

## **MAS NOTICE 652**

10 July 2017

Last revised on 21 September 2020

### **NOTICE TO BANKS**

### **BANKING ACT, CAP 19**

### **NET STABLE FUNDING RATIO (“NSFR”)**

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#### **Introduction**

- 1 This Notice is issued pursuant to sections 10C and 65 of the Banking Act (Cap. 19) (“the Act”) and applies to a Reporting Bank which is an internationally active bank or which has been notified by the Authority that it is a domestic systemically important bank (“D-SIB”).

[MAS Notice 652 (Amendment) 2019]

[MAS Notice 652 (Amendment No. 2) 2020]

- 2 The minimum all currency Net Stable Funding Ratio (“NSFR”) requirements that a Reporting Bank shall maintain at all times is –
  - a) in the case of a D-SIB incorporated in Singapore and whose head office or parent bank is incorporated in Singapore, or an internationally active bank, an all currency NSFR of at least 100% on a consolidated (“Group”) level, which consolidates the assets and liabilities of all its banking group entities, other than those of the following banking group entities (“excluded entities”), if any:
    - i) an insurance subsidiary;
    - ii) any other entity, where such non-consolidation of assets and liabilities of the entity is expressly permitted under the Accounting Standards. For the avoidance of doubt, the exemption in paragraph 4(a) of Singapore Financial Reporting Standards 110 (“SFRS 110”) Consolidated Financial Statements<sup>A</sup> shall not apply for the purposes of complying with this paragraph;

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<sup>A</sup> Paragraph 4(a) of SFRS 110 exempts a parent from presenting consolidated financial statements, subject to certain conditions.

[MAS Notice 652 (Amendment) 2019]

- b) in the case of a D-SIB that is not an internationally active bank and whose head office or parent bank is incorporated outside Singapore, and the D-SIB has not obtained the approval of the Authority pursuant to paragraph 4 of MAS Notice 649 to comply with the requirements set out in that Notice on a country-level group basis, an all currency NSFR of at least 50%, at the entity-level; and
- c) in the case of a D-SIB that is not an internationally active bank and whose head office or parent bank is incorporated outside Singapore, and the D-SIB has obtained the approval of the Authority pursuant to paragraph 4 of MAS Notice 649 to comply with the requirements set out in that Notice on a country-level group basis, an all currency NSFR of at least 50%, at the country-level group basis.

[MAS Notice 652 (Amendment) 2019]

- 2A Pursuant to paragraph 2(a) and for the purposes of this Notice (other than paragraph 2(a)), all assets, liabilities, transactions, exposures or operations of a banking group entity of a Reporting Bank (except excluded entities) shall be deemed to be that of the Reporting Bank.

[MAS Notice 652 (Amendment) 2019]

## **Definitions**

- 3 In this Notice –

“available stable funding” or “ASF” means the portion of capital and liabilities held by a Reporting Bank that is expected to be reliable over one year;

[MAS Notice 652 (Amendment) 2019]

“banks within the same cooperative network” means a group of legally autonomous banks with a statutory framework of cooperation with common strategic focus and brand where specific functions are performed by central institutions or specialized service providers;

“carrying value” means –

- a) in the case of a liability or equity instrument, the amount at which the liability or equity instrument is recorded before the application of any regulatory deductions, filters or other adjustments, as determined in accordance with the Accounting Standards; or

- b) in the case of an asset, the amount at which the asset is recorded, net of specific allowances, as determined in accordance with the Accounting Standards;

[MAS Notice 652 (Amendment) 2019]

“High quality liquid assets” or “HQLA” means any assets listed in paragraph 39;

“Level 1 HQLA” means any HQLA listed in paragraphs 39(a), 39(b), 39(c), 39(d), 39(g), 39(h) or 39(n);

“Level 2A HQLA” means any HQLA listed in paragraphs 39(e), 39(i) or 39(o);

“Level 2B HQLA” means any HQLA listed in paragraphs 39(f), 39(j), 39(k), 39(l), 39(m) or 39(o);

“net stable funding ratio” or “NSFR” means the amount of available stable funding relative to the amount of required stable funding in a Reporting Bank and is computed as follows:

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

[MAS Notice 652 (Amendment) 2019]

“non-performing loans” means loans that are more than 90 days past due;

“parent bank” has the same meaning as in paragraph 1 of the Fifth Schedule of the Banking Act;

[MAS Notice 652 (Amendment) 2019]

“performing loans” means loans that are not past due for more than 90 days;

“regulatory capital” means capital as set out in paragraphs 6.1.1 to 6.3.8 of MAS Notice 637<sup>1</sup>;

“required stable funding” or “RSF” is a function of the liquidity characteristics and residual maturities of the various assets held by a Reporting Bank, including its off-balance sheet (“OBS”) exposures; and

[MAS Notice 652 (Amendment) 2019]

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<sup>1</sup> For the avoidance of doubt, paragraphs 6.5.1 to 6.5.9 of MAS Notice 637 are not applicable.

“unencumbered” means free of legal, regulatory, contractual or other restrictions on the ability of the Reporting Bank to liquidate, sell, transfer or assign the assets.

[MAS Notice 652 (Amendment) 2019]

- 4 The expressions used in this Notice shall, except where defined in this Notice or where the context otherwise requires, have the same meaning as in the Act and in paragraphs 1A and 17 of MAS Notice 649.

[MAS Notice 652 (Amendment) 2019]

## **Calculation Methodology**

### **(A) ASF Calculation Methodology**

- 5 The amount of ASF is measured based on the broad characteristics of the relative stability of a Reporting Bank’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. A Reporting Bank shall calculate its ASF by first assigning the carrying value of its capital and liabilities to one of five categories set out in paragraphs 6 to 17 below and multiplying the carrying value with the assigned ASF factor set out in Table 1 in the Annex. The total ASF is the sum of the weighted amounts.

[MAS Notice 652 (Amendment) 2019]

- 6 A Reporting Bank shall assign the following liabilities and capital instruments a 100% ASF factor:
- a) 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;
  - b) 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;
  - c) the total amount of secured and unsecured borrowings and liabilities (including term deposits) 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;

- d) term deposits with residual maturities of more than one year that cannot be withdrawn early without paying a penalty that is materially greater than the loss of interest and are provided by retail<sup>1A</sup> and small business customers.

[MAS Notice 652 (Amendment) 2019]

7 A Reporting Bank shall assign the following liabilities a 95% ASF factor:

- a) stable<sup>2</sup>, non-maturity (demand) deposits provided by retail and small business customers;
- b) stable term deposits with residual maturities of less than one year provided by retail and small business customers;
- c) stable term deposits with residual maturities of more than one year that can be withdrawn early without having to pay a penalty that is materially greater than the loss of interest and are provided by retail and small business customers.

[MAS Notice 652 (Amendment) 2019]

8 A Reporting Bank shall assign the following liabilities a 90% ASF factor:

- a) less stable<sup>4</sup>, non-maturity (demand) deposits provided by retail and small business customers;
- b) less stable term deposits with residual maturities of less than one year provided by retail and small business customers;
- c) less stable term deposits with residual maturities of more than one year that can be withdrawn early without having to pay a penalty that is materially greater than the loss of interest and are provided by retail and small business customers.

[MAS Notice 652 (Amendment) 2019]

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<sup>1A</sup> Deposits provided by a retail customer are deposits placed with a Reporting Bank by a natural person.

[MAS Notice 652 (Amendment) 2019]

<sup>2</sup> Whether a deposit is a stable deposit shall be determined in accordance with paragraphs 37 and 38 of MAS Notice 649.

