 231 of the Basel II Framework, the bank may include such a deposit in this category provided that the total aggregate funding raised from the customer is less than €1 million (on a consolidated basis where applicable) and the deposit is managed as a retail deposit. This means that the bank treats such deposits in its internal risk management systems consistently over time and in the same manner as other retail deposits, and that the deposits are not individually managed in a way comparable to larger corporate deposits.

92. Term deposits from small business customers should be treated in accordance with the treatment for term retail deposits as outlined in paragraph 82, 83, and 84.

(b) Operational deposits generated by clearing, custody and cash management activities: 25%

93. Certain activities lead to financial and non-financial customers needing to place, or leave, deposits with a bank in order to facilitate their access and ability to use payment and settlement systems and otherwise make payments. These funds may receive a 25% run-off factor only if the customer has a substantive dependency with the bank and the deposit is required for such activities. Supervisory approval would have to be given to ensure that banks utilising this treatment actually are conducting these operational activities at the level indicated. Supervisors may choose not to permit banks to utilise the operational deposit run-off rates in cases where, for example, a significant portion of operational deposits are provided by a small proportion of customers (ie concentration risk).

94. Qualifying activities in this context refer to clearing, custody or cash management activities that meet the following criteria:

- The customer is reliant on the bank to perform these services as an independent third party intermediary in order to fulfil its normal banking activities over the next 30 days. For example, this condition would not be met if the bank is aware that the customer has adequate back-up arrangements.
- These services must be provided under a legally binding agreement to institutional customers.
- The termination of such agreements shall be subject either to a notice period of at least 30 days or significant switching costs (such as those related to transaction, information technology, early termination or legal costs) to be borne by the customer if the operational deposits are moved before 30 days.

⁴¹ "Aggregated funding" means the gross amount (ie not netting any form of credit extended to the legal entity) of all forms of funding (eg deposits or debt securities or similar derivative exposure for which the counterparty is known to be a small business customer). In addition, applying the limit on a consolidated basis means that where one or more small business customers are affiliated with each other, they may be considered as a single creditor such that the limit is applied to the total funding received by the bank from this group of customers.

95. Qualifying operational deposits generated by such an activity are ones where:
- The deposits are by-products of the underlying services provided by the banking organisation and not sought out in the wholesale market in the sole interest of offering interest income.
 - The deposits are held in specifically designated accounts and priced without giving an economic incentive to the customer (not limited to paying market interest rates) to leave any excess funds on these accounts. In the case that interest rates in a jurisdiction are close to zero, it would be expected that such accounts are non-interest bearing. Banks should be particularly aware that during prolonged periods of low interest rates, excess balances (as defined below) could be significant.
96. Any excess balances that could be withdrawn and would still leave enough funds to fulfil these clearing, custody and cash management activities do not qualify for the 25% factor. In other words, only that part of the deposit balance with the service provider that is proven to serve a customer's operational needs can qualify as stable. Excess balances should be treated in the appropriate category for non-operational deposits. If banks are unable to determine the amount of the excess balance, then the entire deposit should be assumed to be excess to requirements and, therefore, considered non-operational.
97. Banks must determine the methodology for identifying excess deposits that are excluded from this treatment. This assessment should be conducted at a sufficiently granular level to adequately assess the risk of withdrawal in an idiosyncratic stress. The methodology should take into account relevant factors such as the likelihood that wholesale customers have above average balances in advance of specific payment needs, and consider appropriate indicators (eg ratios of account balances to payment or settlement volumes or to assets under custody) to identify those customers that are not actively managing account balances efficiently.
98. Operational deposits would receive a 0% inflow assumption for the depositing bank given that these deposits are required for operational reasons, and are therefore not available to the depositing bank to repay other outflows.
99. Notwithstanding these operational categories, if the deposit under consideration arises out of correspondent banking or from the provision of prime brokerage services, it will be treated as if there were no operational activity for the purpose of determining run-off factors.⁴²
100. The following paragraphs describe the types of activities that may generate operational deposits. A bank should assess whether the presence of such an activity does indeed generate an operational deposit as not all such activities qualify due to differences in customer dependency, activity and practices.
101. A clearing relationship, in this context, refers to a service arrangement that enables customers to transfer funds (or securities) indirectly through direct participants in domestic

⁴² Correspondent banking refers to arrangements under which one bank (correspondent) holds deposits owned by other banks (respondents) and provides payment and other services in order to settle foreign currency transactions (eg so-called nostro and vostro accounts used to settle transactions in a currency other than the domestic currency of the respondent bank for the provision of clearing and settlement of payments). Prime brokerage is a package of services offered to large active investors, particularly institutional hedge funds. These services usually include: clearing, settlement and custody; consolidated reporting; financing (margin, repo or synthetic); securities lending; capital introduction; and risk analytics.

settlement systems to final recipients. Such services are limited to the following activities: transmission, reconciliation and confirmation of payment orders; daylight overdraft, overnight financing and maintenance of post-settlement balances; and determination of intra-day and final settlement positions.

102. A custody relationship, in this context, refers to the provision of safekeeping, reporting, processing of assets or the facilitation of the operational and administrative elements of related activities on behalf of customers in the process of their transacting and retaining financial assets. Such services are limited to the settlement of securities transactions, the transfer of contractual payments, the processing of collateral, and the provision of custody related cash management services. Also included are the receipt of dividends and other income, client subscriptions and redemptions. Custodial services can furthermore extend to asset and corporate trust servicing, treasury, escrow, funds transfer, stock transfer and agency services, including payment and settlement services (excluding correspondent banking), and depository receipts.

103. A cash management relationship, in this context, refers to the provision of cash management and related services to customers. Cash management services, in this context, refers to those products and services provided to a customer to manage its cash flows, assets and liabilities, and conduct financial transactions necessary to the customer's ongoing operations. Such services are limited to payment remittance, collection and aggregation of funds, payroll administration, and control over the disbursement of funds.

104. The portion of the operational deposits generated by clearing, custody and cash management activities that is fully covered by deposit insurance can receive the same treatment as "stable" retail deposits

(c) *Treatment of deposits in institutional networks of cooperative banks: 25% or 100%*

105. An institutional network of cooperative (or otherwise named) banks is a group of legally autonomous banks with a statutory framework of cooperation with common strategic focus and brand where specific functions are performed by central institutions or specialised service providers. A 25% run-off rate can be given to the amount of deposits of member institutions with the central institution or specialised central service providers that are placed (a) due to statutory minimum deposit requirements, which are registered at regulators or (b) in the context of common task sharing and legal, statutory or contractual arrangements so long as both the bank that has received the monies and the bank that has deposited participate in the same institutional network's mutual protection scheme against illiquidity and insolvency of its members. As with other operational deposits, these deposits would receive a 0% inflow assumption for the depositing bank, as these funds are considered to remain with the centralised institution.

106. Supervisory approval would have to be given to ensure that banks utilising this treatment actually are the central institution or a central service provider of such a cooperative (or otherwise named) network. Correspondent banking activities would not be included in this treatment and would receive a 100% outflow treatment, as would funds placed at the central institutions or specialised service providers for any other reason other than those outlined in (a) and (b) in the paragraph above, or for operational functions of clearing, custody, or cash management as outlined in paragraphs 101-103.

(d) *Unsecured wholesale funding provided by non-financial corporates and sovereigns, central banks, multilateral development banks, and PSEs: 20% or 40%*

107. This category comprises all deposits and other extensions of unsecured funding from non-financial corporate customers (that are not categorised as small business customers) and (both domestic and foreign) sovereign, central bank, multilateral

development bank, and PSE customers that are not specifically held for operational purposes (as defined above). The run-off factor for these funds is 40%, unless the criteria in paragraph 108 are met.

108. Unsecured wholesale funding provided by non-financial corporate customers, sovereigns, central banks, multilateral development banks, and PSEs without operational relationships can receive a 20% run-off factor if the entire amount of the deposit is fully covered by an effective deposit insurance scheme or by a public guarantee that provides equivalent protection.

(e) *Unsecured wholesale funding provided by other legal entity customers: 100%*

109. This category consists of all deposits and other funding from other institutions (including banks, securities firms, insurance companies, etc), fiduciaries,⁴³ beneficiaries,⁴⁴ conduits and special purpose vehicles, affiliated entities of the bank⁴⁵ and other entities that are not specifically held for operational purposes (as defined above) and not included in the prior three categories. The run-off factor for these funds is 100%.

110. All notes, bonds and other debt securities issued by the bank are included in this category regardless of the holder, unless the bond is sold exclusively in the retail market and held in retail accounts (including small business customer accounts treated as retail per paragraphs 89-91), in which case the instruments can be treated in the appropriate retail or small business customer deposit category. To be treated in this manner, it is not sufficient that the debt instruments are specifically designed and marketed to retail or small business customers. Rather there should be limitations placed such that those instruments cannot be bought and held by parties other than retail or small business customers.

111. Customer cash balances arising from the provision of prime brokerage services, including but not limited to the cash arising from prime brokerage services as identified in paragraph 99, should be considered separate from any required segregated balances related to client protection regimes imposed by national regulations, and should not be netted against other customer exposures included in this standard. These offsetting balances held in segregated accounts are treated as inflows in paragraph 154 and should be excluded from the stock of HQLA.

(iii) *Secured funding run-off*

112. For the purposes of this standard, “secured funding” is defined as those liabilities and general obligations that are collateralised by legal rights to specifically designated assets owned by the borrowing institution in the case of bankruptcy, insolvency, liquidation or resolution.

113. Loss of secured funding on short-term financing transactions: In this scenario, the ability to continue to transact repurchase, reverse repurchase and other securities financing transactions is limited to transactions backed by HQLA or with the bank’s domestic

⁴³ Fiduciary is defined in this context as a legal entity that is authorised to manage assets on behalf of a third party. Fiduciaries include asset management entities such as pension funds and other collective investment vehicles.

⁴⁴ Beneficiary is defined in this context as a legal entity that receives, or may become eligible to receive, benefits under a will, insurance policy, retirement plan, annuity, trust, or other contract.

⁴⁵ Outflows on unsecured wholesale funding from affiliated entities of the bank are included in this category unless the funding is part of an operational relationship, a deposit in an institutional network of cooperative banks or the affiliated entity of a non-financial corporate.

sovereign, PSE or central bank.⁴⁶ Collateral swaps should be treated as repurchase or reverse repurchase agreements, as should any other transaction with a similar form. Additionally, collateral lent to the bank's customers to effect short positions⁴⁷ should be treated as a form of secured funding. For the scenario, a bank should apply the following factors to all outstanding secured funding transactions with maturities within the 30 calendar day stress horizon, including customer short positions that do not have a specified contractual maturity. The amount of outflow is calculated based on the amount of funds raised through the transaction, and not the value of the underlying collateral.

114. Due to the high-quality of Level 1 assets, no reduction in funding availability against these assets is assumed to occur. Moreover, no reduction in funding availability is expected for any maturing secured funding transactions with the bank's domestic central bank. A reduction in funding availability will be assigned to maturing transactions backed by Level 2 assets equivalent to the required haircuts. A 25% factor is applied for maturing secured funding transactions with the bank's domestic sovereign, multilateral development banks, or domestic PSEs that have a 20% or lower risk weight, when the transactions are backed by assets other than Level 1 or Level 2A assets, in recognition that these entities are unlikely to withdraw secured funding from banks in a time of market-wide stress. This, however, gives credit only for outstanding secured funding transactions, and not for unused collateral or merely the capacity to borrow.

115. For all other maturing transactions the run-off factor is 100%, including transactions where a bank has satisfied customers' short positions with its own long inventory. The table below summarises the applicable standards:

Categories for outstanding maturing secured funding transactions	Amount to add to cash outflows
• Backed by Level 1 assets or with central banks.	0%
• Backed by Level 2A assets.	15%
• Secured funding transactions with domestic sovereign, PSEs or multilateral development banks that are not backed by Level 1 or 2A assets. PSEs that receive this treatment are limited to those that have a risk weight of 20% or lower.	25%
• Backed by RMBS eligible for inclusion in Level 2B	
• Backed by other Level 2B assets	50%
• All others	100%

⁴⁶ In this context, PSEs that receive this treatment should be limited to those that are 20% risk weighted or better, and "domestic" can be defined as a jurisdiction where a bank is legally incorporated.

⁴⁷ A customer short position in this context describes a transaction where a bank's customer sells a security it does not own, and the bank subsequently obtains the same security from internal or external sources to make delivery into the sale. Internal sources include the bank's own inventory of collateral as well as rehypothecatable collateral held in other customer margin accounts. External sources include collateral obtained through a securities borrowing, reverse repo, or like transaction.

