



مصرف الإمارات العربية المتحدة المركزي  
CENTRAL BANK OF THE U.A.E.

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معيار السيولة في المصارف الإسلامية  
STANDARD RE LIQUIDITY AT ISLAMIC BANKS

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## **Article (1)**

### **Introduction**

- 1.1 This Standard Re Liquidity at Islamic Banks (“the Standard”) forms part of the Regulations re Liquidity at Banks (“The Regulation”). Licensed banks that conduct all or part of their activities in accordance with the provisions of Islamic Shari’ah must comply with this Standard in the same manner as they must comply with the Regulation.
- 1.2 This Standard must be read in conjunction with the Regulation re. Liquidity at Banks. The Standard follows the structure of the Regulation and covers these specific elements:
  - 1) Qualitative Requirements;
  - 2) Quantitative Requirements including:
    - a. Eligible Liquid Asset Ratio (ELAR),
    - b. Advances to Stable Resources Ratio (ASRR),
    - c. Liquidity Coverage Ratio (LCR), and
    - d. Net Stable Funding Ratio (NSFR);
  - 3) Reporting Requirements.
- 1.3 This Standard is issued pursuant to the powers vested in the Central Bank under the provisions of the Decretal Federal Law No. (14) of 2018 Regarding the Central Bank & Organization of Financial Institutions and Activities (the “Central Bank Law”).
- 1.4 Where this Standard stipulates that a licensed bank provide information, undertake certain measures, or address certain terms listed as a minimum, the Central Bank may impose requirements, which are additional to those outlined in the relevant article of the Standard.
- 1.5 This Standard delineates on the supervisory expectations of the Central Bank with respect to liquidity risk management for Shari’ah compliant businesses and activities in a legally binding manner.

## **Article (2)**

### **Scope of Application**

- 2.1 This Standard applies to all licensed banks that conduct all of their activities in accordance with the provisions of Islamic Shari’ah (“Islamic Banks” or “IBs). IBs established in the UAE with Group relationships, including subsidiaries, Affiliates, or international branches, must ensure that the Standard is adhered to on a solo and a Group-wide basis.
- 2.2 A licensed bank that fully owns an Islamic Bank must adhere to the requirements set out within this Standard at the level of the subsidiary and consolidate these requirements into its overall risk management framework.
- 2.3 Licensed banks that conduct part of their activities in accordance with the provisions of Islamic Shari’ah (“Banks housing an Islamic Window”) may refer to this Standard to familiarise themselves with the requirements in order to be aware of the liquidity risks arising from Shari’ah compliant activities and businesses.

- 2.4 Banks housing an Islamic Window must comply with the liquidity requirements set by the Central Bank’s Regulations and Guidance re liquidity at banks. For monitoring purposes only, banks housing an Islamic Window are required to report stand-alone quantitative measures as set-out in this Standard without having to comply with the ratios set by this Standard.

### **Article (3)**

#### **Objective**

- 3.1 The aim of this Standard is to ensure that IBs have a robust liquidity risk management and governance framework in place, while ensuring compliance with the provisions of Shari’ah, in line with the Central Bank’s Regulation regarding Liquidity at Banks.
- 3.2 The Standard aims to ensure that Islamic Banks are holding sufficient Shari’ah compliant liquid assets to withstand a liquidity stress for a reasonable period of time.

### **Article (4)**

#### **Definitions**

- a. Affiliate:** An entity owned by another entity by more than 25% and less than 50% of its capital.
- b. Board:** Islamic Bank’s board of directors.
- c. Compliance with Islamic Shari’ah** refers to compliance with Islamic Shari’ah in accordance with:
- a. resolutions, fatwas, regulations, and standards issued by the Higher Shari’ah Authority (“HSA”) in relation to licensed activities and businesses of Islamic Bank (“HSA’s Resolutions”), and
  - b. resolutions and fatwas issued by Internal Shari’ah Supervision Committee (“ISSC”) of respective Islamic Bank, in relation to licensed activities and businesses of such institution (“the Committee’s Resolutions”), provided they do not contradict HSA’s Resolutions.
- d. Central Bank:** Central Bank of the UAE
- e. Confidential Information:** information that is publicly unavailable and where its disclosure is not permitted as per Article 120 of Decretal Federal Law No. (14) of 2018.
- f. Fatwas:** juristic opinions on any matter pertaining to Shari’ah issues in Islamic finance, issued by HSA or ISSC.

- g. Group:** A group of entities which includes an entity (the ‘first entity’) and:

  - a. any Controlling Shareholder of the first entity;
  - b. any Subsidiary of the first entity or of any Controlling Shareholder of the first entity;  
and
  - c. any Affiliate, joint venture, sister company and other member of the Group.
- h. High Quality Liquid Assets or HQLA:** Assets unencumbered by liens and other restrictions on transfer which can be converted into cash easily and immediately, with little or no loss of value, including under the stress scenario.
- i. Higher Shari’ah Authority or HSA:** is the Central Bank’s Higher Shari’ah Authority for Islamic banking and financial activities.
- j. Independence:** Ensuring that the ISSC is not subject to any form of undue influence when issuing resolutions and fatwas in accordance with the Shari’ah parameters, and ensuring that the Internal Shari’ah Control Division or Section and Shari’ah Audit Division or Section are also not subject to any form of undue influence. This should be carried out to strengthen the confidence of both shareholders and stakeholders in the Islamic Bank compliance with Islamic Shari’ah.
- k. Internal Shari’ah Audit:** regular process to inspect and assess Islamic Banks’ compliance with Islamic Shari’ah and the level of adequacy and effectiveness of Islamic Banks’ Shari’ah governance systems.
- l. Internal Shari’ah Control Division Section:** a technical division (or section) in the Islamic Bank with a mandate to support the ISSC in its mandate.
- m. Internal Shari’ah Supervisory Committee or ISSC:** a body appointed by the Islamic Bank, comprised of scholars specialized in Islamic financial transactions, which independently supervises transactions, activities, and products of the Islamic Bank and ensures they are compliant with Islamic Shari’ah in all its relevant objectives, activities, operations, and code of conduct.
- n. Liquidity Risk Tolerance:** the level of liquidity risk that the bank is willing to assume, it should be appropriate for the business strategy of the bank and its role in the financial system and should reflect the bank’s financial condition and funding capacity.

- o. Restricted Investment Account:** The account holders authorize Islamic Banks to invest their funds based on Mudarabah or agency contracts (Wakala) with certain restrictions as to where, how and for what purpose these funds are to be invested.
- p. Unrestricted Investment Account:** The account holders authorize Islamic Banks to invest their funds based on Mudarabah or agency contracts (Wakala) without imposing any restrictions. The Islamic bank can commingle these funds with their own funds and invest them in a pooled portfolio.
- q. Islamic Window:** refers to the licensed activities that are carried on in accordance with the Islamic Shari'ah that are carried on by financial institutions for their account or for the account of or in partnership with third parties which comply with the regulatory requirements stated in this Standard and other regulations issued by the Central Bank.
- r. Senior Management:** The executive management of the Islamic Bank responsible and accountable to the Board for the sound and prudent day-to-day management of the financial institution, generally including, but not limited to, the chief executive officer, chief financial officer, chief risk officer, and heads of the compliance and internal audit functions. The term Senior Management includes the head of Islamic Bank.
- s. Shari'ah Non-Compliance Risk:** probability of financial loss or reputational risk that an Islamic Bank might incur or suffer for not complying with Islamic Shari'ah.
- t. Shari'ah Supervision:** monitoring of Islamic Bank's compliance with Islamic Shari'ah in all its objectives, activities, operations, and code of conduct.
- u. Subsidiary:** An entity, owned by another entity by more than 50% of its capital, or under full control of that entity regarding the appointment of its board of directors.

## **Article (5)**

### **Qualitative Requirements**

- a. This article addresses the qualitative requirements contained in the regulations and emphasises the key focus of the Central Bank in its on and off site examination of IB.
- b. The qualitative rules in this Standard come into force on 30 June 2022. Any IB that expects to be in breach of the Regulations and Standard must approach the Central Bank to discuss a remediation plan. Breaches will be dealt with on a case by case basis. The Central Bank will apply proportionality in determining the suitability of some of the more complex requirements for smaller IBs.

**5.1 Liquidity Management Framework:**

- a. IBs must have appropriate governance processes, including Board and Senior Management oversight, in order to identify, measure, monitor, report and control the liquidity risk in compliance with Shari'ah rules and principles, and within the context of available Shari'ah-compliant instruments and markets.
- b. The governance structure of an IB must specify the roles and responsibilities of senior management, the Internal Shari'ah Supervision Committee (ISSC), and its functional and business units, including that of the risk management department, with appropriate segregation between operational and monitoring functions.
- c. IBs must have in place a sound and comprehensive liquidity risk management framework, integrated into the bank-wide risk management process. The primary objective of the liquidity risk management framework must be to ensure, with a high degree of confidence, that the IB is able to maintain sufficient liquidity to meet its regular funding requirements and payment obligations in the normal course of business; and to help it withstand a reasonable period of liquidity stress based on its liquidity risk tolerance level. The source of funding could be IB specific or market-wide.
- d. The liquidity risk management process of an IB must involve adequate tools to identify, measure, monitor, report and control the liquidity risk in compliance with Shari'ah rules and principles, including a plan to meet contingency funding requirements and setting limits on the basis of robust stress testing and scenario analysis.
- e. The Board bears the ultimate responsibility for approving a comprehensive liquidity risk management framework, and for monitoring the level of liquidity risk by the IB. This framework must include strategy and robust policies for the management of liquidity risk by the IB, keeping in view the nature, size and complexity of its operations, business model, funding profile, mix of Shari'ah-compliant financing and investment products, and availability of Shari'ah-compliant liquidity instruments and mechanisms.
- f. Senior management is responsible for executing and implementing the Board-approved strategy and must develop policies for managing the liquidity risk; for having a clear view of all sources and linkages of liquidity risks by taking a holistic approach to risk management; and for laying down the procedures and processes for continuous monitoring of liquidity risk and reporting to the Board.

- g. The strategy and policies of IBs for liquidity risk management must explicitly incorporate both normal and stressed times scenarios.
- h. The liquidity risk management framework must cover identifying, mitigating and managing liquidity risk. The IB must ensure that its liquidity risk management function does not take the opportunity to make profits at the expense of prudent management of liquidity risk.
- i. Liquidity risk management strategy and policies must cover all on and off-balance sheet items. IB must perform an impact analysis on management and mitigation of liquidity risks arising from new business initiatives and product approvals. The IB must have comprehensive and appropriate internal controls and internal audit mechanisms, in order to evaluate and test the adequacy of controls in the liquidity risk management framework. The senior management must ensure that all such functions and business units are operating under the approved policies, procedures and limits.
- j. IBs must have a robust Shari'ah governance framework in accordance with the Standard re Shari'ah Governance for Islamic financial institutions in order to ensure an effective independent oversight of Shari'ah compliance, especially liquidity risk management mechanisms and instruments. The involvement of the ISSC must include the following elements:
  - i. approving new Shari'ah-compliant liquidity risk management instruments and mechanisms, including Shari'ah-compliant hedging products;
  - ii. ensuring proper execution of its approved products and mechanisms,
  - iii. verifying and controlling the non-commingling of funds between Islamic windows/branches/subsidiaries and parent conventional entities; and
  - iv. ensuring Shari'ah compliance of the IB's placements with other entities, including placements with conventional banks, if any.

## 5.2 **The Role of the Board**

- a. The Board has the ultimate responsibility for setting the level of liquidity risk tolerance and the liquidity risk management framework of the IB. The liquidity risk tolerance for the IB must be commensurate with its ability to have sufficient recourse to Shari'ah-compliant funds in order to mitigate this risk.
- b. The members of the Board should familiarise themselves with liquidity risk and how it is managed, including IB's specific liquidity risk. The Board should also understand how other risks affect the IB's overall liquidity risk strategy, i.e. how a tighter funding market will impact the IB's liquidity and how other risks, if materialised, could result in a liquidity run

on the IB. At least one of the Board members must have detailed understanding of liquidity risk management for Islamic Banks.

- c. The Board must ensure that the IB's liquidity risk tolerance is transformed into actionable elements, reflecting its potential response to a range of plausible events. There are a variety of ways in which an IB can express its risk tolerance. For example, an IB may quantify its liquidity risk tolerance in terms of the level of funding gap the bank decides to assume under normal and stressed business conditions for different maturity buckets.
- d. The Board must ensure that liquidity risk tolerance is communicated to all levels of management so that it is taken into account in the various processes of the institution Including, but not limited to product approval, documentation, execution and subsequent monitoring and reporting.
- e. The Board must, on a regular basis, and at least on an annual basis, evaluate the relevance of the liquidity risk management strategy and policies based on prevailing and future potential market conditions, ground realities and stakeholders' expectations while making appropriate changes, as needed. In the case of rapidly changing market conditions related to liquidity, the Board may decide to make appropriate revisions more frequently. The strategy may comprise different high-level qualitative and quantitative objectives, parameters and limits.
- f. In line with the stated risk tolerance, the Board must establish, approve and review from time to time, the liquidity risk management strategy and significant policies, taking into consideration the IB's business model, legal structure, complexity, key lines of business, and macroeconomic and regulatory environment.
- g. The Board must ensure that senior management transforms board-approved strategies and policies into detailed and well-documented guidance, procedures and operating instructions which are properly aligned from risk and reward perspectives.
- h. The Board must also approve and review the IB's liquidity contingency funding plan (CFP) established for handling institution-specific or market-wide liquidity stress to ensure that the IB continues to fund its important activities on a timely basis, without incurring unacceptable costs or losses.
- i. The Board must establish a mechanism for regular monitoring and detailed reporting of the liquidity risk profile of the IB. It must periodically review this information, and information on the IB's level of liquidity, in order to be able to provide strategic direction on a timely

basis. The Board must have in place a system to review liquidity reports sent to it by management; identify liquidity concerns; and follow up on remedial action undertaken by management.