[MAS Notice 652 (Amendment) 2019]

<sup>3</sup> [Deleted by MAS Notice 652 (Amendment) 2019]

<sup>4</sup> Less stable deposits are deposits that are not stable deposits.

9 A Reporting Bank shall assign the following liabilities a 50% ASF factor:

- a) funding (secured and unsecured) with a residual maturity of less than one year provided by non-financial corporates;
- b) operational deposits as set out in paragraph 10, for which a Reporting Bank has obtained the approval of the Authority pursuant to paragraph 46 of MAS Notice 649;
- c) funding with residual maturity of less than one year from sovereigns, public sector entities (PSEs), and multilateral and national development banks;
- d) other funding (secured and unsecured) not included in paragraphs 6 to 8 with residual maturity between six months to less than one year, including funding from central banks and financial institutions.

[MAS Notice 652 (Amendment) 2019]

[MAS Notice 652 (Amendment No. 2) 2019]

10 For the purposes of paragraph 9(b), operational deposits shall be determined as follows:

- a) Operational deposits shall only include deposits from customers with qualifying clearing, custody and cash management accounts with the Reporting Bank (“qualifying operational deposits”);
- b) Qualifying clearing, custody or cash management activities shall meet the following criteria:
  - i) the customer is reliant on the Reporting Bank to perform these services as an independent third party intermediary in order to fulfil its normal banking activities over the next 30 days. For example, this condition would not be met if the Reporting Bank is aware that the customer has adequate back-up arrangements;
  - ii) the Reporting Bank is providing these services under a legally binding agreement to customers;
  - iii) the customer may only terminate such agreements either by giving prior notice of at least 30 days or paying significant switching costs (such as those related to transaction, information technology, early termination or legal costs) if the operational deposits are withdrawn before 30 days;

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<sup>5</sup> [Deleted by MAS Notice 652 (Amendment) 2019]

- c) Qualifying operational deposits generated from the qualifying clearing, custody and cash management activities shall meet the following criteria:
- i) the deposits are by-products of the underlying services provided by the Reporting Bank and not sought out in the wholesale market in the sole interest of offering interest income;
  - ii) the deposits are held in specifically designated accounts and priced without giving an economic incentive to the customer (not limited to paying market interest rates) to leave any excess funds on these accounts. In the case that interest rates in a jurisdiction are close to zero, such accounts are likely to be non-interest bearing. A Reporting Bank should be particularly aware that during prolonged periods of low interest rates, excess balances<sup>6</sup> could be significant;
- d) A Reporting Bank shall determine the methodology for identifying excess deposits that are excluded from this category. A Reporting Bank shall conduct the assessment based on the methodology at a sufficiently granular level to adequately assess the risk of withdrawal in an idiosyncratic stress. The methodology shall take into account relevant factors such as the likelihood that wholesale customers have above average balances in advance of specific payment needs, and consider appropriate indicators (e.g. ratios of account balances to payment or settlement volumes or to assets under custody) to identify those customers that are not actively managing account balances efficiently;
- e) Notwithstanding the inclusion of a deposit into the operational deposit category, if the deposit under consideration arises out of correspondent banking<sup>7</sup> or from the provision of prime brokerage services, a Reporting Bank shall treat the deposit as if there were no operational activity.

[MAS Notice 652 (Amendment) 2019]

[MAS Notice 652 (Amendment No. 2) 2019]

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<sup>6</sup> Any excess balances that may be withdrawn while still leaving sufficient funds to fulfil the qualifying clearing, custody and cash management activities do not qualify as operational deposits.

<sup>7</sup> Correspondent banking refers to arrangements under which one bank (correspondent) holds deposits owned by other banks (respondents) and provides payment and other services in order to settle foreign currency transactions (e.g. so-called nostro and vostro accounts used to settle transactions in a currency other than the domestic currency of the respondent bank for the provision of clearing and settlement of payments). Prime brokerage is a package of services offered to large active investors, particularly institutional hedge funds. These services usually include: clearing, settlement and custody; consolidated reporting; financing (margin, repo or synthetic); securities lending; capital introduction; and risk analytics.

11 A Reporting Bank shall assign the following liabilities a 0% ASF factor:

- a) all other liabilities and equities not included in paragraphs 6 to 9, including other funding with residual maturity of less than six months from central banks and financial institutions, including banks within the same institutional network of cooperative banks (“cooperative network”)<sup>8</sup>;
- b) other liabilities without a stated maturity<sup>9</sup>. The only exceptions for liabilities without a stated maturity are the following and the Reporting Bank shall assign such liabilities either a 100% ASF factor if the effective maturity is one year or greater, or a 50% ASF factor if the effective maturity is between 6 months and less than one year:
  - i) first, deferred tax liabilities, which should be treated according to the nearest possible date on which such liabilities could be realised;
  - ii) second, minority interest, which should be treated according to the term of the instrument, usually in perpetuity;
- c) NSFR derivative liabilities net of NSFR derivative assets, if NSFR derivative liabilities are greater than NSFR derivative assets<sup>10</sup>, where NSFR derivative liabilities are calculated in accordance with paragraphs 16 and 17 and NSFR derivative assets are calculated in accordance with paragraphs 29 to 31; and
- d) trade date payables arising from purchases of 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.

[MAS Notice 652 (Amendment) 2019]

12 To determine the maturity of an equity or liability instrument, a Reporting Bank shall assume that investors will redeem a call option at the earliest possible date.

[MAS Notice 652 (Amendment) 2019]

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<sup>8</sup> A cooperative network is a group of legally autonomous banks with a statutory framework of cooperation with a common strategic focus and brand where specific functions are performed by central institutions or specialized service providers.

<sup>9</sup> This may include short positions and open maturity positions.

<sup>10</sup>  $ASF = 0\% \times \text{MAX} ((\text{NSFR derivative liabilities} - \text{NSFR derivative assets}), 0)$ .



- 13 For funding with options exercisable at the Reporting Bank's discretion, including options to extend the maturity date of its obligations, a Reporting Bank shall take into account reputational factors that may limit its ability not to exercise the option.<sup>11</sup> In particular, where the market expects certain liabilities to be redeemed before their legal final maturity date, a Reporting Bank shall assume such behaviour for the purposes of the NSFR and include these liabilities in the corresponding ASF category.

[MAS Notice 652 (Amendment) 2019]

- 14 For long-dated liabilities, a Reporting Bank shall treat only the portion of cash flows falling at or beyond the six-month and one-year time horizons as having an effective residual maturity of six months or more and one year or more, respectively.

[MAS Notice 652 (Amendment) 2019]

- 15 Deposits between banks within the same cooperative network may be excluded from liabilities receiving a 0% ASF provided they are either (a) required by law in some jurisdictions to be placed with the central institutions or specialised central service providers and are legally constrained within the cooperative network as minimum deposit requirements, or (b) in the context of common task sharing and legal, statutory or contractual arrangements, so long as the Reporting Bank that has received the monies and the bank that has deposited participate in the same institutional network's mutual protection scheme against illiquidity and insolvency of its members. A Reporting Bank shall obtain the Authority's approval before applying the treatment set out in this paragraph. Such deposits may be assigned an ASF up to the RSF factor assigned for the same deposits to the depositing bank, provided that such ASF does not exceed 85%.

[MAS Notice 652 (Amendment) 2019]

- 16 A Reporting Bank shall calculate derivative liabilities based on the replacement cost for derivative contracts (obtained by marking to market) where the contract has a negative value. When an eligible bilateral netting contract is in place that meets the conditions as set out in Annex 7N of part VII of the MAS Notice 637, a Reporting Bank shall take the replacement cost for the set of derivative exposures covered by the contract as the net replacement cost. A Reporting Bank may exclude, from its calculation, derivative transactions with central banks<sup>12</sup> if such transactions –

- a) arise from the central bank's short-term monetary policy and liquidity operations; and

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<sup>11</sup> This refers to a case where a Reporting Bank may be subject to funding risk if it did not exercise an option on its own funding.

