

MAS NOTICE FHC-N649

29 June 2022

Last revised on 16 May 2024*

NOTICE TO DESIGNATED FINANCIAL HOLDING COMPANIES FINANCIAL HOLDING COMPANIES ACT 2013

MINIMUM LIQUID ASSETS (“MLA”) AND LIQUIDITY COVERAGE RATIO (“LCR”)

Introduction

1 This Notice is issued pursuant to sections 34(1) and 38(2) of the Financial Holding Companies Act 2013 (“the Act”) and applies to all financial holding companies that –

- (a) have a subsidiary that is a bank incorporated in Singapore; and
- (b) are predominantly banking DFHC,

(referred to in this Notice as an “FHC”). Except where specifically mentioned in the paragraph, the requirements set out in this Notice are issued under section 34(1) of the Act.

Definitions

2 In this Notice –

“Accounting Standards” has the same meaning as in section 4(1) of the Companies Act 1967;

“bank” means –

- (a) any company which holds a valid licence under section 7 or 79 of the Banking Act; or
- (b) any entity established or incorporated in a foreign country or jurisdiction that is approved, licensed, registered or otherwise regulated by a bank regulatory agency of the foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction;

“bank regulatory agency”, in relation to a foreign country or jurisdiction, means an authority in the foreign country or jurisdiction exercising any function that corresponds to a regulatory function of the Authority under the Banking Act;

“Banking Act” means the Banking Act 1970;

“chief executive” has the same meaning as in section 2(1) of the Act;

“credit facility” has the same meaning as in section 2(1) of the Act;

“designated financial holding company” has the same meaning as in section 2(1) of the Act;

“FHC” has the same meaning as in paragraph 1;

“FHC group”, in relation to an FHC, means the FHC and its FHC group entities;

“FHC group entity”, in relation to an FHC, means its subsidiary or any other entity that is treated as part of the FHC’s group of entities according to Accounting Standards;

“financial holding company” has the same meaning as in section 2(1) of the Act;

“holding company” has the same meaning as in section 2(1) of the Act;

“insurance subsidiary” means –

- (a) a subsidiary that carries on insurance business as an insurer;
- (b) a subsidiary that is –
 - (i) a holding company of the subsidiary referred to in sub-paragraph (a); and
 - (ii) subject to capital adequacy requirements set out in any direction issued by the Authority under section 36(1) of the Act; or
- (c) a subsidiary of the holding company referred to in sub-paragraph (b) that is included by the holding company in its computation of capital adequacy requirements set out in any direction issued by the Authority under section 36(1) of the Act;

“internationally active designated financial holding company” means a designated financial holding company that has been notified by the Authority that the Authority

considers it to be internationally active, taking into consideration whether the designated financial holding company has one or more subsidiary or any other entity that is treated as part of the designated financial holding company's group of entities according to Accounting Standards established or incorporated in a foreign country or jurisdiction that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in the foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction, and whether the subsidiary's or entity's operations are significant in that foreign country or jurisdiction;

"person" has the same meaning as in section 2(1) of the Act;

"predominantly banking DFHC" has the same meaning as in regulation 3 of the Financial Holding Companies Regulations;

"public sector entity" or "PSE" means –

- (a) a regional government or local authority that is able to exercise one or more functions of the central government at the regional or local level;
- (b) an administrative body or non-commercial undertaking responsible to, or owned by, a central government, regional government or local authority, which performs regulatory or non-commercial functions;
- (c) a statutory board in Singapore (other than the Authority); or
- (d) a town council in Singapore established pursuant to the Town Councils Act 1988;

"related corporation" has the same meaning as in section 2(1) of the Act;

"significant currency", in relation to an FHC, means a currency where the aggregate liabilities of the FHC denominated in that currency as at the end of the month amounts to 5% or more of the FHC's total liabilities;

"sovereign" means a central government of a country or jurisdiction;

"subsidiary" has the same meaning as in section 2(1) of the Act;

"unencumbered", in relation to an asset of an FHC, means that the asset can be liquidated, sold, transferred, or assigned by the FHC without any legal, regulatory, contractual or other restrictions.

3 The expressions used in this Notice, except where expressly defined in this Notice or where the context otherwise requires, have the same meanings as in the Banking Act.

4 An FHC only needs to comply with Part II – LCR if it is an internationally active designated financial holding company or it is an entity within a group that is designated by the Authority as a domestic systemically important bank¹ (“D-SIB”).

5 An FHC that does not fall within paragraph 4 may, upon giving prior written notice of at least one month to the Authority, choose to comply with either Part I – MLA or Part II – LCR, and the requirements in the relevant part would apply accordingly. While an FHC that has chosen to comply with Part I – MLA may choose to comply with Part II – LCR subsequently upon giving the requisite notice to the Authority, an FHC that has chosen to comply with Part II – LCR must obtain the Authority’s prior written approval to comply with Part I – MLA subsequently.²

6 Pursuant to section 38(2) of the Act, an FHC must comply with the requirements in this Notice on a consolidated (“Group”) level, which consolidates the assets and liabilities of all its FHC group entities, other than those of the following FHC group entities, if any:

- (a) an insurance subsidiary;
- (b) any other entity, where such non-consolidation of assets and liabilities of the entity is expressly permitted under the Accounting Standards. To avoid doubt, the exemption for an entity that is a parent from presenting consolidated financial statements in paragraph 4(a) of Singapore Financial Reporting Standards 110 (“SFRS 110”) Consolidated Financial Statements does not apply to the FHC for the purposes of complying with this paragraph.

7 Pursuant to paragraph 6, and for the purposes of this Notice (other than paragraph 6), an FHC must deem –

- (a) all assets, liabilities, equity, transactions, exposures, operations or customers of an FHC group entity of the FHC to be that of the FHC (per the scope of consolidation in paragraph 6); and
- (b) all collateral held by an FHC group entity of the FHC to be collateral held by the FHC (per the scope of consolidation in paragraph 6).

8 Any approval granted by the Authority to an FHC group entity of an FHC under:

¹ More information on the D-SIB framework can be found at <https://www.mas.gov.sg/-/media/MAS/News-and-Publications/Monographs-and-Information-Papers/Monograph--MAS-Framework-for-Impact-and-Risk-Assessment.pdf>.

² The Authority will not ordinarily grant such an approval except in exceptional circumstances.

- (a) paragraph 46 of MAS Notice 649 dated 28 November 2014 and last revised on 27 September 2021 is treated as an approval granted by the Authority to the FHC in respect of that FHC group entity for the purposes of paragraph 62 of this Notice; and
- (b) paragraphs 5, 11, 34, 43, 62, 71 and 114, and paragraph 1 of Appendix 5, of MAS Notice 649 dated 24 June 2022 is treated as an approval granted by the Authority to the FHC in respect of that FHC group entity for the purposes of paragraphs 5, 14, 35, 43, 62, 71 and 113, and paragraph 1 of Appendix 5, of this Notice respectively,

each approval being a “deemed approval”.

9 A deemed approval –

- (a) shall lapse if the approval granted by the Authority to that FHC group entity under MAS Notice 649 lapses, is revoked, or is otherwise withdrawn; and
- (b) shall be suspended or otherwise does not apply for the duration that the approval granted by the Authority to that FHC group entity under MAS Notice 649 is suspended or otherwise does not apply.

