



BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA

Net Stable Funding Ratio

Applicable to:

1. Licensed banks
2. Licensed investment banks
3. Licensed Islamic banks

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PART A OVERVIEW

1 Introduction

- 1.1 The Net Stable Funding Ratio (NSFR) is a minimum standard that requires banking institutions to maintain a stable funding profile to support their assets and off-balance sheet activities.
- 1.2 A stable funding profile reduces the likelihood of a banking institution's liquidity position being severely eroded by material disruptions to its regular sources of funding. Under such circumstances, the viability of the banking institution may be put, or perceived to be, at risk. This could subsequently lead to broader systemic stress.
- 1.3 The NSFR complements the *Liquidity Coverage Ratio* (LCR), which has been in effect in Malaysia since 1 June 2015. While the LCR encourages the short-term resilience (30 days) of a banking institution's liquidity risk profile, the NSFR aims to reduce funding risk over a time horizon of up to one year.

2 Applicability

- 2.1 This policy document is applicable to all banking institutions as defined in paragraph 5.2.

3 Legal provisions

- 3.1 This policy document is issued pursuant to—
 - (a) section 47(1), section 143(2) and section 266 of the Financial Services Act 2013 (FSA); and
 - (b) section 57(1), section 155(2) and section 277 of the Islamic Financial Services Act 2013 (IFSA).

4 Effective date

- 4.1 This policy document will come into effect on 1 July 2020.

5 Interpretation

5.1 The terms and expressions used in this policy document shall have the same meanings assigned to them in the FSA, IFSA or the policy documents referred to in paragraph 6.1, as the case may be, unless otherwise defined in this policy document.

5.2 For the purpose of this policy document–

“**S**” denotes a standard, an obligation, a requirement, specification, direction, condition and any interpretative, supplemental and transitional provisions that must be complied with. Non-compliance may result in enforcement action;

“**G**” denotes guidance which may consist of statements or information intended to promote common understanding and advice or recommendations that are encouraged to be adopted;

“**banking institution**” refers to a licensed bank, a licensed investment bank or a licensed Islamic bank except for a licensed international Islamic bank, as the case may be;

“**consolidated level**” means either–

- (a) where a banking institution is not a subsidiary of another financial institution, the consolidation of the banking institution and all financial and non-financial subsidiaries, except insurance/takaful subsidiaries; or
- (b) where a banking institution is a subsidiary of a financial holding company, the consolidation of the financial holding company and all financial and non-financial subsidiaries, except insurance/takaful subsidiaries;

“**central counterparty**” or “**CCP**” refers to an entity that interposes itself between counterparties to contracts traded within one or more financial markets, becoming the legal counterparty such that it is the buyer to every seller and the seller to every buyer;

“**debt securities**” includes any sukuk structured under any Shariah compliant contract;

“**entity level**” refers to the global operations of a banking institution (i.e. domestic operations and overseas branch operations) on a stand-alone basis, including its Labuan banking subsidiary;

“**financial holding company**” refers to a financial holding company approved pursuant to section 112(3) of the FSA or section 124(3) of the IFSA, as the case may be, and holds investment directly or indirectly in corporations that are engaged predominantly in banking business;

“**financial institution**” refers to a banking institution or a financial holding company, as the case may be;

“financial entity” refers to any entity, whether incorporated in or outside Malaysia, engaged substantively in any of the following activities: banking, insurance/takaful, provision of credit, securities broking, fund management, asset management, leasing and factoring and similar activities that are ancillary to the conduct of these activities;

“Islamic banking institution” refers to–

- (a) a licensed Islamic bank, except for a licensed international Islamic bank; or
- (b) a licensed bank or licensed investment bank approved under section 15(1)(a) of the FSA to carry on Islamic banking business.

6 Related legal instruments and policy documents

- 6.1 This policy document must be read together with other relevant instruments and policy documents that have been issued by the Bank, in particular–
- (a) *Capital Adequacy Framework (Basel II – Risk-Weighted Assets)*;
 - (b) *Capital Adequacy Framework for Islamic Banks (Risk-Weighted Assets)*;
 - (c) *Capital Adequacy Framework (Capital Components)*;
 - (d) *Capital Adequacy Framework for Islamic Banks (Capital Components)*;
 - (e) *Investment Account*;
 - (f) *Leverage Ratio*;
 - (g) *Liquidity Coverage Ratio*;
 - (h) *STATsmart Reporting Requirements on Data Submission for Reporting Entities*; and
 - (i) *Statutory Reserve Requirement*.

7 Policy document superseded

- 7.1 This policy document supersedes the observation period reporting obligations under the Basel III Observation Period Reporting (Net Stable Funding Ratio), issued on 23 March 2018.

PART B POLICY REQUIREMENTS

8 General requirements

Level of application

- S** 8.1 A banking institution shall comply with the requirements in this policy document at the consolidated level. For the avoidance of doubt, the Bank may specify entities within the group to be excluded from the consolidation.
- S** 8.2 Notwithstanding paragraph 8.1, the Bank may require a banking institution to comply with the requirements at the entity level after having regard to the following:
- (a) the extent to which liquidity risk management function of the banking institution is managed independently (i.e. as opposed to being centralised at the group level);
 - (b) the existence of legal, regulatory, Shariah, tax, accounting or contractual impediments to the transferability of liquidity across financial entities under both business-as-usual and stressed conditions; and
 - (c) the Bank's assessment on the effectiveness of liquidity risk management policies and practices at the group level.