- j. The Board must proactively seek and review information related to any major institutional- and market-level events that could impair the liquidity position of the IB. Institutional-level events may include deterioration in the value and marketability of liquid asset holdings, significant funding concentrations, increasing costs of funding, significant withdrawal of deposits and investment accounts (IA), an escalating funding gap, frequent and sizeable breaches of limits, cash-flow shortages, major losses in operational results, etc. Market-level events may include a rating downgrade or a significant breach in Shari`ah compliance or other breaches, with a potential to transform into increased reputational risk and other negative market events.

### 5.3 **The Role of Senior Management**

- a. Senior management is to develop a strategy, policies and practices to manage liquidity risk in accordance with the Board approved risk tolerance and ensure that IB maintains sufficient liquidity. The strategy should include specific policies on liquidity management, such as:
- the composition of assets and liabilities;
  - the diversity and stability of funding sources;
  - the approach to managing liquidity in different currencies, across borders; across business lines and legal entities;
  - the approach to intraday liquidity management; and
  - the assumptions on the liquidity and marketability of assets.
- The IB's strategy should be continually reviewed and compliance must be reported to the Board on a regular basis.
- b. The strategy should take account of liquidity needs under normal conditions as well as under periods of liquidity stress as a result of IB specific or a market wide crises, and a combination of these two. The strategy may include various high-level quantitative and qualitative targets. The strategy should be appropriate for the nature, scale and complexity of the IB's activities. In formulating this strategy, the IB must take into consideration Shari`ah compliance; its legal structures; key business lines; the breadth and diversity of markets, products, and jurisdictions in which it operates; and the regulatory requirements it is subject to. The Board must approve the strategy and critical policies and practices and review them at least annually.

- c. Senior management must ensure that liquidity is effectively managed on a regular and timely basis and that appropriate policies and procedures are established to limit and control material sources of liquidity risk.
- d. Senior management must have ongoing and active involvement in order to effectively manage liquidity on a regular and timely basis.
- e. IBs must designate responsibility for monitoring and managing liquidity risk to an appropriate committee e.g. the Assets and Liabilities Committee (“ALCO”), the Executive Risk Committee and/or the Risk Management Committee, etc.
- f. The ALCO or any other committee assigned to monitor an IB’s liquidity risk must actively monitor the IB’s liquidity risk profile and have adequate broad representation within the IB, including finance, treasury, senior managers, credit, deposits and investments, financing and risk management. The Board must define the mandate of this committee in terms of planning, directing and controlling the flow, level, mix, cost and yield of the IB’s funds and investments.
- g. The committee must ensure that the system set up for liquidity risk management is able to adequately identify and measure the risk exposure. The committee must also ensure that the IB has an information system which is sufficiently flexible and able to prepare and provide timely, accurate and relevant reports to senior management, the Board and the Central Bank about the institution’s liquidity risk exposure.
- h. Senior management must observe the changes in market conditions and new developments that can present significant challenges in terms of the smooth management of liquidity risk in the IB. Senior management must present to the Board regular reports on the liquidity position of the bank. The Board should be informed immediately of new or emerging liquidity concerns. These include increasing funding costs or concentrations, the growing size of a funding gap, the drying up of alternative sources of liquidity, material and/or persistent breaches of limits, and/or a significant decline in the cushion of unencumbered, highly liquid assets. The Board must ensure that senior management takes appropriate remedial actions to address the concerns. Senior management must be able to recommend to the Board any necessary amendments to the strategy and policies for managing liquidity risk.
- i. Senior management is responsible for determining the structure, responsibilities and controls for managing liquidity risk in all legal entities, branches and subsidiaries in the jurisdictions in which IB is active, and outline these elements clearly in the IB’s liquidity policies. The management structure of an IB must be established in such a way that it provides for

segregation of duties between operational and monitoring functions, which can minimise the chances of conflicts of interest. It is expected that the primary responsibility for monitoring liquidity risk management must be independent of business units that are involved in the financing, investment and trading functions.

- j. It is the responsibility of the Board and senior management to ensure that adequate internal controls and internal audit mechanisms are in place to protect the integrity of the established liquidity risk management process. Senior management must define the specific procedures and approvals necessary for exceptions to policies and limits, including the escalation procedures and follow-up actions to be taken for breaches of limits.
- k. The active involvement of senior management is vital to the stress testing process in the IB. Senior management must demand that rigorous stress scenarios be considered, even in times when liquidity is plentiful.
- l. The strategy, key policies for implementing the strategy and the liquidity risk management structure must be communicated throughout the organisation by senior management. All individuals within business units conducting activities that have a material impact on liquidity must be fully aware of the liquidity strategy and operate under the approved policies, procedures, limits and controls.
- m. Individuals responsible for liquidity risk management must maintain close links with those monitoring market conditions, as well as with other individuals with access to critical information, such as credit risk managers. Individuals with direct responsibility over liquidity risk management at the banks must meet the fit and proper criteria set by the Central Bank including appropriate academic qualifications, good understanding of Shari'ah compliant activities and its liquidity related risks, good character and sound financial position.
- n. Senior management must ensure that independent oversight and verification is performed by middle office and/or risk management staff who are capable of assessing treasury's adherence to liquidity limits, policies and procedures. The independent control functions must have the skills and authority to challenge information and modeling assumptions provided by business lines. In addition, internal audit must regularly review the implementation and effectiveness of the agreed framework for controlling liquidity risk.

#### 5.4 **Identification of Liquidity Risk**

- a. IBs must be able to identify the exposure to liquidity risk, in the short and long term, arising from institution-specific, market-wide or cross-border events for all its operations including subsidiaries, branches, or similar arrangements. In the process of identification, the IB must identify and recognise each significant on- and off-balance sheet position that can have an impact on its liquidity in normal and stressed times and establish a range of metrics. The IB must consider the types of events and activities that can expose it to liquidity risk. It must have a robust framework for projecting the contingent liabilities and other commitments, including calculating the impact of drawing on undrawn commitments.

The identification process must consider, among other things, the nature of exposure, the creditworthiness of the counterparty, correlations between the various business and geographical sectors, and the nature of the relationship with various counterparties. IB must be able to identify incidents that can negatively influence perception in the marketplace about its creditworthiness and the fulfilment of its obligations.

- b. IBs must consider the interactions between exposures to funding liquidity risk and market liquidity risk. An IB that obtains liquidity from capital markets and interbank market Shari'ah compliant instruments must recognise that these sources may be more volatile than normal deposits and IAs.
- c. An IB must be able to model the contractual and behavioral profiles of its fund providers with respect to normal and disruptive market conditions, which can be impacted by its smoothing techniques. For instance, an IB must ensure the availability of sufficient funds as and when the demand arises from non-remuneration accounts and other accounts guaranteed by IB. In addition, an IB must also model the behavioral profile of its investment accounts, as the IB may be affected by runs or panic withdrawals of funds by the Investment Accounts Holders ("IAH's) in the case of rate of return risk, Shari'ah non-compliance risk or reputational risk which may have an impact on the liquidity condition of the IB.
- d. An IB must ensure that assets are prudently valued according to relevant financial reporting and supervisory standards. An IB must fully factor into its risk management, the consideration that valuations may deteriorate under market stress, and take this into account in assessing the feasibility and impact of asset sales during stress on its liquidity position.
- e. In analysing the risk profile of investment accounts, an IB must take into consideration the smoothing techniques adopted by the IB in line with the Central Bank's standards and regulations. Stress testing, including scenario analysis, must be used to evaluate the behaviour of IAH and other fund providers of the IB and its impact. IB's own historical data may provide a good basis for performing an internal assessment of the expectations and incentives of IAH, in normal as well as stressed times

- f. For restricted investment accounts, an IB normally makes matching investments. However, in the case where restricted investment accounts have the right to withdraw funds before the assets are liquidated, the IB may need to fund the gap for the intervening period until the assets are converted into cash. If the withdrawals are more than expected, the IB may be exposed to liquidity risk.
- g. Due to the IB's dual role in meeting its obligations to current and investment accounts, and managing the expectations of its IAH, it is imperative that the IB performs liquidity cash-flow analysis periodically and under various market conditions. The analysis must include assumptions about the repayment of invested funds to the IAH to the extent that the amount of capital erosion due to investment losses is sufficiently mitigated by Investment Reserve Risk ("IRR").
- h. If the IB is sourcing funds using contracts other than Mudaraba or Wakala, especially if using sale based instruments, such practices will expose the IB to refinancing risk (through renewal of contract) in stressed market conditions. Observing the Shari'ah requirements in such cases, especially Shari'ah rules pertaining to sale of debt which, among other things, requires that renewal of the contract can only be made after the initial contract has been terminated. Counterparties may be less willing to hold their funds with the IB, resulting in a liquidity shortage and possibly a liquidity crisis, especially in the case of stressed markets, as well as perceived or actual financial or reputational problems of the IB.
- i. IB must be aware that identification of liquidity risk must take into consideration various liquidity risks associated with its own balance sheet (corporate books) operations. An IB may face funding liquidity problems due to:
- i. refinancing risk (e.g. due to system-wide liquidity stress or credit crunch),
  - ii. the inadequacy of the liquidity infrastructure in the jurisdiction, or
  - iii. the inability of a particular counterparty to renew a liquidity facility, in the absence of more general liquidity stress.
- Due to the significant size of such transactions and their potential impact on the profitability and liquidity of the institution, IB must monitor the timing, counterparties, nature and terms of transactions (e.g. secured or unsecured), etc.
- j. IB must also keep track of information related to significant counterparties and other market related information that can impact, directly or indirectly, the management of its liquidity risk. Such information about significant counterparties, most notably financial institutions, may include, but is not limited to, institutional credit rating, market reputation regarding repayment capacity, share prices, profitability, frequency and capacity to renew the funding,

financial results of cross-border operations, credit ratings of issued Sukuk, etc. The market-related information may include Islamic money market rates, profit rates paid to IAH and fund providers by competitors, market indices, latest auction rates of local and sovereign Sukuk, as well as movements in foreign exchange and commodities markets – both in local and cross-border markets.

k. IB must design a set of indicators to aid this process to identify the emergence of increased risk or vulnerabilities in its liquidity risk position or potential funding needs. Such early warning indicators must identify any negative trend and trigger an assessment and potential response by management in order to mitigate the IB's exposure to the emerging risk. Early warning indicators can be qualitative or quantitative in nature and may include, but are not limited to:

- Rapid asset growth, especially when funded with potentially volatile liabilities.
- Growing concentrations in assets or liabilities.
- Increases in currency mismatches.
- A decrease of weighted average maturity of liabilities.
- Repeated incidents of positions approaching or breaching internal or regulatory limits.
- Negative trends or heightened risk associated with a particular product line, such as rising delinquencies.
- Significant deterioration in the IB's earnings, asset quality, and overall financial condition.
- Negative publicity.
- A credit rating downgrade.
- Stock price declines or rising debt costs.
- Widening debt or credit-default-swap spreads.
- Rising wholesale or retail funding costs.
- Counterparties that begin requesting or request additional collateral for credit.
- Correspondent banks that eliminate or decrease their credit lines.
- Increasing retail deposit outflows.
- Increasing redemptions of Islamic CDs before maturity.
- Difficulty accessing longer-term funding.

l. Early warning indicators must be closely monitored by senior management on a regular basis. Limits and analysis of the indicators in (l) above must be reviewed and breaches/emerging trends must be escalated up to the board committees or the full board, if significant enough. Clear procedures and escalation criteria must be put in place based on the warning indicators, these include the circumstances where the CFP must be invoked.

## 5.5 **Integration of Liquidity Risk into Enterprise Risk Management Framework**

- a. IB must ensure that liquidity risk management practices are incorporated within an institution-wide, integrated enterprise risk management framework that fully takes into account the interactions between liquidity risk and other risks, including market, credit and operational risk, displaced commercial risk, reputational and Shari'ah non-compliance risk, as per the Central Bank's risk management regulations and standards. This framework must also address liquidity risk arising from various Shari'ah-compliant financial contracts, either directly due to the nature of the contract or indirectly as a consequence of other risks, at any stage during the period of the contract.
- b. IB must take into account the fact that various types of risks interact with liquidity risk in a variety of ways, both in normal and stressed conditions.
- c. Credit risk in an IB can transform into liquidity risk if it faces major defaults in its financing and investment portfolio. Uncertainty about the creditworthiness and quality of an IB's financing portfolio can make it difficult to obtain funding from the market or to resell an eligible asset portfolio to other IBs. For instance, Murabahah and other debt modes of financing cannot be resold in the market due to Shari'ah restrictions on the selling of debt. In addition, during stressed conditions, an IB may find it difficult to sell or collateralise these assets to generate liquidity. Furthermore, any reputational problem experienced by the IB due to perceived Shari'ah non-compliance or fiduciary risk may result in the withdrawal of funds by the fund providers, resulting in heightened liquidity risk for the IB.
- d. The liquidity risk management framework of the IB must factor-in these and similar relationships and interactions between liquidity risk and other risks while setting limits, performing stress testing, preparing CFP, and executing its risk management strategy and policies in its operational environment.
- e. Rate of return risk, which is a major cause of displaced commercial risk, can also give rise to liquidity problems in the IB. For instance, IBs may have invested investment accounts' funds into relatively long maturity assets such as long-maturity Murabahah, Ijarah without repricing, and thereby have locked in lower rates of return on assets than those currently on offer in the market. Despite the contractual features of the investment accounts, the investment account holders may choose to move their funds to other institutions offering higher return, posing a liquidity risk for the IB. To mitigate this risk, IB may smooth the profits payout to their IAH.
- f. IB must address liquidity risks arising from various Shari'ah-compliant modes for financing and investment. IB must especially look into risk transformation in the transactions during the various stages of execution, which might impact the liquidity of these products, directly or indirectly.
  - i. In a Murabahah contract, an IB's liquidity is impacted by the risk of cancellation in a non-binding Murabahah contract and by late or non-payment by customers.