PART I – MLA

Definitions

10 In Part I – MLA –

“associate” has the same meaning as in the Schedule to the Act, with each reference in that Schedule to a “substantial shareholder” replaced with a reference to a “corporation”;

“bills of exchange” has the same meaning as in section 3 of the Bills of Exchange Act 1949;

“computation day” means the business day on which an FHC computes the minimum amount of Liquid Assets that the FHC has to maintain on the relevant maintenance day;

“corporation” has the same meaning as in section 2(1) of the Act;

“counterparty related to an FHC” means –

- (a) a related corporation of the FHC;
- (b) an associate of the FHC;
- (c) an FHC group entity of the FHC; and
- (d) a subsidiary or associate of any holding company of the FHC;

“limited purpose e-money” has the same meaning as given by Part 3 of the First Schedule to the Payment Services Act 2019;

“Liquid Assets” means any Tier-1 Liquid Assets or Tier-2 Liquid Assets;

“maintenance day”, in relation to any computation day, means the day occurring 2 business days from that computation day;

“MAS Bills” means any debt securities issued by the Monetary Authority of Singapore under the Monetary Authority of Singapore Act 1970;

“Qualifying Liabilities”, in relation to an FHC, means the Qualifying Liabilities as computed by the FHC in accordance with paragraph 15;

“Relevant Entity”, in relation to an FHC, means any of the following:

- (a) any bank;
- (b) any merchant bank in Singapore;

“Singapore Dollar Qualifying Liabilities” means Qualifying Liabilities denominated in Singapore dollars;

“Singapore Government Securities” or “SGS” means any debt securities issued by the Singapore Government under any written law;

“Tier-1 Liquid Assets” means the following liquid assets:

- (a) for the purposes of the Singapore Dollar MLA requirement –
 - (i) any liquid asset listed in paragraph (a) or (b) of the definition of “liquid assets” in section 34(11) of the Act; or
 - (ii) any liquid asset listed in paragraph 11(a), (b) or (c), other than assets maintained and held by an FHC group entity of an FHC for the purposes of section 40 of the Banking Act;
- (b) for the purposes of the all currency MLA requirement –
 - (i) any liquid asset listed in paragraph (a) or (b) of the definition of “liquid assets” in section 34(11) of the Act; or
 - (ii) any liquid asset listed in paragraph 11(a), (b), (c) or (d), other than assets maintained and held by an FHC group entity of an FHC for the purposes of section 40 of the Banking Act;

“Tier-2 Liquid Assets” means any liquid asset listed in paragraph 11(e) or (f), other than assets maintained and held by an FHC group entity of an FHC for the purposes of section 40 of the Banking Act;

“undrawn commitment”, in relation to an FHC, means any arrangement of the FHC with any counterparty, that will pose liquidity risk to the FHC in the event the counterparty, or a third party in whose favour the arrangement is made, as the case

may be, utilises or calls upon the commitment³, but does not include any arrangement where the drawdown or utilisation is subject to the approval of the FHC at the point of drawdown, and the FHC has the unconditional right to refuse drawdown.

Liquid Assets

11 For the purposes of paragraph (c) of the definition of “liquid assets” in section 34(11) of the Act, the following assets are approved by the Authority as “liquid assets”:

- (a) any SGS and any SGS held under a reverse repurchase agreement;
- (b) any sukuk issued by Singapore Sukuk Pte Ltd;
- (c) any MAS Bills and any MAS Bills held under a reverse repurchase agreement;
- (d) any debt securities or sukuk⁴ denominated in the relevant currency or currencies, as the case may be, other than a sukuk which is a liquid asset by virtue of sub-paragraph (b), that are issued by a sovereign or a central bank and assigned a credit rating of at least AA- by Fitch Ratings or Standard and Poor’s Ratings Services or a credit rating of at least Aa3 by Moody’s Investor Services, and include any such debt securities or sukuk held under a reverse repurchase agreement;
- (e) any debt securities or sukuk denominated in the relevant currency or currencies, as the case may be, other than a sukuk which is a liquid asset by virtue of sub-paragraph (b) or a debt security or sukuk defined in sub-paragraph (d), that –
 - (i) are issued by a statutory board in Singapore, and have a minimum issue size of S\$200 million;
 - (ii) are assigned a credit rating that satisfies the long-term issue or short-term issue credit ratings set out in Appendix 3, and have a minimum issue size of S\$200 million;
 - (iii) are issued by a sovereign, the Bank for International Settlements, the International Monetary Fund, the European Union, the European Stability Mechanism, the European Financial Stability Facility, a

³ For example, any unutilised portion of a guarantee, any standby letter of credit, any warranty, any standby credit facility, any forward asset purchase, any underwriting arrangements, any credit protection sold by the FHC and any liquidity facilities granted by the FHC.

⁴ To avoid doubt, only sukuk that demonstrate characteristics similar to a debt security are approved by the Authority as Liquid Assets.

multilateral development bank, or a sovereign-guaranteed company (where the sovereign or government is not the Singapore Government), and are assigned a credit rating of AAA by Fitch Ratings or Standard and Poor's Ratings Services or a credit rating of Aaa by Moody's Investor Services; or

- (iv) are issued by a PSE that is assigned a credit rating of AAA by Fitch Ratings or Standard and Poor's Ratings Services or a credit rating of Aaa by Moody's Investor Services, and assigned a risk weight of 0% under paragraph 7.3.48 of MAS Notice 637 as applied by paragraph 7.1 of MAS Notice FHC-N637,

and include any such debt securities or sukuk held under a reverse repurchase agreement⁵;

- (f) any bill of exchange which satisfies the requirements set out in Appendix 2;

provided always that –

- (g) the asset is unencumbered;
- (h) where the asset is a debt security or sukuk, it is not a convertible debt security or sukuk; and
- (i) the asset does not arise or result from any contractual or other arrangements with, or investments in, a counterparty related to the FHC.

[MAS Notice FHC-N649 (Amendment) 2024]

12 For the purposes of paragraph 11(d), (e)(ii) and (e)(iii), where the debt security or sukuk is issued by a sovereign or central bank, and the debt security or sukuk does not have any credit rating assigned to it by Fitch Ratings, Standard & Poor's Ratings Services or Moody's Investor Services, the FHC may –

- (a) treat the credit rating of the issuing sovereign or central bank assigned by Fitch Ratings, Standard & Poor's Ratings Services or Moody's Investor Services as that assigned to the debt security or sukuk; and

⁵ To avoid doubt, where an issue of such debt securities or sukuk is partially redeemed such that the outstanding issue size falls below S\$200 million, those debt securities or sukuk would no longer be approved as Liquid Assets under paragraph 11(e)(i) and (ii).

- (b) where the issuing central bank does not have any credit rating assigned to it by Fitch Ratings, Standard & Poor's Ratings Services or Moody's Investor Services, treat the credit rating of the sovereign of the country or jurisdiction of the central bank assigned by Fitch Ratings, Standard & Poor's Ratings Services or Moody's Investor Services as that assigned to the debt security or sukuk.

Valuation of Liquid Assets

13 When computing the amount of Liquid Assets held by an FHC on any maintenance day, the FHC must use –

- (a) in the case of its bills of exchange, the book value of those bills of exchange; and
- (b) in the case of its Liquid Assets other than bills of exchange, the marked-to-market value of those Liquid Assets as of the computation day to which that maintenance day relates, multiplied by the following relevant percentage:
 - (i) where the Liquid Asset is a debt security or sukuk set out in paragraph 11(e)(i) to (iv), and the FHC holds more than 20% of the total market of the particular issue of the debt security or sukuk (including issues from different tranches), 50%;
 - (ii) where the Liquid Asset is a debt security or sukuk set out in paragraph 11(e)(i), and the FHC does not hold more than 20% of the total market of the particular issue of the debt security or sukuk (including issues from different tranches), 90%;
 - (iii) where the Liquid Asset is a debt security or sukuk set out in paragraph 11(e)(ii), and the FHC does not hold more than 20% of the total market of the particular issue of the debt security or sukuk (including issues from different tranches), the percentage determined in accordance with Appendix 3;
 - (iv) for all other Liquid Assets not set out in sub-paragraphs (b)(i) to (b)(iii), 100%.

14 Despite paragraph 13(b), an FHC may, upon giving prior written notice of at least one month to the Authority, use the marked-to-market value of its Liquid Assets other than bills of exchange as of a maintenance day when computing the amount of Liquid Assets held by the FHC on the maintenance day. An FHC that has adopted the treatment in this paragraph

must obtain the Authority's prior written approval to adopt the treatment in paragraph 13(b) subsequently.⁶

Computation of Qualifying Liabilities

15 An FHC must compute its Qualifying Liabilities as the sum of⁷ –

- (a) all liabilities of the FHC denominated in the relevant currency or currencies, as the case may be, due to non-bank customers other than the Authority and merchant banks in Singapore, computed on a gross basis;
- (b) all liabilities of the FHC denominated in the relevant currency or currencies, as the case may be, due to the Authority, that –
 - (i) are due within one month from the computation day; and
 - (ii) are computed on a net basis after the deduction of all claims denominated in the relevant currency or currencies, as the case may be, by the FHC on the Authority, that –
 - (A) are maturing within one month from the computation day;
 - (B) are not Liquid Assets⁸; and
 - (C) are not cash receivables from the Authority arising from reverse repurchase agreements of Liquid Assets transacted with the Authority,

and where this is a net asset, the FHC may deduct the net asset amount from Qualifying Liabilities;

- (c) all liabilities of the FHC denominated in the relevant currency or currencies, as the case may be, due to Relevant Entities, that –
 - (i) are due within one month from the computation day; and

⁶ The Authority will not ordinarily grant such an approval except in exceptional circumstances.