(iv) *Additional requirements*

116. **Derivatives cash outflows:** the sum of all net cash outflows should receive a 100% factor. Banks should calculate, in accordance with their existing valuation methodologies, expected contractual derivative cash inflows and outflows. Cash flows may be calculated on a net basis (ie inflows can offset outflows) by counterparty, only where a valid master netting agreement exists. Banks should exclude from such calculations those liquidity requirements that would result from increased collateral needs due to market value movements or falls in value of collateral posted.⁴⁸ Options should be assumed to be exercised when they are 'in the money' to the option buyer.

117. Where derivative payments are collateralised by HQLA, cash outflows should be calculated net of any corresponding cash or collateral inflows that would result, all other things being equal, from contractual obligations for cash or collateral to be provided to the bank, if the bank is legally entitled and operationally capable to re-use the collateral in new cash raising transactions once the collateral is received. This is in line with the principle that banks should not double count liquidity inflows and outflows.

118. **Increased liquidity needs related to downgrade triggers embedded in financing transactions, derivatives and other contracts:** (100% of the amount of collateral that would be posted for, or contractual cash outflows associated with, any downgrade up to and including a 3-notch downgrade). Often, contracts governing derivatives and other transactions have clauses that require the posting of additional collateral, drawdown of contingent facilities, or early repayment of existing liabilities upon the bank's downgrade by a recognised credit rating organisation. The scenario therefore requires that for each contract in which "downgrade triggers" exist, the bank assumes that 100% of this additional collateral or cash outflow will have to be posted for any downgrade up to and including a 3-notch downgrade of the bank's long-term credit rating. Triggers linked to a bank's short-term rating should be assumed to be triggered at the corresponding long-term rating in accordance with published ratings criteria. The impact of the downgrade should consider impacts on all types of margin collateral and contractual triggers which change rehypothecation rights for non-segregated collateral.

119. **Increased liquidity needs related to the potential for valuation changes on posted collateral securing derivative and other transactions:** (20% of the value of non-Level 1 posted collateral). Observation of market practices indicates that most counterparties to derivatives transactions typically are required to secure the mark-to-market valuation of their positions and that this is predominantly done using cash or sovereign, central bank, multilateral development banks, or PSE debt securities with a 0% risk weight under the Basel II standardised approach. When these Level 1 liquid asset securities are posted as collateral, the framework will not require that an additional stock of HQLA be maintained for potential valuation changes. If however, counterparties are securing mark-to-market exposures with other forms of collateral, to cover the potential loss of market value on those securities, 20% of the value of all such posted collateral, net of collateral received on a counterparty basis (provided that the collateral received is not subject to restrictions on reuse or rehypothecation) will be added to the stock of required HQLA by the bank posting such collateral. This 20% will be calculated based on the notional amount required to be posted as collateral after any other haircuts have been applied that may be applicable to the collateral category. Any collateral that is in a segregated margin account can only be used to offset outflows that are associated with payments that are eligible to be offset from that same account.

⁴⁸ These risks are captured in paragraphs 119 and 123, respectively.

120. **Increased liquidity needs related to excess non-segregated collateral held by the bank that could contractually be called at any time by the counterparty:** 100% of the non-segregated collateral that could contractually be recalled by the counterparty because the collateral is in excess of the counterparty's current collateral requirements.

121. **Increased liquidity needs related to contractually required collateral on transactions for which the counterparty has not yet demanded the collateral be posted:** 100% of the collateral that is contractually due but where the counterparty has not yet demanded the posting of such collateral.

122. **Increased liquidity needs related to contracts that allow collateral substitution to non-HQLA assets:** 100% of the amount of HQLA collateral that can be substituted for non-HQLA assets without the bank's consent that have been received to secure transactions that have not been segregated.

123. **Increased liquidity needs related to market valuation changes on derivative or other transactions:** As market practice requires collateralisation of mark-to-market exposures on derivative and other transactions, banks face potentially substantial liquidity risk exposures to these valuation changes. Inflows and outflows of transactions executed under the same master netting agreement can be treated on a net basis. Any outflow generated by increased needs related to market valuation changes should be included in the LCR calculated by identifying the largest absolute net 30-day collateral flow realised during the preceding 24 months. The absolute net collateral flow is based on both realised outflows and inflows. Supervisors may adjust the treatment flexibly according to circumstances.

124. **Loss of funding on asset-backed securities,⁴⁹ covered bonds and other structured financing instruments:** The scenario assumes the outflow of 100% of the funding transaction maturing within the 30-day period, when these instruments are issued by the bank itself (as this assumes that the re-financing market will not exist).

125. **Loss of funding on asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities:** (100% of maturing amount and 100% of returnable assets). Banks having structured financing facilities that include the issuance of short-term debt instruments, such as asset backed commercial paper, should fully consider the potential liquidity risk arising from these structures. These risks include, but are not limited to, (i) the inability to refinance maturing debt, and (ii) the existence of derivatives or derivative-like components contractually written into the documentation associated with the structure that would allow the "return" of assets in a financing arrangement, or that require the original asset transferor to provide liquidity, effectively ending the financing arrangement ("liquidity puts") within the 30-day period. Where the structured financing activities of a bank are conducted through a special purpose entity⁵⁰ (such as a special purpose vehicle, conduit or structured investment vehicle - SIV), the bank should, in determining the HQLA requirements, look through to the maturity of the debt instruments issued by the entity and any embedded options in financing arrangements that

⁴⁹ To the extent that sponsored conduits/SPVs are required to be consolidated under liquidity requirements, their assets and liabilities will be taken into account. Supervisors need to be aware of other possible sources of liquidity risk beyond that arising from debt maturing within 30 days.

⁵⁰ A special purpose entity (SPE) is defined in the Basel II Framework (paragraph 552) as a corporation, trust, or other entity organised for a specific purpose, the activities of which are limited to those appropriate to accomplish the purpose of the SPE, and the structure of which is intended to isolate the SPE from the credit risk of an originator or seller of exposures. SPEs are commonly used as financing vehicles in which exposures are sold to a trust or similar entity in exchange for cash or other assets funded by debt issued by the trust.

may potentially trigger the “return” of assets or the need for liquidity, irrespective of whether or not the SPV is consolidated.

Potential Risk Element	HQLA Required
Debt maturing within the calculation period	100% of maturing amount
Embedded options in financing arrangements that allow for the return of assets or potential liquidity support	100% of the amount of assets that could potentially be returned, or the liquidity required

126. **Drawdowns on committed credit and liquidity facilities:** For the purpose of the standard, credit and liquidity facilities are defined as explicit contractual agreements or obligations to extend funds at a future date to retail or wholesale counterparties. For the purpose of the standard, these facilities only include contractually irrevocable (“committed”) or conditionally revocable agreements to extend funds in the future. Unconditionally revocable facilities that are unconditionally cancellable by the bank (in particular, those without a precondition of a material change in the credit condition of the borrower) are excluded from this section and included in “Other Contingent Funding Liabilities”. These off-balance sheet facilities or funding commitments can have long or short-term maturities, with short-term facilities frequently renewing or automatically rolling-over. In a stressed environment, it will likely be difficult for customers drawing on facilities of any maturity, even short-term maturities, to be able to quickly pay back the borrowings. Therefore, for purposes of this standard, all facilities that are assumed to be drawn (as outlined in the paragraphs below) will remain outstanding at the amounts assigned throughout the duration of the test, regardless of maturity.

127. For the purposes of this standard, the currently undrawn portion of these facilities is calculated net of any HQLA eligible for the stock of HQLA, if the HQLA have already been posted as collateral by the counterparty to secure the facilities or that are contractually obliged to be posted when the counterparty will draw down the facility (eg a liquidity facility structured as a repo facility), if the bank is legally entitled and operationally capable to re-use the collateral in new cash raising transactions once the facility is drawn, and there is no undue correlation between the probability of drawing the facility and the market value of the collateral. The collateral can be netted against the outstanding amount of the facility to the extent that this collateral is not already counted in the stock of HQLA, in line with the principle in paragraph 72 that items cannot be double-counted in the standard.

128. A liquidity facility is defined as any committed, undrawn back-up facility that would be utilised to refinance the debt obligations of a customer in situations where such a customer is unable to rollover that debt in financial markets (eg pursuant to a commercial paper programme, secured financing transactions, obligations to redeem units, etc). For the purpose of this standard, the amount of the commitment to be treated as a liquidity facility is the amount of the currently outstanding debt issued by the customer (or proportionate share, if a syndicated facility) maturing within a 30 day period that is backstopped by the facility. The portion of a liquidity facility that is backing debt that does not mature within the 30-day window is excluded from the scope of the definition of a facility. Any additional capacity of the facility (ie the remaining commitment) would be treated as a committed credit facility with its associated drawdown rate as specified in paragraph 131. General working capital facilities for corporate entities (eg revolving credit facilities in place for general corporate or working capital purposes) will not be classified as liquidity facilities, but as credit facilities.

129. Notwithstanding the above, any facilities provided to hedge funds, money market funds and special purpose funding vehicles, for example SPEs (as defined in paragraph 125)

or conduits, or other vehicles used to finance the banks own assets, should be captured in their entirety as a liquidity facility to other legal entities.

130. For that portion of financing programs that are captured in paragraphs 124 and 125 (ie are maturing or have liquidity puts that may be exercised in the 30-day horizon), banks that are providers of associated liquidity facilities do not need to double count the maturing financing instrument and the liquidity facility for consolidated programs.

131. Any contractual loan drawdowns from committed facilities⁵¹ and estimated drawdowns from revocable facilities within the 30-day period should be fully reflected as outflows.

- (a) *Committed credit and liquidity facilities to retail and small business customers:* Banks should assume a 5% drawdown of the undrawn portion of these facilities.
- (b) *Committed credit facilities to non-financial corporates, sovereigns and central banks, PSEs and multilateral development banks:* Banks should assume a 10% drawdown of the undrawn portion of these credit facilities.
- (c) *Committed liquidity facilities to non-financial corporates, sovereigns and central banks, PSEs, and multilateral development banks:* Banks should assume a 30% drawdown of the undrawn portion of these liquidity facilities.
- (d) *Committed credit and liquidity facilities extended to banks subject to prudential supervision:* Banks should assume a 40% drawdown of the undrawn portion of these facilities.
- (e) *Committed credit facilities to other financial institutions including securities firms, insurance companies, fiduciaries,⁵² and beneficiaries⁵³* Banks should assume a 40% drawdown of the undrawn portion of these credit facilities.
- (f) *Committed liquidity facilities to other financial institutions including securities firms, insurance companies, fiduciaries, and beneficiaries:* Banks should assume a 100% drawdown of the undrawn portion of these liquidity facilities.
- (g) *Committed credit and liquidity facilities to other legal entities (including SPEs (as defined on paragraph 125), conduits and special purpose vehicles,⁵⁴ and other entities not included in the prior categories):* Banks should assume a 100% drawdown of the undrawn portion of these facilities.

132. **Contractual obligations to extend funds within a 30-day period.** Any contractual lending obligations to financial institutions not captured elsewhere in this standard should be captured here at a 100% outflow rate.

133. If the total of all contractual obligations to extend funds to retail and non-financial corporate clients within the next 30 calendar days (not captured in the prior categories)

⁵¹ Committed facilities refer to those which are irrevocable.

⁵² Refer to footnote 43 for definition.

⁵³ Refer to footnote 44 for definition.

⁵⁴ The potential liquidity risks associated with the bank's own structured financing facilities should be treated according to paragraphs 124 and 125 of this document (100% of maturing amount and 100% of returnable assets are included as outflows).

exceeds 50% of the total contractual inflows due in the next 30 calendar days from these clients, the difference should be reported as a 100% outflow.

134. **Other contingent funding obligations:** (run-off rates at national discretion). National supervisors will work with supervised institutions in their jurisdictions to determine the liquidity risk impact of these contingent liabilities and the resulting stock of HQLA that should accordingly be maintained. Supervisors should disclose the run-off rates they assign to each category publicly.

135. These contingent funding obligations may be either contractual or non-contractual and are not lending commitments. Non-contractual contingent funding obligations include associations with, or sponsorship of, products sold or services provided that may require the support or extension of funds in the future under stressed conditions. Non-contractual obligations may be embedded in financial products and instruments sold, sponsored, or originated by the institution that can give rise to unplanned balance sheet growth arising from support given for reputational risk considerations. These include products and instruments for which the customer or holder has specific expectations regarding the liquidity and marketability of the product or instrument and for which failure to satisfy customer expectations in a commercially reasonable manner would likely cause material reputational damage to the institution or otherwise impair ongoing viability.

136. Some of these contingent funding obligations are explicitly contingent upon a credit or other event that is not always related to the liquidity events simulated in the stress scenario, but may nevertheless have the potential to cause significant liquidity drains in times of stress. For this standard, each supervisor and bank should consider which of these “other contingent funding obligations” may materialise under the assumed stress events. The potential liquidity exposures to these contingent funding obligations are to be treated as a nationally determined behavioural assumption where it is up to the supervisor to determine whether and to what extent these contingent outflows are to be included in the LCR. All identified contractual and non-contractual contingent liabilities and their assumptions should be reported, along with their related triggers. Supervisors and banks should, at a minimum, use historical behaviour in determining appropriate outflows.