- ii. In the case of Ijarah, IB may face liquidity risk due to the late or non-payment of instalments by the customer, the inability to sell or lease the asset to a new customer at the end of an earlier contract, or default by the customer.
  - iii. In a Salam contract, the illiquidity of commodity markets and the non-permissibility of exiting the contract before delivery can pose a liquidity risk for an IB.
  - iv. In the case of the investment modes, Mudarabah and Musharakah, liquidity risk can arise in the case of late or non-payment of profit payments during the contract and non-payment by the customer of the principal at the end of the contract.
- g. The IB must be able to analyse its financing and investment portfolio with reference to features of Shari'ah-compliant contracts that can lead to liquidity risk and make appropriate adjustments, as needed. Overall liquidity risk for an IB will largely depend on the mix of various Shari'ah-compliant modes of financing and investment in its asset portfolio and the concentration of individual customers exposed to each type of contract.
- h. The IB must take into consideration that liquidity risk can arise either directly due to the nature of the contract or indirectly as a consequence of other risks at any stage during the period of the contract, mostly through credit risk, whereas continuous illiquidity in the Sukuk market mostly impacts an IB's liquidity through market risk.
- i. An IB must be able to take fully into account the interaction between funding and market liquidity in its analysis of liquidity risk. With the increasing interconnections between the two types of liquidity, it is imperative that the IB evaluate the potential systemic consequences of liquidity problems.
- j. A liquidity risk management framework must include limits, warning indicators, communication and escalation procedures. IB must set limits to control its liquidity risk exposure and vulnerabilities. IB must regularly review such limits and corresponding escalation procedures. Limits must be relevant to the business in terms of its location, complexity, and nature of products, currencies and markets served. Limits must be used for managing day-to-day liquidity within and across lines of business and legal entities under "normal" conditions. The limit framework must also include measures aimed at ensuring that the IB can continue to operate in a period of market stress, bank-specific stress and a combination of the two. For example, a commonly used simple limit is the size of cumulative net cash outflow (based on board approved assumptions) and covers various time horizons. The limit may also include estimates of outflows resulting from the drawdown of commitments or other obligations of the bank.

## 5.6 Measurement of Liquidity Risk

- a. IB must be able to measure and forecast its future cash flows arising from all of its positions, whether on or off-balance sheet, over a range of time bands. The IB must use a range of time horizons in order to assess its vulnerability to changes in its cash flows and liquidity

requirements over time, given the size and mix of its balance sheet components. These time horizons can range from intraday, overnight, weekly and monthly for short-term liquidity assessments, up to one year for medium term and over one year for longer-term assessments.

- b. An IB must have robust, documented and well tested methodologies for measuring liquidity risk, and must make appropriate amendments and revalidation to reflect changing market conditions, so as to ensure that the major assumptions and parameters continue to be relevant and up to date.
- c. IBs must also take into consideration the impact of potential payments and commitments arising from off-balance sheet items such as committed lines, guarantees, letters of credit and Shari'ah-compliant derivatives. Particular importance must be paid to covenants that trigger the drawing of liquidity lines or that allow counterparties not to fulfil their obligations. Implicit support to restricted investment accounts or any securitisation vehicles of the IB (held off-balance sheet in most cases) must also be considered in the liquidity analysis. For securitisation vehicles, an IB must also take into consideration the contingent exposure and triggering events stemming from its contractual and non-contractual relationships with special purpose vehicles. ("SPV"). Undrawn commitments, letters of credit and financial guarantees represent a potentially significant drain of funds for IB. IB may be able to ascertain a "normal" level of cash outflows under routine conditions, and then estimate the scope for an increase in these flows during periods of stress.
- d. IBs must recognise that the behaviour of their cash flows can be considerably different from other types of institutions owing to the different nature of the contracts used for their financing and investment products. Cash flows in an IB may be categorised as follows:
  - i. Known cash flows: are those cash flows where the amount and maturities are known in advance, such as receivables from Murabahah, Ijarah, based financing.
  - ii. Conditional but predictable cash flows: are dependent on the performance of commitments or work, and fulfilment of agreed terms and conditions over an agreed period by the counterparties, as in the case of Salam, Istisna` and Diminishing Musharakah.
  - iii. Conditional but unpredictable cash flows: are related to equity participations by the IB where the recovery of invested capital and possible levels of return on investment are conditional on the financial results of the activity in which the funds are invested, as in Musharakah and Mudarabah.
- e. For measuring liquidity risk, IB must utilise a range of measurement techniques, time horizons and levels of granularity. Depending upon the nature, size and complexity of

operations of an IB, cash-flow forecasts and projections can range from simple spreadsheets to sophisticated modelling techniques, including utilising static simulations, value at risk, liquidity at risk and others. IB may use, for measuring and monitoring liquidity risk, the cash-flow mismatch/maturity gap for calculating the net funding requirement, which is based on an estimation of the amount and timing of future cash flows with respect to contractual or expected maturity.

- f. IBs must analyse liquidity gaps, breaking them down by type of product, business unit and currency, with appropriate forecasting of liquidity needs in various stress scenarios. In order to ensure the reliability of the forecasting process, IB must collect and aggregate relevant data, and verify that the data are processed and transferred correctly through various systems and channels. IBs must also validate the forecasted cash flows and ensure that the data are complete and reconciled, with appropriate plausibility checks. The validations and back-testing results must be properly documented and communicated to senior management for their information.
- g. The maturity gap approach helps the IB to address the net funding requirement in each time horizon. The analysis of net funding requirements involves the construction of a maturity ladder and the calculation of a cumulative net excess or deficit in funding at a series of points in time.
- h. For calculating net funding requirements, the IB must analyse prospective cash flows based on assumptions of the future behaviour of assets, liabilities and off-balance sheet items, and then calculate the cumulative net excess or shortfall over the time frame.
- i. Assumptions related to the behaviour of various fund providers and asset classes, or regarding possible triggers of any contingent liability and liquidity disruption, play an extremely important role in measuring and projecting cash flows. IBs must ensure that the assumptions it makes are practical, realistic and properly documented.
- j. Assumptions related to the behaviour and stability of investment accounts, current accounts and funds generated from wholesale investors, as well as the volatility of asset portfolios on the basis of investment modes such as Mudarabah and Musharakah, are important. IBs must be able to test various scenarios on the availability of alternative funding sources from Islamic money and capital markets under adverse market conditions, as well as the effects of a deterioration in its asset quality or capital adequacy. An important consideration in such analyses is the critical role that the reputation and creditworthiness of an IB plays in accessing funds from the market on reasonable terms and in time. IB must be aware of any information that may adversely affect its public image and reputation, and hence its access

to funds from the Islamic interbank market. Such information includes any negative publicity appearing in the media on the IB's Shari'ah non-compliance, rating downgrade and fall in earnings.

- k. Evaluating the liquidity position and liquidity risk of an IB requires an analysis of the behaviour of different cash flows under various market conditions. This behaviour can be analysed using various stress testing or "what-if" scenarios, to determine what the impact would be on cash stocks (i.e. cash balances) or cash flows. Stress testing helps to quantify potential liquidity gaps in specified stress scenarios using deterministic and stochastic cash flows and, therefore, must be linked with various actions and countermeasures.
- l. IBs must also include sensitivity and scenario analyses in their stress testing. While sensitivity analyses test the dependence on a selected risk factor, scenario analyses simultaneously examine the effect of several risk factors on liquidity. The results of stress testing exercises must be the basis of setting limits, preparing the CFP, and revising the strategy, policies and procedures for liquidity risk management in the IB.
- m. Stress testing must be conducted on a regular basis and must consider the following:
  - It must be done on individual entity basis, group basis and across business lines.
  - It must consider the implication of the scenarios across different time horizons, including on an intraday basis.
  - The extent and frequency of testing should be commensurate with the size of the bank and its liquidity risk exposures.
  - IB must build in the capability to increase the frequency of tests in special circumstances, such as in volatile market conditions or at the request of the Central Bank.
  - Senior management must be actively involved in the stress testing process, demanding rigorous assumptions and challenging the results.
  - The Board must be informed of the stress testing results and must be able to challenge outcomes, assumptions and actions taken on the basis of the tests.
- n. IBs must ensure consistency in the reporting process to allow for comparability overtime and assist in measuring changes in the risk exposure and/or profile.
- o. The stress test scenarios must consider the following:
  - A simultaneous drying up of market liquidity in several previously highly liquid markets (inter-bank money markets, non UAE funding markets, securitisation).
  - Severe constraints in accessing secured and unsecured wholesale funding.
  - The run-off of retail funding.

- Contingent claims and more specifically, potential draws on committed lines extended to third parties or the IB's subsidiaries, branches or head office and the liquidity absorbed by off-balance activities.
  - Severe operational or settlement disruptions affecting one or more payment or settlement systems.
  - Take into account the link between reductions in market liquidity and constraints on funding liquidity. This is particularly important for IBs with significant market share in, or heavy reliance upon, specific funding markets.
  - IBs must also consider the results of stress tests performed for various other risk types and consider possible interactions between liquidity risk and these other types of risk (e.g. capital stress tests), and including consistency across stressed credit and liquidity methodologies/metrics.
  - Tests must reflect accurate time-frames for the settlement cycles of assets that might be liquidated (i.e. time to receive the sale proceeds).
  - If an IB relies upon liquidity outflows from one system to meet obligations in another, it must consider the risk that operational or settlement disruptions might prevent or delay expected flows across systems. This is particularly relevant for IBs relying upon intra-group transfers or centralised liquidity management.
  - Additional margin calls and collateral requirements.
  - The availability of contingent lines extended to the IB.
  - The impact of credit rating triggers.
  - The access to Central Bank facilities.
  - The potential reputational impact when executing contingency /remedial action.
  - Estimates of future balance sheet growth.
  - The likely behavioral response of other market participants (similar response to market stress might amplify market strain).
  - The likely impact of its own behaviour on other market participants.
  - Where a bank uses a correspondent or custodian to conduct settlement, the analysis must include the impact of those agents restricting their provision of intraday credit.
- p. IBs must use various kinds of limits for controlling its liquidity risk. These limits are normally set at the group level and are apportioned downwards to the various entities, including subsidiaries, units/divisions or desks. Through limits, IBs can ensure that it does not have a level of outflows, which cannot be funded in the market, taking account of its risk tolerance and historical record. Overall, IBs must set their limit structure so that it continues to operate in an idiosyncratic stress or market-wide stress, or both.
- q. IBs may use internal fund transfer pricing technique for measuring and analysing pricing, profitability and performance of various business lines, products and branches within the IB.

Since the internal prices affect the performance measurement of different functional units, products and lines of business, senior management must assign such responsibility to an independent unit in a transparent manner. It must also uphold the Shari'ah requirements in case IB has different pools of funds. In addition, the internal pricing must be decided after an interactive discourse between the business lines and the unit/s responsible for the fund transfer price and must cover all significant business activities of the IB, including off-balance sheet. This process must take into account different factors related to assets, liabilities and off-balance sheet items, including their expected holding periods and associated changes in liquidity risk, "stickiness" or stability of funding sources, and other related factors. It must also be updated at appropriate intervals.

- r. Senior management must appropriately incorporate liquidity costs, benefits and risks in the internal pricing and performance measurement for all significant business activities (both on- and off-balance sheet). The sophistication of the transfer pricing framework must be in line with the bank's level of sophistication and business complexity. The costs, benefits and risks must then be explicitly attributed to the relevant activity so that line management incentives are consistent with and reinforce the overarching liquidity risk tolerance and strategy of the bank, with a liquidity charge assigned, as appropriate, to positions, portfolios, or individual transactions.
- s. This assignment of liquidity costs, benefits and risks must incorporate factors related to the anticipated holding periods of assets and liabilities, their market liquidity risk characteristics, and any other relevant factors, including the benefits from having access to relatively stable sources of funding, such as some types of retail deposits.  
The quantification and attribution of these risks must be explicit and transparent at the line management level and must include consideration of how liquidity would be affected under stressed conditions.  
The analytical framework must be reviewed as appropriate to reflect changing business and financial market conditions and so maintain the appropriate alignment of incentives.
- t. IBs must assess its aggregate foreign currency liquidity needs and determine acceptable currency mismatches. IBs must undertake a separate analysis of its strategy for each currency in which it has significant activity, considering potential constraints in times of stress. The size of foreign currency mismatches must take into account: (a) the IB's ability to raise funds in foreign currency markets; (b) the likely extent of foreign currency back-up Shari'ah compliant facilities available in its domestic market; (c) the ability to transfer a liquidity surplus from one currency to another, and across jurisdictions and legal entities; and (d) the likely convertibility of currencies in which the bank is active.

IBs must take account of the risks of sudden changes in foreign exchange rates or market liquidity, or both, which could sharply widen liquidity mismatches and alter the effectiveness of foreign exchange hedges and hedging strategies.