⁷ To avoid doubt, this excludes any contingent liability of the FHC.

⁸ To avoid doubt, as MAS Bills held by the FHC, including those held under a reverse repurchase agreement, are Liquid Assets, cash receivables from MAS Bills cannot be deducted when computing the liabilities of the FHC due to the Authority on a net basis under paragraph 15(b)(ii).

(ii) are computed on a net basis after the deduction of all claims denominated in the relevant currency or currencies, as the case may be, by the FHC on Relevant Entities, that –

- (A) are maturing within one month from the computation day;
- (B) are not Liquid Assets⁹;
- (C) are not cash receivables from convertible debt securities or sukuk, issued by Relevant Entities; and
- (D) are not cash receivables from Relevant Entities arising from reverse repurchase agreements of Liquid Assets transacted with Relevant Entities,

and where this is a net asset, the FHC must not deduct the net asset amount from Qualifying Liabilities and must treat the net asset amount as zero;

- (d) 15% of all undrawn commitments of the FHC denominated in the relevant currency or currencies, as the case may be. For the purposes of the Singapore Dollar MLA requirement, where the undrawn commitment is a multi-currency facility involving the Singapore dollars as a component currency, the FHC must include the entire facility amount as its undrawn commitment for its computation of its Singapore Dollar Qualifying Liabilities. However, if there is a sub-limit for the Singapore dollars in the facility, the FHC may use the sub-limit amount for its computation of its Singapore Dollar Qualifying Liabilities;
- (e) all liabilities of the FHC denominated in the relevant currency or currencies, as the case may be, arising from the issue of bills of exchange, other than a bill of exchange which satisfies the requirements set out in Appendix 1; and
- (f) all liabilities of the FHC denominated in the relevant currency or currencies, as the case may be, arising from –

⁹ Claims on Relevant Entities that are not Liquid Assets include –

- (a) deposits placed with any Relevant Entity;
- (b) certificates of deposit issued by any Relevant Entity;
- (c) loans extended to any Relevant Entity;
- (d) cash receivables from debt securities or sukuk which are not Liquid Assets and are issued by any Relevant Entity (“Relevant Debt Securities or Sukuk”). To avoid doubt, claims on Relevant Entities that are not Liquid Assets include cash receivables from Relevant Debt Securities or Sukuk that are posted as collateral by the FHC in a repurchase agreement but does not include cash receivables from Relevant Debt Securities or Sukuk that are held by the FHC under a reverse repurchase agreement; and
- (e) cash receivables from any Relevant Entity, other than arising from (a) to (d) above.

- (i) the provision of any e-money issuance service as defined in section 2(1) of the Payment Services Act 2019; and
- (ii) the issuance of any limited purpose e-money;

but does not include any liability of the FHC arising from –

- (g) any funds received through repurchase agreements of Liquid Assets;
- (h) any funds received through currency, interest rate and foreign exchange swaps;
- (i) any issue of subordinated debt, the terms of which comply with the criteria for the treatment of the liabilities as capital in its computation of its capital adequacy ratio under section 36(1) of the Act, whether or not the entire amount of such liabilities is in fact treated in such computation as capital; and
- (j) any funds raised through the discounting of any bill of exchange which satisfies the requirements set out in Appendix 1, with banks, merchant banks in Singapore or finance companies (as defined in section 2 of the Finance Companies Act 1967).

MLA Framework

16 An FHC must hold, at all times¹⁰ –

- (a) Liquid Assets denominated in any currency amounting to no less than 16% of the value of its Qualifying Liabilities denominated in any currency (“all currency MLA requirement”); and
- (b) Liquid Assets denominated in Singapore dollars amounting to no less than 16% of the value of its Singapore Dollar Qualifying Liabilities (“Singapore Dollar MLA requirement”).

17 An FHC must treat every business day as a computation day. On a maintenance day, an FHC must hold the Singapore Dollar MLA requirement and the all currency MLA requirement, respectively, that was computed on the relevant computation day. Where a day is not a business day, an FHC must hold for that day, the Singapore Dollar MLA requirement and the all currency MLA requirement of the immediately preceding maintenance day which

¹⁰ An FHC should ensure its liquidity risk management is sound and commensurate with the size, nature and complexity of its activities, and observe the guidelines in Appendix 8.

is a business day. Appendix 4 sets out the computation and maintenance schedules for an FHC determining its Singapore Dollar MLA requirement and all currency MLA requirement.

Minimum Amount of Tier-1 Liquid Assets

18 An FHC must hold, at all times –

- (a) Tier-1 Liquid Assets denominated in any currency amounting to no less than 8% of the value of its Qualifying Liabilities denominated in any currency; and
- (b) Tier-1 Liquid Assets denominated in Singapore dollars amounting to no less than 8% of the value of its Singapore Dollar Qualifying Liabilities.

Utilisation of Liquid Assets

19 An FHC must –

- (a) give prior written notification to the Authority of its intent to utilise its Liquid Assets in a liquidity stress situation, where such utilisation will cause the FHC's MLA to fall below the prevailing minimum requirements as described in paragraphs 16 and 18; and
- (b) ensure that the notification is signed by its chief executive, chief financial officer or any equivalent senior management.

20 An FHC must –

- (a) provide its justification for the utilisation of Liquid Assets;
- (b) set out the cause of the liquidity stress situation and provide supporting documents, where available; and
- (c) detail the steps which it has taken and is going to take to resolve the liquidity stress situation,

to the Authority within one business day after the utilisation of its Liquid Assets.

21 An FHC must keep the Authority informed of material developments during the liquidity stress situation.

Submission of liquidity returns

22 An FHC must prepare the appropriate liquidity returns set out at Appendix 5 as at the last day of each month.

23 An FHC must submit all returns prepared in accordance with paragraph 22 to the Authority electronically through MASNET not later than 14 days after the last day of each month.

24 Despite paragraph 23, if the day on which an FHC has to submit any return is not a business day, the FHC may submit the return on the next business day.

PART II – LCR

Definitions

25 In Part II – LCR –

“30-day LCR horizon” means the 30-day period following the day on which the LCR is computed;

“Alternative Liquidity Approaches” means the alternative liquidity approaches available in a country or jurisdiction with an insufficient supply of Level 1 HQLA in its domestic currency, as described in the “Liquidity Coverage Ratio LCR31 Alternative liquidity approaches” issued by the Basel Committee on Banking Supervision on 15 December 2019;

“cash management service”, in relation to an FHC, means one or more of the following:

- (a) the remittance of payments;
- (b) collection and aggregation of funds;
- (c) payroll administration;
- (d) control over the disbursement of funds,

in the context of a relationship where the FHC provides products and services to a customer to manage his or its cash flows, assets and liabilities, and conducts financial transactions necessary to the customer’s affairs or operations;

“clearing service”, in relation to an FHC, means one or more of the following:

- (a) the transmission, reconciliation and confirmation of payment orders;
- (b) daylight overdraft, overnight financing and maintenance of post-settlement balances;
- (c) determination of intra-day and final settlement positions,

in the context of a relationship where the FHC provides a service that enables customers to transfer funds or securities through direct participants in domestic settlement systems to the final recipient;

“committed facility” has the same meaning as in paragraph 101;

“correspondent banking” has the same meaning as in paragraph 69;

“custody service”, in relation to an FHC, means one or more of the following:

- (a) the settlement of securities transactions;
- (b) the transfer of contractual payments;
- (c) the processing of collateral;
- (d) the provision of custody related cash management services;
- (e) the receipt of dividends and other income;
- (f) customer subscriptions and redemptions;
- (g) asset and corporate trust servicing;
- (h) treasury, escrow, funds transfer, stock transfer and agency services, including payment and settlement services (excluding correspondent banking), and depository receipts,

in the context of a relationship where the FHC provides the above services to a customer in connection with the customer’s transactions in and holdings of financial assets;

“financial institution” has the same meaning as in Annex 2A of MAS Notice 637 as applied by paragraph 2.1 of MAS Notice FHC-N637;