Minimum NSFR requirement

- S** 8.3 A banking institution shall maintain a minimum NSFR of 100% at all times which shall be calculated in the following manner:

$$\text{NSFR} = \frac{\text{Total amount of available stable funding}}{\text{Total amount of required stable funding}} \geq 100\%$$

- S** 8.4 Notwithstanding paragraph 8.3, where the Bank specifies in writing a higher minimum NSFR for a banking institution after having regard to its liquidity risk profile and relevant risk mitigation measures, the banking institution shall comply with the adjusted minimum NSFR as specified by the Bank at all times.
- S** 8.5 A banking institution shall comply with the minimum NSFR specified in paragraph 8.3 or 8.4 on an aggregated currency¹ basis. All foreign currency exposures must be reported in Ringgit-equivalent terms based on the foreign exchange rates as at the reporting date.
- S** 8.6 In the event that the NSFR of a banking institution falls below the minimum level as specified in paragraph 8.3 or 8.4, the banking institution shall notify the Bank immediately, with an explanation of the following:
- (a) cause of the decline; and
 - (b) remedial measures taken or to be taken (with a proposed time frame) to bring the NSFR position into compliance.

¹ Ringgit and all other currencies.

- G** 8.7 The Bank will consider the reasons for the decline in a banking institution's NSFR as provided by the banking institution under paragraph 8.6, including prevailing market conditions, before deciding on the necessity and nature of a supervisory response. A banking institution is encouraged to proactively engage the Bank if they foresee issues in maintaining the minimum NSFR.

9 Available stable funding (ASF)

- G** 9.1 ASF factors reflect the degree of stability of a banking institution's capital and liabilities over a time horizon of up to one year. Calibration of the ASF factors is considered across two dimensions—
- (a) funding tenor: Longer-term liabilities are generally assumed to be more stable than short-term liabilities; and
 - (b) funding counterparty: Funding provided by retail customers and small business customers are assumed to be behaviourally more stable than wholesale funding of the same maturity.
- S** 9.2 A banking institution shall calculate the total amount of ASF in the following manner:
- (a) assign the carrying value² of the banking institution's capital and liabilities to one of the six categories of the ASF factors as specified in paragraphs 9.8 to 9.13;
 - (b) multiply the assigned amount by the corresponding ASF factor to obtain a weighted amount; and
 - (c) sum up the weighted amount to obtain the banking institution's total amount of ASF.

$$\text{Total amount of ASF} = \text{Sum of} \left\{ \begin{array}{l} \text{Carrying value of a capital} \\ \text{instrument or liability} \end{array} \times \text{ASF factor} \right\}$$

Determining the maturity of a capital instrument or liability

- S** 9.3 A banking institution shall assign the carrying value of a capital instrument or liability to the following maturity buckets according to its contractual residual maturity, unless otherwise specified in paragraphs 9.4 to 9.7:
- (a) one year or more;
 - (b) six months to less than one year; or
 - (c) less than six months.
- S** 9.4 A banking institution shall report term deposits from retail customers or term funding from small business customers according to their contractual residual maturity, subject to the deposit or funding meeting either of the following conditions:
- (a) the depositor or funds provider has no legal right to withdraw the deposit or funding prior to contractual maturity; or

² The carrying value represents the amount at which a capital instrument, liability or an asset is recorded before the application of any regulatory deductions, filters or other adjustments.

- (b) withdrawal prior to contractual maturity results in a penalty amounting to 100% of the accrued interest/profit.
- S** 9.5 Notwithstanding paragraph 9.4, where a banking institution has allowed any term deposits or term funding to be withdrawn or redeemed prior to contractual maturity, the banking institution shall treat the entire category of the term deposits or term funding as demand deposits.
- S** 9.6 A banking institution shall treat a capital instrument and liability with call options (whether explicit or implicit) in the following manner:
- (a) where the call option is exercisable at the counterparty's discretion, the banking institution shall assume that the counterparty will redeem the option at the earliest call date; and
- (b) where the call option is exercisable at the banking institution's discretion, the banking institution shall assume that the option will be exercised in situations where the market expects these instruments to be redeemed before the final contractual maturity date³.
- S** 9.7 For long-term liabilities, a banking institution shall only recognise the portion of cash flows falling at or beyond the six-month and one-year time horizons as having a contractual residual maturity of six months or more and one year or more, respectively. These cash flows can constitute the interest/profit and/or principal portion, depending on the contractual terms of the liability.

ASF factors**100%**

- S** 9.8 A banking institution shall apply a 100% ASF factor to–
- (a) the total amount of regulatory capital⁴, excluding the proportion of Tier 2 instruments with residual maturity of less than one year;
- (b) total amount of equities⁵ and capital instruments not included in paragraph 9.8(a) that has a residual maturity of one year or more; and
- (c) secured and unsecured borrowings and liabilities with a residual maturity of one year or more.

95%

- S** 9.9 A banking institution shall apply a 95% ASF factor to demand deposits and term deposits placed by retail and small business customers with a residual maturity of less than one year that meet the criteria for stable deposits.