#### 5.7 **Control and Mitigation of Liquidity Risk**

- a. IBs must ensure that it has a well-diversified funding base, which must be commensurate with the nature and size of its business, products offered and regulatory market environment. It must maintain strong relationships with various fund providers – retail, corporate or interbank – to ensure proper diversification of its funding base. It must also be able to identify major factors that influence the decision-making process of various fund providers and take measures to control and mitigate those factors, as well as to maintain relationships with its core investment funds and deposit base. The diversification of funding sources must span a range of maturities, including the short, medium and longer term, so as to provide a suitable match with maturities in its assets portfolio.
- b. As a part of its diversification strategy, an IB must manage and limit its funding concentrations. IB must limit funding concentrations by name–type, product, geographical location, sector, currency and nature of the provider.
- c. IBs that rely on the funding from wholesale investors as a major funding source must assess the likelihood of being able to continue to rely on keeping funds with such investors when under duress and must incorporate in its analysis that funding from wholesale investors might dry up in stressed conditions.
- d. IBs may use securitisation of financing and investment assets for managing liquidity, freeing up assets from the balance sheet and raising new funds, in addition to reducing their risk exposures.
- e. IBs must also take into consideration the features and risks of various sources of funds and mechanisms e.g. retail and corporate fund providers on the basis of current accounts, investment accounts, other type of accounts, and the Islamic interbank market being used.
- f. Preserving market access is an important element of achieving diversification in the funding base of IB. Access to various funding markets ensures that the IB is able to raise new funds and sell its Shari`ah-compliant assets and Sukuk with ease and without a major price distortion. IB must also be able to spot alternative funding sources in order to meet any situation of market duress and these must form part of its CFP. Possible sources of such funding in the IB may be an expansion of its deposits and investment accounts, securitisation, the sale of unencumbered Shari`ah-compliant assets, the drawing down of committed lines of

financing, accessing the local Islamic interbank market, secured financing through Shari'ah-compliant alternative structures, etc.

## 5.8 **Consolidated Management of Liquidity Risk**

- a. In the case of an IB that is part of a group which has a centralised structure for managing liquidity risk, the Board and Senior Management at the group/parent level must prepare a strategy, policies and procedures for the Islamic operations taking into account the position of such operations within the overall group/parent, with due consideration to mutual Shari'ah independencies and constraints in transfers of liquidity on a Shari'ah-compliant basis between the group entities.
- b. A major consideration in the transfer of liquidity from an Islamic entity to the conventional group/head office, or vice versa, is the issue of segregation of funds, constraints on any such transfer, and the Shari'ah-compliant structures or mechanisms that can be used to facilitate the placement of funds.

## 5.9 **Maintaining a High-Quality Liquidity Buffer**

- a. IBs must maintain a liquidity buffer as the first line of defense in the event of a liquidity disruption. A liquidity buffer consists of cash and other highly liquid, unencumbered, Shari'ah-compliant assets and is an important tool in disruptive market conditions when an IB may need to generate liquidity in a short span of time and normal funding sources become dry or are unable to provide liquidity. The availability of this excess liquidity precludes the need for an IB to take extraordinary measures during initial periods of stress.
- b. IBs must calibrate the magnitude of its liquidity buffer on the basis of its funding gap and stress testing exercise over specific time horizons. The calibration of a liquidity buffer is highly dependent on assumptions used for defining the stress conditions. These assumptions incorporate the factors such as net and cumulative funding requirements in various time buckets, as well as encompassing both contractual and non-contractual cash flows. Assumptions must also include factors such as the length and severity of stress, the withdrawal of funding by investment accounts and depositors, and the non-availability of funding on an unsecured basis (including interbank Mudarabah, and Wakalah) as well as on a secured basis (using Shari'ah-compliant alternatives structure to a repurchase agreement) from modestly liquid assets.
- c. The IB liquidity buffer must comprise cash and highly liquid assets which can be sold or used as collateral for a Shari'ah-compliant alternative to a repurchase agreement in disruptive market conditions.

In addition to the highly liquid instruments, other instruments which may need a relatively longer time in liquidation may be considered, provided the IB can demonstrate the ability to generate the liquidity from such instruments in an agreed timeframe. The core component of this buffer must be eligible as collateral for generating liquidity from the Central Bank on a Shari'ah-compliant basis.

- d. The IB can also include statutory reserves with the Central Bank in its calculation of a liquidity buffer provided it can demonstrate that such reserves can be withdrawn in case of need without any regulatory repercussions. The criteria for specifying an instrument's eligibility as a liquidity buffer include its issuer, size, maturity, depth of the market, currency, tradability from a Shari'ah perspective, and the range of investors holding such an instrument.
- e. IBs must ensure that its liquidity buffer is reasonably diversified, and that there are no constraints – whether legal, regulatory or operational – on the utilisation of these assets. The IB must also consider maintaining buffers of highly liquid assets in other major currencies, especially in cases where the local currency is non-convertible.
- f. An IB must also test and be active in each market in which it keeps Shari'ah compliant assets as liquidity buffers. This will provide an assurance to the IB about the liquidity of such instruments in various market conditions and will provide an opportunity to test its assumptions.

#### 5.10 **Preparing a Contingency Funding Plan (CFP)**

- a. IBs, regardless of their nature and complexity, must have a CFP that delineates the strategy, action plan and procedures for dealing with liquidity stress events, including making up cash flow in adverse circumstances. Such a plan must be prepared with input from all relevant functions of the IB, while carefully incorporating the results from stress tests, including scenario analyses and considering any limitations to sourcing funding in the future.
- b. The CFP must establish a clear designation of roles and responsibilities and backup of key functions, with a suitable internal and external communication plan addressing various stages of stress events. The plan must include regular monitoring of related triggers, with appropriate escalation procedures.
- c. Key objectives of a CFP are to reduce the effects of liquidity shocks, maintain going-concern status, and send market signals that the IB is in reasonable health.
- d. The main components of a CFP include:

- i. definition of the triggering events that will activate the CFP;
  - ii. governance of the CFP during the various stages of stress events, including describing the roles and responsibilities of various functions and committees;
  - iii. escalation procedures explaining when to consider, and how to take, additional measures for generating funds;
  - iv. internal and external communication plans, including major counterparties, customers, investment account holders, auditors, media and the Central Bank; and
  - v. the frequency and parameters used as a basis for revising the CFP.
- e. CFPs must have the following characteristics:
- i. Be commensurate with a IB's complexity, risk profile, scope of operations and role in the financial systems in which the IB operates.
  - ii. Include a clear description of a diversified set of contingency measures for preserving liquidity and making up cash flow shortfalls in various adverse situations.
  - iii. Articulate available potential contingency funding sources and the amount of funds a bank estimates can be derived from these sources; clear escalation/prioritisation procedures detailing when and how each of the actions can and must be activated; and the lead time needed to tap additional funds from each of the contingency sources.
  - iv. The CFP's design, plans and procedures must be closely integrated with the IB's ongoing analysis of liquidity risk and with the results of the scenarios and assumptions used in stress tests.
  - v. It must prepare the IB to manage a range of scenarios of severe liquidity stress that include both IB-specific and more generalised market-wide stress, as well as the potential interaction between them.
  - vi. It must include a diversified menu of options to allow management to have an overview of the potentially available contingency measures. Banks must also examine the time periods for which measures can be carried out under various assumptions and stresses.
- f. IB's CFP must be closely integrated with the overall strategy, policies and procedures for managing liquidity risk and must be proportionate with the IB's size, nature of products, risk profile and level of tolerance. It must also address constraints on obtaining Shari'ah compliant funding.
- g. During the process of preparation of the CFP, an IB must take input from all relevant functions and bodies, and most importantly from the senior management, treasury, and risk management and finance departments. It must be then formally approved by the Board of the IB.

- h. IBs must also define the triggering events that will activate the various stages of the CFP. Such events may include events related to the IB, such as a downgrade in its credit rating or that of Sukuk that it has originated or for which it is an obligor; problems in specific products or lines of business (e.g. issues affecting an important market segment resulting in a reduction of cash flows to the IB from losses of customers and collectability problems); and/or the default or a rating downgrade of Sukuk it is holding, etc.
- i. There might be some external events that can cause the need for activation of CFP, such as a lower rating or defaults in its holding of Sukuk or other Shari'ah-compliant securities, deterioration of overall market conditions, negative publicity about its Shari'ah compliance, or changes in legal, accounting and tax regulations that might impact negatively on the IB's liquidity position. IB is expected to perform regular monitoring of related triggers that will activate the CFP with related reporting to the senior management and relevant committees such as ALCO.
- j. IBs must clearly designate the roles and responsibilities of the various personnel involved in the management of the CFP during each stage of the liquidity crisis. An IB must define the classification of these stages and may consider delimiting various stages, such as:
  - i. recognition of various triggering events where withdrawals do not follow predictable patterns;
  - ii. a liquidity crunch where unsecured funding might be partially inaccessible and there is a need to liquidate assets or investments in an orderly manner; and
  - iii. a condition of severe liquidity shock where unsecured funding is not available and securing funding is difficult to obtain.
- k. During the course of each defined stage, the IB must lay down the roles and responsibilities of the relevant board and senior management committees, as well as other staff, in order to prevent any confusion and misconception about their roles. IB can also consider the establishment of a crisis management team with clearly assigned leadership roles to increase internal coordination and decision-making during a liquidity disruption.
- l. The IB CFP must illustrate the decision-making process to be adopted at different stages of the liquidity crisis. The process must outline the nature and timing of action to be taken by the personnel responsible for managing liquidity disruptions with respect to their assigned roles. It must also elaborate the parameters for escalating any issue to higher senior management. The procedures must explain the nature and extent of internal and external communication.

- m. The communication plan of the IB, as defined in the CFP, must ensure clear, timely and regular internal communication to warrant timely decision-making and avoid any misconception or confusion about the appropriate steps to be taken during the crisis and roles of the various personnel.
- n. Senior management must review and update the CFP at least every year for the Board's approval, or more often as business or market circumstances change. The review must take place in order to assess its effectiveness and to ensure that it remains relevant and up to date in the changing market conditions. An IB may consider assessing the efficacy of CFP during the simulation of stress conditions, if conducted and make appropriate changes to reflect the applicability of the CFP if needed.
- o. IBs must also conduct regular contingency tests to ensure that key exposures are taken into account, contingency procedures are well understood, and relevant expectations from each function are clear during times of crisis. The testing procedure must also assess the reliability of key contacts, the effectiveness of legal and operational documentation, the availability of credit lines, and the marketability of its Shari`ah-compliant asset portfolio by selling or through any collateralised mechanism. Key aspects of these tests include:
  - ensuring that roles and responsibilities are appropriate and understood,
  - confirming that contact information is up to date,
  - proving the transferability of cash and collateral,
  - ensuring that the necessary legal and operational documentation is in place to execute the plan at short notice,
  - proving ability to sell or purchase certain assets or periodically draw down credit lines.
- p. The CFP must be consistent with the IB's business continuity plans and must be operational under situations where business continuity arrangements have been invoked.

#### 5.11 **Managing Shari`ah-Compliant Collateral**

- a. IBs must be able to identify its needs for Shari`ah-compliant collateral over different time horizons, and must address the Shari`ah, legal and operational constraints on the use of such collateral. The IB must actively manage its collateral positions while differentiating between encumbered and unencumbered assets, and its information system must be able to identify available unencumbered collateral by type, currency and location, in both normal and stressed times.
- b. IBs must have a strategy, policies and procedures in place in order to ascertain its collateral needs over various time horizons in both normal and stressed times. The IB must also determine the Shari`ah, legal, regulatory and operational constraints on utilisation and

transfer of collateral over different jurisdictions and currencies, and according to the nature of assets. The IB must also estimate the level of collateral according to its liquidity buffer requirements and in consideration of the various stages of liquidity crisis stated in its CFP. The IB must also explore the opportunity to expand the range of collateral it is holding, which can be diversified in terms of currency, jurisdiction, type and tenor.

- c. An IB must actively manage its collateral positions while differentiating between encumbered and unencumbered assets. The IB must have a robust management information system that can meet the requirements and challenges of liquidity risk management and keep track of expected cash flows in light of contractual and behavioral profiles of assets, liabilities and off-balance sheet items.

#### 5.12 **Collaboration Between IBs**

- a. IBs, especially within the same jurisdiction, should closely cooperate among themselves in order to develop Shari'ah-compliant arrangements, solutions and trading mechanisms for liquidity management purposes.
- b. Such collaboration shall provide a robust platform and harmonised agreements for active trading amongst the IBs, with availability of market makers in various trading instruments and mechanisms.

#### 5.13 **Meeting Payment and Settlement System Obligations**

- a. Irrespective of whether an IB uses a net or a gross payment and settlement system, it must be able to manage short-term (overnight and intraday) liquidity in order to meet, on a timely basis, its payment and settlement obligations in all circumstances.
- b. In view of the interdependencies and interconnectedness between payment and settlement systems, IBs must ensure that its critical payments are always made on a timely basis in order to avoid any potential systemic disruptions, which could prevent the smooth functioning of other payment systems and money markets.
- c. IBs must monitor important liquidity flows and must directly contact the counterparties in the case of any late payments. IB must also assign clear roles and responsibilities with respect to the intraday management of liquidity. Looking at the time-critical nature of intraday liquidity management, IB must be able to formalise its decision-making and follow-up processes so that settlements can be monitored on a continuous basis with proper internal controls and allocation of responsibilities. Its management information system must be facilitative enough to provide the senior management and other relevant personnel with information on the IB's liquidity and collateral positions, with flexibility to provide more detailed information when needed, especially during stressed market conditions.

IBs must implement back-up measures in order to reduce any operational problems, such as problems with trading and settlement systems, information system networks and unauthorised access to the systems, etc. The IB must also take account of intraday considerations in its stress testing and scenario analysis exercise, the results of which must be incorporated into its CFP. IB must include the possibility of any unforeseen interruption in its intraday liquidity flows as a part of its liquidity risk planning.