“high quality liquid assets” or “HQLA” means any liquid asset that –

- (a) is listed in paragraph (a) or (b) of the definition of “liquid assets” in section 34(11) of the Act or paragraph 29;
- (b) satisfies the requirements set out in paragraph 32; and
- (c) is available on an FHC’s balance sheet as at the end of the day immediately preceding the 30-day LCR horizon;

“institutional network of cooperative banks” has the same meaning as in paragraph 71;

“less stable deposit” has the same meaning as in paragraph 52;

“Level 1 HQLA” means any HQLA listed in paragraph (a) or (b) of the definition of “liquid assets” in section 34(11) of the Act or paragraph 29(a), (b), (c), (f), (g) or (m);

“Level 2 HQLA” means any Level 2A HQLA or Level 2B HQLA;

“Level 2A HQLA” means any HQLA listed in paragraph 29(d), (h) or (n);

“Level 2B HQLA” means any Level 2B(I) HQLA or Level 2B(II) HQLA;

“Level 2B(I) HQLA” means any HQLA listed in paragraph 29(i) or (n);

“Level 2B(II) HQLA” means any HQLA listed in paragraph 29(e), (j), (k), (l) and (n);

“Liquidity Coverage Ratio” or “LCR” means a ratio which is computed at the end of each day as follows:

$$\text{LCR} = \frac{\text{HQLA}}{\text{Total net cash outflows}} \times 100\%;$$

“prime brokerage service” has the same meaning as in paragraph 70;

“recognised ECAI” has the same meaning as in Annex 2A of MAS Notice 637 as applied by paragraph 2.1 of MAS Notice FHC-N637;

“retail deposit” has the same meaning as in paragraph 44;

“secured funding” has the same meaning as in paragraph 82;

“small business” means any corporation, partnership, limited liability partnership, sole proprietorship, trust, or fund (including a collective investment scheme or closed-end fund), with reported annual revenue of less than or equal to S\$100 million;

“small business customer”, in relation to an FHC, means any customer or group of customers –

- (a) that is a small business;
- (b) that the FHC does not have any exposure to, or that the FHC has exposures of not more than S\$2 million;

- (c) where the funding provided by the customer or group of customers is not more than S\$2 million; and
- (d) where the exposures to the customer or group of customers are managed by the FHC as retail exposures, or where the FHC does not have any exposure to the customer or group of customers, the funding provided by the customer or group of customers is managed by the FHC as retail deposits;

“stable deposit” has the same meaning as in paragraph 46;

“ultimate financial holding company” means a financial holding company that is an ultimate holding company;

“ultimate holding company” has the same meaning as in section 5A of the Companies Act 1967, except that any reference to “corporation” in that section shall be construed as if it did not exclude a co-operative society;

“unsecured precious metals assets” has the same meaning as in paragraph 135;

“unsecured precious metals liabilities” has the same meaning as in paragraph 79;

“unsecured wholesale funding” has the same meaning as in paragraph 58.

26 For the purposes of the definition of “small business customer” in paragraph 25 –

- (a) in determining the total exposures to, or total funding provided by, a group of customers, the FHC must ensure that the basis of aggregation of a group of customers follows the basis of aggregation set out in paragraph 7.3.16 of MAS Notice 637 as applied by paragraph 7.1 of MAS Notice FHC-N637;
- (b) an exposure is managed by the FHC as a retail exposure if the exposure is originated in the same manner as other retail exposures, and is managed by the FHC as part of a pool of similar exposures in its internal risk management systems consistently over time and in the same manner as other retail exposures; and
- (c) a funding is managed by the FHC as retail deposits if the funding is originated in the same manner as other retail deposits, and is managed by the FHC as part of a pool of similar deposits in its internal risk management systems consistently over time and in the same manner as other retail deposits.

[MAS Notice FHC-N649 (Amendment) 2024]

LCR Framework

27 An FHC must maintain at all times¹¹ –

- (a) in the case where it is an internationally active designated financial holding company, or whose ultimate financial holding company is incorporated in Singapore, a Singapore Dollar LCR of at least 100% and an all currency LCR of at least 100%; and
- (b) in all other cases, a Singapore Dollar LCR of at least 100% and an all currency LCR of at least 50%.

28 An FHC must only use HQLA denominated in Singapore dollars to fulfil the requirements on Singapore Dollar LCR. To avoid doubt, the total net cash outflows for the Singapore Dollar LCR only include total net cash outflows denominated in Singapore dollars.

HQLA

29 For the purposes of paragraph (c) of the definition of “liquid assets” in section 34(11) of the Act, the following assets are approved by the Authority as “liquid assets”:

- (a) reserves held with the Authority and other central banks, which include –
 - (i) an FHC’s overnight deposits with a central bank; and
 - (ii) an FHC’s term deposits with a central bank where¹² –
 - (A) the FHC has a contractual agreement with the central bank to repay such deposits on notice from the FHC; or
 - (B) the deposits constitute a loan against which the FHC may borrow on a term basis or on an overnight but automatically renewable basis,

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

- (b) any sukuk issued by Singapore Sukuk Pte Ltd;

¹¹ An FHC should ensure its liquidity risk management is sound and commensurate with the size, nature and complexity of its activities, and observe the guidelines in Appendix 8.

¹² To avoid doubt, other term deposits with central banks are not eligible as HQLA. However, if the term deposit matures within the 30-day LCR horizon, the FHC must treat the term deposit in accordance with paragraph 132.

- (c) any marketable security or sukuk representing a claim on, or that is guaranteed by, a sovereign, a central bank, a PSE, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Union, the European Stability Mechanism, the European Financial Stability Facility or a multilateral development bank, which satisfies the following conditions:
 - (i) it is assigned a 0% risk-weight under Table 7-1 or paragraphs 7.3.46 to 7.3.51 of MAS Notice 637 as applied by paragraph 7.1 of MAS Notice FHC-N637;
 - (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;
- (d) any marketable security or sukuk representing a claim on, or that is 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 7.3.42 to 7.3.51 of MAS Notice 637 as applied by paragraph 7.1 of MAS Notice FHC-N637;
 - (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, with 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;
- (e) any marketable security or sukuk representing a claim on, or that is guaranteed by, a sovereign, a central bank or a PSE, which satisfies the following conditions:

- (i) it –
 - (A) 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
 - (B) 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, with 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;
- (f) where a sovereign has a non-0% risk weight as determined in accordance with Table 7-1 of MAS Notice 637 as applied by paragraph 7.1 of MAS Notice FHC-N637, any sovereign or central bank debt security or sukuk issued in domestic currencies by the sovereign or its central bank –
- (i) if the sovereign is the Singapore Government or the central bank is the Authority; or
 - (ii) if the sovereign or central bank is from a foreign country or jurisdiction where an FHC has a subsidiary¹³ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in the foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction and the FHC or its subsidiary takes liquidity risk in that country or jurisdiction;
- (g) where the sovereign has a non-0% risk weight as determined in accordance with Table 7-1 of MAS Notice 637 as applied by paragraph 7.1 of MAS Notice FHC-N637, any sovereign or central bank debt security or sukuk issued in foreign currencies by the sovereign or its central bank –

¹³ To avoid doubt, this includes a branch of the subsidiary.

- (i) if the sovereign is the Singapore Government or the central bank is the Authority; or
- (ii) if the sovereign or central bank is from a foreign country or jurisdiction where an FHC has a subsidiary¹⁴ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in the foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction and the FHC or its subsidiary takes liquidity risk in that country or jurisdiction,

up to the amount of an FHC's total net cash outflows in that specific foreign currency arising from the operations of the FHC or its subsidiary, in Singapore or that country or jurisdiction, as the case may be;

- (h) 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 or sukuk 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 FHC or any of its related corporations;
 - (iii) it –
 - (A) 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; or
 - (B) 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, with a maximum price decline or increase in haircut not exceeding 10 percentage points over a 30-day period of significant liquidity stress;

¹⁴ To avoid doubt, this includes a branch of the subsidiary.

- (i) any corporate debt security or sukuk, which satisfies the following conditions:
 - (i) it is not a complex structured product or a subordinated debt security or sukuk;
 - (ii) it is not issued by a financial institution or any of its related corporations;
 - (iii) it –
 - (A) 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
 - (B) 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, with a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress;
- (j) any corporate debt security or sukuk, which satisfies the following conditions:
 - (i) it is not a complex structured product or a subordinated debt security or sukuk;
 - (ii) it is not issued by a financial institution or any of its related corporations;
 - (iii) it –
 - (A) 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

- (B) 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, with a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress;
- (k) any residential mortgage-backed security or sukuk ("RMBS"), which satisfies the following requirements:
 - (i) it is not issued by, and the underlying assets have not been originated by, the FHC 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, with 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 average¹⁵ loan-to-value ratio ("LTV") of 80% at the time of issuance of the RMBS;

¹⁵ 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.