137. Non contractual contingent funding obligations related to potential liquidity draws from joint ventures or minority investments in entities, which are not consolidated per paragraph 164 should be captured where there is the expectation that the bank will be the main liquidity provider when the entity is in need of liquidity. The amount included should be calculated in accordance with the methodology agreed by the bank’s supervisor.

138. In the case of contingent funding obligations stemming from trade finance instruments, national authorities can apply a relatively low run-off rate (eg 5% or less). Trade finance instruments consist of trade-related obligations directly underpinned by the movement of goods or the provision of services, such as:

- documentary trade letters of credit, documentary and clean collection, import bills, and export bills; and
- guarantees directly related to trade finance obligations, such as shipping guarantees.

139. Lending commitments, such as direct import or export financing for non-financial corporate firms, are excluded from this treatment and banks will apply the draw-down rates specified in paragraph 131.

140. National authorities should determine the run-off rates for the other contingent funding obligations listed below in accordance with paragraph 134. Other contingent funding obligations include products and instruments such as:

- unconditionally revocable "uncommitted" credit and liquidity facilities;
- guarantees and letters of credit unrelated to trade finance obligations (as described in paragraph 138);
- non-contractual obligations such as:
 - potential requests for debt repurchases of the bank's own debt or that of related conduits, securities investment vehicles and other such financing facilities;
 - structured products where customers anticipate ready marketability, such as adjustable rate notes and variable rate demand notes (VRDNs); and
 - managed funds that are marketed with the objective of maintaining a stable value such as money market mutual funds or other types of stable value collective investment funds etc.
- For issuers with an affiliated dealer or market maker, there may be a need to include an amount of the outstanding debt securities (unsecured and secured, term as well as short-term) having maturities greater than 30 calendar days, to cover the potential repurchase of such outstanding securities.
- **Non contractual obligations where customer short positions are covered by other customers' collateral:** A minimum 50% run-off factor of the contingent obligations should be applied where banks have internally matched client assets against other clients' short positions where the collateral does not qualify as Level 1 or Level 2, and the bank may be obligated to find additional sources of funding for these positions in the event of client withdrawals.

141. **Other contractual cash outflows:** (100%). Any other contractual cash outflows within the next 30 calendar days should be captured in this standard, such as outflows to cover unsecured collateral borrowings, uncovered short positions, dividends or contractual interest payments, with explanation given as to what comprises this bucket. Outflows related to operating costs, however, are not included in this standard.

2. Cash inflows

142. When considering its available cash inflows, the bank should only include contractual inflows (including interest payments) from outstanding exposures that are fully performing and for which the bank has no reason to expect a default within the 30-day time horizon. Contingent inflows are not included in total net cash inflows.

143. Banks and supervisors need to monitor the concentration of expected inflows across wholesale counterparties in the context of banks' liquidity management in order to ensure that their liquidity position is not overly dependent on the arrival of expected inflows from one or a limited number of wholesale counterparties.

144. **Cap on total inflows:** In order to prevent banks from relying solely on anticipated inflows to meet their liquidity requirement, and also to ensure a minimum level of HQLA holdings, the amount of inflows that can offset outflows is capped at 75% of total expected cash outflows as calculated in the standard. This requires that a bank must maintain a minimum amount of stock of HQLA equal to 25% of the total cash outflows.

(i) *Secured lending, including reverse repos and securities borrowing*

145. A bank should assume that maturing reverse repurchase or securities borrowing agreements secured by Level 1 assets will be rolled-over and will not give rise to any cash inflows (0%). Maturing reverse repurchase or securities lending agreements secured by Level 2 HQLA will lead to cash inflows equivalent to the relevant haircut for the specific assets. A bank is assumed **not** to roll-over maturing reverse repurchase or securities borrowing agreements secured by non-HQLA assets, and can assume to receive back 100% of the cash related to those agreements. Collateralised loans extended to customers for the purpose of taking leveraged trading positions (“margin loans”) should also be considered as a form of secured lending; however, for this scenario banks may recognise no more than 50% of contractual inflows from maturing margin loans made against non-HQLA collateral. This treatment is in line with the assumptions outlined for secured funding in the outflows section.

146. As an exception to paragraph 145, if the collateral obtained through reverse repo, securities borrowing, or collateral swaps, which matures within the 30-day horizon, is re-used (ie rehypothecated) and is used to cover short positions that could be extended beyond 30 days, a bank should assume that such reverse repo or securities borrowing arrangements will be rolled-over and will not give rise to any cash inflows (0%), reflecting its need to continue to cover the short position or to re-purchase the relevant securities. Short positions include both instances where in its ‘matched book’ the bank sold short a security outright as part of a trading or hedging strategy and instances where the bank is short a security in the ‘matched’ repo book (ie it has borrowed a security for a given period and lent the security out for a longer period).

Maturing secured lending transactions backed by the following asset category:	Inflow rate (if collateral is not used to cover short positions):	Inflow rate (if collateral is used to cover short positions):
Level 1 assets	0%	0%
Level 2A assets	15%	0%
Level 2B assets		
Eligible RMBS	25%	0%
Other Level 2B assets	50%	0%
Margin lending backed by all other collateral	50%	0%
Other collateral	100%	0%

147. In the case of a bank’s short positions, if the short position is being covered by an unsecured security borrowing, the bank should assume the unsecured security borrowing of collateral from financial market participants would run-off in full, leading to a 100% outflow of either cash or HQLA to secure the borrowing, or cash to close out the short position by buying back the security. This should be recorded as a 100% other contractual outflow according to paragraph 141. If, however, the bank’s short position is being covered by a collateralised securities financing transaction, the bank should assume the short position will be maintained throughout the 30-day period and receive a 0% outflow.

148. Despite the roll-over assumptions in paragraphs 145 and 146, a bank should manage its collateral such that it is able to fulfil obligations to return collateral whenever the counterparty decides not to roll-over any reverse repo or securities lending transaction.⁵⁵ This is especially the case for non-HQLA collateral, since such outflows are not captured in the LCR framework. Supervisors should monitor the bank's collateral management.

(ii) Committed facilities

149. No credit facilities, liquidity facilities or other contingent funding facilities that the bank holds at other institutions for its own purposes are assumed to be able to be drawn. Such facilities receive a 0% inflow rate, meaning that this scenario does not consider inflows from committed credit or liquidity facilities. This is to reduce the contagion risk of liquidity shortages at one bank causing shortages at other banks and to reflect the risk that other banks may not be in a position to honour credit facilities, or may decide to incur the legal and reputational risk involved in not honouring the commitment, in order to conserve their own liquidity or reduce their exposure to that bank.

(iii) Other inflows by counterparty

150. For all other types of transactions, either secured or unsecured, the inflow rate will be determined by counterparty. In order to reflect the need for a bank to conduct ongoing loan origination/roll-over with different types of counterparties, even during a time of stress, a set of limits on contractual inflows by counterparty type is applied.

151. When considering loan payments, the bank should only include inflows from fully performing loans. Further, inflows should only be taken at the latest possible date, based on the contractual rights available to counterparties. For revolving credit facilities, this assumes that the existing loan is rolled over and that any remaining balances are treated in the same way as a committed facility according to paragraph 131.

152. Inflows from loans that have no specific maturity (ie have non-defined or open maturity) should not be included; therefore, no assumptions should be applied as to when maturity of such loans would occur. An exception to this would be minimum payments of principal, fee or interest associated with an open maturity loan, provided that such payments are contractually due within 30 days. These minimum payment amounts should be captured as inflows at the rates prescribed in paragraphs 153 and 154.

(a) Retail and small business customer inflows

153. This scenario assumes that banks will receive all payments (including interest payments and instalments) from retail and small business customers that are fully performing and contractually due within a 30-day horizon. At the same time, however, banks are assumed to continue to extend loans to retail and small business customers, at a rate of 50% of contractual inflows. This results in a net inflow number of 50% of the contractual amount.

(b) Other wholesale inflows

154. This scenario assumes that banks will receive all payments (including interest payments and instalments) from wholesale customers that are fully performing and contractually due within the 30-day horizon. In addition, banks are assumed to continue to extend loans to wholesale clients, at a rate of 0% of inflows for financial institutions and central banks, and 50% for all others, including non-financial corporates, sovereigns, multilateral development banks, and PSEs. This will result in an inflow percentage of:

⁵⁵ This is in line with Principle 9 of the *Sound Principles*.

- 100% for financial institution and central bank counterparties; and
- 50% for non-financial wholesale counterparties.

155. Inflows from securities maturing within 30 days not included in the stock of HQLA should be treated in the same category as inflows from financial institutions (ie 100% inflow). Banks may also recognise in this category inflows from the release of balances held in segregated accounts in accordance with regulatory requirements for the protection of customer trading assets, provided that these segregated balances are maintained in HQLA. This inflow should be calculated in line with the treatment of other related outflows and inflows covered in this standard. Level 1 and Level 2 securities maturing within 30 days should be included in the stock of liquid assets, provided that they meet all operational and definitional requirements, as laid out in paragraphs 28-54.

156. *Operational deposits:* Deposits held at other financial institutions for operational purposes, as outlined in paragraphs 93-103, such as for clearing, custody, and cash management purposes, are assumed to stay at those institutions, and no inflows can be counted for these funds – ie they will receive a 0% inflow rate, as noted in paragraph 98.

157. The same treatment applies for deposits held at the centralised institution in a cooperative banking network, that are assumed to stay at the centralised institution as outlined in paragraphs 105 and 106; in other words, the depositing bank should not count any inflow for these funds – ie they will receive a 0% inflow rate.

(iv) *Other cash inflows*

158. *Derivatives cash inflows:* the sum of all net cash inflows should receive a 100% inflow factor. The amounts of derivatives cash inflows and outflows should be calculated in accordance with the methodology described in paragraph 116.

159. Where derivatives are collateralised by HQLA, cash inflows should be calculated net of any corresponding cash or contractual collateral outflows that would result, all other things being equal, from contractual obligations for cash or collateral to be posted by the bank, given these contractual obligations would reduce the stock of HQLA. This is in accordance with the principle that banks should not double-count liquidity inflows or outflows.

160. *Other contractual cash inflows:* Other contractual cash inflows should be captured here, with explanation given to what comprises this bucket. Inflow percentages should be determined as appropriate for each type of inflow by supervisors in each jurisdiction. Cash inflows related to non-financial revenues are not taken into account in the calculation of the net cash outflows for the purposes of this standard.

III. Application issues for the LCR

161. This section outlines a number of issues related to the application of the LCR. These issues include the frequency with which banks calculate and report the LCR, the scope of application of the LCR (whether they apply at group or entity level and to foreign bank branches) and the aggregation of currencies within the LCR.

A. Frequency of calculation and reporting

162. The LCR should be used on an ongoing basis to help monitor and control liquidity risk. The LCR should be reported to supervisors at least monthly, with the operational capacity to increase the frequency to weekly or even daily in stressed situations at the

discretion of the supervisor. The time lag in reporting should be as short as feasible and ideally should not surpass two weeks.

163. Banks are expected to inform supervisors of their LCR and their liquidity profile on an ongoing basis. Banks should also notify supervisors immediately if their LCR has fallen, or is expected to fall, below 100%.

B. Scope of application

164. The application of the requirements in this document follow the existing scope of application set out in Part I (Scope of Application) of the Basel II Framework.⁵⁶ The LCR standard and monitoring tools should be applied to all internationally active banks on a consolidated basis, but may be used for other banks and on any subset of entities of internationally active banks as well to ensure greater consistency and a level playing field between domestic and cross-border banks. The LCR standard and monitoring tools should be applied consistently wherever they are applied.

165. National supervisors should determine which investments in banking, securities and financial entities of a banking group that are not consolidated per paragraph 164 should be considered significant, taking into account the liquidity impact of such investments on the group under the LCR standard. Normally, a non-controlling investment (eg a joint-venture or minority-owned entity) can be regarded as significant if the banking group will be the main liquidity provider of such investment in times of stress (for example, when the other shareholders are non-banks or where the bank is operationally involved in the day-to-day management and monitoring of the entity's liquidity risk). National supervisors should agree with each relevant bank on a case-by-case basis on an appropriate methodology for how to quantify such potential liquidity draws, in particular, those arising from the need to support the investment in times of stress out of reputational concerns for the purpose of calculating the LCR standard. To the extent that such liquidity draws are not included elsewhere, they should be treated under "Other contingent funding obligations", as described in paragraph 137.

166. Regardless of the scope of application of the LCR, in keeping with Principle 6 as outlined in the *Sound Principles*, a bank should actively monitor and control liquidity risk exposures and funding needs at the level of individual legal entities, foreign branches and subsidiaries, and the group as a whole, taking into account legal, regulatory and operational limitations to the transferability of liquidity.