#### 5.14 **Foreign Exchange Liquidity Risk**

- a. IB must have a measurement, monitoring and control mechanism for liquidity positions in each currency with a significant exposure. IB must assess, monitor and, where appropriate, limit the size of its cash-flow mismatches over particular time horizons for foreign currencies in aggregate and for each significant individual currency in which it operates, especially with respect to its domestic currency (or, where different, its functional currency).
- b. The IB must employ appropriate stress tests and make use of Shari'ah-compliant hedging strategies for limit setting and controlling currency risk. The IB must especially limit its exposures in currencies that are not highly liquid or have low convertibility.
- c. As a part of the overall stress testing exercise of the IB, foreign exchange liquidity must also be analysed under normal and stressed market conditions. The IB must adopt hedging techniques, including Shari`ah-compliant derivatives, if any (the swap market, in particular), remains a key feature of managing relevant foreign exchange exposures.
- d. Where an IB provides financing facilities in foreign currencies, it can face a number of risks that must be considered as a part of its overall liquidity risk management strategy and policies. IB must consider the impact of changes in foreign currency exchange rates with respect to the domestic currency and the likely convertibility of these currencies in the event of need. In the case of an unexpected currency devaluation, local customers will be unable or will find it difficult to pay back their foreign currency financing, resulting in cash-flow problems for the IB providing such financing. As a part of its foreign currency liquidity strategy, IB must evaluate the profile of its customers in terms of the nature of its business and the sources of earnings which can impact its ability to settle the foreign currency financing.
- e. IB must apply suitable limits on mismatches and positions in various foreign currencies on the basis of appropriate stress tests and scenario analysis. These limits must be reviewed on a regular basis. IB must also evaluate the possibility of loss of access to the foreign exchange markets, as well as the inability or difficulty in swapping currencies in the case of market disruption.

- f. Foreign exchange settlement risk arises when an IB finds itself in unexpected positions in currencies as the result of a counterparty's failure to settle its payments on time. In the correspondent settlement of foreign exchange, the full amount of settlement is at risk until the counterparty fulfils its foreign currency obligations. IBs must establish effective control measures and communications channels in order to mitigate any such settlement risk.

#### 5.15 **Reporting and Disclosure of Liquidity Risk**

- a. An IB must have a fully integrated information system, commensurate with its nature, size and complexity of operations, that provides clear, timely and accurate liquidity risk reports to its relevant functional units and senior management. The information system must, at suitable intervals, present to senior management and the Board a clear understanding of the IB's liquidity risk exposures and vulnerabilities, its compliance with established policies and limits, as well as the appropriateness of management strategies with respect to approved risk tolerance.
- b. IBs must have a reliable management information system designed to provide the Board, senior management and other appropriate personnel with timely and forward-looking information on the liquidity position of the IB. The management information system must have the ability to calculate liquidity positions in all of the currencies in which the bank conducts business – both on a subsidiary/branch basis in all jurisdictions in which the bank is active and on an aggregate group basis. It must capture all sources of liquidity risk, including contingent risks and the related triggers and those arising from new activities, and have the ability to deliver more granular and time sensitive information during stress events.
- c. To effectively manage and monitor its net funding requirements, IBs must have the ability to calculate liquidity positions on an intraday basis, on a day-to-day basis for the shorter time horizons, and over a series of more distant time periods thereafter. The management information system must be used in day-to-day liquidity risk management to monitor compliance with the bank's established policies, procedures and limits.
- d. The IB must make appropriate and regular disclosures of qualitative and quantitative information about its liquidity position and liquidity risk management practices through suitable channels.
- e. Senior management must define the types, contents, scope and frequencies of reporting to different levels of management and the board, including various committees such as ALCO and the risk management committee.

- f. Liquidity risk reports must provide aggregate information with adequate supporting granularity to enable the recipients to assess the liquidity risk position of the IB in changing market conditions. The reports must pick up any “early warning signals” and provide enough information to the recipients for them to make informed decisions and appropriate changes in policies, procedures and associated thresholds. The reports must also provide information on compliance with the IB’s established policies and procedures, along with details of any breaches and exceptions. The reporting must enable the management to evaluate trends in the aggregate liquidity risk exposure of the IB, as well as its components, in order to provide a basis for timely decision-making and corrective actions.
  
- g. IB’s liquidity risk disclosures must include:
  - i. summary of the liquidity risk management framework that addresses risk exposure for each category of funding (current accounts, unrestricted and restricted IA), as well as on an aggregate basis;
  - ii. general information on policies to manage and mitigate liquidity risk, taking into account the ease of access to Shari`ah-compliant funds and the diversity of funding sources;
  - iii. indicators of exposure to liquidity risk, such as the ratio of short-term assets to short-term liabilities and investment accounts, liquid asset ratios or funding volatility;
  - iv. maturity analysis of financing and various categories of funding (current account, unrestricted and restricted investment account) by different maturity buckets;
  - v. policy on maintaining liquidity buffers;
  - vi. the frequency and type of internal liquidity reporting;
  - vii. an explanation of the utilisation of stress testing in a liquidity risk management framework;
  - viii. a summary of the features and testing plans of the CFP; and
  - ix. supervisory restrictions on the transfer of liquidity among group entities, if any.

## **Article (6)**

### **Quantitative Requirements**

- a. This article addresses the quantitative requirements contained in the regulations and emphasises the key focus of the Central Bank in its on and off site examination of IB.
  
- b. The quantitative requirements come into force on 30 June 2022, meanwhile, IBs must continue to report based on the existing enforceable standards. Any IB that expects to be in breach of the Regulations and Standard must approach the Central Bank to discuss a remediation plan. Breaches will be dealt with on a case by case basis. The Central Bank will apply proportionality in determining the suitability of some of the more complex requirements for smaller IBs.

## **Liquidity Ratios**

c. There are four main liquidity ratios:

- i. Eligible Liquid Asset Ratio (“ELAR”),
- ii. Advances to Stable Resources Ratio (“ASRR”),
- iii. Liquidity Coverage Ratio (“LCR”), and
- iv. Net Stable Funding Ratio (“NSFR”).

IBs that apply and are approved to be assessed under LCR and NSFR cannot elect to revert to the ELAR regulatory framework and once approved must comply with both LCR and NSFR.

### **6.1 Eligible Liquid Asset Ratio**

a. ELAR is a ratio of the stock of eligible liquid assets to total liabilities (excluding liabilities allowed in the regulatory capital base). It is a measure that aims to ensure that banks hold minimum buffers of liquid assets.

b. Eligible liquid assets under ELAR are:

- i. Account balances at the Central Bank;
- ii. Physical cash at the IB;
- iii. Central Bank Islamic CDs and other Central Bank’s other Islamic instruments;
- iv. UAE Federal Government Sukuk;
- v. Reserve requirements;
- vi. UAE local government and Public Sector Entities’ publicly traded Shari’ah compliant securities that are assigned 0% credit risk weighting under standardized approach (limited to a maximum of 20% of eligible liquid assets);
- vii. Foreign, Sovereign Shari’ah compliant instruments or Shari’ah compliant instruments issued by their central banks, also multilateral development banks all of which receive 0% credit risk weighting under Standardized approach (limited to a maximum of 15% of eligible liquid assets).

c. IBs required to comply with ELAR must hold an amount equivalent to at least 10% (or some other percentage as set by the Central Bank) of their total on balance sheet liabilities at all times in the above assets. This ratio may be subject to upward revisions from time to time either as a result of Central Bank policy or as a result of a recalibration exercise.

### **6.2 Advances to Stable Resources Ratio**

This measure detailed in the current Central Bank reporting (BRF7) continues to be in effect for IBs unless an individual IB is permitted to apply the NSFR under the Central Bank’s LCR/NSFR Liquidity Framework.

### 6.3 **Liquidity Coverage Ratio**

- a. LCR is the ratio of the stock of High Quality Liquid Assets (“HQLA”) to total net cash outflows over the next 30 days. It represents a 30 days stress scenario with combined assumptions covering both bank specific and market wide stresses.
- b. The objective of the LCR is to promote IBs’ resilience against short-term liquidity shocks. To meet this requirement, an IB is obliged to have an adequate stock of unencumbered HQLA that can be converted easily and immediately into cash with no or little loss of value, in order to meet its liquidity needs for a 30-calendar-day period under a liquidity stress scenario. This is based on the assumption that, if the requirement is met, the IB could survive for the 30 days of the given stress scenario. This period allows the IB an adequate time to make necessary arrangements and undertake corrective actions to resolve internal liquidity problems.
- c. Therefore, the LCR is based on the assumption that a combined set of idiosyncratic and market-wide shocks may trigger the run-off of a proportion of retail deposits, including investment accounts, and a partial loss of unsecured wholesale funding capacity. The LCR is also developed based on the possibility that stressed market conditions would result in a partial loss of secured, short-term financing with certain collateral and counterparties, and an increase in market volatilities that impact the quality and solvency of the collateral, given that many IB’s transactions are backed by physical assets. In volatile market conditions, an IB may encounter additional contractual outflows and unscheduled drawdowns of committed but unused credit and liquidity facilities. Similarly, IB could find itself compelled to honor non-contractual obligations for the sake of avoiding the reputational risk that would arise from a perception by the market that the IB was, for example, allowing a related entity to become insolvent.

#### 6.3.1 **Formula for Calculating LCR**

- a. The LCR consists of two components:  
HQLA (Shari’ah-compliant) as the numerator and net cash outflows over the next 30 days as the denominator, both in a stress scenario. The HQLA are the assets that can be easily and immediately converted into cash, with no or little loss of value, during a time of stress. The total net cash outflows will be calculated as the total expected cash outflows minus total expected cash inflows in the specified stress scenario for the subsequent 30 calendar days.
- b. The formula for calculating LCR, therefore, is as follows:

$$\text{LCR} = \frac{\text{Stock of Shari’ah Compliant HQLA}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

- c. 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 specified scenario up to an aggregate cap of 75% of total expected cash outflows. There is a cap applied on total cash inflows in order to prevent IBs from relying solely on anticipated inflows to meet their liquidity requirements, and also to ensure a minimum level of HQLA holdings. Accordingly, the amount of inflows that can offset outflows is capped at 75% of total expected cash outflows. Therefore, by applying this cap, the IB is required to hold a minimum amount of stock of HQLA equal to 25% of the total net cash outflows.
- d. 
$$\text{Total net cash outflows over the next 30 calendar days} = \text{Total gross expected cash outflows} - \text{Lesser of (total expected cash inflows; 75\% of total expected cash outflows)}$$
- e. The LCR requirement is based on a scenario that entails a combination of idiosyncratic and market-wide shocks; nevertheless, IBs must develop its own scenarios based on liquidity stress testing of their portfolio. IBs must hold more HQLA if the results of their stress tests indicate that this is necessary. Such internal stress tests must incorporate longer time horizons than that mandated by this Standard. IB is expected to share the results of these additional stress tests with the Central Bank.

### 6.3.2 Components of High-Quality Liquid Assets (HQLA)

- a. The HQLA are defined as assets unencumbered by liens and other restrictions on transfer which can be converted into cash easily and immediately, with little or no loss of value, including under the stress scenario.
- b. HQLA are to be determined on the basis of the eligibility criteria for different categories of HQLA and must be subject to the limits applicable to each category. These eligibility criteria for HQLA and composition limits are intended to ensure that an IB's HQLA stock provides it with the ability to generate liquidity in fairly short order, through sale or secured funding in a stress scenario. The assets are required to meet fundamental and market-related characteristics, particularly in terms of low risk, ease and certainty of valuation, and low volatility. HQLA is also eligible for intraday and overnight liquidity facilities offered by the Central Bank.
- c. To be considered as HQLA, an asset must also have a low correlation with risky assets, an active and sizeable market, and low volatility. This requirement has to be fulfilled at all times, including during an underlying stress scenario. These factors assist the Central Bank

to determine which assets qualify as HQLA. The Central Bank also will consider risk components of HQLA, such as liquidity risk, market risk, credit risk, and operational risk. For Shari’ah-compliant assets, the risk of Shari’ah non-compliance and associated reputational problems could significantly limit liquidity for these assets – both sale and interbank trading – in the secondary market.

- d. HQLA (except Level 2B assets, as defined below) is eligible for use as collateral when seeking short- to medium-term liquidity facilities from the Central Bank.
- e. To meet HQLA requirements, the assets must possess the following characteristics:

- i. Fundamental characteristics:

- The assets must be low risk, as reflected in the high credit rating of the issuer or the instruments. The assets must be easy to value, have a homogeneous and relatively simple structure, and not be subject to wrong-way (highly correlated) risk. Shari’ah compliance of the structure and contracts underlying the liquid assets is another critical criterion of HQLA for IBs. Ideally, the asset must be listed on a national, regional or international stock exchange to ensure that sufficient information on pricing and trading is available to the public.

- ii. Market-related characteristics

- The assets are expected to be liquefiable at any time. Thus, as far as possible, there must be historical evidence of market breadth and depth. This could be demonstrated by low bid–ask spreads, high trading volumes, and a large and diverse number of market participants. Availability of market-makers is another factor for consideration. The asset prices are expected to have remained relatively stable and be less prone to sharp price declines over time, including during stress conditions.

- Assets must be tested through sale or Shari’ah-compliant alternatives of repurchase (repo) transactions to ascertain whether the liquid assets meet the criteria of “high quality” and fulfil the fundamental and market-related characteristics mentioned above. It is required that the liquidity-generating capacity of HQLA remains unchanged in periods of severe idiosyncratic and market stress. Lower-quality assets typically fail to meet that test. It must be noted that, in severe market conditions, if IBs attempt to raise liquidity from lower-quality assets, this will lead to significantly discounted prices. This may not only worsen the market’s confidence in the Islamic Banks but also may generate mark-to-market losses for its similar assets and put pressure on its liquidity position. In these conditions, market liquidity for lower-quality assets is likely to disappear quickly.