[MAS Notice 652 (Amendment) 2019]

<sup>12</sup> Such transactions include foreign exchange derivatives such as foreign exchange swaps.

- b) have a maturity of six months or less at inception.

[MAS Notice 652 (Amendment) 2019]

- 17 In calculating NSFR derivative liabilities<sup>13</sup>, a Reporting Bank shall deduct collateral posted in the form of variation margin in connection with derivative contracts (regardless of the asset type) from the negative replacement cost amount. To the extent that the Reporting Bank's accounting framework reflects on balance sheet, in connection with a derivative contract, an asset associated with collateral posted as variation margin that is deducted from the replacement cost amount for purposes of the NSFR, the Reporting Bank shall not include that asset in the calculation of a Reporting Bank's RSF to avoid any double-counting.

[MAS Notice 652 (Amendment) 2019]

**(B) RSF Calculation Methodology**

- 18 A Reporting Bank shall measure the amount of RSF based on the broad characteristics of the liquidity risk profile of a Reporting Bank's assets and OBS exposures.

[MAS Notice 652 (Amendment) 2019]

- 19 A Reporting Bank shall calculate the amount of RSF by first assigning the carrying value of its assets to one of eight categories set out in paragraphs 32 to 43 below and multiplying the carrying value with the assigned RSF factor set out in Table 2 in the Annex. The total RSF is the sum of the weighted amounts added to the amount of off balance sheet activity (or potential liquidity exposure) multiplied by its associated RSF factor.

[MAS Notice 652 (Amendment) 2019]

- 20 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 monetised through sale or used as collateral in a secured borrowing transaction over the course of one year without significant expense.

[MAS Notice 652 (Amendment) 2019]

- 21 A Reporting Bank shall allocate assets to the appropriate RSF factor based on their residual maturity or liquidity value.

[MAS Notice 652 (Amendment) 2019]

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<sup>13</sup> NSFR derivative liabilities = (derivative liabilities) – (total collateral posted as variation margin on derivative liabilities).

- 22 A Reporting Bank shall assume that investors would exercise any option to extend maturity when determining the maturity of an instrument. For assets with options exercisable at the Reporting Bank's discretion, the Reporting Bank shall take into account reputational factors that may limit a Reporting Bank's ability not to exercise the option.<sup>14</sup> In particular, where the market expects certain assets to be extended in their maturity, a Reporting Bank shall assume such behaviour for the purposes of the NSFR and include these assets in the corresponding RSF category.

[MAS Notice 652 (Amendment) 2019]

- 23 For amortising loans and other principal repayment claims, a Reporting Bank shall treat the portion that comes due within the one-year horizon in the less-than-one-year residual maturity category.

[MAS Notice 652 (Amendment) 2019]

- 23A A Reporting Bank shall treat an unencumbered loan without a stated final maturity date, even where the borrower may repay the loan in full and without penalty charges at the next reset date, as having an effective residual maturity of more than one year and shall assign either a 65%, 85% or 100% RSF factor to the unencumbered loan in accordance with paragraph 37, 38 or 40 of this Notice.

[MAS Notice 652 (Amendment) 2019]

- 24 To determine its RSF, a Reporting Bank shall –

- 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 derivatives or secured financing transactions in the Reporting Bank's balance sheet; and

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<sup>14</sup> This refers to a case where a Reporting Bank may be subject to funding risk if it did not exercise an option on its own assets.

[MAS Notice 652 (Amendment) 2019]

- ii) the effects of such transactions will be reflected in the Reporting Bank's balance sheet when settled.

[MAS Notice 652 (Amendment) 2019]

25 A Reporting Bank shall assign encumbered assets<sup>15</sup> on the balance sheet with an RSF factor in the following manner:

- a) assets that are encumbered for one year or more shall be assigned a 100% RSF factor<sup>15A</sup>;
- b) assets that are 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%, shall be assigned a 50% RSF factor;
- c) assets that are encumbered for between six months and less than one year that would, if unencumbered, receive an RSF factor higher than 50% shall be assigned that higher RSF factor;
- d) assets that have less than six months remaining in the encumbrance period shall be assigned the same RSF factor as an equivalent asset that is unencumbered.

[MAS Notice 652 (Amendment) 2019]

25A Subject to paragraph 25B, a Reporting Bank may assign reduced RSF factors to the following assets in the case of exceptional<sup>16</sup> central bank liquidity operations:

- a) assets that are provided as collateral for exceptional central bank liquidity providing operations may be assigned the same RSF factor applied to the equivalent asset that is unencumbered;

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<sup>15</sup> Examples of encumbered assets include assets backing securities or covered bonds and assets pledged in securities financing transactions or collateral swaps. An asset pledged in a repo or secured transaction is considered encumbered for the term of the repo or secured transaction, even if the actual maturity of the collateral is shorter.

[MAS Notice 652 (Amendment) 2019]

<sup>15A</sup> For the avoidance of doubt, a 100% RSF factor applies to collateral pledged in a repo of secured transaction with a remaining maturity of one year or greater, even if the collateral pledged matures in less than one year.

[MAS Notice 652 (Amendment) 2019]

<sup>16</sup> Exceptional central bank liquidity operations are non-standard, temporary operations conducted by a central bank in order to achieve its mandate in a period of market-wide financial stress and/or exceptional macroeconomic challenges.

[MAS Notice 652 (Amendment) 2019]

- b) claims on central banks with a residual maturity of more than 6 months that arise from exceptional central bank liquidity absorbing operations may be assigned a 5% RSF factor.

[MAS Notice 652 (Amendment) 2019]

25B A Reporting Bank shall obtain the Authority's approval before applying the treatment set out in paragraph 25A in the case of exceptional central bank liquidity operations conducted by a central bank other than the Authority.

[MAS Notice 652 (Amendment) 2019]

26 For secured funding arrangements, a Reporting Bank shall in determining its assets –

- a) exclude securities which it has borrowed in securities financing transactions<sup>17</sup> where it does not have beneficial ownership;
- b) include securities it has lent in securities financing transactions where it retains beneficial ownership; and
- c) exclude securities it has received through collateral swaps if those securities do not appear on its balance sheets.

[MAS Notice 652 (Amendment) 2019]

27 Where a Reporting Bank has encumbered securities in repos or other securities financing transactions, but has retained beneficial ownership, and those assets remain on the Reporting Bank's balance sheet, the Reporting Bank shall allocate such securities to the appropriate RSF category in the manner set out in paragraphs 32 to 43 in this Notice.

[MAS Notice 652 (Amendment) 2019]

28 A Reporting Bank shall measure securities financing transactions with a single counterparty net when calculating the NSFR, provided that the netting conditions set out in paragraph 2.18 in Annex 4A of MAS Notice 637 are met.

[MAS Notice 652 (Amendment) 2019]

29 A Reporting Bank shall calculate derivative assets based on the replacement cost for derivative contracts (obtained by marking to market) where the contract has a positive value. When an eligible bilateral netting contract is in place that meets the conditions as set out in Annex 7N of part VII of the MAS Notice 637, a Reporting Bank shall take the

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<sup>17</sup> These include reverse repos and collateral swaps.

replacement cost for the set of derivative exposures covered by the contract as the net replacement cost. A Reporting Bank may exclude, from its calculation, derivative transactions with central banks<sup>18</sup> if such transactions –

- a) arise from the central bank's short-term monetary policy and liquidity operations; and
- b) have a maturity of six months or less at inception.