90%

- S** 9.10 A banking institution shall apply a 90% ASF factor to–
- (a) demand deposits and term deposits placed by retail and small business customers with a residual maturity of less than one year that do not

³ Such market expectations may be formed based on the historical experience of the banking institution exercising the option, expectations set by the banking institution at the outset, or normal market practice.

⁴ This includes disregarding the cap of 0.6% for the internal ratings-based approach for credit risk and 1.25% for the standardised approach for credit risk.

⁵ This includes unaudited interim profit.

- meet the criteria for stable deposits;
- (b) Unrestricted Investment Account (UA) funds placed by retail and small business customers with a residual maturity of less than one year; and
- (c) funding from securities issued by the banking institution with a residual maturity of less than one year that are sold exclusively to, and are exclusively held by, retail and small business customers.

60%

- S** 9.11 A banking institution shall apply a 60% ASF factor to funding from sovereigns, public sector entities (PSEs)⁶, multilateral development banks (MDBs) and non-financial entities with a residual maturity of less than one year.

50%

- S** 9.12 A banking institution shall apply a 50% ASF factor to—
- (a) operational deposits from financial entities and central banks with a residual maturity of less than one year; and
 - (b) all other equities and liabilities that do not qualify for the higher ASF factors in paragraphs 9.8 to 9.11, including funding from financial entities and central banks and Tier 2 instruments, with a residual maturity of between six months to less than one year.

0%

- S** 9.13 A banking institution shall apply a 0% ASF factor to—
- (a) all other equities and liabilities that do not qualify for higher ASF factors in paragraphs 9.8 to 9.12, including funding from financial entities and central banks and Tier 2 instruments, with a residual maturity of less than six months;
 - (b) liabilities without a stated maturity, such as short positions and open maturity positions;
 - (c) NSFR derivative liabilities net of NSFR derivative assets, if NSFR derivative liabilities are greater than NSFR derivative assets⁷; and
 - (d) “trade date” payables arising from purchases of financial instruments, foreign currencies and commodities that—
 - (i) are expected to be settled 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 be settled.

- G** 9.14 A summary of the components of each of the ASF categories and the associated ASF factors is provided in Appendix 1.

⁶ Examples of PSEs include Kumpulan Wang Simpanan Pekerja, Kumpulan Wang Persaraan, Lembaga Tabung Angkatan Tentera and Lembaga Tabung Haji.

⁷ Max [(NSFR derivative liabilities – NSFR derivative assets), 0].

10 Required stable funding (RSF)

- G** 10.1 RSF factors reflect the degree of asset liquidity⁸, or in the case of off-balance sheet (OBS) exposures, potential liquidity needs arising from commitments and contingent funding obligations. More stable funding is required for less liquid assets, or OBS obligations and commitments that are more likely to materialise.
- G** 10.2 The calibration of the RSF factors considers the liquidity risk profile of a banking institution's assets across four dimensions, namely–
- (a) sustainable credit creation: Stable funding is required for some proportion of lending to ensure continuity of intermediation;
 - (b) possibility of roll-over: Banking institutions may seek to roll over a significant proportion of maturing loans/financing to preserve customer relationships;
 - (c) asset tenor: Shorter-term assets require a smaller proportion of stable funding as banking institutions could redeem these assets instead of rolling them over; and
 - (d) asset quality and liquidity value: Unencumbered, high-quality assets that can be securitised or traded (i.e. readily used as collateral to secure additional funding or sold in the secondary market) do not need to be wholly financed with stable funding.
- S** 10.3 A banking institution shall calculate the total amount of RSF as follows:
- (a) assign the carrying value (net of any specific provisions) of the banking institution's assets to one of the eight categories as specified in paragraphs 10.12 to 10.19;
 - (b) multiply the assigned amount by the corresponding RSF factor to obtain a weighted amount; and
 - (c) sum up the weighted amount to obtain the banking institution's total amount of RSF.

$$\text{Total amount of RSF} = \text{Sum of} \left[\begin{array}{l} \text{Carrying value of asset} \\ \text{or OBS exposure} \end{array} \times \text{RSF factor} \right]$$

- S** 10.4 In determining the amount of RSF for financial instruments, foreign currencies and commodities, a banking institution shall–
- (a) include these assets where a purchase order has been executed; and
 - (b) exclude these assets where a sales order has been executed.
- S** 10.5 A banking institution shall continue to apply the requirements in paragraph 10.4 even if the purchase or sales transaction has not been reflected in the banking institution's balance sheet under a settlement-date accounting model, provided

⁸ For example, an asset is considered less liquid if there is a significant possibility of it being rolled over, or if the asset cannot be monetised through sale or used as collateral in a secured borrowing transaction over the course of one year, without a significant cost to the banking institution.

that–

- (a) the transaction is not reflected as a derivative or SFT in the balance sheet; and
- (b) the effect of the transaction will be reflected in the balance sheet upon settlement.