### 6.3.3 **Categorisation of HQLA**

a. Level 1 Assets:

HQLA are divided into two main categories or levels: Level 1 and Level 2. Level 1 assets can constitute an unlimited share of the pool and are not normally subject to a haircut under the LCR.

b. Level 1 assets are limited to:

- a. Coins and Banknotes;
- b. Reserves and account balances held at the Central Bank;
- c. Central Bank's Islamic CDs;
- d. Sukuk and other Shari'ah-compliant marketable securities issued or guaranteed by UAE Federal Government or Local Governments;
- e. Sukuk and other Shari'ah-compliant marketable securities issued or guaranteed by multilateral development banks (MDBs) which are assigned a 0% risk weight;
- f. Sukuk and other Shari'ah-compliant marketable securities issued by foreign sovereign or foreign central banks that have a 0% risk weight; and
- g. Sukuk and other Shari'ah-compliant marketable securities issued by UAE Public Sector Entities' (PSE or GRE) that have a non-0% risk weight.

c. Those assets that are 0% risk weighted and unrated are unlikely to have the same depth of market as those that are rated above investment grade in a stress scenario. IBs must take this into account when assessing an asset's suitability and a liquidity premium charged. In any case, 0% risk weighted assets that are not rated cannot exceed 25% of the total Level 1 HQLA.

d. Level 2A Assets:

Level 2 assets comprise Level 2A and Level 2B assets as permitted by the Central Bank. Level 2A assets are limited to the following, subject to a 15% haircut applied to the current market value of each asset:

- a. Shari'ah-compliant marketable securities/Sukuk issued or guaranteed by sovereigns, central banks, PSEs, MDBs, which are assigned a 20% risk weight;
- b. Shari'ah-compliant securities (including Shari'ah-compliant commercial paper) and Sukuk that satisfy all of the following conditions:
  - i. not issued by an IB /financial institution or any of its affiliated entities;
  - ii. either: (a) have a long-term credit rating from a recognised external credit assessment institution (ECAI) of at least AA- or, in the absence of a long-term rating, a short-term rating equivalent in quality to the long-term rating; or (b) do not have a credit

assessment by a recognised ECAI but are internally rated as having a probability of default corresponding to a credit rating of at least AA-.

These assets must be:

- a) traded in a market characterised by a low level of concentration; and
- b) able to be regarded as a reliable source of liquidity at all times (i.e. maximum decline of price must not exceed volatility targets over a 30 day period during a relevant period of significant liquidity stress).

e. Level 2B Assets:

The Level 2B assets are limited to the following:

- 1) Sukuk and other Shari'ah-compliant securities backed by commodity(ies) and other real asset(s) that satisfy all of the following conditions, subject to a 25% haircut:
  - i. not issued by the IB, and the underlying assets have not been originated by, the IB itself or any of its affiliated entities;
  - ii. 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;
  - iii. being traded in a market characterised by a low level of concentration and being regarded as a reliable source of liquidity at all times – that is, a maximum decline of price must not exceed volatility targets over a 30 day period during a relevant period of significant liquidity stress; and
  - iv. the underlying asset pool is restricted to Shari'ah-compliant (residential) mortgages and cannot contain structured products.
  
- 2) Sukuk and other Shari'ah-compliant securities that satisfy all of the following conditions may be included in Level 2B, subject to a 50% haircut:
  - i. not issued by a financial institution or any of its affiliated entities;
  - ii. either: (a) have a long-term credit rating from a recognised ECAI of 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 (b) do not have a credit assessment by a recognised ECAI and are internally rated as having a probability of default corresponding to a credit rating of between A+ and BBB-; and
  - iii. being traded in a market characterised by a low level of concentration and being regarded as a reliable source of liquidity at all times – that is, a maximum decline in price not exceeding 20% or an increase in a haircut over a 30-day period not exceeding 20 percentage points during a relevant period of significant liquidity stress.

- 3) Shari'ah-compliant equity shares that satisfy all of the following conditions may be included in Level 2B, subject to a 50% haircut:
    - i. not issued by a financial institution or any of its affiliated entities;
    - ii. exchange traded and centrally cleared;
    - iii. a constituent of the major stock index in the UAE or where the liquidity risk is taken, as decided by the Central Bank of the UAE where the index is located;
    - iv. denominated in the UAE dirhams or in the currency of the jurisdiction where its liquidity risk is taken; and
    - v. being traded in a capital market characterised by a low level of concentration and being regarded as a reliable source of liquidity at all times – that is, a maximum decline in share price not exceeding 40% or an increase in a haircut not exceeding 40 percentage points over a 30-day period during a relevant period of significant liquidity stress.
  
  - 4) Other Shari'ah-compliant instruments or Sukuk that are widely recognised in the UAE may be included in Level 2B, subject to a minimum 50% haircut if they meet the following conditions:
    - i. not issued by a financial institution or any of its affiliated entities; and
    - ii. being traded in a market characterised by a low level of concentration and being regarded as a reliable source of liquidity at all times.
  
  - 5) Sukuk and other Shari'ah-compliant marketable securities issued by sovereign or central banks rated BBB+ to BBB- that are not included in Level 1 assets may be included in Level 2B assets with a 50% haircut.
- f. A cap will be applicable to the use of Level 2 assets, up to 40% of the total stock of HQLA, after the application of required haircuts. Specific to the Level 2B assets, the total assets under this category must comprise no more than 15% of the total stock of HQLA after the application of required haircuts and must be included within the overall 40% cap on Level 2 assets.
- g. Given that the UAE Dirham is pegged to the US Dollar, for the sake of flexibility US\$/AED currency mismatches can be offset. It must be noted though that it is required that liquid assets be held in the currency of the net outflow, including both the US\$ and AED individually, and IBs are expected to comply where possible. However, net outflows in other GCC currencies pegged to the US\$ that exceed 15% of the total LCR net outflows must be matched. Other pegged and free floating currencies must be matched if they exceed 10% of total net LCR outflows.

#### 6.3.4 Operational Considerations for HQLA

- a. Assets meeting the fundamental and market-related characteristics cannot automatically be recognised as HQLA. The assets are subject to operational requirements that are designed to ensure that the stock of HQLA is managed in such a way that an IB can, and is able to demonstrate that it can, immediately use the stock of assets as a source of contingent funds that is available to the IB to convert into cash through Shari'ah-compliant mechanisms – that is, outright sale or the use of Shari'ah-compliant alternatives to repurchase (repo) transactions – 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. IBs may follow the internationally accepted operational requirements for the asset to be recognised as HQLA.
- b. In particular, the assets must fulfil the following operational requirements:
  - i. All assets included in HQLA must meet the requirement to be unencumbered, which means free of legal, regulatory, contractual or other restrictions on the ability of the IBs to liquidate, sell, transfer or assign the asset. However, assets which qualify as HQLA that have been pre-positioned or deposited with, or pledged to, the Central Bank or a PSE, but have not been used to generate liquidity, may be included in the stock.
  - ii. The assets must be under the control of the IB's liquidity risk management function. IBs may segregate the HQLA from other assets with the sole intent to use HQLA as a source of liquidity. IBs must undertake the necessary initiatives to ensure the assets are accessible to the market, to minimise the risk that they cannot be transferred and liquidated during a period of actual stress. To ensure the liquidity of the HQLA in a stress period, IBs must periodically liquidate a sample of HQLA to test their access to the market, the effectiveness of their processes of liquidation, and the availability of the assets.
  - iii. IBs must mitigate market and rate of return risk associated with ownership of the stock of HQLA in accordance with the Shari'ah rules and principles. IBs must also consider the impact of early settlement on the mitigation technique, if applicable, as well as other risks that may occur due to such transactions. If an IB chooses to mitigate some underlying risk by hedging it in a Shari'ah-compliant manner, the IB must include in its total cash outflows those that would result from the termination of any specific hedging transaction against the HQLA.

- iv. Any surplus of HQLA held by a legal entity within a group can be included at the consolidated level only if those assets would also be freely available to the consolidated (parent) entity in times of stress.
  - v. A bank must develop and implement procedures, systems and controls that enable it to determine the stock of HQLA in terms of composition and various characteristics. Such procedures and systems enable the IBs to:
    - confirm the eligibility of an asset for inclusion as a HQLA;
    - ensure that its HQLA are appropriately diversified across asset type, issuer, currency and other factors associated with liquidity risk;
    - identify the location of HQLA; and
    - confirm that the amounts of HQLA held in foreign markets are adequate to meet its LCR in those markets.
  - vi. IBs must periodically monetise a representative proportion of the assets in its stock of HQLA through sale and Shari'ah-compliant alternatives of repurchase (repo) transactions in order to test its access to the market, the effectiveness of its processes for liquidation and the availability of the assets, and to minimise the risk of negative signaling during a period of actual stress.
- c. The stock of HQLA must be well diversified within the asset classes (except for instruments issued by the sovereign government of the UAE or from the jurisdiction in which the IB operates, Central Bank reserves, Central Bank securities and cash). IB must 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.
- d. IBs must endeavour to hold eligible liquid assets in the currencies that match the currencies of the net cash outflow. Liquid asset portfolios must be well diversified in terms of counterparties and tenor and held for the sole purpose of managing liquidity risk.

#### 6.3.5 **Components of Total Net Cash Outflows**

- a. The term “total net cash outflows” 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 IA, and off-balance sheet (OBS) commitments by the rates at which they are expected to run off or be drawn down.

- b. 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.
- c. To avoid double counting, for assets that are included as part of the stock of HQLA (i.e. the numerator of the LCR), the associated cash inflows cannot also be counted as cash inflows in calculating net cash outflows. Therefore, instruments that are utilised for intraday liquidity facilities must be excluded from the components of HQLA. Obligations arising from the assets will remain recorded as components of total net cash outflows.

### 6.3.6 Cash Outflows

- a. IB shall calculate total cash outflows based on the categories of cash outflows as listed below. Each category consists of various types of liabilities or IA, which have their own run-off factors tied to their behavioral characteristics.
- b. Treatment of IAs  
Income-earning deposits with IB, whether retail or wholesale, typically take the form of IA, which are categorised as follows:
  - a) Restricted IA (RIA), and
  - b) Unrestricted IA (UIA).
- c. The applicable run-off factor for IA depends on the withdrawal rights of the IAH and whether they are retail or wholesale accounts. Whether the IA are reported on- or off-balance sheet is not relevant. In the case of RIA, IAH may or may not have the right to withdraw funds before the contractual maturity date. For RIA with no withdrawal rights prior to maturity, the IB managing the RIA is not exposed to run-off for LCR purposes, unless the contract maturity date falls within the next 30 days. Alternatively, IAH may have withdrawal rights subject to giving at least 30 days' notice. In this case, also, the IBs managing these RIA is not exposed to run-off from them for LCR purposes (except for those accounts for which notice of withdrawal has been given and the withdrawal date falls within the next 30 days, or those which mature within the next 30 days). Only in the case of RIA from which the IAH may withdraw funds at less than 30 days' notice without any "significant reduction of profit" is the IB exposed to run-off for LCR purposes. To be "significant", a reduction of profit must be considerably more than a mere loss of accrued income. Where an IB offers such RIA, it would be expected to retain a proportion of HQLA in the relevant RIA fund in order to meet withdrawals, in which case the HQLA would be netted off the amount of the run-off in calculating the total net cash outflows. However, it must be noted that if an IB has voluntarily waived such restrictions and permitted withdrawals to be made at short notice (i.e. less than 30 days) without any significant reduction of profit, such restrictions will have

to be ignored subsequently in determining the applicable run-off factor. The run-off factor applied to the RIA is based on the aforementioned minimum ratios. Where the funds of RIA are invested in assets with a liquid secondary market, such that under normal conditions the assets may be monetised rapidly in time to meet a demand for withdrawal, there is a risk that under stressed conditions it may not be possible to monetise the assets so readily. Hence, there is a potential exposure to a (net) run-off for LCR purposes. The amount of the run-off for LCR purposes must therefore be reduced only in respect of cash and HQLA held in the RIA fund.

- d. For UIA, in some cases withdrawals will be permitted either on demand or at less than 30 days' notice. The run-off factor applied to UIA depends on the contractual withdrawal rights of the IAH.
- e. Retail Deposits and IAs  
Retail deposits are separated into stable and less stable deposits. Stable retail deposits receive 5% run off and less stable receive 10% run off.
- f. Current retail deposits/IA are considered stable if:
  - i. They are resident deposits and,
  - ii. A relationship with the customer has been well established, for example the customer has been dealing with the bank for over 1 year; or
  - iii. The customer uses the account for transactions such as salary being deposited in the account, paying bills and standing order payments.
- g. Retail term deposits/IA which are maturing within the 30 day period are classified as stable if:
  - i. They are resident deposits, and
  - ii. A relationship with the customer has been well established, for example, the term deposit has a history of being rolled over at maturity with the IB, or the relationship has been established for over 1 year with the customer.
- h. Deposits from small and medium sized entities (SMEs) can be treated as retail deposits (as per the clauses above), if their deposit amount is less than AED 20 Million.
- i. Unsecured deposits from non-financial corporates – 40% run off for Non- operational and 25% run off for operational.
- j. Unsecured Wholesale Funding

Unsecured wholesale funding is defined as those liabilities and general obligations of the IBs that are raised from non-natural persons such as legal entities, including sole proprietorships and partnerships and are not collateralised by legal rights to specifically designated assets owned by the funding institution in the case of bankruptcy, insolvency, liquidation or resolution. The wholesale funding included in the LCR includes 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, as well as funding with an undetermined maturity. Wholesale funding that is callable by the funds provider subject to a contractually defined and binding notice period surpassing the 30-day horizon is not included.