[MAS Notice 652 (Amendment) 2019]

- 30 In calculating NSFR derivative assets<sup>19</sup>, a Reporting Bank shall not offset the positive replacement cost amount with the collateral received in connection with derivative contracts regardless of whether or not netting is permitted under the Reporting Bank's operative accounting or risk-based framework, unless the collateral is received in the form of cash variation margin and meets the conditions as set out in paragraph 2.11 in Annex 4A of MAS Notice 637.

[MAS Notice 652 (Amendment) 2019]

- 31 A Reporting Bank shall not offset derivative assets with any remaining balance sheet liability associated with (a) variation margin received that does not meet the criteria as set out in paragraph 30 or (b) initial margin received, and shall assign such balance sheet liabilities a 0% ASF factor.

[MAS Notice 652 (Amendment) 2019]

- 32 A Reporting Bank shall assign the following assets a 0% RSF factor:

- a) coins and banknotes immediately available to meet obligations;
- b) all central bank reserves (including required reserves and excess reserves), unless relevant supervisors or central bank have assigned RSF factors to these reserves;
- c) all claims on central banks with residual maturities of less than six months;
- d) trade date receivables arising from sales of financial instruments, foreign currencies and commodities that (i) are expected to settle within the standard

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<sup>18</sup> Such transactions include foreign exchange derivatives such as foreign exchange swaps.

<sup>19</sup> NSFR derivative assets = (derivative assets) – (cash collateral received as variation margin on derivative assets).

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.

[MAS Notice 652 (Amendment) 2019]

- 33 A Reporting Bank shall assign a 5% RSF factor to unencumbered Level 1 HQLA, excluding assets receiving a 0% RSF as specified in paragraph 32.

[MAS Notice 652 (Amendment) 2019]

- 34 A Reporting Bank shall assign a 10% RSF factor to unencumbered loans to financial institutions with residual maturities of less than six months, where the loan is secured against Level 1 HQLA and where the Reporting Bank has the ability to freely rehypothecate the collateral received for the life of the loan.

[MAS Notice 652 (Amendment) 2019]

- 35 A Reporting Bank shall assign the following assets a 15% RSF factor:

- a) unencumbered Level 2A HQLA;
- b) all other unencumbered loans to financial institutions with residual maturities of less than six months not included in paragraph 34.

[MAS Notice 652 (Amendment) 2019]

- 36 A Reporting Bank shall assign the following assets a 50% RSF factor:

- a) unencumbered Level 2B HQLA;
- b) any HQLA that are encumbered for a period of between six months and less than one year;
- c) all loans to financial institutions and central banks with residual maturity of between six months and less than one year;
- d) deposits held at other financial institutions for operational purposes, as outlined in paragraph 10 in this Notice, that are subject to the 50% ASF factor in paragraph 9(b);
- e) subject to paragraph 36A, all other non-HQLA not included in paragraphs 32 to 35 that have a residual maturity of less than one year, including loans to non-

financial corporates, loans to retail customers and small business customers, and loans to sovereigns and PSEs.

[MAS Notice 652 (Amendment) 2019]

[MAS Notice 652 (Amendment) 2020]

36A Despite paragraph 36(e), a Reporting Bank shall assign to all loans to non-financial corporates, retail customers and small business customers, that have a residual maturity of less than six months, the following RSF factors:

- a) between 8 April 2020 and 30 September 2021 (both dates inclusive), 25%;
- b) between 1 October 2021 and 31 December 2021 (both dates inclusive), 35%;
- c) between 1 January 2022 and 31 March 2022 (both dates inclusive), 45%.

[MAS Notice 652 (Amendment) 2020]

37 A Reporting Bank shall assign the following assets a 65% RSF factor:

- a) unencumbered residential mortgages with a residual maturity of one year or more that would qualify for a 35% or lower risk weight under paragraph 7.3.29 of MAS Notice 637;
- b) other unencumbered loans not included in paragraphs 32 to 36A, excluding loans to financial institutions, with a residual maturity of one year or more that would qualify for a 35% or lower risk weight under paragraphs 7.3.13 to 7.3.20 and paragraphs 7.3.24 to 7.3.26 of MAS Notice 637.

[MAS Notice 652 (Amendment) 2019]

[MAS Notice 652 (Amendment) 2020]

38 A Reporting Bank shall assign the following assets an 85% RSF factor:

- a) cash, securities or other assets posted as initial margin for derivative contracts<sup>19A</sup>, and cash or other assets provided to contribute to the default fund of a central counterparty (“CCP”), regardless of whether those assets are on- or off-balance sheet. Where securities or other assets posted as initial margin for

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<sup>19A</sup> This excludes initial margin posted on behalf of a customer, where –

- a) the Reporting Bank provided a customer access to a third party for the purposes of clearing derivatives,
- b) the transactions are executed in the name of the customer, and
- c) the Reporting Bank does not guarantee performance of the third party.

[MAS Notice 652 (Amendment) 2019]



derivative contracts would otherwise receive a higher RSF factor, a Reporting Bank shall retain that higher factor for such securities or assets;

- b) other unencumbered performing loans that do not qualify for the 35% or lower risk weight under paragraphs 7.3.13 to 7.3.20 and paragraphs 7.3.24 to 7.3.30 of MAS Notice 637 and have residual maturities of one year or more, excluding loans to financial institutions;
- c) unencumbered securities with a remaining maturity of one year or more and exchange-traded ordinary shares, that are not in default and do not qualify as HQLA;
- d) physical traded commodities, including gold.

[MAS Notice 652 (Amendment) 2019]

39 For the purposes of paragraphs 33 to 36 and paragraph 38, HQLA shall be determined as follows:

- a) currency notes and coins of Singapore which are legal tender in Singapore, or foreign currency;

[MAS Notice 652 (Amendment) 2019]

- b) reserves held with the Authority and other central banks, which include –
  - i) cash balances in a Reporting Bank's Current Account and Custody Cash Account maintained with the Authority;
  - ii) a Reporting Bank's overnight deposits with a central bank;
  - iii) a Reporting Bank's term deposits with a central bank where –
    - (A) the Reporting Bank has a contractual agreement with the central bank to repay such deposits on notice from the Reporting Bank; or
    - (B) the deposits constitute a loan against which the Reporting Bank may borrow on a term basis or on an overnight but automatically renewable basis<sup>19B</sup>,

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<sup>19B</sup> Other term deposits with central banks are not liquid assets.

[MAS Notice 652 (Amendment) 2019]

to the extent that the Authority's and the central banks' policies allow them to be drawn down in times of stress;

[MAS Notice 652 (Amendment) 2019]

- c) any sukuk issued by Singapore Sukuk Pte Ltd;
- d) any marketable security representing a claim on or guaranteed by a sovereign, a central bank, a PSE, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Community or a multilateral development bank, which satisfies the following conditions:
  - i) it is assigned a 0% risk-weight under Table 7-1 of MAS Notice 637 or paragraphs 7.3.17 to 7.3.20 of MAS Notice 637;
  - ii) it is traded in large, deep and active repurchase agreement ("repo") or cash markets characterised by a low level of concentration;
  - iii) it has a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions;
  - iv) it is not an obligation of a financial institution or any of its related corporations;

[MAS Notice 652 (Amendment) 2019]

- e) any marketable security representing a claim on or guaranteed by, a sovereign, a central bank, a PSE or a multilateral development bank, which satisfies the following conditions:
  - i) it is assigned a 20% risk weight under paragraphs 7.3.13 to 7.3.20 of MAS Notice 637;
  - ii) it is traded in large, deep and active repo or cash markets characterised by a low level of concentration;
  - iii) it has a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 10 percentage points over a 30-day period of significant liquidity stress;