- S** 10.6 In determining the RSF for high-quality liquid assets (HQLA), a banking institution shall adopt the scope and definition of HQLA specified under the Liquidity Coverage Ratio (LCR), without regard to the operational requirements for HQLA and limits on the total amount of Level 1, Level 2A and Level 2B assets. For the avoidance of doubt, any encumbered HQLA shall be treated based on the requirement in paragraph 10.23.
- S** 10.7 In determining the RSF for partially secured loans/financing, a banking institution shall take into account specific characteristics of the secured and unsecured portions (which carry different risk weights) and assign the corresponding RSF factors to the respective portions of the loan/financing. In the event that it is not possible to distinguish between the secured and unsecured part of the loan/financing, a banking institution must apply the higher RSF factor to the whole loan/financing.
- G** 10.8 For exceptional central bank liquidity operations with a residual maturity equal to or greater than six months, the Bank may assign a lower RSF factor to–
- (a) claims on central bank, which shall be no lower than a 5% RSF factor; or
 - (b) assets that are provided as collateral, which shall be no lower than the RSF factor applied to an equivalent asset that is unencumbered.
- Where these are applied, the Bank will communicate in writing the treatment to banking institutions.

Determining the maturity of an asset

- S** 10.9 A banking institution shall assign the carrying value of an asset to the following maturity buckets according to its contractual residual maturity⁹, unless otherwise specified in paragraphs 10.10 and 10.11:
- (a) one year or more;
 - (b) six months to less than one year; or
 - (c) less than six months.
- S** 10.10 A banking institution shall treat assets with options (whether explicit or implicit) in the following manner:
- (a) where the option is exercisable at the counterparty's discretion, the banking institution shall assume that the counterparty will exercise any option to extend the asset's maturity; and
 - (b) where the option is exercisable at the banking institution's discretion, the banking institution shall assume that the option will be exercised in a manner that is aligned to market expectations for these assets to be extended in maturity¹⁰.

⁹ This includes amortising claims such as loans/financing and debt securities.

¹⁰ For example, this could refer to a case where the banking institution may imply that it faces funding risk if it does not exercise an option on its assets.

- S** 10.11 For loans/financing or facilities with contractual provisions where they would be subject to periodic review to determine if they are renewed, a banking institution shall not use the next review date as the maturity date if there is reason or evidence (e.g. historical trends of roll-over or renewals, need to preserve strategic relationships, etc.) to deem otherwise.

RSF factors**0%**

- S** 10.12 A banking institution shall assign a 0% RSF factor to the following assets:
- (a) cash currently held and immediately available to meet obligations;
 - (b) all central bank reserves, including any balances held in the banking institution's Statutory Reserve Account;
 - (c) all claims on central banks, including placements with the Bank and other central banks, with a residual maturity of less than six months;
 - (d) "trade date" receivables arising from sales of financial instruments, foreign currencies and commodities that–
 - (i) are expected to be settled 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; and
 - (e) derivatives liabilities (i.e. negative mark-to-market value) as calculated according to paragraphs 11.1 and 11.2 (before deducting variation margin posted).

5%

- S** 10.13 A banking institution shall assign a 5% RSF factor to unencumbered Level 1 HQLA, excluding assets in paragraph 10.12.

10%

- S** 10.14 A banking institution shall assign a 10% RSF factor to unencumbered loans/financing to financial entities with a residual maturity of less than six months, provided that–
- (a) the loan/financing is secured against Level 1 HQLA; and
 - (b) the banking institution has the ability to freely rehypothecate the received collateral for the life of the loan/financing.

15%

- S** 10.15 A banking institution shall assign a 15% RSF factor to the following unencumbered assets:
- (a) Level 2A HQLA;
 - (b) debt securities issued by corporates¹¹, that satisfy all of the following conditions:
 - (i) not issued by a financial entity or any of its affiliated entities;
 - (ii) assigned a rating between AA- and AA+ by a recognised External Credit Assessment Institution (ECAI) or internally rated with a probability of default (PD) corresponding to a credit rating of at least AA-;

¹¹ Classified as Level 2B HQLA under the LCR.

- (iii) traded in large, deep and active repo or cash markets characterised by a low level of concentration; and
- (iv) proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions; and
- (c) other claims on financial entities, excluding operational deposits, with a residual maturity of less than six months.

50%

- S** 10.16 A banking institution shall assign a 50% RSF factor to the following unencumbered assets:
- (a) Level 2B HQLA, excluding assets that receive a 15% RSF factor as specified in paragraph 10.15(b);
 - (b) common equity shares that satisfy all of the following conditions:
 - (i) not issued by a financial entity or any of its affiliated entities;
 - (ii) exchange traded and centrally cleared;
 - (iii) a constituent of the major stock index¹² in the home jurisdiction or where the liquidity risk is taken; and
 - (iv) denominated in Ringgit or in the currency of the jurisdiction where the liquidity risk is taken;
 - (c) debt securities issued by corporates that satisfy all of the following conditions:
 - (i) denominated in Ringgit;
 - (ii) not issued by a financial entity or any of its affiliated entities;
 - (iii) assigned a rating between A- and A+ by a recognised ECAI or internally rated with a PD corresponding to a credit rating of between A- to A+;
 - (iv) traded in large, deep and active repo or cash markets characterised by a low level of concentration; and
 - (v) proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions;
 - (d) debt securities issued or explicitly guaranteed by sovereigns and central banks that satisfy all of the following conditions:
 - (i) assigned a rating between BBB- and BBB+ by a recognised ECAI or internally rated with a PD corresponding to a credit rating of between BBB- and BBB+; and
 - (ii) not an obligation of a financial entity or any of its affiliated entities;
 - (iii) traded in large, deep and active repo or cash markets characterised by a low level of concentration; and
 - (iv) proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions;
 - (e) operational deposits held at financial institutions with a residual maturity of less than one year;
 - (f) other claims on financial entities and central banks with a residual maturity of between six months and less than one year; and

¹² For Malaysia, this shall include the FTSE Bursa Malaysia Top 100 Index and the FTSE Bursa Malaysia Hijrah Shariah Index.