167. To ensure consistency in applying the consolidated LCR across jurisdictions, further information is provided below on two application issues.

1. Differences in home / host liquidity requirements

168. While most of the parameters in the LCR are internationally "harmonised", national differences in liquidity treatment may occur in those items subject to national discretion (eg deposit run-off rates, contingent funding obligations, market valuation changes on derivative transactions, etc) and where more stringent parameters are adopted by some supervisors.

169. When calculating the LCR on a consolidated basis, a cross-border banking group should apply the liquidity parameters adopted in the home jurisdiction to all legal entities

⁵⁶ See BCBS, *International Convergence of Capital Measurement and Capital Standards: A Revised Framework - Comprehensive Version*, June 2006 ("Basel II Framework").

being consolidated except for the treatment of retail / small business deposits that should follow the relevant parameters adopted in host jurisdictions in which the entities (branch or subsidiary) operate. This approach will enable the stressed liquidity needs of legal entities of the group (including branches of those entities) operating in host jurisdictions to be more suitably reflected, given that deposit run-off rates in host jurisdictions are more influenced by jurisdiction-specific factors such as the type and effectiveness of deposit insurance schemes in place and the behaviour of local depositors.

170. Home requirements for retail and small business deposits should apply to the relevant legal entities (including branches of those entities) operating in host jurisdictions if: (i) there are no host requirements for retail and small business deposits in the particular jurisdictions; (ii) those entities operate in host jurisdictions that have not implemented the LCR; or (iii) the home supervisor decides that home requirements should be used that are stricter than the host requirements.

2. *Treatment of liquidity transfer restrictions*

171. As noted in paragraph 36, as a general principle, no excess liquidity should be recognised by a cross-border banking group in its consolidated LCR if there is reasonable doubt about the availability of such liquidity. Liquidity transfer restrictions (eg ring-fencing measures, non-convertibility of local currency, foreign exchange controls, etc) in jurisdictions in which a banking group operates will affect the availability of liquidity by inhibiting the transfer of HQLA and fund flows within the group. The consolidated LCR should reflect such restrictions in a manner consistent with paragraph 36. For example, the eligible HQLA that are held by a legal entity being consolidated to meet its local LCR requirements (where applicable) can be included in the consolidated LCR to the extent that such HQLA are used to cover the total net cash outflows of that entity, notwithstanding that the assets are subject to liquidity transfer restrictions. If the HQLA held in excess of the total net cash outflows are not transferable, such surplus liquidity should be excluded from the standard.

172. For practical reasons, the liquidity transfer restrictions to be accounted for in the consolidated ratio are confined to existing restrictions imposed under applicable laws, regulations and supervisory requirements.⁵⁷ A banking group should have processes in place to capture all liquidity transfer restrictions to the extent practicable, and to monitor the rules and regulations in the jurisdictions in which the group operates and assess their liquidity implications for the group as a whole.

C. Currencies

173. As outlined in paragraph 42, while the LCR is expected to be met on a consolidated basis and reported in a common currency, supervisors and banks should also be aware of the liquidity needs in each significant currency. As indicated in the LCR, the currencies of the stock of HQLA should be similar in composition to the operational needs of the bank. Banks and supervisors cannot assume that currencies will remain transferable and convertible in a stress period, even for currencies that in normal times are freely transferable and highly convertible.

⁵⁷ There are a number of factors that can impede cross-border liquidity flows of a banking group, many of which are beyond the control of the group and some of these restrictions may not be clearly incorporated into law or may become visible only in times of stress.

Part 2: Monitoring tools

174. In addition to the LCR outlined in Part 1 to be used as a standard, this section outlines metrics to be used as consistent monitoring tools. These metrics capture specific information related to a bank's cash flows, balance sheet structure, available unencumbered collateral and certain market indicators.

175. These metrics, together with the LCR standard, provide the cornerstone of information that aid supervisors in assessing the liquidity risk of a bank. In addition, supervisors may need to supplement this framework by using additional tools and metrics tailored to help capture elements of liquidity risk specific to their jurisdictions. In utilising these metrics, supervisors should take action when potential liquidity difficulties are signalled through a negative trend in the metrics, or when a deteriorating liquidity position is identified, or when the absolute result of the metric identifies a current or potential liquidity problem. Examples of actions that supervisors can take are outlined in the Committee's *Sound Principles* (paragraphs 141-143).

176. The metrics discussed in this section include the following:

- I. Contractual maturity mismatch;
- II. Concentration of funding;
- III. Available unencumbered assets;
- IV. LCR by significant currency; and
- V. Market-related monitoring tools

I. Contractual maturity mismatch

A. Objective

177. The contractual maturity mismatch profile identifies the gaps between the contractual inflows and outflows of liquidity for defined time bands. These maturity gaps indicate how much liquidity a bank would potentially need to raise in each of these time bands if all outflows occurred at the earliest possible date. This metric provides insight into the extent to which the bank relies on maturity transformation under its current contracts.

B. Definition and practical application of the metric

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.
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178. A bank should report contractual cash and security flows in the relevant time bands based on their residual contractual maturity. Supervisors in each jurisdiction will determine the specific template, including required time bands, by which data must be reported. Supervisors should define the time buckets so as to be able to understand the bank's cash flow position. Possibilities include requesting the cash flow mismatch to be constructed for the overnight, 7 day, 14 day, 1, 2, 3, 6 and 9 months, 1, 2, 3, 5 and beyond 5 years buckets.

Instruments that have no specific maturity (non-defined or open maturity) should be reported separately, with details on the instruments, and with no assumptions applied as to when maturity occurs. Information on possible cash flows arising from derivatives such as interest rate swaps and options should also be included to the extent that their contractual maturities are relevant to the understanding of the cash flows.

179. At a minimum, the data collected from the contractual maturity mismatch should provide data on the categories outlined in the LCR. Some additional accounting (non-dated) information such as capital or non-performing loans may need to be reported separately.

1. Contractual cashflow assumptions

180. No rollover of existing liabilities is assumed to take place. For assets, the bank is assumed not to enter into any new contracts.

181. Contingent liability exposures that would require a change in the state of the world (such as contracts with triggers based on a change in prices of financial instruments or a downgrade in the bank's credit rating) need to be detailed, grouped by what would trigger the liability, with the respective exposures clearly identified.

182. A bank should record all securities flows. This will allow supervisors to monitor securities movements that mirror corresponding cash flows as well as the contractual maturity of collateral swaps and any uncollateralised stock lending/borrowing where stock movements occur without any corresponding cash flows.

183. A bank should report separately the customer collateral received that the bank is permitted to rehypothecate as well as the amount of such collateral that is rehypothecated at each reporting date. This also will highlight instances when the bank is generating mismatches in the borrowing and lending of customer collateral.

C. Utilisation of the metric

184. Banks will provide the raw data to the supervisors, with no assumptions included in the data. Standardised contractual data submission by banks enables supervisors to build a market-wide view and identify market outliers vis-à-vis liquidity.

185. Given that the metric is based solely on contractual maturities with no behavioural assumptions, the data will not reflect actual future forecasted flows under the current, or future, strategy or plans, ie, under a going-concern view. Also, contractual maturity mismatches do not capture outflows that a bank may make in order to protect its franchise, even where contractually there is no obligation to do so. For analysis, supervisors can apply their own assumptions to reflect alternative behavioural responses in reviewing maturity gaps.

186. As outlined in the *Sound Principles*, banks should also conduct their own maturity mismatch analyses, based on going-concern behavioural assumptions of the inflows and outflows of funds in both normal situations and under stress. These analyses should be based on strategic and business plans and should be shared and discussed with supervisors, and the data provided in the contractual maturity mismatch should be utilised as a basis of comparison. When firms are contemplating material changes to their business models, it is crucial for supervisors to request projected mismatch reports as part of an assessment of impact of such changes to prudential supervision. Examples of such changes include potential major acquisitions or mergers or the launch of new products that have not yet been contractually entered into. In assessing such data supervisors need to be mindful of assumptions underpinning the projected mismatches and whether they are prudent.

187. A bank should be able to indicate how it plans to bridge any identified gaps in its internally generated maturity mismatches and explain why the assumptions applied differ from the contractual terms. The supervisor should challenge these explanations and assess the feasibility of the bank's funding plans.

II. Concentration of funding

A. Objective

188. This metric is meant to identify those sources of wholesale funding that are of such significance that withdrawal of this funding could trigger liquidity problems. The metric thus encourages the diversification of funding sources recommended in the Committee's *Sound Principles*.

B. Definition and practical application of the metric

A. Funding liabilities sourced from each significant counterparty as a % of total liabilities

B. Funding liabilities sourced from each significant product/instrument as a % of total liabilities

C. List of asset and liability amounts by significant currency

1. Calculation of the metric

189. The numerator for A and B is determined by examining funding concentrations by counterparty or type of instrument/product. Banks and supervisors should monitor both the absolute percentage of the funding exposure, as well as significant increases in concentrations.

(i) Significant counterparties

190. The numerator for counterparties is calculated by aggregating the total of all types of liabilities to a single counterparty or group of connected or affiliated counterparties, as well as all other direct borrowings, both secured and unsecured, which the bank can determine arise from the same counterparty⁵⁸ (such as for overnight commercial paper / certificate of deposit (CP/CD) funding).

191. A "significant counterparty" is defined as a single counterparty or group of connected or affiliated counterparties accounting in aggregate for more than 1% of the bank's total balance sheet, although in some cases there may be other defining characteristics based on the funding profile of the bank. A group of connected counterparties is, in this context, defined in the same way as in the "Large Exposure" regulation of the host country in the case of consolidated reporting for solvency purposes. Intra-group deposits and deposits from related parties should be identified specifically under this metric, regardless of whether the metric is being calculated at a legal entity or group level, due to the potential limitations to intra-group transactions in stressed conditions.

⁵⁸ For some funding sources, such as debt issues that are transferable across counterparties (such as CP/CD funding dated longer than overnight, etc), it is not always possible to identify the counterparty holding the debt.

(ii) *Significant instruments / products*

192. The numerator for type of instrument/product should be calculated for each individually significant funding instrument/product, as well as by calculating groups of similar types of instruments/products.

193. A “significant instrument/product” is defined as a single instrument/product or group of similar instruments/products that in aggregate amount to more than 1% of the bank's total balance sheet.

(iii) *Significant currencies*

194. In order to capture the amount of structural currency mismatch in a bank's assets and liabilities, banks are required to provide a list of the amount of assets and liabilities in each significant currency.

195. A currency is considered “significant” if the aggregate liabilities denominated in that currency amount to 5% or more of the bank's total liabilities.

(iv) *Time buckets*

196. The above 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.

C. Utilisation of the metric

197. In utilising this metric to determine the extent of funding concentration to a certain counterparty, both the bank and supervisors must recognise that currently it is not possible to identify the actual funding counterparty for many types of debt.⁵⁹ The actual concentration of funding sources, therefore, could likely be higher than this metric indicates. The list of significant counterparties could change frequently, particularly during a crisis. Supervisors should consider the potential for herding behaviour on the part of funding counterparties in the case of an institution-specific problem. In addition, under market-wide stress, multiple funding counterparties and the bank itself may experience concurrent liquidity pressures, making it difficult to sustain funding, even if sources appear well diversified.

198. In interpreting this metric, one must recognise that the existence of bilateral funding transactions may affect the strength of commercial ties and the amount of the net outflow.⁶⁰

199. These metrics do not indicate how difficult it would be to replace funding from any given source.

200. To capture potential foreign exchange risks, the comparison of the amount of assets and liabilities by currency will provide supervisors with a baseline for discussions with the banks about how they manage any currency mismatches through swaps, forwards, etc. It is meant to provide a base for further discussions with the bank rather than to provide a snapshot view of the potential risk.

⁵⁹ For some funding sources, such as debt issues that are transferable across counterparties (such as CP/CD funding dated longer than overnight, etc), it is not always possible to identify the counterparty holding the debt.

⁶⁰ Eg where the monitored institution also extends funding or has large unused credit lines outstanding to the “significant counterparty”.

III. Available unencumbered assets

A. Objective

201. These metrics provide supervisors with data on the quantity and key characteristics, including currency denomination and location, of banks' available unencumbered assets. These assets have the potential to be used as collateral to raise additional HQLA or secured funding in secondary markets or are eligible at central banks and as such may potentially be additional sources of liquidity for the bank.

B. Definition and practical application of the metric

**Available unencumbered assets that are marketable as collateral in
secondary markets
and
Available unencumbered assets that are eligible for central banks' standing facilities**

202. A bank is to report the amount, type and location of available unencumbered assets that could serve as collateral for secured borrowing in secondary markets at prearranged or current haircuts at reasonable costs.

203. Likewise, a bank should report the amount, type and location of available unencumbered assets that are eligible for secured financing with relevant central banks at prearranged (if available) or current haircuts at reasonable costs, for standing facilities only (ie excluding emergency assistance arrangements). This would include collateral that has already been accepted at the central bank but remains unused. For assets to be counted in this metric, the bank must have already put in place the operational procedures that would be needed to monetise the collateral.