- (vii) the securitisations are subject to risk retention laws and regulations which require issuers to retain an interest in the assets they securitise;
- (l) any ordinary shares, excluding preference shares and treasury shares, which satisfy 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;
 - (iii) the shares are a constituent of –
 - (A) the FTSE Straits Times Index (“STI”) or the MSCI Singapore Free Index;
 - (B) where an FHC has a subsidiary¹⁶ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in a foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction and the FHC or its subsidiary takes liquidity risk in that country or jurisdiction, an index in the foreign country or jurisdiction that the bank regulatory agency of that country or jurisdiction recognises for purposes of including the equities as Level 2B HQLA under the applicable regulatory policy; or
 - (C) any other index in Singapore for which an FHC 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 (l)(iii)(A);
 - (iv) denominated in Singapore dollars or in the domestic currency of the foreign country or jurisdiction referred to in sub-paragraph (l)(iii)(B);
 - (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, with a maximum

¹⁶ To avoid doubt, this includes a branch of the subsidiary.

price decline or increase in haircut not exceeding 40 percentage points over a 30-day period of significant liquidity stress;

- (m) where an FHC has a subsidiary¹⁷ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in a foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction and the foreign country or jurisdiction adopts the Alternative Liquidity Approaches, any liquid assets recognised as alternative liquid assets in the foreign country or jurisdiction and which the bank regulatory agency of that country or jurisdiction recognises for purposes of including the liquid assets as Level 1 HQLA, subject to the requirements specified in paragraph 146;
- (n) where an FHC has a subsidiary¹⁸ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in a foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction and the foreign country or jurisdiction adopts the Alternative Liquidity Approaches, any liquid assets recognised as alternative liquid assets in the foreign country or jurisdiction and which the bank regulatory agency of that country or jurisdiction recognises for purposes of including the liquid assets as Level 2 HQLA, subject to the requirements specified in paragraph 146.

[MAS Notice FHC-N649 (Amendment) 2024]

30 For the purposes of determining the eligibility of a security or sukuk as a liquid asset under paragraph 29(e)(i)(A), (h)(iii)(A), (i)(iii)(A), (j)(iii)(A) and (k)(ii), –

- (a) where there are 2 credit ratings for a particular issue of the security or sukuk, the FHC must use the poorer credit rating for that particular issue of the security or sukuk; and
- (b) where there are more than 2 credit ratings for a particular issue of the security or sukuk, the FHC must use the higher of the 2 poorest credit ratings for that particular issue of the security or sukuk.

31 Despite paragraph 29(e)(i)(A), (h)(iii)(A), (i)(iii)(A), (j)(iii)(A) and (k)(ii), an FHC may recognise local rating scales (rather than international ratings) of a recognised ECAI if the relevant securities, covered bonds or sukuk are held by the FHC for local currency liquidity needs arising from its operations in that local country or jurisdiction.

[MAS Notice FHC-N649 (Amendment) 2024]

¹⁷ To avoid doubt, this includes a branch of the subsidiary.

¹⁸ To avoid doubt, this includes a branch of the subsidiary.

Operational requirements

32 An FHC must treat a liquid asset as HQLA only if the liquid asset complies with the following operational requirements¹⁹:

- (a) the liquid asset is unencumbered²⁰ and is not pledged whether explicitly or implicitly, to secure, collateralise or credit-enhance any transaction, nor be designated to cover operational costs²¹;
- (b) the liquid asset is under the control of the function²² charged with managing the liquidity of the FHC. In this regard, an asset would only be considered to be under the control of the function if the asset is maintained in a separate pool managed by the function with the sole intent for use as a source of contingent funds or if the FHC is able to demonstrate that the function has the authority and legal and operational capability to monetise the asset at any point in the 30-day LCR horizon and that the proceeds of doing so are available to the function throughout the 30-day LCR horizon without directly conflicting with a stated business or risk management strategy²³;
- (c) in the case of a liquid asset received in reverse repo and securities financing transactions, the liquid asset has not been rehypothecated and is legally and contractually available for the FHC to sell or deal with such assets;
- (d) in the case of a liquid asset deposited with, or pledged to, a central bank or a PSE, the liquid asset has not been used to generate liquidity;
- (e) in the case of a liquid asset held by an FHC group entity of the FHC to meet statutory liquidity requirements imposed on the FHC group entity by the laws and regulations of any country or jurisdiction to which the FHC group entity is subject to, the FHC includes the cash outflows and cash inflows of the FHC group entity in its computation of its LCR, and the liquid asset in surplus of the

¹⁹ An FHC should periodically monetise a representative proportion of the assets in the stock through repo or outright sale, in order to test its access to the market, the effectiveness of its processes for monetisation, the availability of the assets, and to minimise the risk of negative signalling during a period of actual stress.

²⁰ To avoid doubt, all assets maintained and held by an FHC group entity of the FHC for the purposes of section 40 of the Banking Act are encumbered. For the purposes of Part II – LCR, cash balances maintained by an FHC group entity of the FHC for the purposes of section 39 of the Banking Act are considered unencumbered.

²¹ For example, rents and salary.

²² For example, the treasurer.

²³ For example, an FHC must exclude an asset which it is impeded from selling, such as an asset, which, if sold at large fire-sale discounts would cause the FHC to breach minimum solvency requirements, or an asset which the FHC is required to hold, including, but not limited to, an asset to meet statutory minimum inventory requirements for market making, from the stock of HQLA.

statutory liquidity requirements, if any, is freely available to the FHC group in times of stress;

- (f) in the case of a liquid asset received as collateral for derivatives transactions, the liquid asset is not segregated, has not been rehypothecated and is legally and contractually available for the FHC to sell or deal with such assets, and the FHC records an appropriate cash outflow for the associated risks in accordance with paragraph 87;
- (g) in the case of a liquid asset received as part of a basket of collateral as security for a transaction, the liquid asset can be monetised separately;
- (h) in the case of a liquid asset pledged as collateral, the liquid asset is unused as at the end of the day and is not intended to collateralise derivatives transactions. If the FHC is unable to determine which assets are unused, it must assume that the assets are encumbered in the following order:
 - (i) firstly, assets that are not HQLA;
 - (ii) secondly, Level 2B(II) HQLA;
 - (iii) thirdly, Level 2B(I) HQLA;
 - (iv) fourthly, Level 2A HQLA;
 - (v) fifthly, Level 1 HQLA;
- (i) in the case of a liquid asset received as part of a securities borrowing transaction that is not a reverse repo or collateral swap, the liquid asset cannot be returned or recalled within the 30-day LCR horizon.

Composition of HQLA

33 An FHC must measure its Level 1 HQLA at an amount not greater than the current market value.

34 An FHC must ensure that –

- (a) its Level 2A HQLA are subject to a 15% haircut on the current market value of each Level 2A HQLA; and

(b) its Level 2B HQLA are subject to –

- (i) a 25% haircut on the current market value of RMBS; and
- (ii) a 50% haircut on the current market value of corporate debt securities (including commercial papers), sovereign debt securities, PSE debt securities and ordinary shares.

35 Where a liquid asset can be categorised into different categories of HQLA, an FHC must categorise the liquid asset into the HQLA category with the highest haircut, except where expressly provided otherwise or where the FHC has obtained the approval of the Authority to do otherwise.²⁴

36 An FHC must apply a cap on its Level 2 HQLA, Level 2B HQLA and Level 2B(II) HQLA, to ensure that they do not exceed 40%, 15% and 5% of total HQLA respectively. The FHC must compute the cap on its Level 2 HQLA, Level 2B HQLA and Level 2B(II) HQLA after the application of the required haircuts, and after taking into account the unwinding of short-term securities financing transactions and collateral swap transaction maturing within the 30-day LCR horizon that involve the exchange of HQLA.

37 If a liquid asset no longer qualifies as HQLA²⁵, an FHC is permitted to keep such liquid assets as HQLA for an additional 30 days. This would allow the FHC additional time to adjust its HQLA as needed or replace the liquid asset.