- (g) all other non-HQLA not included in paragraphs 10.12 to 10.15 that have a residual maturity of less than one year¹³, including loans/financing to sovereigns, PSEs, MDBs, non-financial entities, retail and small business customers.

65%

- S** 10.17 A banking institution shall assign a 65% RSF factor to the following unencumbered assets:
- (a) residential mortgages with a residual maturity of one year or more that would qualify for a 35% or lower risk weight under the standardised approach for credit risk; and
 - (b) other loans/financing (excluding loans/financing to financial entities) with a residual maturity of one year or more that would qualify for a 35% or lower risk weight under the standardised approach for credit risk.

85%

- S** 10.18 A banking institution shall assign an 85% RSF factor to the following assets:
- (a) cash, securities or other assets (whether on- or off-balance sheet) posted as initial margin for derivative contracts¹⁴, having regard to the following:
 - (i) where the banking institution posts initial margin on behalf of a customer and does not guarantee performance of the third party, the initial margin would be exempted from this requirement;
 - (ii) where the initial margin is not separated from the variation margin—
 - (A) the initial margin for over-the-counter transactions shall be calculated as any fixed independent amount that was contractually required to be posted at the inception of the derivatives transaction, regardless of whether any portion was returned in the form of variation margin received;
 - (B) the initial margin for centrally cleared transactions shall be calculated as the total amount of margin posted less negative replacement cost amount of the portfolio;
 - (b) cash or other assets contributed to the default fund of a CCP;
 - (c) other unencumbered performing loans/financing (excluding loans/financing to financial entities) that do not qualify for a 35% or lower risk weight under the standardised approach for credit risk and have a contractual residual maturity of one year or more;
 - (d) unencumbered debt securities with a residual maturity of one year or more that do not qualify as HQLA and that are not in default;
 - (e) other unencumbered exchange-traded equities that are not in default; and
 - (f) unencumbered physical traded commodities, including gold.

¹³ This includes short-term unsecured instruments and transactions with residual maturity of less than one year. Examples include investments in collective investment schemes, banker's acceptances (BA), Accepted Bills-i (AB-i), negotiable instruments of deposits (NID) and Islamic negotiable instruments (INI).

¹⁴ Where securities or other assets posted as initial margin for derivative contracts would otherwise receive a 100% RSF factor, a banking institution shall retain the higher RSF factor.

100%

- S** 10.19 A banking institution shall assign a 100% RSF factor to the following assets:
- (a) NSFR derivative assets net of NSFR derivative liabilities, if NSFR derivative assets are greater than NSFR derivative liabilities¹⁵; and
 - (b) all other assets not included in paragraphs 10.12 to 10.18, including non-performing loans/financing, claims on financial entities and central banks with a residual maturity of one year or more, non-exchange-traded equities, fixed assets, items deducted from regulatory capital and defaulted securities.
- G** 10.20 A summary of the assets in each of the RSF categories and the associated RSF factors is provided in Appendix 2.

Off-balance sheet (OBS) exposures

- G** 10.21 The categories of OBS exposures covered under the NSFR include–
- (a) credit and liquidity facilities; and
 - (b) other contingent funding obligations.
- S** 10.22 A banking institution shall apply the following RSF factors to the undrawn portion of the credit and liquidity facilities and other non-contractual contingent funding obligations described in the table below–

	Category	RSF factor
Committed facilities		
(a)	Irrevocable and conditionally revocable credit and liquidity facilities	5%
Non-contractual contingent funding obligations		
(b)	Unconditionally revocable (i.e. uncommitted) credit and liquidity facilities	0%
(c)	Trade finance-related obligations (including guarantees and letters of credit)	
(d)	Guarantees and letters of credit unrelated to trade finance obligations	
(e)	Potential requests for debt repurchases of the banking institution's own debt or that of related conduits, securities investment vehicles (SIVs) and other such financing facilities	
(f)	Structured products where customers anticipate ready marketability	
(g)	Managed funds that are marketed with the objective of maintaining a stable value (e.g. money market mutual funds, other types of stable value collective investment funds)	

¹⁵ Max [(NSFR derivative assets – NSFR derivative liabilities), 0].