204. A bank should report separately the customer collateral received that the bank is permitted to deliver or re-pledge, as well as the part of such collateral that it is delivering or re-pledging at each reporting date.

205. In addition to providing the total amounts available, a bank should report these items categorised by significant currency. A currency is considered "significant" if the aggregate stock of available unencumbered collateral denominated in that currency amounts 5% or more of the associated total amount of available unencumbered collateral (for secondary markets or central banks).

206. In addition, a bank must report the estimated haircut that the secondary market or relevant central bank would require for each asset. In the case of the latter, a bank would be expected to reference, under business as usual, the haircut required by the central bank that it would normally access (which likely involves matching funding currency – eg ECB for euro-denominated funding, Bank of Japan for yen funding, etc).

207. As a second step after reporting the relevant haircuts, a bank should report the expected monetised value of the collateral (rather than the notional amount) and where the assets are actually held, in terms of the location of the assets and what business lines have access to those assets.

C. Utilisation of the metric

208. These metrics are useful for examining the potential for a bank to generate an additional source of HQLA or secured funding. They will provide a standardised measure of the extent to which the LCR can be quickly replenished after a liquidity shock either via raising funds in private markets or utilising central bank standing facilities. The metrics do not, however, capture potential changes in counterparties' haircuts and lending policies that could occur under either a systemic or idiosyncratic event and could provide false comfort that the estimated monetised value of available unencumbered collateral is greater than it would be when it is most needed. Supervisors should keep in mind that these metrics do not compare available unencumbered assets to the amount of outstanding secured funding or any other balance sheet scaling factor. To gain a more complete picture, the information generated by these metrics should be complemented with the maturity mismatch metric and other balance sheet data.

IV. LCR by significant currency

A. Objective

209. While the LCR is required to be met in one single currency, in order to better capture potential currency mismatches, banks and supervisors should also monitor the LCR in significant currencies. This will allow the bank and the supervisor to track potential currency mismatch issues that could arise.

B. Definition and practical application of the metric

Foreign Currency LCR = Stock of HQLA in each significant currency / Total net cash outflows over a 30-day time period in each significant currency
(Note: Amount of total net foreign exchange cash outflows should be net of foreign exchange hedges)

210. The definition of the stock of high-quality foreign exchange assets and total net foreign exchange cash outflows should mirror those of the LCR for common currencies.⁶¹

211. A currency is considered "significant" if the aggregate liabilities denominated in that currency amount to 5% or more of the bank's total liabilities.

212. As the foreign currency LCR is not a standard but a monitoring tool, it does not have an internationally defined minimum required threshold. Nonetheless, supervisors in each jurisdiction could set minimum monitoring ratios for the foreign exchange LCR, below which a supervisor should be alerted. In this case, the ratio at which supervisors should be alerted would depend on the stress assumption. Supervisors should evaluate banks' ability to raise funds in foreign currency markets and the ability to transfer a liquidity surplus from one currency to another and across jurisdictions and legal entities. Therefore, the ratio should be higher for currencies in which the supervisors evaluate a bank's ability to raise funds in

⁶¹ Cash flows from assets, liabilities and off-balance sheet items will be computed in the currency that the counterparties are obliged to deliver to settle the contract, independent of the currency to which the contract is indexed (or "linked"), or the currency whose fluctuation it is intended to hedge.

foreign currency markets or the ability to transfer a liquidity surplus from one currency to another and across jurisdictions and legal entities to be limited.

C. Utilisation of the metric

213. This metric is meant to allow the bank and supervisor to track potential currency mismatch issues that could arise in a time of stress.

V Market-related monitoring tools

A. Objective

214. High frequency market data with little or no time lag can be used as early warning indicators in monitoring potential liquidity difficulties at banks.

B. Definition and practical application of the metric

215. While there are many types of data available in the market, supervisors can monitor data at the following levels to focus on potential liquidity difficulties:

1. Market-wide information
2. Information on the financial sector
3. Bank-specific information

1. *Market-wide information*

216. Supervisors can monitor information both on the absolute level and direction of major markets and consider their potential impact on the financial sector and the specific bank. Market-wide information is also crucial when evaluating assumptions behind a bank's funding plan.

217. Valuable market information to monitor includes, but is not limited to, equity prices (ie overall stock markets and sub-indices in various jurisdictions relevant to the activities of the supervised banks), debt markets (money markets, medium-term notes, long term debt, derivatives, government bond markets, credit default spread indices, etc); foreign exchange markets, commodities markets, and indices related to specific products, such as for certain securitised products (eg the ABX).

2. *Information on the financial sector*

218. To track whether the financial sector as a whole is mirroring broader market movements or is experiencing difficulties, information to be monitored includes equity and debt market information for the financial sector broadly and for specific subsets of the financial sector, including indices.

3. *Bank-specific information*

219. To monitor whether the market is losing confidence in a particular institution or has identified risks at an institution, it is useful to collect information on equity prices, CDS spreads, money-market trading prices, the situation of roll-overs and prices for various lengths of funding, the price/yield of bank debenture or subordinated debt in the secondary market.

C. Utilisation of the metric/data

220. Information such as equity prices and credit spreads are readily available. However, the accurate interpretation of such information is important. For instance, the same CDS spread in numerical terms may not necessarily imply the same risk across markets due to market-specific conditions such as low market liquidity. Also, when considering the liquidity impact of changes in certain data points, the reaction of other market participants to such information can be different, as various liquidity providers may emphasise different types of data.

Annex 1

Calculation of the cap on Level 2 assets with regard to short-term securities financing transactions

1. This annex seeks to clarify the appropriate method for the calculation of the cap on Level 2 (including Level 2B) assets with regard to short-term securities financing transactions.

2. As stated in paragraph 36, the calculation of the 40% cap on Level 2 assets should take into account the impact on the stock of HQLA of the amounts of Level 1 and Level 2 assets involved in secured funding,⁶² secured lending⁶³ and collateral swap transactions maturing within 30 calendar days. The maximum amount of adjusted Level 2 assets in the stock of HQLA is equal to two-thirds of the adjusted amount of Level 1 assets after haircuts have been applied. The calculation of the 40% cap on Level 2 assets will take into account any reduction in eligible Level 2B assets on account of the 15% cap on Level 2B assets.⁶⁴

3. Further, the calculation of the 15% cap on Level 2B assets should take into account the impact on the stock of HQLA of the amounts of HQLA assets involved in secured funding, secured lending and collateral swap transactions maturing within 30 calendar days. The maximum amount of adjusted Level 2B assets in the stock of HQLA is equal to 15/85 of the sum of the adjusted amounts of Level 1 and Level 2 assets, or, in cases where the 40% cap is binding, up to a maximum of 1/4 of the adjusted amount of Level 1 assets, both after haircuts have been applied.

4. The adjusted amount of Level 1 assets is defined as the amount of Level 1 assets that would result after unwinding those short-term secured funding, secured lending and collateral swap transactions involving the exchange of any HQLA for any Level 1 assets (including cash) that meet, or would meet if held unencumbered, the operational requirements for HQLA set out in paragraphs 28 to 40. The adjusted amount of Level 2A assets is defined as the amount of Level 2A assets that would result after unwinding those short-term secured funding, secured lending and collateral swap transactions involving the exchange of any HQLA for any Level 2A assets that meet, or would meet if held unencumbered, the operational requirements for HQLA set out in paragraphs 28 to 40. The adjusted amount of Level 2B assets is defined as the amount of Level 2B assets that would result after unwinding those short-term secured funding, secured lending and collateral swap transactions involving the exchange of any HQLA for any Level 2B assets that meet, or would meet if held unencumbered, the operational requirements for HQLA set out in paragraphs 28 to 40. In this context, short-term transactions are transactions with a maturity date up to and including 30 calendar days. Relevant haircuts would be applied prior to calculation of the respective caps.

⁶² See definition in paragraph 112.

⁶³ See definition in paragraph 145.

⁶⁴ When determining the calculation of the 15% and 40% caps, supervisors may, as an additional requirement, separately consider the size of the pool of Level 2 and Level 2B assets on an unadjusted basis.

5. The formula for the calculation of the stock of HQLA is as follows:

Stock of HQLA = Level 1 + Level 2A + Level 2B – Adjustment for 15% cap – Adjustment for 40% cap

Where:

Adjustment for 15% cap = Max (Adjusted Level 2B – 15/85*(Adjusted Level 1 + Adjusted Level 2A), Adjusted Level 2B - 15/60*Adjusted Level 1, 0)

Adjustment for 40% cap = Max ((Adjusted Level 2A + Adjusted Level 2B – Adjustment for 15% cap) - 2/3*Adjusted Level 1 assets, 0)

6. Alternatively, the formula can be expressed as:

Stock of HQLA = Level 1 + Level 2A + Level 2B – Max ((Adjusted Level 2A+Adjusted Level 2B) – 2/3*Adjusted Level 1, Adjusted Level 2B – 15/85*(Adjusted Level 1 + Adjusted Level 2A), 0)

Annex 2

Principles for assessing eligibility for alternative liquidity approaches (ALA)

1. This Annex presents a set of principles and criteria for assessing whether a currency is eligible for alternative treatment under the LCR (hereinafter referred to as the “Principles”). All of the Principles have to be satisfied in order to qualify for alternative treatment. Supplementary guidance is provided to elaborate on how a jurisdiction seeking alternative treatment should demonstrate its compliance with the Principles, including any supporting information (qualitative and quantitative) to justify its case. The Principles will be the main source of reference upon which self-assessments or independent peer reviews should be based. Unless otherwise specified, all references in the Principles are to the liquidity standard.
2. The Principles may not, in all cases, be able to capture specific circumstances or unique factors affecting individual jurisdictions in respect of the issue of insufficiency in HQLA. Hence, a jurisdiction will not be precluded from providing any additional information or explaining any other factor that is relevant to its compliance with the Principles, even though such information or factor may not be specified in the Principles.
3. Where a jurisdiction uses estimations or projections to support its case, the rationale and basis for those estimations or projections should be clearly set out. In order to support its case and facilitate independent peer review, the jurisdiction should provide information, to the extent possible, covering a long enough time series (eg three to five years depending on data availability).

Principle 1

The use of alternative treatment under the LCR is only available to the domestic currency of a jurisdiction which can demonstrate and justify that an issue of insufficiency in HQLA denominated in that currency genuinely exists, taking into account all relevant factors affecting the supply of, and demand for, such HQLA.

4. In order to qualify for alternative treatment, the jurisdiction must be able to demonstrate that there is “*a true shortfall in HQLA in the domestic currency as relates to the needs in that currency*” (see paragraph 55). The jurisdiction must demonstrate this with due regard to the three criteria set out below.

Criterion (a): The supply of HQLA in the domestic currency of the jurisdiction is insufficient, in terms of Level 1 assets only or both Level 1 and Level 2 assets, to meet the aggregate demand for such assets from banks operating in that currency. The jurisdiction must be able to provide adequate information (quantitative and otherwise) to demonstrate this.

5. This criterion requires the jurisdiction to provide sufficient information to demonstrate the insufficiency of HQLA in its domestic currency. This insufficiency must principally reflect a shortage in Level 1 assets, although Level 2 assets may also be insufficient in some jurisdictions.

6. To illustrate that a currency does not have sufficient HQLA, the jurisdiction will need to provide all relevant information and data that have a bearing on the size of the HQLA gap faced by banks operating in that currency that are subject to LCR requirements (“LCR banks”). These should, to the extent practicable, include the following information:

(i) Supply of HQLA

The jurisdiction should provide the current and projected stock of HQLA denominated in its currency, including:

- the supply of Level 1 and Level 2 assets broken down by asset classes;
- the amounts outstanding for the last three to five years; and
- the projected amounts for the next three to five years.

The jurisdiction may provide any other information in support of its stock and projection of HQLA. Should the jurisdiction feel that the true nature of the supply of HQLA cannot be simply reflected by the numbers provided, it should provide further information to sufficiently explain the case.

To avoid doubt, if the jurisdiction is a member of a monetary union operating under a single currency, debt or other assets issued in other members of the union in that currency is considered available for all jurisdictions in that union (see paragraph 55). Hence, the jurisdiction should take into account the availability of such assets which qualify as HQLA in its analysis.

(ii) Market for HQLA

The jurisdiction should provide a detailed analysis of the nature of the market for the above assets. Information relating to the market liquidity of the assets would be of particular importance. The jurisdiction should present its views on the liquidity of the HQLA based on the information presented.

Details of the primary market for the above assets should be provided, including:

- the channel and method of issuance;
- the issuers;
- the past issue tenor, denomination and issue size for the last three to five years; and
- the projected issue tenor, denomination and issue size for the next three to five years.

Details of the secondary market for the above assets should also be provided, including:

- the trading size and activity;
- types of market participants; and
- the size and activity of its repo market.