- k. The outflows to unsecured wholesale funding are further categorised into five categories. First are current and term accounts (less than 30 days' maturity) provided by small business customers. As with the categorisation of retail deposits, these types of current and term accounts are further divided into stable and less stable deposits. Treatment of the current and term accounts provided by small business customers is also similar to the treatment of the retail deposits. Stable deposits are assigned a 5% run-off factor, while less stable deposits are assigned run-off factors based on the different buckets that are determined according to the risk profiles of each group, with a minimum run-off factor of 10%. As indicated above, in the case of IBs that do not practice "smoothing" of profit payouts to IAH, a higher run-off factor must be applied. Categorisation of the buckets and their run-off factors shall be similar to that of the buckets of less stable current and term accounts in the retail category.
- l. The second category is operational accounts generated by clearing, custody and cash management activities. These deposits are defined as deposits placed by financial and non-financial customers in order to facilitate their access to and ability to use payment and settlement systems and otherwise make payments. These funds are assigned a 25% run-off factor. However, this factor is only applicable if the customer has a substantive dependency on the IBs and the deposit required for such activities, and meets the international definition and qualifying criteria for funds to be recognised as operational accounts.
- m. In order to ensure consistent and effective implementation of operational accounts, one or more of the following criteria for determining the eligibility of any account as an operational account must be met:
  - i. used for providing cash management, custody or clearing products only;
  - ii. must be provided under a legally binding agreement to institutional customers;
  - iii. termination of these accounts shall be subject to either a notice period of at least 30 days or a significant reduction of profit for closing these accounts; and
  - iv. returns on these accounts are determined without giving any economic incentive to the customer to leave any excess funds in the accounts.

- n. Any excess balances that could be withdrawn and would still leave enough funds to fulfil the 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 must be treated in the appropriate category for non-operational accounts. If the IB is unable to determine the amount of the excess balance, then the entire deposit must be assumed to be excess to requirements and, therefore, considered non-operational. The IB must determine the methodology for identifying excess deposits that are excluded from this treatment. This assessment must be conducted at a sufficiently granular level to adequately assess the risk of withdrawal in an idiosyncratic stress scenario.
- o. The third category includes funds from an institutional network of cooperative IB. In some jurisdictions, there are IBs that act as "central institutions" or central service providers for lower-tier IBs, such as Islamic cooperatives. A 25% run-off rate can be applied by such an IBs to the amount of deposits member institutions place with it as their central institution or specialised central service provider that are placed (a) due to statutory minimum deposit requirements, and which are registered at regulatory authorities, or (b) in the context of common task-sharing and legal, statutory or contractual arrangements. As with other operational accounts, these deposits would receive a 0% inflow assumption for the IBs. Supervisory approval would be needed in each case to ensure that IBs utilising this treatment actually are the central institutions or central service providers (e.g. to a cooperative network).
- p. The fourth category is unsecured wholesale funding provided by non-financial corporates and sovereigns, the Central Bank, MDBs and PSEs. A 40% run-off factor is applicable to funds from such sources that are not specifically held for operational purposes.
- q. The last category is "other entities". This category consists of all deposits and funding from other institutions including, among others, banks, IBs, securities firms, insurance or Islamic insurance (Takaful) companies, etc., fiduciaries and beneficiaries, conduits and special purpose vehicles, affiliated entities of the IBs, and any other entities that are not specifically held for operational purposes and are not included in the prior categories. The run-off factor for these funds is 100%.
- r. Secured Funds  
Secured funding is defined as liabilities and general obligations with maturities of less than 30 days that are collateralised by legal rights to specifically designated assets owned by the counterparty in the case of bankruptcy, insolvency, liquidation or resolution. Various run-

off factors are assigned to these funds, depending on the type of collateral. The secured funding transactions with a central bank counterparty or backed by Level 1 assets with any counterparty are assigned a 0% run-off factor. A 15% run-off factor is assigned to secured funding transactions backed by Level 2A assets with any counterparty.

- s. Higher run-off factors are assigned to secured funding not backed by Level 1 or Level 2A assets. Secured funding transactions backed by assets that are neither Level 1 nor Level 2A, with domestic sovereign, MDBs or domestic PSEs as a counterparty, as well as secured funding backed by commodity or real assets eligible for inclusion in Level 2B, may receive 25% run-off factors. On the other hand, secured funding backed by other Level 2B assets and all other secured funding transactions that do not fall within the above categorisations shall be assigned 50% and 100% run-off factors, respectively.
- t. For all other maturing transactions, the run-off factor is 100%, including transactions where IB has met customers' short positions with its own long inventory. Table below summarises the applicable standards.
- u. For all other maturing transactions, the run-off factor is 100%, including transactions where IB has met customers' short positions with its own long inventory. Table below summarises the applicable standards.

**Amount to Add to Cash Outflows:**

<b>Categories for outstanding maturing secured funding transactions</b>	<b>Amount to add to cash outflows</b>
Backed by Level 1 assets or with central banks	0%
Backed by Level 2A assets	15%
Secured funding transactions with domestic sovereign, PSEs or MDBs 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. Backed by Shari'ah-compliant residential mortgage-backed securities (RMBS) <sup>28</sup> eligible for inclusion in Level 2B	25%
Backed by other Level 2B assets	50%
All others	100%

**Additional Requirements:**

- v. Some instruments under this category could include Shari'ah-compliant hedging (Tahawwut) instruments, which are assigned a 100% run-off factor; undrawn credit and liquidity facilities to retail and small business customers, which are assigned a 5% run-off factor; undrawn financing facilities to non-financial corporates as well as sovereigns, central

banks, PSEs and MDBs, which are assigned a 10% run-off factor for credit and a 30% run-off factor for liquidity; as well as other contractual obligations extended to financial institutions/IBs, which are assigned a 100% run-off factor.

- w. Some instruments under this category could include Shari'ah-compliant hedging (Tahawwut) instruments, which are assigned a 100% run-off factor; undrawn credit and liquidity facilities to retail and small business customers, which are assigned a 5% run-off factor; undrawn financing facilities to non-financial corporates as well as sovereigns, central banks, PSEs and MDBs, which are assigned a 10% run-off factor for credit and a 30% run-off factor for liquidity; as well as other contractual obligations extended to financial institutions/IBs, which are assigned a 100% run-off factor.

- x. Shari'ah-compliant Interbank Contracts

The instruments traded in the conventional interbank market are usually short-term and liquid in nature, and their maturities range from one day up to a year. The trading is wholesale and mostly conducted over the counter. An Islamic interbank money market would essentially perform similar functions with the exception that the instruments used must comply with Shari'ah principles. Widely used Shari'ah-compliant instruments used by IBs for interbank liquidity management are based on Mudarabah, commodity Murabahah or Wakalah arrangements. All these contracts are structured as unsecured wholesale funding. The run-off rate applied to these transactions, maturing in the next 30 calendar days, is 100%.

### 6.3.7 **Cash Inflows**

- a. Cash Inflows – 100% in the normal course of business inflows with a cap of 75% of outflows
- b. When considering its cash inflows, an IB must include only contractual inflows from outstanding exposures that are fully performing and for which the IB has no reason to expect a default within the 30-day time horizon. Contingent inflows (such as returns on profit-sharing instruments) are not included in total net cash inflows. IB need to monitor the concentration of expected inflows across wholesale counterparties. In order to prevent IB from placing too much reliance on expected inflows to meet their liquidity requirement, and 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 defined in this standard.
- c. The first category of cash inflows is secured financing, including Shari'ah-compliant alternatives to reverse repos and securities borrowing. Unless stated otherwise, the run-off rates mentioned in the following can be applied.

- d. IB must assume that the maturity of financing secured by Level 1 assets will be rolled over and will not give rise to any cash inflows. Therefore, an inflow factor of 0% will be applied to this kind of transaction. Maturing financing secured by Level 2 assets will lead to cash inflows equivalent to the relevant haircut for the specific assets. For instance, a 15% inflow factor is assigned if the transaction is secured by Level 2A assets; and an inflow factor of 25–50% is assigned if it is secured by Level 2B assets. IB is assumed not to roll over maturing secured financing covered by non-HQLA assets, and can assume that it will receive back 100% of the cash related to those agreements (i.e. an inflow factor of 100%).
- e. The second category of IB cash inflows is committed facilities. No financing facilities, liquidity facilities or other contingent funding facilities that the IB holds at other institutions for its own purposes will be assumed to be drawn. Such facilities receive a 0% inflow rate, meaning that this scenario does not consider inflows from committed financing or liquidity facilities.
- f. The third category of cash inflows is inflows from various counterparties, for which the inflow rate is determined by the type of counterparty. This category of inflows takes into account cash inflows from either secured or unsecured transactions from various counterparties, which are categorised as: (a) retail customers and small business customers and (b) wholesale inflows, including non-financial corporates, as well as financial institutions/IBs and other entities. The inflow rate will be determined based on the type of counterparty. Non-financial wholesale counterparties, as well as retail customers, may be assigned a 50% inflow factor, while financial institutions/IBs and central bank counterparties may be assigned a 100% inflow factor.
- g. Inflows from financing that have no specific maturity (i.e. have undefined or open maturity) must not be included. Therefore, no assumptions must be applied as to when maturity of such financing would occur. An exception to this would be minimum payments of principal, fee or profit associated with an open maturity financing, provided that such payments are contractually due within 30 days. These minimum payment amounts must be captured as inflows, at the rates prescribed in (d), to these transactions.
- h. Inflows from securities maturing within 30 days that are not included in the stock of HQLA must be placed in the same category as inflows from financial institutions (i.e. 100% inflow). IBs 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. These inflows must 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

must be included in the stock of HQLA rather than being counted as inflows, provided that they meet all operational and definitional requirements.

- i. Deposits held at other IBs for operational purposes which fall under the category of operational accounts are assumed to stay at the counterparties. Thus, no inflows can be counted for these funds (0% inflow rate). The same treatment applies for deposits held at the centralised institution in a cooperative banking network, as such funds are assumed to stay at the centralised institution.
- j. The last category is other cash inflows – that is, inflows that are not categorised under the above categories. This category includes Shari’ah-compliant hedging to which an inflow rate of 100% is assigned. Cash inflows related to non-financial revenues, however, are not taken into account in the calculation of the net cash outflows for the purposes of the LCR.

#### 6.4 **Net Stable Funding Ratio (NSFR)**

- a. NSFR is the ratio of the available amount of stable funding relative to the required amount of stable funding. It is a structural ratio that aims to ensure that the banks have sufficient long-term funding beyond the LCR’s 30 day time horizon to meet both the funding of its long term assets and the funding of a portion of contingent liability.
- b. The intention of the NSFR is to promote better stable funding of the assets and activities of banking institutions. The NSFR is applicable to IBs approved by the Central Bank to operate under the LCR/NSFR regulatory framework. The purpose of the NSFR is to promote resilience over a longer time horizon than the LCR by creating additional incentives for institutions to fund their activities with more stable sources of funding on an ongoing basis. The NSFR supplements the LCR and has a time horizon of one year. It has been developed to promote a sustainable maturity structure of assets and liabilities. It ensures that longer-term assets are funded with at least a minimum amount of stable liabilities over a 12-month time horizon.
- c. The NSFR can be summarised as the requirement for a minimum amount of “stable funding” over a one-year time horizon based on liquidity risk factors assigned to assets, OBS liquidity exposures and other contingent funding obligations. The objective of the ratio is to ensure stable funding on an ongoing, viable entity basis, over one year.

##### 6.4.1 **Formula for Calculating NSFR**

- a. There are two components of the NSFR:
  - available stable funding (ASF); and
  - required stable funding (RSF).

The NSFR is defined as the ratio of the amount of available amount of stable funding to the amount of required stable funding. This ratio must be equal to at least 100% on an ongoing basis. Available stable funding is defined as the portion of those types and amounts of equity and liability financing expected to be reliable sources of funds over a one-year time horizon. Required stable funding is based on the liquidity characteristics and residual maturities of the various kinds of assets held by IBs as well as those included in its OBS exposures.

b.

$$\text{NSFR} = \frac{\text{Available stable funding (ASF)}}{\text{Required stable funding (RSF)}} \geq 100\%$$

c. The amount of ASF is composed of the total amount of an IB's (1) capital, (2) UIA with a maturity equal to or greater than one year, (3) liabilities or Sukuk issued with effective or remaining maturities of one year or greater, and (4) that portion of "stable" deposits and/or UIA with maturities of less than one year that would be expected to stay with the IB. On the other hand, the amount of RSF is measured using supervisory assumptions about the broad characteristics of the liquidity risk profiles of an IB's assets and OBS exposures. A certain RSF factor is assigned to each asset type, with those assets deemed to be more liquid receiving a lower RSF factor and therefore requiring less stable funding.

d. The ASF and RSF are based on a presumed degree of stability of liabilities and liquidity characteristics of assets under the extended stress conditions, respectively. On the liability side (ASF), funding tenor and funding type and counterparty are two dimensions that must be taken into account. For example, longer-term liabilities are assumed to be more stable than short-term liabilities, and deposits or UIA from retail and small business customers are more stable than wholesale funding with the same maturity. Mostly, IBs rely on deposits and UIA provided by retail customers. These deposits and UIA are behaviorally more stable than other types of deposit. However, on the asset side (RSF), resilient credit creation, IBs behaviour, asset tenor, asset quality and liquidity value are the criteria for the appropriate amount of required stable funding. There is trade-off between these criteria. The difficulties for the IBS are lack of HQLA, unavailability of a Shari'ah-compliant repo mechanism to securitise and trade, and the absence of a secondary market.

Available Stable Funding

e. The amount of available stable funding (ASF) is calculated by multiplying the carrying values of funding side items by the applicable ASF factors which are based on the broad characteristics of the relative stability of an IB's funding sources, including the contractual maturity of its liabilities and the differences in the propensity of different types of funding providers to withdraw their funding. Five categories are mentioned in this standard, IBs must

first assign the carrying value of an IB's capital and liabilities to one of the five categories as presented below. The amount assigned to each category is then multiplied by an ASF factor, and the total ASF is the sum of the weighted amounts. Carrying value represents the amount at which a liability or equity instrument is recorded before the application of any regulatory deductions, filters or other adjustments.