38 An FHC must compute HQLA in accordance with the formula in Appendix 6.

Total net cash outflows

39 Total net cash outflows is defined as total expected cash outflows minus the lower of –

- (a) total expected cash inflows; and
- (b) 75% of total expected cash outflows.

40 Except where otherwise stated, an FHC must compute –

- (a) total expected cash outflows as the sum of cash outflows of outflow items; and

²⁴ An FHC may apply to the Authority for such approval with evidence supporting the less conservative treatment.

²⁵ For example, due to a rating downgrade.

- (b) total expected cash inflows as the sum of cash inflows of inflow items.

41 Except where otherwise stated, an FHC must compute cash outflows and cash inflows of outflow and inflow items by multiplying the cash outflow and cash inflow rates respectively to the outstanding balances of the outflow and inflow items due within the 30-day LCR horizon. For the purposes of such computation, the FHC must apply the cash outflow and cash inflow rates in paragraphs 44 to 144 and Appendix 7 to each category of cash outflows and cash inflows.

42 An FHC must not double count assets and liabilities in its computation of its LCR. If a liquid asset is included as part of HQLA, the FHC cannot count the cash inflows associated with that liquid asset as part of the total expected cash inflows.

43 Where transactions can be categorised into multiple categories with different cash inflow or cash outflow rates, an FHC must apply the higher cash outflow rate or lower cash inflow rate, as the case may be, to the transactions except where expressly provided otherwise or where the FHC has obtained the approval of the Authority to do otherwise.

Cash outflows

(A) Retail deposit cash outflows

44 Retail deposits are deposits placed by a natural person. Deposits from legal entities, sole proprietorships or partnerships are captured in the wholesale funding categories. An FHC must include cash outflows from all retail deposits, including demand deposits and term deposits, in its computation of its LCR, unless otherwise excluded under the criteria set out in paragraphs 54 and 56.

45 Retail deposits are divided into “stable” and “less stable” as described in paragraphs 46 and 52.

(I) Stable deposits

46 Stable deposits are those which are fully insured by the Singapore Deposit Insurance Corporation Limited (“SDIC”), or an effective government deposit insurance scheme in a foreign country or jurisdiction, where –

- (a) the depositors have established relationships with the FHC such that the deposits are highly unlikely to be withdrawn (“established relationships”); or
- (b) the deposits are in transactional accounts²⁶.

²⁶ For example, an account where salaries are automatically credited.

47 Fully insured deposits means the amount of deposits that will be fully paid out by an effective deposit insurance scheme. To avoid doubt, in the case of deposits that are in excess of the deposit insurance limit of the effective deposit insurance scheme, an FHC must treat only the amount of deposits up to the deposit insurance limit as fully insured and must not treat the amount of deposits in excess of the deposit insurance limit as fully insured.

48 Effective deposit insurance scheme means a scheme –

- (a) that has the ability to make prompt payouts;
- (b) that has a clearly defined coverage;
- (c) that has high public awareness; and
- (d) where the deposit insurer of the insurance scheme has formal legal powers to fulfil its mandate and is operationally independent, transparent and accountable.

49 An FHC may consider an explicit and legally binding sovereign deposit guarantee that effectively functions as deposit insurance as an effective deposit insurance scheme.

50 An FHC must apply a cash outflow rate of 5% to stable deposits that are fully insured by SDIC.

51 Where an FHC has stable deposits that are fully insured by an effective government deposit insurance scheme in a foreign country or jurisdiction, the FHC must follow the relevant treatment adopted by the bank regulatory agency in the foreign country or jurisdiction.

(II) Less stable deposits

52 Less stable deposits are deposits that are not stable deposits.

53 An FHC must apply a cash outflow rate of 10% to less stable deposits.

(III) Retail term deposits

54 Subject to paragraphs 55 and 56, an FHC must exclude the cash outflow from a retail term deposit with a residual maturity or withdrawal notice period of greater than 30 days from the total expected cash outflows, if the depositor has no legal right to withdraw the

deposit within the 30-day LCR horizon, or if early withdrawal results in a significant penalty that is materially greater than the loss of interest.

55 If an FHC allows a depositor to withdraw a retail term deposit referred to in paragraph 54 within the 30-day LCR horizon without applying any penalty that is materially greater than the loss of interest, or despite a clause that says the depositor has no legal right to withdraw, the FHC must include the cash outflow from all retail term deposits referred to in paragraph 54 in the total expected cash outflows as computed in accordance with paragraphs 46 to 53.

56 Despite paragraph 55, if an FHC allows a depositor that is undergoing exceptional circumstances that would qualify as hardship²⁷ to withdraw a retail term deposit referred to in paragraph 54 within the 30-day LCR horizon without applying any penalty that is materially greater than the loss of interest, or despite a clause that says the depositor has no legal right to withdraw, the FHC may continue to exclude the cash outflow from all retail term deposits referred to in paragraph 54 from the total expected cash outflows.

57 Where an FHC has a subsidiary²⁸ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in a foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction, the FHC must apply the cash outflow and cash inflow rates outlined in Part II – LCR in its computation of its LCR, except for deposits from retail and small business customers where the FHC must follow the relevant treatment adopted in that country or jurisdiction, subject to the requirements in paragraph 145.

(B) Unsecured wholesale funding cash outflows

58 Unsecured wholesale funding are liabilities and general obligations (excluding liabilities and obligations related to derivative contracts) of persons who are not natural persons and such liabilities and general obligations are not secured by legal rights to specifically designated assets owned by the person in the event of the bankruptcy, insolvency, liquidation or resolution of the person.

59 An FHC must include the cash outflow from an unsecured wholesale funding in the total expected cash outflows, if the funding is callable within the 30-day LCR horizon, has its earliest possible contractual maturity date situated within the 30-day LCR horizon²⁹, has an undetermined maturity, or has options that are exercisable at the discretion of the counterparty to the unsecured wholesale funding transaction within the 30-day LCR horizon. For options exercisable at the FHC's discretion, the FHC must consider reputational factors

²⁷ For example, loss of employment, entering into a serious accident or illness.

²⁸ To avoid doubt, this includes a branch of the subsidiary.

²⁹ For example, maturing term deposits and debt securities.

that may limit its ability not to exercise the option and its impact on unsecured wholesale funding cash outflows.

60 An FHC must not include unsecured wholesale funding that is callable by the counterparty to the unsecured wholesale funding transaction subject to a contractually defined and binding notice period surpassing the 30-day LCR horizon in the total expected cash outflows.

(I) Unsecured wholesale funding provided by small business customers

61 An FHC must treat unsecured wholesale funding provided by small business customers in the same way as retail deposits.

(II) Operational deposits generated by clearing, custody and cash management services

62 Subject to paragraphs 63, 64, 65 and 68, an FHC may, with the Authority's approval –

- (a) apply a cash outflow rate that is the same as the cash outflow rate applied to stable deposits, to the portion of operational deposits from customers receiving qualifying clearing, custody and cash management services from the FHC ("qualifying operational deposits") that is fully covered by a deposit insurance scheme; and
- (b) apply a cash outflow rate of 25% to other qualifying operational deposits.

63 For the purposes of paragraph 62, an FHC must ensure that qualifying clearing, custody or cash management services meet the following criteria:

- (a) the customer is reliant on the FHC to perform these services as an independent third party intermediary in order to fulfil its normal banking activities over the 30-day LCR horizon³⁰;
- (b) the FHC is providing these services under a legally binding agreement to customers;
- (c) the customer may only terminate the agreement referred to in sub-paragraph (b) by giving prior notice of at least 30 days or paying significant switching

³⁰ For example, this condition would not be met if the FHC is aware that the customer has adequate back-up arrangements.

costs³¹ if the operational deposits are withdrawn within the 30-day LCR horizon.

64 For the purposes of paragraph 62, an FHC must ensure that qualifying operational deposits generated from the qualifying clearing, custody and cash management services meet the following criteria:

- (a) the deposits are by-products of the underlying services provided by the FHC and not sought out in the wholesale market in the sole interest of offering interest income;
- (b) the deposits are held in specifically designated accounts and priced without giving an economic incentive to the customer³² to leave any excess balances on these accounts. In the case that interest rates in a country or jurisdiction are close to zero, such accounts are likely to be non-interest bearing.³³

65 For the purposes of paragraph 62, an FHC must not treat any excess balances that may be withdrawn while still leaving sufficient funds to fulfil the qualifying clearing, custody and cash management services as qualifying operational deposits.