Where possible, the jurisdiction should provide an estimate of the amount of the above assets (Level 1 and Level 2) required to be in free circulation for them to remain genuinely liquid, as well as any justification for these figures.

(iii) *Demand for HQLA by LCR banks*

The jurisdiction should provide:

- the number of LCR banks under its purview;
- the current demand (ie net 30-day cash outflows) for HQLA by these LCR banks⁶⁵ for meeting the LCR or other requirements (eg collateral for intraday repo);
- the projected demand for the next three to five years based on banks' business growth and strategy; and
- an estimate of the percentage of total HQLA already in the hands of banks.

The jurisdiction should provide commentaries on cash flow projections where appropriate to improve their persuasiveness. The projections should take into account observed behavioural changes of the LCR banks and any other factors that may result in a reduction of their 30-day cash outflows.

(iv) *Demand for HQLA by other entities*

There are other potential holders of Level 1 and Level 2 assets that are not subject to the LCR, but will likely take up, or hold onto, a part of the outstanding stock of HQLA. These include:

- banks, branches of banks, and other deposit-taking institutions which conduct bank-like activity (such as building societies and credit unions) in the jurisdiction but are not subject to the LCR;
- other financial institutions which are normally subject to prudential supervision, such as investment or securities firms, insurance or reinsurance companies, pension/superannuation funds, mortgage funds, and money market funds; and
- other significant investors which have demonstrated a track record of strategic "buy and hold" purchases which can be presumed to be price insensitive. This would include foreign sovereigns, foreign central banks and foreign sovereign /quasi-sovereign funds, but not hedge funds or other private investment management vehicles.

The jurisdiction may provide information on the demand for Level 1 and Level 2 assets by the above HQLA holders in support of its application. Historical demand for such assets by these holders is not sufficient. The alternate holders of HQLA must at least exhibit the following qualities:

- **Price inelastic:** the holders of HQLA are unlikely to switch to alternate assets unless there is a significant change in the price of these assets.
- **Proven to be stable:** the demand for HQLA by the holders should remain stable over the next three years as they require these assets to meet specific purposes, such as asset-liability matching or other regulatory requirements.

7. The jurisdiction should be able to come up with a reasonable estimate of the HQLA gap faced by its LCR banks (current and over the next three to five years), based on credible information. In deriving the HQLA gap, the jurisdiction should first compare (i) the total

⁶⁵ Use QIS data wherever possible. Supervisors should be collecting data on LCR from 1 January 2012.

outstanding stock of its HQLA in domestic currency with (ii) the total liquidity needs of its LCR banks in domestic currency. The jurisdiction should then explain the method of deriving the high quality liquid asset gap, taking into account all relevant factors, including those set out in criterion (b), which may affect the size of the gap. A detailed analysis of the calculations should be provided (eg in the form of a template), explaining any adjustments to supply and demand and justifications for such adjustments.⁶⁶ The jurisdiction should demonstrate that the method of defining insufficiency is appropriate for its circumstances, and that it can truly reflect the HQLA gap faced by LCR banks in the currency.

Criterion (b): The determination of insufficiency in HQLA by the jurisdiction under criterion (a) should address all major factors relevant to the issue. These include, but are not limited to, the expected supply of HQLA in the medium term (eg three to five years), the extent to which the banking sector can and should run less liquidity risk, and the competing demand from banks and non-bank investors for holding HQLA for similar or other purposes.

8. This criterion builds on the information provided by the jurisdiction under criterion (a), and requires the jurisdiction to further explain the manner in which the insufficiency issue is determined, by listing all major factors that affect the HQLA gap faced by its LCR banks under criterion (a). There should be a commentary for each of the factors, explaining why the factor is relevant, the impact of the factor on the HQLA gap, and how such impact is incorporated into the analysis of insufficiency in HQLA. The jurisdiction should be able to demonstrate that it has adequately considered all relevant factors, including those that may improve the HQLA gap, so as to ascertain that the insufficiency issue is fairly stated.

9. On the supply of HQLA, there should be due consideration of the extent to which the insufficiency issue may be alleviated by estimated medium term supply of such assets, as well as the factors restricting the availability of HQLA to LCR banks. In the case of government debt, relevant information on availability can be reflected, for example, from the size and nature of other users of government debt in the jurisdiction; holdings of government debt which seldom appear in the traded markets; and the amount of government debt in free circulation for the assets to remain truly liquid.

10. On the demand of HQLA, there should be due consideration of the potential liquidity needs of the banking sector, taking into account the scope for banks to reduce their liquidity risk (and hence their demand for HQLA) and the extent to which banks can satisfy their demand through the repo market (rather than through outright purchase of HQLA). Other needs for maintaining HQLA (eg for intraday repo purposes) may also increase banks' demand for such assets.

11. The jurisdiction should also include any other factors not mentioned above that are relevant to its case.

Criterion (c): The issue of insufficiency in HQLA faced by the jurisdiction is caused by structural, policy and other constraints that cannot be resolved within the medium term (eg three to five years). Such constraints may relate to the fiscal or budget policies of the jurisdiction, the infrastructural development of its capital markets, the structure of its monetary system and operations (eg the currency board arrangements for jurisdictions with pegged exchange rates), or other jurisdiction-specific factors

⁶⁶ For HQLA that are subject to caps or haircuts (eg Level 2 assets), the effects of such constraints should be accounted for.

leading to the shortage or imbalance in the supply of HQLA available to the banking sector.

12. This criterion is to establish that the insufficiency issue is caused by constraints that are not temporary in nature. The jurisdiction should provide a list of such constraints, explain the nature of the constraints and how the insufficiency issue is affected by the constraints, as well as whether there is any prospect of change in the constraints (eg measures taken to address the constraints) in the next three to five years. To demonstrate the significance of the constraints, the jurisdiction should support the analysis with appropriate quantitative information.

13. A jurisdiction may have fiscal or budget constraints that limit its ability or need to raise debt. To support this, the following information should, at a minimum, be provided:

- (i) **Fiscal position for the past ten years:** Consistent fiscal surpluses (eg at least six out of the past ten years or at least two out of the past three years)⁶⁷ can be an indication that the jurisdiction does not need to raise debt (or a lot of debt). On the contrary, it is unlikely that jurisdictions with persistent deficits (eg at least six out of the past ten years) will have a shortage in government debt issued.
- (ii) **Fiscal position as % of GDP (ten-year average):** This is another way of looking at the fiscal position. A positive ten-year average will likely suggest that the need for debt issuance is low. Similarly, a negative ten-year average will suggest otherwise.
- (iii) **Issue of government / central bank debt in the past ten years** and the reasons for such issue (eg for market operations / setting the yield curve, etc.). This is to assess the level of, and consistency in, debt issuance.

14. The jurisdiction should also provide the **ratio of its government debt to total banking assets denominated in domestic currency** (for the past three to five years) to facilitate trend analysis of the government debt position versus a proxy indicator for banking activity (ie total banking assets), as well as comparison of the position across jurisdictions (including those that may not have the insufficiency issue). While this ratio alone cannot give any conclusive view about the insufficiency issue, a relatively low ratio (eg below 20%) may support the case if the jurisdiction also performs similarly under other indicators.

15. A jurisdiction may have an under-developed capital market that has resulted in limited availability of corporate / covered bonds to satisfy market demand. Information to be provided includes the causes of this situation, measures that are being taken to develop the market, the expected effect of such measures, and other relevant statistics showing the state of the market.

16. There may also be other structural issues affecting the monetary system and operations. For example, the currency board arrangements for jurisdictions with pegged exchange rates could potentially constrain the issue of central bank debt and cause uncertainty or volatility in the availability of such debt to the banking sector. The jurisdiction should explain such arrangements and their effects on the supply of central bank debt (supported by relevant historical data in the past three to five years).

⁶⁷ Some deficits during economic downturns need to be catered for. Moreover, the recent surplus/deficit situation is relevant for assessment.

Principle 2

A jurisdiction which intends to adopt one or more of the options for alternative treatment must be capable of limiting the uncertainty of performance, or mitigating the risks of non-performance, of the option(s) concerned.

17. This Principle assesses whether and how the jurisdiction can mitigate the risks arising from the adoption of any of the options, based on the requirements set out in the three criteria mentioned below. The assessment will also include whether the jurisdiction's approach to adopting the options is in line with the alternative treatment set out in the Basel III liquidity framework (see paragraphs 55 to 62).

18. To start with, the jurisdiction should explain its policy towards the adoption of the options, including which of the options will be used and the estimated (and maximum allowable) extent of usage by the banking sector. The jurisdiction is also expected to justify the appropriateness of the maximum level of usage of the options to its banking system, having regard to the relevant guidance set out in the Basel III liquidity framework (see paragraphs 63 to 65).

Criterion (a): For Option 1 (ie the provision of contractual committed liquidity facilities from the relevant central bank at a fee), the jurisdiction must have the economic strength to support the committed liquidity facilities granted by its central bank. To ensure this, the jurisdiction should have a process in place to control the aggregate of such facilities within a level that can be measured and managed by it.

19. A jurisdiction intending to adopt Option 1 must demonstrate that it has the economic and financial capacity to support the committed liquidity facilities that will be granted to its banks.⁶⁸ The jurisdiction should, for example, have a strong credit rating (such as AA-⁶⁹) or be able to provide other evidence of financial strength, with no adverse developments (eg a looming crisis) that may heavily impinge on the domestic economy in the near term.

20. The jurisdiction should also demonstrate that it has a **process** in place to control the aggregate facilities granted under Option 1 within a level that is appropriate for its local circumstances. For example, the jurisdiction may limit the amount of Option 1 commitments to a certain level of its GDP and justify why this level is suitable for its banking system. The process should also cater for situations where the aggregate facilities are approaching the limit, or have indeed breached, the limit, as well as how the limit interplays with other restrictions for using the options (eg maximum level of usage for all options combined).

21. To facilitate assessment of compliance with requirements in paragraph 58, the jurisdiction should provide all relevant details associated with the extension of the committed facility, covering:

- (i) the commitment fee (including the basis on which it is charged,⁷⁰ the method of calculation⁷¹ and the frequency of re-calculating or varying the fee). The jurisdiction

⁶⁸ This is to enhance market confidence rather than to query the jurisdiction's ability to honour its commitments.

⁶⁹ This is the minimum sovereign rating that qualifies for a 0% risk weight under the Basel II Standardised Approach for credit risk.

⁷⁰ Paragraph 58 requires the fee to be charged regardless of the amount, if any, drawn down against the facility.

⁷¹ Paragraph 58 presents the conceptual framework for setting the fee.

should, in particular, demonstrate that the calculation of the commitment fee is in line with the conceptual framework set out in paragraph 58.

- (ii) the types of collateral acceptable to the central bank for securing the facility and respective collateral margins or haircuts required;
- (iii) the legal terms of the facility (including whether it covers a fixed term or is renewable or evergreen, the notice of drawdown, whether the contract will be irrevocable prior to maturity,⁷² and whether there will be restrictions on a bank's ability to draw down on the facility);⁷³
- (iv) the criteria for allowing individual banks to use Option 1;
- (v) disclosure policies (ie whether the level of the commitment fee and the amount of committed facilities granted will be disclosed, either by the banks or by the central bank); and
- (vi) the projected size of committed liquidity facilities that may be granted under Option 1 (versus the projected size of total net cash outflows in the domestic currency for Option 1 banks) for each of the next three to five years and the basis of projection.

Criterion (b): For Option 2 (ie use of foreign currency HQLA to cover domestic currency liquidity needs), the jurisdiction must have a mechanism in place that can keep under control the foreign exchange risk of the holdings of its banks in foreign currency HQLA.

22. A jurisdiction intending to adopt Option 2 should demonstrate that it has a **mechanism** in place to control the foreign exchange risk arising from banks' holdings in foreign currency HQLA under this Option. This is because such foreign currency asset holdings to cover domestic currency liquidity needs may be exposed to the risk of decline in the liquidity value of those foreign currency assets should exchange rates move adversely when the assets are converted into the domestic currency, especially in times of stress.

23. This control mechanism should, at a minimum, cover the following elements:

- (i) The jurisdiction should ensure that the use of Option 2 is confined only to foreign currencies that can provide a reliable source of liquidity in the domestic currency in case of need. In this regard, the jurisdiction should specify the currencies (and broad types of HQLA denominated in those currencies⁷⁴) allowable under this option, based on prudent criteria. The suitability of the currencies should be reviewed whenever significant changes in the external environment warrant a review.
- (ii) The selection of currencies should, at a minimum, take into account the following aspects:
 - the currency is freely transferable and convertible into the domestic currency;
 - the currency is liquid and active in the relevant foreign exchange market (the methodology and basis of assessment should be provided);

⁷² Paragraph 58 requires the maturity date to at least fall outside the 30-day LCR window and the contract to be irrevocable prior to maturity.