Encumbered assets

- S** 10.23 A banking institution shall apply the following RSF factors to encumbered assets¹⁶:

	Period of encumbrance	RSF factor
(a)	Assets encumbered for one year or more	100%
(b)	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%	50%
(c)	Assets encumbered for between six months and less than one year that would, if unencumbered, receive an RSF factor higher than 50%	Same RSF factor as if the assets were unencumbered
(d)	Assets encumbered for less than six months	

Securities Financing Transactions (SFTs)

- S** 10.24 In determining its assets for SFTs¹⁷, the banking institution shall–
- exclude securities that it has borrowed in SFTs or received through collateral swaps where it does not have beneficial ownership; and
 - include securities that it has lent in SFTs or provided through collateral swaps where it retains beneficial ownership.
- S** 10.25 In respect of paragraph 10.24(b), a banking institution shall treat the securities that it has beneficial ownership of as encumbered for the term of the SFT, including in cases where the securities mature and have to be replaced during the term of the SFT¹⁸.
- S** 10.26 A banking institution shall treat the collateral received in an SFT but that does not appear on the balance sheet as follows:
- where the collateral has been rehypothecated, the on-balance sheet receivable is encumbered throughout the term of the rehypothecation of the collateral; and
 - where the collateral has been sold outright, the on-balance sheet receivable is encumbered throughout the contractual residual maturity of the on-balance sheet receivable.
- G** 10.27 A banking institution may calculate the RSF amount for an SFT with a single counterparty on a net basis, provided that the netting conditions set out in Appendix 2 of the policy document on *Leverage Ratio* are met.

¹⁶ This includes, among others, assets that are pledged for asset backing securities or covered bonds.

¹⁷ This includes, among others, reverse repos and collateral swaps.

¹⁸ For example, assets pledged under a transaction maturing beyond one year should be subject to an RSF factor of 100%, regardless of the residual maturity of the pledged asset.

11 Derivatives

Calculation of derivative liability amounts

- S** 11.1 A banking institution shall calculate derivative liabilities based on the negative mark-to-market value of their derivative contracts.
- S** 11.2 When an eligible bilateral netting agreement is in place that meets the conditions specified in the *Capital Adequacy Framework (Basel II – Risk-Weighted Assets)* and *Capital Adequacy Framework for Islamic Banks (Risk-Weighted Assets)*, a banking institution shall aggregate the replacement cost of the set of derivative contracts covered by the netting agreement to derive the net replacement cost.
- S** 11.3 A banking institution shall calculate the NSFR derivative liability amount in the following manner¹⁹:

$\text{NSFR derivative liabilities} = \text{Derivative liabilities} - \text{Total collateral posted (regardless of asset type) as variation margin}$
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Calculation of derivative asset amounts

- S** 11.4 A banking institution shall calculate derivative assets based on the positive mark-to-market value of their derivative contracts.
- S** 11.5 When an eligible bilateral netting agreement is in place that meets the conditions as specified in the *Capital Adequacy Framework (Basel II – Risk-Weighted Assets)* and *Capital Adequacy Framework for Islamic Banks (Risk-Weighted Assets)*, a banking institution shall aggregate the replacement cost for the set of derivative contracts covered by the netting agreement to derive the net replacement cost.
- S** 11.6 In calculating the NSFR derivative assets, a banking institution shall not offset the positive mark-to-market value of a derivative contract with the collateral received in connection with that transaction. This is regardless of whether or not netting is permitted, unless–
- (a) collateral is received in the form of cash variation margin; and
 - (b) the cash variation margin received meets the conditions specified in paragraph 13.4 of the policy document on *Leverage Ratio*.

¹⁹ To the extent that collateral posted as variation margin is reflected on-balance sheet and is deducted from the replacement cost amount for purposes of the NSFR, the collateral shall not be included in the calculation of RSF to avoid double-counting.

$\text{NSFR derivative assets} = \text{Derivative assets} - \text{Total cash variation margin received}$
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- S** 11.7 A banking institution shall not offset derivative assets with any remaining balance sheet liabilities associated with—
- (a) variation margin received that does not meet the criteria in paragraph 11.6; or
 - (b) initial margin received.
- S** 11.8 With respect to paragraph 11.7, a banking institution shall assign a 0% ASF factor to these liabilities.
- S** 11.9 For derivative transactions with the Bank that are attributed to short-term monetary policy and liquidity operations (e.g. foreign exchange swaps), a banking institution shall exclude them from the calculation of the NSFR if they have a contractual original maturity of less than six months.

12 Interdependent assets and liabilities

- G** 12.1 Certain asset and liability items, on the basis of contractual arrangements, can be considered interdependent if—
- (a) the liability cannot fall due while the asset remains on the balance sheet;
 - (b) the principal payment that flows from the asset cannot be used for any other purpose other than repaying the liability; and
 - (c) the liability cannot be used to fund other assets.
- G** 12.2 In respect of paragraph 12.1, the Bank may consider adjusting the RSF and ASF factors for asset and liability items deemed to be interdependent so that they are both 0%, subject to a banking institution demonstrating that the following criteria are met:
- (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 should be the same;
 - (c) the banking institution is acting solely as a pass-through unit to channel the funding received (the interdependent liability) into the corresponding interdependent asset; and
 - (d) the counterparties for each pair of interdependent liabilities and assets should not be the same.
- S** 12.3 Where the Bank specifies interdependent assets and liabilities in accordance with paragraph 12.2, a banking institution shall apply 0% RSF and ASF factors to these assets and liabilities respectively²⁰.

²⁰ For the avoidance of doubt, BNM's Fund for SMEs, BNM's Fund for Affordable Homes, Restricted Investment Accounts and derivatives do not qualify for this treatment.