66 For the purposes of paragraph 65, an FHC must –

- (a) determine the methodology for identifying excess balances that are excluded from this category; and
- (b) conduct an assessment based on the methodology at a sufficiently granular level to adequately assess the risk of withdrawal in an idiosyncratic stress.

67 For the purposes of the methodology referred to in paragraph 66(a), an FHC must ensure that the methodology takes into account relevant factors³⁴, and consider appropriate indicators³⁵ to identify those customers that are not actively managing account balances efficiently.

³¹ For example, those related to transaction, information technology, early termination or legal costs.

³² To avoid doubt, paying market interest rates for the deposits is not sufficient for the FHC to determine that the deposits are priced without giving an economic incentive to the customer.

³³ The FHC should be particularly aware that during prolonged periods of low interest rates, excess balances could be significant.

³⁴ For example, the likelihood that wholesale customers have above average balances in advance of specific payment needs.

³⁵ For example, ratios of account balances to payment or settlement volumes or to assets under custody.

68 For the purposes of paragraph 62, an FHC must not treat any deposit arising out of correspondent banking or from the provision of prime brokerage services as qualifying operational deposits.

69 Correspondent banking means any arrangement under which a bank or merchant bank (correspondent) holds deposits owned by another bank or merchant bank (respondent) and provides payment or other services to the respondent in order to settle foreign currency transactions.³⁶

70 Prime brokerage services is a package of services³⁷ offered to large active investors³⁸.

(III) Deposits in institutional networks of cooperative banks

71 An institutional network of cooperative (or otherwise named) banks is a group of legally autonomous banks with a statutory framework of cooperation with common strategic focus and brand where specific functions are performed by central institutions or specialised service providers. Subject to paragraph 72, an FHC that is a central institution or a specialised service provider of an institutional network of cooperative banks, may, with the Authority's approval, apply a cash outflow rate of 25% to the amount of deposits that members of the institutional network have placed with the FHC arising from statutory minimum deposit requirements or in the context of common task sharing and legal, statutory or contractual arrangements, so long as both the FHC that has received the deposits and the member of the institutional network that has placed the deposits participate in the same institutional network's mutual protection scheme against illiquidity and insolvency of its members.

72 Despite paragraph 71, an FHC that is a central institution or a specialised service provider of an institutional network of cooperative banks, must apply a cash outflow rate of 100% to the amount of deposits that members of the institutional network have placed with the FHC for –

- (a) correspondent banking services; and
- (b) clearing, custody or cash management services.

³⁶ For example, nostro and vostro accounts used to settle transactions in a currency other than the domestic currency of the respondent bank or merchant bank for the provision of clearing and settlement of payments.

³⁷ For example, clearing, settlement and custody, consolidated reporting, financing (margin, repo or synthetic), securities lending, capital introduction, and risk analytics.

³⁸ For example, institutional hedge funds.

(IV) Deposits contractually pledged to an FHC as collateral to secure other transactions

73 Despite paragraphs 44 to 72, if a deposit is contractually pledged to an FHC as collateral to secure a credit facility or loan granted by the FHC (“pledged deposit”) that will not mature or settle within the 30-day LCR horizon, the FHC may exclude the pledged deposit from its computation of its LCR only if the following conditions are met:

- (a) the loan or credit facility is not maturing within the 30-day LCR horizon;
- (b) there is a legally enforceable contract disallowing withdrawal of the pledged deposit before the loan is fully settled or repaid;
- (c) the amount of deposit that is excluded from its computation of its LCR does not exceed the outstanding balance of the loan or drawn portion of the credit facility.

74 Paragraph 73 does not apply to a deposit that is pledged against an undrawn facility, in which case the FHC must apply the higher of the cash outflow rate applicable to the undrawn facility and the pledged deposit.

(V) Unsecured wholesale funding provided by non-financial corporates and sovereigns, central banks, multilateral development banks and PSEs

75 An FHC must apply a cash outflow rate of 20% to unsecured wholesale funding provided by corporate customers which are not financial institutions, sovereigns, central banks, multilateral development banks, and PSEs, that also do not qualify as operational deposits, if the entire amount of the deposit is fully covered by an effective deposit insurance scheme or by a public guarantee that provides equivalent protection. Otherwise, the FHC must apply a cash outflow rate of 40% to such unsecured wholesale funding.

(VI) Unsecured wholesale funding provided by other customers that are not natural persons

76 An FHC must apply a cash outflow rate of 100% to all unsecured wholesale funding that are not included in paragraphs 58 to 75³⁹.

77 An FHC must include all notes, bonds and other debt securities issued by the FHC in this category regardless of the holder, unless the bond is sold exclusively in the retail market

³⁹ For example, deposits and other funding, that are not qualifying operational deposits, from banks, securities firms, insurance companies, fiduciaries, beneficiaries, conduits and special purpose vehicles, affiliated entities of the FHC and other entities.

and held in retail accounts (including small business customer accounts), in which case the FHC may include the notes, bonds or debt securities in the appropriate retail or small business customer deposit category provided that limitations are placed on the instrument by the FHC such that those instruments cannot be bought and held by parties other than retail or small business customers.

78 An FHC must separate customer cash balances arising from the provision of prime brokerage services, including but not limited to the cash arising from prime brokerage services, from any required segregated balances related to customer protection regimes imposed on the FHC or its FHC group entities by the laws and regulations of any country or jurisdiction to which the FHC or its FHC group entities is subject and the FHC must not net such cash balances against other customer exposures included in its computation of its LCR. An FHC must treat segregated balances related to customer protection regimes imposed by the laws and regulations of any country or jurisdiction to which the FHC or its FHC group entities is subject as cash inflows in accordance with paragraph 132 and must exclude these segregated balances from HQLA.

(C) Unsecured precious metals liabilities cash outflows

79 Unsecured precious metals liabilities are liabilities and general obligations (excluding liabilities and obligations related to derivative contracts) in precious metals and are not secured funding.⁴⁰

80 An FHC must treat unsecured precious metals liabilities in the same way as retail deposits and unsecured wholesale funding, and apply the appropriate cash outflow rates in accordance with paragraphs 44 to 78.

81 Despite paragraph 80, an FHC may apply a cash outflow rate of 0% to an unsecured precious metals liability if –

- (a) contractual arrangements require the unsecured precious metals liability to be settled by physical delivery and the FHC is able to supply the precious metals from its own inventories; or
- (b) contractual arrangements allow the FHC to choose cash settlement or physical delivery and there are no market practices or reputational factors that may limit the FHC's ability to choose physical delivery if the FHC is able to supply the precious metals from its own inventories.

⁴⁰ For example, deposits in precious metals received by an FHC.

(D) Secured funding cash outflows

82 Secured funding are liabilities and general obligations that are collateralised by legal rights to specifically designated assets owned by the borrowing institution in the case of bankruptcy, insolvency, liquidation or resolution of the borrowing institution.

83 An FHC must include forward repurchase transactions and collateral swaps that start prior to, but mature within, the 30-day LCR horizon in this category.

84 An FHC must treat collateral swaps and any other transaction which involves an exchange of non-cash assets as a combination of a repurchase and reverse repurchase agreement. The FHC must compute the cash outflow for collateral swaps based on the net cash outflow that will result from an equivalent repurchase and reverse repurchase transaction, floored at zero. The FHC must treat any collateral lent to its customers to effect short positions as a form of secured funding.

85 If a pool of assets is used as collateral for a secured funding transaction, and an FHC is unable to determine specifically which assets are used to collateralise the transaction, it must assume that the assets are encumbered in the following order:

- (a) firstly, assets which are not HQLA;
- (b) secondly, Level 2B(II) HQLA;
- (c) thirdly, Level 2B(I) HQLA;
- (d) fourthly, Level 2A HQLA;
- (e) fifthly, Level 1 HQLA.

86 An FHC must apply the relevant cash outflow rates in “Cash Outflows – C. Secured funding” section of Appendix 7 to the amount of funds raised through an outstanding secured funding transaction that matures within the 30-day LCR horizon or that arises from collateral lent to customers to effect short positions without a specified contractual maturity.