- f. When determining the maturity of an equity-based or liability instrument, investors are assumed to redeem a call option at the earliest possible date in Shari'ah-compliant ways. For funding with options exercisable at the IB's discretion, the reputational factors that may limit an IB's ability not to exercise the option, must be taken into account. In particular, where the market expects certain liabilities to be redeemed before their legal final maturity date, IBs must assume such behaviour for the purpose of the NSFR and include these liabilities in the corresponding ASF category. For long-dated liabilities, only the portion of cash flows falling at or beyond the six-month and one-year time horizons must be treated as having an effective residual maturity of six months or more and one year or more, respectively.
- g. RIA do not count as ASF, but retail UIA may fall into one of the categories mentioned below mostly receiving ASF factors in the 100%, the 95% or the 90% category. Sukuk issued with an effective maturity of one year or more would also qualify for a 100% ASF.
- h. The first category of ASF is the liabilities and capital instruments receiving a 100% ASF factor. This category comprises:
  - i. the total amount of regulatory capital, before the application of capital deductions, excluding the proportion of Tier 2 instruments with residual maturity of less than one year;
  - ii. the total amount of any capital instrument not included in (a) that has an effective residual maturity of one year or more, but excluding any instruments with explicit or embedded options that, if exercised, would reduce the expected maturity to less than one year; and
  - iii. the total amount of secured and unsecured funding and liabilities (including deposits and/or UIA) with effective residual maturities of one year or more. Cash flows falling below the one-year horizon but arising from liabilities with a final maturity greater than one year do not qualify for the 100% ASF factor.
- i. The second category is the liabilities receiving a 95% ASF factor. This category comprises "stable" deposits and/or UIA with residual maturities of less than one year provided by retail and small business customers.

- j. The third category is the liabilities of IB receiving a 90% ASF factor. It comprises “less stable” deposits and/or UIA with residual maturities of less than one year provided by retail and small business customers.
- k. The fourth category is the liabilities receiving a 50% ASF factor which comprises:
  - i. funding (secured and unsecured) with a residual maturity of less than one year provided by non-financial corporate customers;
  - ii. operational accounts;
  - iii. funding with residual maturity of less than one year from sovereigns, public sector entities (PSEs), and multilateral and national development banks; and
  - iv. other funding (secured and unsecured) not included in the categories above with residual maturity between six months and less than one year, including funding from central banks and financial institutions.
- l. The last category is the liabilities receiving a 0% ASF which are:
  - i. all other liabilities and equity categories not included in the above categories, including other funding with residual maturity of less than six months from central banks and financial institutions;
  - ii. other liabilities without a stated maturity. Two exceptions can be recognised for liabilities without a stated maturity:
    - a. first, deferred tax liabilities, which must be treated according to the nearest possible date on which such liabilities could be realised; and
    - b. second, minority interest, which must be treated according to the term of the instrument, usually in perpetuity.

These liabilities would then be assigned either a 100% ASF factor if the effective maturity is one year or greater, or 50% if the effective maturity is between six months and less than one year
  - iii. net NSFR Shari’ah-compliant hedging liabilities, and
  - iv. “trade date” payables arising from purchases of financial instruments, foreign currencies and commodities that
    - a. are expected to settle within the standard settlement cycle or period that is customary for the relevant exchange or type of transaction, or
    - b. have failed to, but are still expected to, settle.

m. Calculation of Shari’ah-compliant Hedging Liability Amounts

Shari’ah-compliant hedging liabilities (e.g. Islamic swaps) are calculated first based on the replacement cost for the Shari’ah-compliant hedging contracts (obtained by marking to market), where the contract has a negative value. When an eligible bilateral netting contract

is in place, the replacement cost for the set of Shari'ah-compliant hedging exposures covered by the contract will be the net replacement cost.

- n. In calculating NSFR Shari'ah-compliant hedging liabilities, collateral posted in the form of variation margin that follows Shari'ah principles in connection with Shari'ah-compliant hedging contracts as in the TMA contract, regardless of the asset type, must be deducted from the negative replacement cost amount
- o. Required Stable Funding  
The amount of required stable funding (RSF) is calculated by multiplying the carrying values of assets and OBS exposures by the applicable RSF factors which are based on the broad characteristics of liquidity risk profile of an IB's assets and OBS exposures. Eight categories are mentioned in this standard, IBs must first assign the carrying values of an IB's assets to one of eight categories as presented below. The amount assigned to each category is then multiplied by an RSF factor. The total RSF is the sum of the weighted amounts of each asset category and the amount of OBS activity (or potential liquidity exposure) multiplied by its associated RSF factor.
- p. The RSF factors assigned to various types of assets are intended to approximate the amount of a particular asset that would have to be funded, either because it will be rolled over, or because it could not be monetized through sale or used as collateral in a secured financing transaction over the course of one year without significant expense.
- q. Asset categorisation to the various types of RSF is based on their residual maturity or liquidity value. When determining the maturity of an instrument, investors must be assumed to exercise any option to extend maturity. For assets with options exercisable at the IB's discretion, reputational factors that may limit IB's ability not to exercise the option must be taken into account. In particular, where the market expects certain assets to be extended in their maturity, IBs must assume such behaviour for the purpose of the NSFR and include these assets in the corresponding RSF category.
- r. For purposes of determining its RSF, an IB must: (a) include financial instruments, foreign currencies and commodities for which a purchase order has been executed; and (b) exclude financial instruments, foreign currencies and commodities for which a sales order has been executed, even if such transactions have not been reflected in the balance sheet under a settlement-date accounting model, provided that (i) such transactions are not reflected as Shari'ah-compliant hedging contracts or secured financing transactions in the IB's balance sheet, and (ii) the effects of such transactions will be reflected in the IB's balance sheet when settled.

- s. The first category is the assets assigned a 0% RSF factor and comprises:
  - i. coins and banknotes immediately available to meet obligations;
  - ii. all central bank reserves (including required reserves and excess reserves);
  - iii. all claims on central banks with residual maturities of less than six months; and
  - iv. “trade date” receivables arising from sales of Shari’ah-compliant financial instruments, foreign currencies and commodities that (i) are expected to settle within the standard settlement cycle or period that is customary for the relevant exchange or type of transaction, or (ii) have failed to, but are still expected to, settle.
  
- t. The second category is the assets assigned a 5% RSF factor and comprises unencumbered Level 1 assets, excluding assets receiving a 0% RSF as specified above, and including: Sukuk and other Shari’ah-compliant marketable securities issued or guaranteed by sovereigns, central banks, public sector entities (PSEs), multilateral development banks (MDBs) or relevant international organisations which are assigned a 0% risk weight.
  
- u. The third category is the assets assigned a 10% RSF factor which consist of the unencumbered financings to financial institutions with residual maturities of less than six months, where the financing is secured against Level 1 assets.
  
- v. The fourth category is the assets assigned a 15% RSF factor which comprise:
  - i. unencumbered Level 2A assets, including: (i) Sukuk and other Shari’ah-compliant marketable securities issued or guaranteed by sovereigns, central banks, PSEs, MDBs or relevant international organisations, which are assigned a 20% risk weight based on standardized approach as implemented in the UAE; and (ii) corporate Sukuk with a credit rating equal or equivalent to at least AA–; and
  - ii. all other unencumbered financings to financial institutions with residual maturities of less than six months not included in the second category.
  
- w. The fifth category is the assets assigned a 50% RSF factor which comprise:
  - i. unencumbered Level 2B assets as defined and subject to the conditions set forth in paragraph 31, including: (i) Sukuk and other Shari’ah-compliant securities backed by commodity(ies) and other real asset(s) with a credit rating of at least AA; (ii) corporate Sukuk and other Shari’ah-compliant securities with a credit rating of between A+ and BBB–; and (iii) Shari’ah-compliant equity shares not issued by financial institutions or their affiliates;
  - ii. any HQLA as defined in the LCR that are unencumbered for a period of between six months and less than one year;
  - iii. all financings to financial institutions and central banks with a residual maturity of between six months and less than one year; and

- iv. deposits or UIA held at other financial institutions for operational purposes that are subject to the 50% ASF factor;
  - v. all other non-HQLA not included in the above categories that have a residual maturity of less than one year, including financing to non-financial corporate clients, financings to retail customers (ie natural persons) and small business customers, and financings to sovereigns and PSEs.
- x. The sixth category is the assets assigned a 65% RSF factor which comprise:
- i. unencumbered residential real estate financing with a residual maturity of one year or more that would qualify for a 35% or lower risk weight based on standardized approach as implemented in the UAE; and
  - ii. other unencumbered financing not included in the above categories, excluding financing to financial institutions, with a residual maturity of one year or more that would qualify for a 35% or lower risk weight based on standardized approach as implemented in the UAE.
- y. The seventh category is the assets assigned an 85% RSF factor which comprise:
- i. cash, securities or other assets posted as initial margin for Shari'ah-compliant hedging contracts and cash or other assets provided to contribute to the default fund of a central counterparty;
  - ii. other unencumbered Sukuk and other Shari'ah-compliant securities with a remaining maturity of one year or more and Shari'ah-compliant equity shares, that are not in default and do not qualify as HQLA according to the LCR;
  - iii. other unencumbered performing financing assets that do not qualify for the 35% or lower risk weight based on standardized approach as implemented in the UAE and have residual maturities of one year or more, excluding financing to financial institutions;
  - iv. physical traded commodities
- z. The last category is the assets assigned a 100% RSF factor, which comprise:
- i. all assets that are encumbered for a period of one year or more;
  - ii. net NSFR Shari'ah-compliant hedging assets as calculated according to this standard
  - iii. all other assets not included in the above categories, including non-performing financing, financing to financial institutions with a residual maturity of one year or more, non-exchange-traded Shari'ah-compliant equities, fixed assets, items deducted from regulatory capital, insurance assets, and defaulted Shari'ah-compliant securities; and
  - ii. 20% of Shari'ah-compliant hedging liabilities (i.e. negative replacement cost amounts) as calculated according to this standard (before deducting variation margin posted).

aa. Encumbered Assets

Assets on the balance sheet that are encumbered for one year or more receive a 100% RSF factor. Assets encumbered for a period of between six months and less than one year that would, if unencumbered, receive an RSF factor lower than or equal to 50% receive a 50% RSF factor. Assets encumbered for between six months and less than one year that would, if unencumbered, receive an RSF factor higher than 50% retain that higher RSF factor. Where assets have less than six months remaining in the encumbrance period, those assets may receive the same RSF factor as an equivalent asset that is unencumbered.

bb. Secured Financing Transactions

For secured funding arrangements, use of balance sheet and accounting treatments must generally result in IBs excluding, from their assets, Shari'ah-compliant securities which they have used in securities financing transactions where they do not have beneficial ownership. Where IBs have encumbered securities in Shari'ah-compliant repos or other securities financing transactions, but have retained beneficial ownership and those assets remain on the IBs' balance sheet, the IB must allocate such securities to the appropriate RSF category.

cc. Securities financing transactions with a single counterparty may be measured net when calculating the NSFR only where a valid netting agreement exists or when the inflow and outflow occurs within the same business day.

dd. Calculation of Shari'ah-compliant Hedging Asset Amounts

Shari'ah-compliant hedging assets (e.g. Islamic swaps) are calculated first based on the replacement cost for the Shari'ah-compliant hedging contracts (obtained by marking to market), where the contract has a positive value. When an eligible bilateral netting contract is in place, the replacement cost for the set of Shari'ah-compliant hedging exposures covered by the contract will be the net replacement cost.

ee. In calculating NSFR Shari'ah-compliant hedging assets, collateral received in connection with Shari'ah-compliant hedging contracts may not offset the positive replacement cost amount, regardless of whether or not netting is permitted under the IB's operative accounting or risk-based framework, unless it is received in the form of cash variation margin. Any remaining balance sheet liability associated with initial margin received may not offset Shari'ah-compliant hedging assets and must be assigned a 0% ASF factor.

ff. Interdependent Assets and Liabilities

Central Bank in limited circumstances may determine whether certain asset and liability items, on the basis of contractual arrangements, are interdependent such that the liability

cannot fall due while the asset remains on the balance sheet, the principal payment flows from the asset cannot be used for something other than repaying the liability, and the liability cannot be used to fund other assets. For interdependent items, supervisors may adjust RSF and ASF factors so that they are both 0%, subject to the following criteria:

- a) The individual interdependent asset and liability items must be clearly identifiable.
- b) The maturity and principal amount of both the liability and its interdependent asset must be the same.
- c) The bank is acting solely as a pass-through unit to channel the funding received (the interdependent liability) into the corresponding interdependent asset.
- d) The counterparties for each pair of interdependent liabilities and assets must not be the same.

gg. Off-balance Sheet Exposures (OBS)

Off-balance sheet exposures also attract RSF factors. Many potential OBS liquidity exposures require little direct or immediate funding but can lead to significant liquidity drains over a longer time horizon. The NSFR assigns an RSF factor to various OBS activities in order to ensure that Islamic Bank hold stable funding for the portion of OBS exposures that may be expected to require funding within a one-year horizon.

- hh. Consistent with the LCR, the NSFR identified OBS exposure categories based broadly on whether the commitment is a credit or liquidity facility or some other contingent funding obligation.

### **Article7**

#### **Reporting Requirements**

- a. All IBs are required to report their liquidity position to the Central Bank in accordance with ELAR and ASRR reporting requirements as issued by the Central Bank.
- b. Those IBs approved to move to LCR and NSFR will be required to report their liquidity position to the Central Bank in a form and manner prescribed by the Central Bank.
- c. Banks may also be required to provide the Central Bank with ad hoc reports on liquidity, as and when requested to do so.

**Article 8**  
**Compliance with the Standard**

- 8.1 IBs must comply with the requirements stated in this Standard as per the Article No. 5 and 6. During the transition, IBs must comply with the existing and enforced Central Bank's requirements.
  
- 8.2 The Regulatory Development Division of the Central bank shall be the reference for interpretation of the provisions of this Standard.