13 Investment Account (IA)

- S** 13.1 With the exception of paragraph 13.2, the requirements in paragraph 13 are applicable to IA funds managed by an Islamic banking institution in its capacity as the *mudarib* or *wakeel* of the fund.
- S** 13.2 Where a banking institution is an IA holder (IAH), the banking institution shall apply the relevant RSF factors to assets of the IA funds it has invested.
- G** 13.3 Similar to the LCR, the NSFR treatment of IA funds reflects the degree of liquidity risk that a banking institution is exposed to arising from these funds. The level of liquidity risk may be influenced by features such as the contractual terms and conditions for early redemption of the funds, the quality and liquidity value of underlying assets, and the counterparty type of the IAH.

Restricted Investment Account (RA)

- S** 13.4 An Islamic banking institution shall exclude RA funds in entirety from the calculation of NSFR.
- G** 13.5 Managing RA funds are considered to pose minimal liquidity risk to the Islamic banking institution given that they are subject to stringent redemption conditions. As such, these funds are not subject to the minimum liquidity standards (i.e. LCR and NSFR).

Unrestricted Investment Account (UA)

- G** 13.6 An Islamic banking institution may be exposed to liquidity risk arising from maturity mismatches in UA funds resulting from the early redemption of these funds. This is particularly relevant for UA funds that are subject to less stringent redemption conditions compared to RA funds.
- G** 13.7 An Islamic banking institution may be expected to provide liquidity support for the early redemption of investments in the UA funds. As such, the Islamic banking institution should maintain an appropriate amount of stable funding for these funds in relation to the composition of their underlying assets.
- S** 13.8 An Islamic banking institution shall treat the funding received by, and the underlying assets of, a UA fund in accordance with the requirements specified in paragraphs 9 to 12, unless otherwise specified in paragraphs 13.10 and 13.11.

Determining the maturity of a UA fund under the ASF

- G** 13.9 While early redemption by an IAH could be generally differentiated by types of counterparty, it is also influenced by the perceived risk of the underlying assets. In other words, the higher the quality of the underlying assets in a UA fund, the more likely an IAH would hold their investments in the UA fund to maturity as the higher quality assets are perceived to be of a lower risk profile.

- S** 13.10 An Islamic banking institution shall report the funding received by a UA fund according to its contractual residual maturity provided that the fund is at least 75% invested in one or a combination of the following assets:
- (a) HQLA;
 - (b) deposits placed with another banking institution;
 - (c) unencumbered financing with a residual maturity of less than one year;
or
 - (d) unencumbered financing with a residual maturity of one year or more that would qualify for a 35% or lower risk weight under the standardised approach for credit risk.

RSF treatment for UA funds fully invested in liquid assets

- S** 13.11 An Islamic banking institution shall assign a 10% RSF factor to the carrying value of the underlying assets of a UA fund, if the fund is fully invested in one or a combination of the following assets:
- (a) HQLA;
 - (b) other securities which are traded in a secondary market;
 - (c) exchange-traded commodities; or
 - (d) deposits placed with another banking institution which are maturing or callable within the next six months.

PART C REPORTING REQUIREMENTS

14 Submission requirements

- S** 14.1 A banking institution shall submit its NSFR report on a quarterly basis based on the reporting templates provided by the Bank.
- S** 14.2 A banking institution shall submit the electronic copy of the reporting templates to the Bank through the Statistical Mart for Analysis and Reporting (STATsmart) system no later than 30 calendar days after the quarter-end reporting date. Unless otherwise specified by the Bank, submission of the printed copy of the reporting templates is not required.

15 Monitoring requirements

- S** 15.1 A banking institution shall maintain a complete record of the deposit holders that are financial and non-financial entities, sovereigns, PSEs and MDBs in the interest of assessing deposit behaviour and stability at the transaction level. The internal record must, at a minimum, include the following information:
- (a) name of individual deposit holder²¹;
 - (b) daily end-of-day outstanding deposit amount²²;
 - (c) for term deposits, original contractual maturity;
 - (d) indication of whether the changes in the day-to-day amount are caused by the banking institution (i.e. fees, charges, penalties, interest/profit accrued) or the customer; and
 - (e) where the changes in the day-to-day amount are caused by the customer, indicate whether the change is due to a new placement, full/partial withdrawal, or roll-over following the end of the contractual term.
- S** 15.2 In relation to paragraph 13.10, a banking institution shall maintain a complete record of IAH²³ that are individuals, small businesses, financial and non-financial entities, sovereigns, PSEs and MDBs for each UA fund which enables the assessment of behavioural maturity and stability. The internal record must, at a minimum, include the following information:
- (a) name of individual IAH²⁴;
 - (b) daily end-of-day outstanding investment amount²⁵ for each individual IAH;
 - (c) for term UA, original contractual maturity of the investments;
 - (d) indication of whether the changes in the day-to-day amount are caused by the IAH or other factors (i.e. fees, charges or investment gains or

²¹ Where the depositor is part of a group, this shall be recorded on an entity basis.

²² Deposits in multiple deposit accounts by the same deposit holder are to be recorded separately.

²³ Refers to individuals, small businesses, non-financial corporates, sovereigns, PSEs, MDBs, financial institutions and others.

²⁴ Where the IAH is part of a group, this shall be recorded on an entity basis.