- iv) it is not an obligation of a financial institution or any of its related corporations;

[MAS Notice 652 (Amendment) 2019]

- f) any marketable security representing a claim on or guaranteed by a sovereign, a central bank or a PSE, which satisfies the following conditions:
  - i) it has a long-term credit rating from a recognised ECAI of at least BBB- or in the absence of a long term rating, a short-term rating equivalent in quality to the long-term rating; or does not have a credit assessment by a recognised ECAI and is internally rated as having a probability of default (“PD”) corresponding to a credit rating of at least BBB-;
  - ii) it is traded in large, deep and active repo or cash markets characterised by a low level of concentration;
  - iii) it has a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress;
  - iv) it is not an obligation of a financial institution or any of its related corporations;

[MAS Notice 652 (Amendment) 2019]

- g) where a sovereign has a non-0% risk weight as determined in accordance with Table 7-1 of MAS Notice 637, any sovereign or central bank debt security issued in domestic currencies by the sovereign or its central bank –
  - i) if the sovereign or central bank is from a Reporting Bank’s home country; or
  - ii) if the sovereign or central bank is from a host jurisdiction where a Reporting Bank has a branch or subsidiary and the Reporting Bank or its subsidiary takes liquidity risk in that jurisdiction;

[MAS Notice 652 (Amendment) 2019]

- h) where the sovereign has a non-0% risk weight as determined in accordance with Table 7-1 of MAS Notice 637, any sovereign or central bank debt security issued in foreign currencies by the sovereign or its central bank –

- i) if the sovereign or central bank is from a Reporting Bank's home country;  
or
- ii) if the sovereign or central bank is from a host jurisdiction where a Reporting Bank has a branch or subsidiary and the Reporting Bank or its subsidiary takes liquidity risk in that jurisdiction;

[MAS Notice 652 (Amendment) 2019]

- i) any corporate debt security, covered bond or sukuk, which satisfies the following conditions:
  - i) in the case of a corporate debt security or sukuk, it is not a complex structured product or a subordinated debt security, and it is not issued by a financial institution or any of its related corporations;
  - ii) in the case of a covered bond, it is not issued by the Reporting Bank or any of its related corporations;
  - iii) it has a long-term credit rating from a recognised 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<sup>20</sup>; or does not have a credit assessment by a recognised ECAI but is internally rated as having a PD corresponding to a credit rating of at least AA-;
  - iv) it is traded in large, deep and active repo or cash markets characterised by a low level of concentration;
  - v) it has a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 10 percentage points over a 30-day period of significant liquidity stress;

[MAS Notice 652 (Amendment) 2019]

- j) any corporate debt security or sukuk, which satisfies all of the following conditions:

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<sup>20</sup> In the event of split ratings, the applicable rating shall be determined according to the method used in paragraph 7.3.4 of MAS Notice 637. Local rating scales (rather than international ratings) of a recognised ECAI under paragraph 7.3.53 of MAS Notice 637 can be recognised if corporate debt securities or covered bonds are held by a Reporting Bank for local currency liquidity needs arising from its operations in that local jurisdiction. This also applies to paragraphs 39(j) and 39(k) of this Notice.

[MAS Notice 652 (Amendment) 2019]

- i) it is not a complex structured product or a subordinated debt security;
- ii) it is not issued by a financial institution or any of its related corporations;
- iii) it has a long-term credit rating from a recognised ECAI of at least A- or in the absence of a long term rating, a short-term rating equivalent in quality to the long-term rating, or does not have a credit assessment by a recognised ECAI and is internally rated as having a PD corresponding to a credit rating of at least A-;
- iv) it is traded in large, deep and active repo or cash markets characterised by a low level of concentration;
- v) it has a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress;

[MAS Notice 652 (Amendment) 2019]

k) any corporate debt security or sukuk, which satisfies all of the following conditions:

- i) it is not a complex structured product or a subordinated debt security;
- ii) it is not issued by a financial institution or any of its related corporations;
- iii) it has a long-term credit rating from a recognised ECAI between BBB+ and BBB- or in the absence of a long term rating, a short-term rating equivalent in quality to the long-term rating, or does not have a credit assessment by a recognised ECAI and is internally rated as having a PD corresponding to a credit rating of between BBB+ and BBB-;
- iv) it is traded in large, deep and active repo or cash markets characterised by a low level of concentration;
- v) it has a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress;

[MAS Notice 652 (Amendment) 2019]

l) any residential mortgage-backed security (“RMBS”) which satisfies the following requirements:

- i) it is not issued by, and the underlying assets have not been originated by, the Reporting Bank or any of its related corporations;
- ii) it has 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) it is traded in large, deep and active repo or cash markets characterised by a low level of concentration;
- iv) it has a proven record as a reliable source of liquidity in the markets (repo or sale even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress);
- v) the underlying asset pool is restricted to residential mortgages and does not contain structured products;
- vi) the underlying residential mortgages are “full recourse” loans (i.e. in the case of foreclosure the mortgage owner remains liable for any shortfall in sales proceeds from the property) and have a maximum weighted average<sup>21</sup> loan-to-value ratio (LTV) of 80% at the time of issuance of the RMBS;
- vii) the securitisations are subject to risk retention laws and regulations which require issuers to retain an interest in the assets they securitise;

[MAS Notice 652 (Amendment) 2019]

m) any ordinary shares, excluding preference shares and treasury shares, which satisfy all of the following requirements:

- i) the shares are not issued by a financial institution or any of its related corporations;
- ii) the shares are exchange traded and centrally cleared;

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<sup>21</sup> Weighted average LTV is computed as follows:

$$\text{weighted average LTV} = \frac{\text{mortgage amount}_1 \times \text{LTV}_1 + \text{mortgage amount}_2 \times \text{LTV}_2 + \dots + \text{mortgage amount}_n \times \text{LTV}_n}{\text{mortgage amount}_1 + \text{mortgage amount}_2 + \dots + \text{mortgage amount}_n}$$

Where n is the number of residential mortgages in the RMBS.

- iii) the shares are a constituent of –
  - (A) the FTSE Straits Times Index (“STI”) or the MSCI Singapore Free Index;
  - (B) if the stock is held in a jurisdiction outside of Singapore where a Reporting Bank has a branch or subsidiary and the Reporting Bank or its subsidiary takes liquidity risk in that jurisdiction, an index that the banking supervisor of that jurisdiction recognises for purposes of including the equities as Level 2B HQLA under the applicable regulatory policy;
  - (C) any other index for which a Reporting Bank can demonstrate to the satisfaction of the Authority that the stock is as liquid and readily marketable as equities traded on the indices in sub-paragraph (m)(iii)(A);
- iv) denominated in the domestic currency of a Reporting Bank’s home jurisdiction or in the currency of the jurisdiction where a Reporting Bank has a branch or subsidiary and the Reporting Bank or its subsidiary takes liquidity risk in that jurisdiction;
- v) traded in large, deep and active repo or cash markets characterised by a low level of concentration;
- vi) have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 40 percentage points over a 30-day period of significant liquidity stress;

[MAS Notice 652 (Amendment) 2019]

- n) any liquid assets recognised as alternative liquid assets in jurisdictions that implement the Alternative Liquidity Approaches<sup>22</sup> and which the banking supervisor of that jurisdiction recognises for purposes of including the liquid assets as Level 1 HQLA;

[MAS Notice 652 (Amendment) 2019]

- o) any liquid assets recognised as alternative liquid assets in jurisdictions that implement the Alternative Liquidity Approaches and which the banking

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<sup>22</sup> Please refer to paragraphs 55-67 of the “Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring Tools”.

supervisor of that jurisdiction recognises for purposes of including the liquid assets as Level 2 HQLA.