⁷³ Paragraph 58 requires the contract not to involve any ex-post credit decision by the central bank.

⁷⁴ For example, clarification may be necessary in cases where only central government debt will be allowed, or Level 1 securities issued by multilateral development banks in some currencies will be allowed.

- the currency does not exhibit significant historical exchange rate volatility against the domestic currency;⁷⁵ and
- in the case of a currency which is pegged to the domestic currency, there is a formal mechanism in place for maintaining the peg rate (relevant information about the mechanism and past ten-year statistics on exchange rate volatility of the currency pair showing the effectiveness of the peg arrangement should be provided).

The jurisdiction should explain why each of the allowable currencies is selected, including an analysis of the historical exchange rate volatility, and turnover size in the foreign exchange market, of the currency pair (based on statistics for each of the past three to five years). In case a currency is selected for other reasons,⁷⁶ the justifications should be clearly stated to support its inclusion for Option 2 purposes.

- (iii) HQLA in the allowable currencies used for Option 2 purposes should be subject to haircuts as prescribed under this framework (ie at least 8% for major currencies⁷⁷). The jurisdiction should set a higher haircut for other currencies where the exchange rate volatility against the domestic currency is much higher, based on a methodology that compares the historical (monthly) exchange rate volatilities between the currency pair concerned over an extended period of time.

Where the allowable currency is formally pegged to the domestic currency, a lower haircut can be used to reflect limited exchange rate risk under the peg arrangement. To qualify for this treatment, the jurisdiction should demonstrate the effectiveness of its currency peg mechanism and the long-term prospect of keeping the peg.

Where a threshold for applying the haircut under Option 2 is adopted (see paragraph 61), the level of the threshold should not be more than 25%.

- (iv) Regular information should be collected from banks in respect of their holding of allowable foreign currency HQLA for LCR purposes to enable supervisory assessment of the foreign exchange risk associated with banks' holdings of such assets, both individually and in aggregate.
- (v) There should be an effective means to control the foreign exchange risk assumed by banks. The control mechanism, and how it is to be applied to banks, should be elaborated. In particular,
- there should be prescribed criteria for allowing individual banks to use Option 2;
 - the approach to assessing whether the estimated holdings of foreign currency HQLA by individual banks using Option 2 are consistent with their foreign exchange risk management capacity (re paragraph 59) should be explained; and

⁷⁵ This is relative to the exchange rate volatilities between the domestic currency and other foreign currencies with which the domestic currency is traded.

⁷⁶ For example, the central banks of the two currencies concerned may have entered into special foreign exchange swap agreements that facilitate the flow of liquidity between the currencies.

⁷⁷ These currencies refer to those that exhibit significant and active market turnover in the global foreign currency market (eg the average market turnover of the currency as a percentage of the global foreign currency market turnover over a ten-year period is not lower than 10%).

- there should be a system for setting currency mismatch limits to control banks' maximum foreign currency exposures under Option 2.

Criterion (c): For Option 3 (ie use of Level 2A assets beyond the 40% cap with a higher haircut), the jurisdiction must only allow Level 2 assets that are of a quality (credit and liquidity) comparable to that for Level 1 assets in its currency to be used under this option. The jurisdiction should be able to provide quantitative and qualitative evidence to substantiate this.

24. With the adoption of Option 3, the increase in holdings of Level 2A assets within the banking sector (to substitute for Level 1 assets which are of higher quality but in shortage) may give rise to additional price and market liquidity risks, especially in times of stress when concentrated asset holdings have to be liquidated. In order to mitigate this risk, the jurisdiction intending to adopt Option 3 should ensure that only Level 2A assets that are of comparable quality to Level 1 assets in the domestic currency are allowed to be used under this option (ie to exceed the 40% cap). Level 2B assets should remain subject to the 15% cap. The jurisdiction should demonstrate how this can be achieved in its supervisory framework, having regard to the following aspects:

- (i) **the adoption of higher qualifying standards for additional Level 2A assets.** Apart from fulfilling all the qualifying criteria for Level 2A assets, additional requirements should be imposed. For example, the minimum credit rating of these additional Level 2A assets should be AA or AA+ instead of AA-, and other qualitative and quantitative criteria could be made more stringent. These assets may also be required to be central bank eligible. This will provide a backstop for ensuring the liquidity value of the assets; and
- (ii) **the inclusion of a prudent diversification requirement for banks using Option 3.** Banks should be required to allocate its portfolio of Level 2 assets among different issuers and asset classes to the extent feasible in a given national market. The jurisdiction should illustrate how this diversification requirement is to be applied to banks.

25. The jurisdiction should provide statistical evidence to substantiate that Level 2A assets (used under Option 3) and Level 1 assets in the domestic currency are generally of comparable quality in terms of the maximum decline in price during a relevant period of significant liquidity stress in the past.

26. To facilitate assessment, the jurisdiction should also provide all relevant details associated with the use of Option 3, including:

- (i) the standards and criteria for allowing individual banks to use Option 3;
- (ii) the system for monitoring banks' additional Level 2A asset holding under Option 3 to ensure that they can observe the higher requirements;
- (iii) the application of higher haircuts to additional Level 2A assets (and whether this is in line with paragraph 62);⁷⁸ and

⁷⁸ Under paragraph 62, a minimum higher haircut of 20% should be applied to additional Level 2A assets used under this option. The jurisdiction should conduct an analysis to assess whether the 20% haircut is sufficient for Level 2A assets in its market, and should increase the haircut to an appropriate level if this is warranted in order to achieve the purpose of the haircut. The relevant analysis should be provided for independent peer review during which the jurisdiction should explain and justify the outcome of its analysis.

- (iv) the existence of any restriction on the use of Level 2A assets (ie to what extent banks will be allowed to hold such assets as a percentage of their liquid asset stock).

Principle 3

A jurisdiction which intends to adopt one or more of the options for alternative treatment must be committed to observing all of the obligations set out below.

27. This Principle requires a jurisdiction intending to adopt any of the options to indicate expressly the jurisdiction's commitment to observing the obligations relating to supervisory monitoring, disclosure, periodic self-assessment, and independent peer review of its eligibility for adopting the options, as set out in the criteria below. Whether these commitments are fulfilled in practice should be assessed in subsequent periodic self-assessments and, where necessary, in subsequent independent peer reviews.

Criterion (a): The jurisdiction must maintain a supervisory monitoring system to ensure that its banks comply with the rules and requirements relevant to their usage of the options, including any associated haircuts, limits or restrictions.

28. The jurisdiction should demonstrate that it has a clearly documented framework for monitoring the usage of the options by its banks as well as their compliance with the relevant rules and requirements applicable to them under the supervisory framework. In particular, the jurisdiction should have a system to ensure that the rules governing banks' usage of the options are met, and that the usage of the options within the banking system can be monitored and controlled. To achieve this, the framework should be able to address the aspects mentioned below.

Supervisory requirements

29. The jurisdiction should set out clearly the requirements that banks should meet in order to use the options to comply with the LCR. The requirements may differ depending on the option to be used as well as jurisdiction-specific considerations. The scope of these requirements will generally cover the following areas:

(i) *Rules governing banks' usage of the options*

The jurisdiction should devise the supervisory requirements governing banks' usage of the options, having regard to the guidance set out in Annex 3. Any bank-specific requirements should be clearly communicated to the affected banks.

(ii) *Minimum amount of Level 1 asset holdings*

Banks using the options should be informed of the minimum amount of Level 1 assets that they are required to hold in the relevant currency. The jurisdiction is expected to set a minimum level for banks in the jurisdiction. This should complement the requirement under (iii) below.

(iii) *Maximum amount of usage of the options*

In order to control the usage of the options within the banking system, banks should be informed of any supervisory restriction applicable to them in terms of the maximum amount of alternative HQLA (under each or all of the options) they are allowed to hold. For example, if the maximum usage level is 70%, a bank should maintain at least 30% of its high quality liquid asset stock in Level 1 assets in the relevant currency.

The maximum level of usage of the options set by the jurisdiction should be consistent with the calculations and projections used to support its compliance with Principle 1 and Principle 2.

(iv) *Relevant haircuts for using the options*

The jurisdiction may apply additional haircuts to banks that use the options to limit the uncertainty of performance, or mitigate the risks of non-performance, of the options used (see Principle 2). These should be clearly communicated to the affected banks.

For example, a jurisdiction that relies heavily on Option 3 may observe that a large amount of Level 2A assets will be held by banks to fulfil their LCR needs, thereby increasing the market liquidity risk of these assets. This may necessitate increasing the Option 3 haircut for banks that rely heavily on these Level 2A assets.

(v) *Any other restrictions*

The jurisdiction may choose to apply further restrictions to banks that use the options, which must be clearly communicated to them.

Reporting requirements

30. The jurisdiction should demonstrate that through its data collection framework (eg as part of regular banking returns), sufficient data can be obtained from its banks to ascertain compliance with the supervisory requirements as communicated to the banks. The jurisdiction should determine the reporting requirements, including the types of data and information required, the manner and frequency of reporting, and how the data and information collected will be used.

Monitoring approach

31. The jurisdiction should also indicate how it intends to monitor banks' compliance with the relevant rules and requirements. This may be performed through a combination of off-site analysis of information collected, prudential interviews with banks and on-site examinations as necessary. For example, an on-site review may be necessary to determine the quality of a bank's foreign exchange risk management in order to assess the extent which the bank should be allowed to use Option 2 to satisfy its LCR requirements.

Supervisory toolkit and powers

32. The jurisdiction should demonstrate that it has sufficient supervisory powers and tools at its disposal to ensure compliance with the requirements governing banks' usage of the options. These will include tools for assessing compliance with specific requirements (eg foreign exchange risk management under Option 2 and price risk management under Option 3) as well as general measures and powers available to impose penalties should banks fail to comply with the requirements applicable to them. The jurisdiction should also demonstrate that it has sufficient powers to direct banks to comply with the general rules and/or specific requirements imposed on them. Examples of such measures are the power to issue directives to the banks, restriction of financial activities, financial penalties, increase of Pillar 2 capital, etc.

33. The jurisdiction should also be prepared to restrict a bank from using the options should it fail to comply with the relevant requirements.

Criterion (b): The jurisdiction must document and update its approach to adopting an alternative treatment, and make that explicit and transparent to other national supervisors. The approach should address how it complies with the applicable

criteria, limits and obligations set out in the qualifying principles, including the determination of insufficiency in HQLA and other key aspects of its framework for alternative treatment.

34. The jurisdiction should demonstrate that it has a clearly documented framework that will be disclosed (whether on its website or through other means) upon the adoption of the options for alternative treatment. The document should contain clear and transparent information that will enable other national supervisors and stakeholders to gain a sufficient understanding of its compliance with the qualifying principles for adoption of the options and the manner in which it supervises the use of the options by its banks.

35. The disclosure should cover, at a minimum, the following:

- (i) **Assessment of insufficiency in HQLA:** the jurisdiction's self-assessment of insufficiency in HQLA in the domestic currency, including relevant data about the supply of, and demand for, HQLA, and major factors (eg structural, cyclical or jurisdiction-specific) influencing the supply and demand. This assessment should correspond with the self-assessment required under criterion 3(c) below;
- (ii) **Supervisory framework for adoption of alternative treatment:** the jurisdiction's approach to applying the alternative treatment, including the option(s) allowed to be used by banks, any guidelines, requirements and restrictions associated with the use of such option(s) by banks, and approach to monitoring banks' compliance with them;
- (iii) **Option 1-related information:** if Option 1 will be adopted, the terms of the committed liquidity facility, including the maturity of the facility, the commitment fee charged (and the approach adopted for setting the fee), securities eligible as collateral for the facility (and margins required), and other terms, including any restrictions on banks' usage of this option;
- (iv) **Option 2-related information:** if Option 2 will be adopted, the foreign currencies (and types of securities under those currencies) allowed to be used, haircuts applicable to the foreign currency HQLA, and any restrictions on banks' usage of this option;
- (v) **Option 3-related information:** if Option 3 will be adopted, the Level 2A assets allowed to be used in excess of the 40% cap (and the associated criteria), haircuts applicable to Level 2A assets (within and above the 40% cap), and any restrictions on banks' usage of this option.

36. The jurisdiction should update the disclosed information whenever there are changes to the information (eg updated self-assessment of insufficiency in HQLA performed).

Criterion (c): The jurisdiction must review periodically the determination of insufficiency in HQLA at intervals not exceeding five years, and disclose the results of review and any consequential changes to other national supervisors and stakeholders.

37. The jurisdiction should perform a review of its eligibility for alternative treatment every five years after it has adopted the options. The primary purpose of this review is to determine that there remains an issue of insufficiency in HQLA in the jurisdiction. The review should be in the form of a self-assessment of the jurisdiction's compliance with each of the Principles set out in this Annex.