²⁵ Investments in multiple UA funds by the same IAH are to be recorded separately.

- loss);
 - (e) where changes in the day-to-day amount are caused by the IAH, indicate whether the change is due to a new placement, full/partial redemption prior to end of the contractual term, or roll-over following the end of the contractual term; and
 - (f) the proportion of the UA fund's underlying assets that is comprised of one, or a combination, of the assets listed in paragraph 13.10²⁶.
- S** 15.3 The information set out in paragraphs 15.1 and 15.2 must be made readily available to the Bank upon request²⁷.

²⁶ This information shall be sufficiently granular, with the following breakdown: (i) less than 75%; (ii) between 75%- 85%; and (iii) above 85%.

²⁷ For the avoidance of doubt, a banking institution is not required to submit these information to the Bank as part of its regulatory reporting requirements under paragraphs 14.1 and 14.2.

APPENDICES

Appendix 1: Summary of liability categories and associated ASF factors

ASF factor	Components of ASF category
100%	<ul style="list-style-type: none"> Total amount of regulatory capital, excluding the proportion of Tier 2 instruments with a residual maturity of less than one year Other capital and liability instruments with residual maturity of one year or more
95%	<ul style="list-style-type: none"> Stable demand deposits and term deposits placed by retail and small business customers with residual maturity of less than one year
90%	<ul style="list-style-type: none"> Less stable demand deposits and term deposits placed by retail and small business customers with residual maturity of less than one year UA funds placed by retail and small business customers with residual maturity of less than one year Funding from securities sold exclusively to retail and small business customers with residual maturity of less than one year
60%	<ul style="list-style-type: none"> Funding from sovereigns, PSEs, MDBs and non-financial entities with residual maturity of less than one year
50%	<ul style="list-style-type: none"> Operational deposits from financial entities and central banks with residual maturity of less than one year Other equities and liabilities not included in the above categories with residual maturity between six months and less than one year, including funding from financial entities and central banks
0%	<ul style="list-style-type: none"> All other equities and liabilities not included in the above categories with residual maturity of less than six months, including funding from financial entities and central banks Liabilities without a stated maturity NSFR derivative liabilities net of NSFR derivative assets, if NSFR derivative liabilities are greater than NSFR derivative assets “Trade date” payables

Appendix 2: Summary of asset categories and associated RSF factors

RSF factor	Components of RSF category
0%	<ul style="list-style-type: none"> • Cash • All central bank reserves • All unencumbered claims on central banks with residual maturity of less than six months • “Trade date” receivables • Derivative liabilities
5%	<ul style="list-style-type: none"> • Unencumbered Level 1 HQLA (excluding those that receive a 0% RSF factor)
10%	<ul style="list-style-type: none"> • Unencumbered loans/financing to financial entities with residual maturity of less than six months, where– <ul style="list-style-type: none"> – the loan/financing is secured against Level 1 HQLA; and – the banking institution has the ability to freely rehypothecate the received collateral for the life of the loan/financing • UA funds that are fully invested in liquid assets
15%	<ul style="list-style-type: none"> • Unencumbered Level 2A HQLA • Unencumbered debt securities issued by non-financial corporates rated between AA- and AA+ • Other unencumbered claims on financial entities with residual maturity of less than six months
50%	<ul style="list-style-type: none"> • Unencumbered Level 2B HQLA (excluding those that receive a 15% RSF factor) • Unencumbered qualifying common equity shares • Unencumbered debt securities issued by non-financial corporates rated between A- and A+ • Unencumbered debt securities issued or explicitly guaranteed by sovereigns and central banks rated between BBB- and BBB+ • Unencumbered operational deposits held at financial institutions with residual maturity of less than one year • Other unencumbered claims on financial entities and central banks with residual maturity of between six months and less than one year • All other unencumbered assets not included in the above categories with residual maturity of less than one year, including loans/financing to sovereigns, PSEs, MDBs, non-financial entities, retail and small business customers.

65%	<ul style="list-style-type: none"> • Unencumbered residential mortgages with residual maturity of one year or more that would qualify for a 35% or lower risk weight under the standardised approach for credit risk • Other unencumbered loans/financing (excluding loans/financing to financial entities) with residual maturity of one year or more that would qualify for a 35% or lower risk weight under the standardised approach for credit risk
85%	<ul style="list-style-type: none"> • Cash, debt securities or other assets posted as initial margin for derivative contracts (excluding those that receive a 100% RSF factor) • Cash or other assets contributed to the default fund of a CCP • Other unencumbered performing loans/financing (excluding loans/financing to financial entities) with residual maturity of one year or more that do not qualify for a 35% or lower risk weight under the standardised approach for credit risk • Unencumbered debt securities with a remaining maturity of one year or more that do not qualify as HQLA and that are not in default • Other unencumbered exchange-traded equities that are not in default • Unencumbered physical traded commodities, including gold
100%	<ul style="list-style-type: none"> • NSFR derivative assets net of NSFR derivative liabilities, if NSFR derivative assets are greater than NSFR derivative liabilities • All other assets not included in the above categories, including non-performing loans/financing, loans/financing to financial entities and central banks with a residual maturity of one year or more, non-exchange-traded equities, fixed assets, items deducted from regulatory capital and defaulted securities