[MAS Notice 652 (Amendment) 2019]

40 A Reporting Bank shall assign the following assets a 100% RSF factor:

- a) all assets that are encumbered for a period of one year or more;
- b) NSFR derivative assets net of NSFR derivative liabilities, if NSFR derivative assets are greater than NSFR derivative liabilities<sup>23</sup>, where NSFR derivative assets are calculated in accordance with paragraphs 29 to 31 and NSFR derivative liabilities are calculated in accordance with paragraphs 16 and 17;
- ba) non-maturity reverse repos, unless the Reporting Bank can demonstrate to the Authority that the non-maturity reverse repo would effectively mature in less than one year;
- c) all other assets not included in paragraphs 32 to 38, including non-performing loans, loans to financial institutions with a residual maturity of one year or more, non-exchange-traded shares, fixed assets, items deducted from regulatory capital, retained interest, insurance assets, subsidiary interests and defaulted securities;
- d) 5% of derivative liabilities (that is negative replacement cost amounts) as calculated according to paragraph 16 before deducting variation margin posted. For the purposes of this sub-paragraph, for a derivative structured as “settled-to-market”, the Reporting Bank shall calculate the replacement cost amount as if no settlement payments and receipts had been made to account for the changes in the value of a derivative transaction or a portfolio of derivative transactions.

[MAS Notice 652 (Amendment) 2019]

40A For loans that are partially secured, a Reporting Bank shall treat each of the secured and unsecured portions of a loan according to its characteristics and assign the corresponding RSF factor. If the Reporting Bank is unable to draw the distinction between the secured and unsecured part of the loan, the Reporting Bank shall apply the higher RSF factor that is applicable to the whole loan.

[MAS Notice 652 (Amendment) 2019]

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<sup>23</sup> RSF = 100% x MAX ((NSFR derivative assets – NSFR derivative liabilities), 0).



### **(C) Interdependent Assets and Liabilities**

41 A Reporting Bank may assign interdependent assets and liabilities<sup>23A</sup> a 0% RSF or ASF factor if they meet 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 are the same;
- c) the Reporting 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 are not the same.

[MAS Notice 652 (Amendment) 2019]

### **(D) OBS exposures**

42 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 institutions hold stable funding for the portion of OBS exposures that may be expected to require funding within a one-year horizon.

43 Consistent with the liquidity coverage ratio framework, the NSFR identifies OBS exposure categories based broadly on whether the commitment is a credit or liquidity facility or some other contingent funding obligation. Table 3 in the Annex identifies the specific types of OBS exposures a Reporting Bank shall assign to each OBS category and their associated RSF factor.

[MAS Notice 652 (Amendment) 2019]

[MAS Notice 652 (Amendment No. 2) 2019]

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<sup>23A</sup> For the avoidance of doubt, derivative transactions do not qualify for the treatment in paragraph 41.

[MAS Notice 652 (Amendment) 2019]

## **Frequency of Calculation and Reporting**

- 44 A Reporting Bank shall prepare the appropriate all currency NSFR returns set out below as at the last calendar day of each quarter –
- a) in the case of a Reporting Bank set out in paragraph 2(a), the Reporting Bank’s Group level return and the entity-level return for each Reporting Bank within the banking group;
  - b) in the case of a Reporting Bank set out in paragraph 2(b), the Reporting Bank’s entity-level return; and
  - c) in the case of a Reporting Bank set out in paragraph 2(c), the Reporting Bank’s country-level group level return and the entity-level return for each Reporting Bank within the country-level group.

[MAS Notice 652 (Amendment) 2019]

- 45 A Reporting Bank shall submit to the Authority the NSFR returns prepared in accordance with paragraph 44 not later than 30 calendar days immediately after the last day of each quarter.

[MAS Notice 652 (Amendment) 2019]

## **Effective Date**

- 46 This Notice, with the exception of paragraph 40(d), shall take effect on 1 January 2018. Paragraph 40(d) shall take effect on a date to be specified by the Authority by notice in writing, which shall be given at least 21 days before such date.

[MAS Notice 652 (Amendment) 2017]

- 47 Paragraph 40(d) shall take effect on 1 October 2019.

[MAS Notice 652 (Amendment) 2019]

Table 1

**Summary of liability categories and associated ASF factors**

ASF factor	Components of ASF category
100%	<ul style="list-style-type: none"> <li>• Total regulatory capital (excluding Tier 2 instruments with residual maturity of less than one year)</li> <li>• Other capital instruments and liabilities with effective residual maturity of one year or more</li> </ul>
95%	<ul style="list-style-type: none"> <li>• Stable non-maturity (demand) deposits and term deposits with residual maturity of less than one year provided by retail and small business customers</li> </ul>
90%	<ul style="list-style-type: none"> <li>• Less stable non-maturity deposits and term deposits with residual maturity of less than one year provided by retail and small business customers</li> </ul>
50%	<ul style="list-style-type: none"> <li>• Funding with residual maturity of less than one year provided by non-financial corporates</li> <li>• Operational deposits</li> <li>• Funding with residual maturity of less than one year from sovereigns, PSEs, and multilateral and national development banks</li> <li>• Other funding with residual maturity between six months and less than one year not included in the above categories, including funding provided by central banks and financial institutions</li> </ul>
0%	<ul style="list-style-type: none"> <li>• All other liabilities and equity not included in the above categories, including liabilities without a stated maturity (with a specific treatment for deferred tax liabilities and minority interests)</li> <li>• NSFR derivative liabilities net of NSFR derivative assets if NSFR derivative liabilities are greater than NSFR derivative assets</li> <li>• “Trade date” payables arising from purchases of financial instruments, foreign currencies and commodities</li> </ul>

[MAS Notice 652 (Amendment) 2019]

**Table 2****Summary of asset categories and associated RSF factors**

RSF factor	Components of RSF category
0%	<ul style="list-style-type: none"> <li>• Coins and banknotes</li> <li>• All central bank reserves</li> <li>• All claims on central banks with residual maturities of less than six months</li> <li>• “Trade date” receivables arising from sales of financial instruments, foreign currencies and commodities.</li> </ul>
5%	<ul style="list-style-type: none"> <li>• Unencumbered Level 1 HQLA, excluding coins, banknotes and central bank reserves</li> <li>• Claims on central banks with a residual maturity equal to or greater than six months due to exceptional central bank liquidity absorbing operations</li> </ul>
10%	<ul style="list-style-type: none"> <li>• Unencumbered loans to financial institutions with residual maturities of less than six months, where the loan is secured against Level 1 HQLA and where the Reporting Bank has the ability to freely rehypothecate the received collateral for the life of the loan</li> </ul>
15%	<ul style="list-style-type: none"> <li>• All other unencumbered loans to financial institutions with residual maturities of less than six months not included in the above categories</li> <li>• Unencumbered Level 2A HQLA</li> </ul>
25% / 35% / 45%	<ul style="list-style-type: none"> <li>• All loans to non-financial corporates, retail customers or small business customers, that have a residual maturity of less than six months mentioned in paragraph 36A</li> </ul>
50%	<ul style="list-style-type: none"> <li>• Unencumbered Level 2B HQLA</li> <li>• HQLA encumbered for a period of six months or more and less than one year</li> <li>• Loans to financial institutions and central banks with residual maturities between six months and less than one year</li> <li>• Deposits held at other financial institutions for operational purposes</li> <li>• All other assets not included in the above categories with residual maturity of less than one year, including loans to non-financial corporates, loans to retail and small business customers, and loans to sovereigns and PSEs</li> </ul>
65%	<ul style="list-style-type: none"> <li>• Unencumbered residential mortgages with a residual maturity of one year or more and with a risk weight of less than or equal to 35% under paragraph 7.3.29 of MAS Notice 637</li> <li>• Other unencumbered loans not included in the above categories, excluding loans to financial institutions, with a residual maturity of one year or more and with a risk weight of less than or equal to 35% under</li> </ul>