38. The jurisdiction should have a credible process for conducting the self-assessment, and should provide sufficient information and analysis to support the self-assessment. The

results of the self-assessment should be disclosed (on its website or through other means) and accessible by other national supervisors and stakeholders.

39. Where the self-assessment reflects that the issue of insufficiency in HQLA no longer exists, the jurisdiction should devise a plan for transition to the standard HQLA treatment under the LCR and notify the Basel Committee accordingly. If the issue of insufficiency remains but weaknesses in the jurisdiction's relevant supervisory framework are identified from the self-assessment, the jurisdiction should disclose its plan to address those weaknesses within a reasonable period.

40. If the jurisdiction is aware of circumstances (eg relating to fiscal conditions, market infrastructure or availability of liquidity, etc.) that have radically changed to an extent that may render the issue of insufficiency in HQLA no longer relevant to the jurisdiction, it will be expected to conduct a self-assessment promptly (ie without waiting until the next self-assessment is due) and notify the Basel Committee of the result as soon as practicable. The Basel Committee may similarly request the jurisdiction to conduct a self-assessment ahead of schedule if the Committee is aware of changes that will significantly affect the jurisdiction's eligibility for alternative treatment.

Criterion (d): The jurisdiction must permit an independent peer review of its framework for alternative treatment to be conducted as part of the Basel Committee's work programme and address the comments made.

41. The Basel Committee will oversee the independent peer review process for determining the eligibility of its member jurisdictions to adopt alternative treatment. Hence, any member jurisdiction of the Committee that intends to adopt the options for alternative treatment will permit an independent peer review of its eligibility to be performed, based on a self-assessment report prepared by the jurisdiction to demonstrate its compliance with the Principles. The independent peer review will be conducted in accordance with paragraphs 55 to 56 of the Basel III liquidity framework. The jurisdiction will also permit follow-up review to be conducted as necessary.

42. The jurisdiction will be expected to adopt a proactive attitude to responding to the outcome of the peer review and comments made.

Annex 3

Guidance on standards governing banks' usage of the options for alternative liquidity approaches (ALA) under LCR

1. The following general and specific rules governing banks' usage of the options are for the guidance of supervisors in developing relevant standards for their banks:

I. General rules

(i) *A bank that needs to use an alternative treatment to meet its LCR must report its level of usage to the bank supervisor on a regular basis.*

2. A bank is required to keep its supervisor informed of its usage of the options so as to enable the supervisor to manage the aggregate usage of the options in the jurisdiction and to monitor, where necessary, that banks using such options observe the relevant supervisory requirements.

3. While bank-by-bank approval by the supervisor is not required for use of the ALA options, this will not preclude individual supervisors from considering specific approval for banks to use the options should this be warranted based on their jurisdiction-specific circumstances. For example, use of Option 1 will typically require central bank approval of the committed facility.

(ii) *A bank should not use an alternative treatment to meet its LCR more than its actual need as reflected by the shortfall of eligible HQLA to cover its HQLA requirements in the relevant currency.*

4. A bank that needs to use the options should not be allowed to use such options above the level required to meet its LCR (including any reasonable buffer above the 100% standard that may be imposed by the supervisor). Banks may wish to do so for a number of reasons. For example, they may want to have an additional liquidity facility in anticipation of tight market conditions. However, supervisors may consider whether this should be accommodated. Supervisors should also have a process (eg through periodic reviews) for ensuring that the alternative HQLA held by banks are not excessive compared with their actual need. In addition, banks should not intentionally replace its stock of Level 1 or Level 2 assets with ineligible HQLA to create a larger liquidity shortfall for economic reasons or otherwise.

(iii) *A bank must demonstrate that it has taken reasonable steps to use Level 1 and Level 2 assets and reduce the amount of liquidity risk (as measured by reducing net cash outflows in the LCR) to improve its LCR, before applying an alternative treatment.*

5. Holding a HQLA portfolio is not the only way to mitigate a bank's liquidity risk. A bank must show that it has taken concrete steps to improve its LCR before it applies an alternative treatment. For example, a bank could improve the matching of its assets and liabilities, attract stable funding sources, or reduce its longer term assets. Banks should not treat the use of the options simply as an economic choice.

(iv) *A bank must use Level 1 assets to a level that is consistent with the availability of the assets in the market. The minimum level will be set by the bank supervisor for compliance.*

6. In order to ensure that banks' usage of the options is not out of line with the availability of Level 1 assets within the jurisdiction, the bank supervisor may set a minimum level of Level 1 assets to be held by each bank that is consistent with the availability of Level 1 assets in the market. A bank must then ensure that it is able to hold and maintain Level 1 assets not less than the minimum level when applying the options.

II. Specific standards for Option 2

(v) *A bank using Option 2 must demonstrate that its foreign exchange risk management system is able to measure, monitor and control the foreign exchange risk resulting from the currency-mismatched HQLA positions. In addition, the bank must show that it can reasonably convert the currency-mismatched HQLA to liquidity in the domestic currency when required, particularly in a stress scenario.*

7. To mitigate the risk that excessive currency mismatch may interfere with the objectives of the framework, the bank supervisor should only allow banks that are able to measure, monitor and control the foreign exchange risk arising from the currency mismatched HQLA positions to use this option. As the HQLA that are eligible under Option 2 can be denominated in different foreign currencies, banks must assess the convertibility of those foreign currencies in a stress scenario. As participants in the foreign exchange market, they are in the best position to assess the depth of the foreign exchange swap or spot market for converting those assets to the required liquidity in the domestic currency in times of stress. The supervisor is also expected to restrict the currencies of the assets that are eligible under Option 2 to those that have been historically proven to be convertible into the domestic currency in times of stress.

III. Specific standards for Option 3

(vi) *A bank using Option 3 must be able to manage the price risk associated with the additional Level 2A assets. At a minimum, they must be able to conduct stress tests to ascertain that the value of its stock of HQLA remains sufficient to support its LCR during a market-wide stress event. The bank should take a higher haircut (ie higher than the supervisor-imposed Option 3 haircut) on the value of the Level 2A assets if the stress test results suggest that they should do so.*

8. As the quality of Level 2A assets is lower than that for Level 1 assets, increasing its composition would increase the price risk and hence the volatility of the bank's stock of HQLA. To mitigate the uncertainty of performance of this option, banks are required to show that the values of the assets under stress are sufficient. They must, therefore, be able to conduct stress tests to this effect. If there is evidence to suggest that the stress parameters are more severe than the haircuts set by bank supervisors, the bank should adopt the more prudent parameters and consequently increase HQLA as necessary.

(vii) *A bank using Option 3 must show that it can reasonably liquidate the additional Level 2A assets in a stress scenario.*

9. With additional reliance on Level 2A assets, it is essential to ensure that the market for these assets has sufficient depth. This standard can be implemented in several ways. The supervisor can:

- require Level 2A assets that can be allowed to exceed the 40% cap to meet higher qualifying criteria (eg minimum credit rating of AA+ or AA instead of AA-, central bank eligible, etc.);

- set a limit on the minimum issue size of the Level 2A assets which qualifies for use under this option;
- set a limit on the bank's maximum holding as a percentage of the issue size of the qualifying Level 2A asset;
- set a limit on the maximum bid-ask spread, minimum volume, or minimum turnover of the qualifying Level 2A asset; and
- any other criteria appropriate for the jurisdiction.

These requirements should be more severe than the requirements associated with Level 2 assets within the 40% cap. This is because the increased reliance on Level 2A assets would increase its concentration risk on an aggregate level, thus affecting its market liquidity.

Annex 4

Illustrative Summary of the LCR

(percentages are factors to be multiplied by the total amount of each item)

Item	Factor
Stock of HQLA	
A. Level 1 assets:	
<ul style="list-style-type: none"> • Coins and bank notes • Qualifying marketable securities from sovereigns, central banks, PSEs, and multilateral development banks • Qualifying central bank reserves • Domestic sovereign or central bank debt for non-0% risk-weighted sovereigns 	100%
B. Level 2 assets (maximum of 40% of HQLA):	
Level 2A assets	
<ul style="list-style-type: none"> • Sovereign, central bank, multilateral development banks, and PSE assets qualifying for 20% risk weighting • Qualifying corporate debt securities rated AA- or higher • Qualifying covered bonds rated AA- or higher 	85%
Level 2B assets (maximum of 15% of HQLA)	
<ul style="list-style-type: none"> • Qualifying RMBS • Qualifying corporate debt securities rated between A+ and BBB- • Qualifying common equity shares 	75%
	50%
	50%
Total value of stock of HQLA	

Cash Outflows	
A. Retail deposits:	
Demand deposits and term deposits (less than 30 days maturity)	
<ul style="list-style-type: none"> • Stable deposits (deposit insurance scheme meets additional criteria) 3% • Stable deposits 5% • Less stable retail deposits 10% 	
Term deposits with residual maturity greater than 30 days	0%
B. Unsecured wholesale funding:	
Demand and term deposits (less than 30 days maturity) provided by small business customers:	
<ul style="list-style-type: none"> • Stable deposits 5% • Less stable deposits 10% 	
Operational deposits generated by clearing, custody and cash management activities	25%
<ul style="list-style-type: none"> • Portion covered by deposit insurance 5% 	
Cooperative banks in an institutional network (qualifying deposits with the centralised institution)	25%
Non-financial corporates, sovereigns, central banks, multilateral development banks, and PSEs	40%
<ul style="list-style-type: none"> • If the entire amount fully covered by deposit insurance scheme 20% 	
Other legal entity customers	100%
C. Secured funding:	
<ul style="list-style-type: none"> • Secured funding transactions with a central bank counterparty or backed by Level 1 assets with any counterparty. 0% • Secured funding transactions backed by Level 2A assets, with any counterparty 15% • Secured funding transactions backed by non-Level 1 or non-Level 2A assets, with domestic sovereigns, multilateral development banks, or domestic PSEs as a counterparty 25% • Backed by RMBS eligible for inclusion in Level 2B 25% • Backed by other Level 2B assets 50% • All other secured funding transactions 100% 	
D. Additional requirements:	
Liquidity needs (eg collateral calls) related to financing transactions, derivatives and other contracts	3 notch downgrade
Market valuation changes on derivatives transactions (largest absolute net 30-day collateral flows realised during the preceding 24 months)	Look back approach
Valuation changes on non-Level 1 posted collateral securing derivatives	20%
Excess collateral held by a bank related to derivative transactions that could contractually be called at any time by its counterparty	100%
Liquidity needs related to collateral contractually due from the reporting bank on derivatives transactions	100%

Increased liquidity needs related to derivative transactions that allow collateral substitution to non-HQLA assets	100%
ABCP, SIVs, conduits, SPVs, etc:	
<ul style="list-style-type: none"> Liabilities from maturing ABCP, SIVs, SPVs, etc (applied to maturing amounts and returnable assets) 	100%
<ul style="list-style-type: none"> Asset Backed Securities (including covered bonds) applied to maturing amounts. 	100%
Currently undrawn committed credit and liquidity facilities provided to:	
<ul style="list-style-type: none"> retail and small business clients 	5%
<ul style="list-style-type: none"> non-financial corporates, sovereigns and central banks, multilateral development banks, and PSEs 	10% for credit 30% for liquidity
<ul style="list-style-type: none"> banks subject to prudential supervision 	40%
<ul style="list-style-type: none"> other financial institutions (include securities firms, insurance companies) 	40% for credit 100% for liquidity
<ul style="list-style-type: none"> other legal entity customers, credit and liquidity facilities 	100%
Other contingent funding liabilities (such as guarantees, letters of credit, revocable credit and liquidity facilities, etc)	National discretion
<ul style="list-style-type: none"> Trade finance 	0-5%
<ul style="list-style-type: none"> Customer short positions covered by other customers' collateral 	50%
Any additional contractual outflows	100%
Net derivative cash outflows	100%
Any other contractual cash outflows	100%
Total cash outflows	

Cash Inflows	
Maturing secured lending transactions backed by the following collateral:	
Level 1 assets	0%
Level 2A assets	15%
Level 2B assets	
<ul style="list-style-type: none"> • Eligible RMBS • Other assets 	25%
	50%
Margin lending backed by all other collateral	50%
All other assets	100%
Credit or liquidity facilities provided to the reporting bank	0%
Operational deposits held at other financial institutions (include deposits held at centralised institution of network of co-operative banks)	0%
Other inflows by counterparty:	
<ul style="list-style-type: none"> • Amounts to be received from retail counterparties 	50%
<ul style="list-style-type: none"> • Amounts to be received from non-financial wholesale counterparties, from transactions other than those listed in above inflow categories 	50%
<ul style="list-style-type: none"> • Amounts to be received from financial institutions and central banks, from transactions other than those listed in above inflow categories. 	100%
Net derivative cash inflows	100%
Other contractual cash inflows	National discretion
Total cash inflows	
Total net cash outflows = Total cash outflows minus min [total cash inflows, 75% of gross outflows]	
LCR = Stock of HQLA / Total net cash outflows	