	paragraphs 7.3.13 to 7.3.20 and paragraphs 7.3.24 to 7.3.26 of MAS Notice 637
85%	<ul style="list-style-type: none"> <li>• Cash, securities or other assets posted as initial margin for derivative contracts and cash or other assets provided to contribute to the default fund of a CCP</li> <li>• Other unencumbered performing loans with risk weights greater than 35% under paragraphs 7.3.13 to 7.3.20 and paragraphs 7.3.24 to 7.3.30 of MAS Notice 637 and residual maturities of one year or more, excluding loans to financial institutions</li> <li>• Unencumbered securities that are not in default and do not qualify as HQLA with a remaining maturity of one year or more and exchange-traded equities</li> <li>• Physical traded commodities, including gold</li> </ul>
100%	<ul style="list-style-type: none"> <li>• All assets that are encumbered for a period of one year or more</li> <li>• NSFR derivative assets net of NSFR derivative liabilities if NSFR derivative assets are greater than NSFR derivative liabilities</li> <li>• 5% of derivative liabilities as calculated according to paragraph 16<sup>24</sup></li> <li>• All other assets not included in the above categories, including non-performing loans, loans to financial institutions with a residual maturity of one year or more, non-exchange-traded equities, fixed assets, items deducted from regulatory capital, retained interest, insurance assets, subsidiary interests and defaulted securities</li> </ul>

[MAS Notice 652 (Amendment) 2019]

[MAS Notice 652 (Amendment) 2020]

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<sup>24</sup> As set out in paragraph 47, this shall take effect on 1 October 2019.

[MAS Notice 652 (Amendment) 2017]

[MAS Notice 652 (Amendment) 2019]

**Table 3****Summary of off-balance sheet categories and associated RSF factors**

RSF factor	RSF category
5% of currently undrawn portion	Irrevocable and conditionally revocable credit and liquidity facilities
0% of currently undrawn portion	Unconditionally revocable credit and liquidity facilities
0% of currently undrawn portion	Trade finance-related obligations (including guarantees and letters of credit)
0% of currently undrawn portion	Guarantees and letters of credit unrelated to trade finance obligations
0% of currently undrawn portion	Non-contractual obligations such as – <ul style="list-style-type: none"> <li>• potential requests for debt repurchases of the Reporting Bank’s own debt or that of related conduits, securities investment vehicles and other such financing facilities</li> <li>• structured products where customers anticipate ready marketability, such as adjustable rate notes and variable rate demand notes (VRDNs)</li> <li>• managed funds that are marketed with the objective of maintaining a stable value</li> </ul>

[MAS Notice 652 (Amendment) 2019]

Table 4

## NSFR Reporting Template

**Net Stable Funding Ratio ("NSFR")**  
**THE MONETARY AUTHORITY OF SINGAPORE**  
**THE BANKING ACT, CAP. 19 (SECTIONS 10C AND 65)**

[MAS Notice 652 (Amendment) 2019]

[MAS Notice 652 (Amendment No. 2) 2020]

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**Cover page**

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Institution Name	<input type="text"/>
Reporting Cycle	<input type="text"/> (MM/YYYY)
Business Unit	<input type="text"/>
Currency	<input type="text" value="All currency"/>
Consolidated submission?	<input type="text"/>
Country level/Group details (if applicable):	
Country level/Group name	<input type="text"/>
Country level/Group ID	<input type="text"/>
Institution codes of entities in group:	
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	2. <input type="text"/>
	3. <input type="text"/>
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	5. <input type="text"/>
	6. <input type="text"/>
Approved by:	
(a) Name	<input type="text"/>
(b) Designation	<input type="text"/>
(c) Date (dd/mm/yyyy)	<input type="text"/>
(d) Person to contact for queries	<input type="text"/>
(e) Telephone number	<input type="text"/>
(f) Email address	<input type="text"/>

**THE MONETARY AUTHORITY OF SINGAPORE  
THE BANKING ACT, CAP. 19 (SECTIONS 10C AND 65)**

[MAS Notice 652 (Amendment) 2019]  
[MAS Notice 652 (Amendment No. 2) 2020]

**Computation of Net Stable Funding Ratio ("NSFR")**  
(Name of Reporting Bank)  
As at close of business on (day/month/year)

**A) Available Stable Funding ("ASF")**

	Paragraph Number in MAS Notice 652	Amount (S\$'000)			ASF factor			Calculated ASF (S\$'000)			
		< 6 months	≥ 6 months to < 1 year	≥1 year	< 6 months	≥ 6 months to < 1 year	≥ 1 year	< 6 months	≥ 6 months to < 1 year	≥ 1 year	Total ASF
Tier 1 and Tier 2 capital, as set out in paragraphs 6.1.1 to 6.3.8 of MAS Notice 637, before the application of capital deductions and excluding the proportion of Tier 2 instruments with residual maturity of less than one year	6(a)						1.00				
Capital instruments not included above with an effective residual maturity of one year or more	6(b)						1.00				
"Stable" (as set out in FN 2 of MAS Notice 652) demand and/or term deposits from retail and small business customers	6(c), 6(d), 7(a), 7(b), 7(c)				0.95	0.95	1.00				
"Less stable" (as set out in FN 4 of MAS Notice 652) demand and/or term deposits from retail and small business customers	6(c), 6(d), 8(a), 8(b), 8(c)				0.90	0.90	1.00				
Unsecured funding from non-financial corporates, of which:	6(c), 9(a), 9(b)										
Operational deposit (as set out in paragraph 10 of MAS Notice 652)					0.50	0.50	1.00				
Non-operational deposit					0.50	0.50	1.00				
Non-deposit unsecured funding					0.50	0.50	1.00				
Unsecured funding from central banks, of which:	6(c), 9(b), 9(d), 11(a)										
Operational deposit (as set out in paragraph 10 of MAS Notice 652)					0.50	0.50	1.00				
Non-operational deposit					0.00	0.50	1.00				
Non-deposit unsecured funding					0.00	0.50	1.00				
Unsecured funding from sovereigns/PSEs/MDBs/NDBs, of which:	6(c), 9(b), 9(c)										
Operational deposit (as set out in paragraph 10 of MAS Notice 652)					0.50	0.50	1.00				
Non-operational deposit					0.50	0.50	1.00				
Non-deposit unsecured funding					0.50	0.50	1.00				
Unsecured funding from other legal entities (including financial corporates and financial institutions), of which:	6(c), 9(b), 9(d), 11(a)										
Operational deposit (as set out in paragraph 10 of MAS Notice 652)					0.50	0.50	1.00				
Non-operational deposit					0.00	0.50	1.00				
Non-deposit unsecured funding					0.00	0.50	1.00				





All other liabilities and equity categories not included above	6(c), 9(d), 11(a), 11(b)				0.00	0.50	1.00				
<b>Total ASF</b>											
<b>B) Required Stable Funding ("RSF")</b>											
<b>1) On balance-sheet items</b>											
	Paragraph Number in MAS Notice 652	Amount (S\$'000)			RSF factor			Calculated RSF (S\$'000)			
		< 6 months	≥ 6 months to < 1 year	≥1 year	< 6 months	≥ 6 months to < 1 year	≥ 1 year	< 6 months	≥ 6 months to < 1 year	≥ 1 year	Total RSF
Coins and banknotes	32(a)				0.00						
Total central bank reserves	32(b)				0.00	0.00	0.00				
Of which are required central bank reserves					0.00	0.00	0.00				
Securities held where the institution has an offsetting reverse repurchase transaction when the security on each transaction has the same unique identifier (eg ISIN number or CUSIP) and such securities are reported on the balance sheet of the reporting institutions, of which:											
Unencumbered					0.00	0.00	0.00				
Encumbered, of which:											
Remaining period of encumbrance < 6 months					0.00	0.00	0.00				
Remaining period of encumbrance ≥ 6 months to < 1 year					0.00	0.00	0.00				
Remaining period of encumbrance ≥ 1 year					0.00	0.00	0.00				
Deposits held at other banks which are members of the same cooperative network of banks which satisfy the criteria as set out in paragraph 15 of MAS Notice 652	15, 25, 35(b), 36(c), 40(a), 40(c)				0.15	0.50	1.00				
Other deposits at other banks which are members of the same cooperative network of banks, of which:											
Unencumbered					0.15	0.50	1.00				
Encumbered, of which:											
Remaining period of encumbrance < 6 months					0.15	0.50	1.00				
Remaining period of encumbrance ≥ 6 months to < 1 year					0.50	0.50	1.00				
Remaining period of encumbrance ≥ 1 year					1.00	1.00	1.00				
Loans to financial institutions, of which:											
Loans to financial institutions secured by Level 1 collateral and where the Reporting Bank has the ability to freely rehypothecate the received collateral for the life of the loan, of which:	25, 34, 36(c), 40(a), 40(c)										
Unencumbered					0.10	0.50	1.00				
Encumbered, of which:											
Remaining period of encumbrance < 6 months					0.10	0.50	1.00				
Remaining period of encumbrance ≥ 6 months to < 1 year					0.50	0.50	1.00				
Remaining period of encumbrance ≥ 1 year					1.00	1.00	1.00				
All other secured loans to financial institutions, of which:	25, 35(b), 36(c), 40(a), 40(c)										
Unencumbered					0.15	0.50	1.00				
Encumbered, of which:											
Remaining period of encumbrance < 6 months					0.15	0.50	1.00				









Initial margin posted on Reporting Bank's own positions, in the form of any collateral type, to counterparties exempt from BCBS-IO스코 margin requirements, of which:								
Non-financial entities that are not systemically important								
Sovereigns/central banks/MDBs/BIS								
Cash or other assets provided to contribute to the default fund of a CCP					38(a)			
Required stable funding associated with initial margin posted and cash or other assets provided to contribute to the default fund of a CCP					38(a)			
Items deducted from regulatory capital					40(c)			
Trade date receivables					32(d)			
Interdependent assets					41			
All other assets not included in above categories that qualify for 100% treatment					40(c)			
On balance-sheet RSF (Section B)								
On balance-sheet RSF (Section B and Section D)								
2) Off balance-sheet items								
	Paragraph Number in MAS Notice 652	Amount (S\$'000)						
Irrevocable or conditionally revocable liquidity facilities	43							
Irrevocable or conditionally revocable credit facilities	43							
Unconditionally revocable liquidity facilities	43							
Unconditionally revocable credit facilities	43							
Trade finance-related obligations (including guarantees and letters of credit)	43							
Guarantees and letters of credit unrelated to trade finance obligations	43							
Non-contractual obligations, of which:	43							
Debt-buy back requests (incl related conduits)	43							
Structured products	43							
Managed funds	43							
Other non-contractual obligations	43							
All other off balance-sheet obligations not included in the above categories	43							
Off balance-sheet RSF								
Total RSF (Section B and Section D)								
C) NSFR for each month-end								
	Reporting Month	NSFR	Total ASF (S\$'000)	Total RSF (S\$'000)				
	1							
	2							
	3							



D) For completion only by Reporting Banks with assets encumbered for exceptional central bank liquidity operations											
Note: Values reported in this section should not be reported in Section B above.											
	Paragraph Number in MAS Notice 652	Amount (S\$'000)			RSF factor			Calculated RSF (S\$'000)			
		< 6 months	≥ 6 months to < 1 year	≥1 year	< 6 months	≥ 6 months to < 1 year	≥ 1 year	< 6 months	≥ 6 months to < 1 year	≥ 1 year	Total RSF
Securities held where the institution has an offsetting reverse repurchase transaction when the security on each transaction has the same unique identifier (eg ISIN number or CUSIP) and such securities are reported on the balance sheet of the reporting institutions	25A(a), FN 16										
Of which are encumbered for exceptional central bank liquidity operations, of which:											
Remaining period of encumbrance ≥ 6 months to < 1 year					0.00	0.00	0.00				
Remaining period of encumbrance ≥ 1 year					0.00	0.00	0.00				
Loans to financial institutions, of which:	25A(a), FN 16										
Secured by Level 1 collateral and where the Reporting Bank has the ability to freely rehypothecate the received collateral for the life of the loan											
Of which are encumbered for exceptional central bank liquidity operations, of which:											
Remaining period of encumbrance ≥ 6 months to < 1 year					0.10	0.50	1.00				
Remaining period of encumbrance ≥ 1 year					0.10	0.50	1.00				
All other secured loans to financial institutions											
Of which are encumbered for exceptional central bank liquidity operations, of which:											
Remaining period of encumbrance ≥ 6 months to < 1 year					0.15	0.50	1.00				
Remaining period of encumbrance ≥ 1 year					0.15	0.50	1.00				
Unsecured											
Of which are encumbered for exceptional central bank liquidity operations, of which:											
Remaining period of encumbrance ≥ 6 months to < 1 year					0.15	0.50	1.00				
Remaining period of encumbrance ≥ 1 year					0.15	0.50	1.00				
Securities eligible as Level 1 HQLA as set out in paragraph 3 of MAS Notice 652	25A(a), FN 16										
Of which are encumbered for exceptional central bank liquidity operations, of which:											
Remaining period of encumbrance ≥ 6 months to < 1 year					0.05	0.05	0.05				
Remaining period of encumbrance ≥ 1 year					0.05	0.05	0.05				
Securities eligible for Level 2A HQLA as set out in paragraph 3 of MAS Notice 652	25A(a), FN 16										
Of which are encumbered for exceptional central bank liquidity operations, of which:											
Remaining period of encumbrance ≥ 6 months to < 1 year					0.15	0.15	0.15				







**Notes for completion**

1. The Reporting Bank shall fill in the form in thousands of Singapore dollars (S\$'000). Where amounts are in foreign currency, the Reporting Bank shall report the Singapore Dollar equivalent. Internal FX rates may be used.
2. For Sections A, B and D, the Reporting Bank shall report the figures as of the last day of the reporting quarter. For Section C, the Reporting Bank shall report the figures as of the last day of each month within the reporting quarter.
3. The Reporting Bank shall fill in all blank cells in the form. If the Reporting Bank does not have exposures in a particular category, please enter '0'.
4. As set out in paragraph 47 of MAS Notice 652, the Required Stable Funding add-on for derivative liabilities shall take effect on 1 October 2019.

[MAS Notice 652 (Amendment) 2017]

[MAS Notice 652 (Amendment) 2019]

**\* Notes on History of Amendments**

1. MAS Notice 652 (Amendment) 2017 dated 20 December 2017 with effect from 1 January 2018.
2. MAS Notice 652 (Amendment) 2019 dated 7 August 2019 with effect from 1 October 2019.
3. MAS Notice 652 (Amendment No. 2) 2019 dated 13 December 2019 with effect from 31 December 2019.
4. MAS Notice 652 (Amendment) 2020 dated 7 April 2020 with effect from 8 April 2020.
5. MAS Notice 652 (Amendment No. 2) 2020 dated 21 September 2020 with effect from 1 October 2020.