(E) Additional requirements

(I) Cash outflows from derivative contracts

87 An FHC must –

- (a) apply a cash outflow rate of 100% to the sum of all cash outflows from derivative contracts; and

- (b) compute the amounts of cash outflows from derivative contracts by doing the following:
 - (i) compute such amounts in accordance with its existing valuation methodologies;
 - (ii) exclude from such computations those liquidity requirements that would result from increased collateral needs due to market value movements or fall in value of collateral posted by the FHC;
 - (iii) assume that options are exercised at the point when they are 'in the money' to the option buyer.

88 An FHC may –

- (a) where the FHC has entered into a valid master netting agreement with its counterparty, compute the cash outflows from derivative contracts with that counterparty on a net basis with cash inflows from derivative contracts with the same counterparty; and
- (b) for the purposes of its computation of its all currency LCR, compute the cash outflows from a foreign exchange derivative contract not covered by a master netting agreement, where the foreign exchange derivative contract involves a full exchange of principal amounts within the same day, on a net basis with cash inflows from the foreign exchange derivative contract.

89 Where derivative contracts are collateralised by HQLA, an FHC must compute the cash outflows from derivative contracts net of any corresponding cash or collateral inflows that would result, all other things being equal, from contractual obligations for cash or collateral to be provided to the FHC, if the FHC is legally entitled to, and is operationally capable of, re-using the collateral in new cash raising transactions once the collateral is received.

90 An FHC must treat options which must be settled by physical delivery as secured borrowing transactions, where the assets to be delivered are treated as collateral in secured transactions or collateral swaps, and apply the appropriate cash outflow rates in accordance with paragraphs 82 to 86. The FHC may assume cash settlement, if contractual arrangements allow for both physical delivery and cash settlement. Where contractual arrangements require physical delivery as the mode of settlement, the FHC may assume that the security of lowest value will be delivered, unless the derivative contract provides otherwise.

(II) Increased liquidity needs related to downgrade triggers embedded in financing transactions, derivatives and other contracts

91 For each contract in which downgrade triggers exist, an FHC must include, in its computation of its total expected cash outflows, 100% of the additional collateral or cash outflow as stated in the governing contract to be posted for any downgrade during the 30-day LCR horizon up to and including a 3-notch downgrade of the FHC's long-term credit rating. For the purposes of this paragraph, where a downgrade trigger is linked to the FHC's short-term rating, the FHC must map such short-term rating to the corresponding long-term rating in accordance with published ratings criteria. The FHC must consider impacts on all types of margin collateral and contractual triggers which change rehypothecation rights for non-segregated collateral for the impact of the downgrade.

92 For the purposes of paragraph 91, downgrade triggers are clauses that require the posting of additional collateral, drawdown of contingent facilities, or early repayment of existing liabilities, upon a downgrade of the FHC's credit rating by a recognised ECAI.

(III) Increased liquidity needs related to the potential for valuation changes on posted collateral securing derivative and other transactions⁴¹

93 Where an FHC posts Level 1 HQLA as collateral in respect of a derivative transaction, the FHC is not required to maintain additional HQLA for potential valuation changes. If however, the FHC posts other forms of collateral to cover the potential loss of market value on those securities, the FHC must include, in its computation of its total expected cash outflows, a cash outflow equivalent to 20% of the value of all such posted collateral, net of collateral received on a counterparty basis (provided that the collateral received is not subject to restrictions on reuse or rehypothecation). The FHC must compute the 20% based on the notional amount required to be posted as collateral after any other haircuts have been applied that may be applicable to the collateral category. The FHC must only use collateral that is in a segregated margin account to offset collateral outflows that are associated with payments that are eligible to be offset from that same account. The FHC must compute the notional amount to be collateralised based on the contractual terms of the transaction. The FHC must not net collateral inflows and collateral outflows across counterparties. The FHC must compute the amount of collateral to be posted in accordance with the relevant contract governing the respective transactions.

⁴¹ Counterparties in derivatives and other transactions are typically required to post collateral to secure the marked-to-market valuations of their positions. These counterparties are then required to post additional collateral should the value of the posted collateral fall.

(IV) Increased liquidity needs related to excess non-segregated collateral held by the FHC that could contractually be called at any time by the counterparty

94 An FHC must include, in its computation of its total expected cash outflows, a cash outflow equivalent to 100% of the amount of non-segregated collateral that could contractually be recalled by the counterparty because the collateral is in excess of the counterparty's current collateral requirements, and compute the amount that can be recalled in accordance with the relevant contract governing the transactions.

(V) Increased liquidity needs related to contractually required collateral on transactions for which the counterparty has not yet demanded the collateral be posted

95 An FHC must include, in its computation of its total expected cash outflows, a cash outflow equivalent to 100% of the amount of collateral that is contractually due but where the counterparty has not yet demanded the posting of such collateral, and compute the amount of collateral in accordance with the relevant contract governing the transactions.

(VI) Increased liquidity needs related to contracts that allow collateral substitution to assets that are not HQLA or lower-quality HQLA

96 Where an FHC has received HQLA collateral that is –

- (a) not segregated; and
- (b) can be substituted with lower-quality HQLA or assets that are not HQLA without the FHC's consent in accordance with the relevant contract governing the transactions, including for secured lending transactions maturing beyond the 30-day LCR horizon that allows such collateral substitution,

the FHC must include, in its computation of its total expected cash outflows, a cash outflow equivalent to the market value of the received HQLA collateral multiplied by the difference in haircuts (as defined in paragraph 34) of the received HQLA collateral and the potential substitute collateral.

(VII) Increased liquidity needs related to market valuation changes on derivative or other transactions⁴²

97 An FHC must include, in its computation of its total expected cash outflows, a cash outflow equivalent to the largest absolute net 30-day collateral flow realised during the preceding 24 months.

98 For the purposes of paragraph 97, the FHC must compute the absolute net 30-day collateral flow for a 30-day period by doing the following:

- (a) compute the absolute net 30-day collateral flow based on both realised collateral outflows and collateral inflows during the 30-day period, including payments and receipts which are deemed to settle outstanding exposures from exchange-traded and over-the-counter derivatives structured as “settled-to-market”;
- (b) assess the absolute net 30-day collateral flow on a portfolio level.

(VIII) Loss of funding on asset-backed securities, covered bonds and other structured financing instruments

99 An FHC must apply a cash outflow rate of 100% to all asset-backed securities, covered bonds and other structured financing instruments issued by the FHC that are maturing within the 30-day LCR horizon. For the purposes of this computation, the FHC may offset inflows from Level 1 or Level 2 HQLA used as collateral for these issuances against the redemption payment of these issuances. The FHC must consider any net inflow as other contractual cash inflows in paragraph 143.

[MAS Notice FHC-N649 (Amendment) 2024]

(IX) Loss of funding on asset-backed commercial papers, conduits, securities investment vehicles and other such financing facilities

100 An FHC that has structured financing facilities that include the issuance of short-term debt instruments⁴³, must fully consider the potential liquidity risk⁴⁴ arising from these

⁴² As market practice requires collateralisation of marked-to-market exposures on derivative and other transactions, an FHC faces potentially substantial liquidity risk exposures to these valuation changes.

⁴³ For example, asset backed commercial papers.

⁴⁴ These risks include the inability of the FHC to refinance maturing debt, and the existence of derivatives or derivative-like components contractually written into the documentation associated with the structure that would allow the “return” of assets in a financing arrangement, or that require the original asset transferor to provide liquidity, effectively ending the financing arrangement (“liquidity puts”) within the 30-day LCR horizon.

structures. Where the structured financing activities of the FHC are conducted through a special purpose entity⁴⁵, the FHC must look through to the maturity of the debt instruments issued by the entity and any embedded options in financing arrangements that may potentially trigger the “return” of assets or the need for liquidity, irrespective of whether or not the SPV is consolidated.

Table 1: Cash outflow rates from potential risk elements

Potential Risk Element	Cash outflow rate required
Debt maturing within the 30-day LCR horizon	A cash outflow rate of 100% to maturing amount
Embedded options in financing arrangements that allow for the return of assets or potential liquidity support	A cash outflow rate of 100% to the amount of assets that could potentially be returned, or the liquidity required

(X) Drawdowns on committed credit and liquidity facilities

101 Committed facilities are defined as explicit contractual agreements or obligations to extend funds at a future date to retail or wholesale counterparties, which are contractually irrevocable or conditionally revocable agreements.

102 An FHC must compute the undrawn portion of the committed facilities net of any HQLA that have already been posted as collateral by the counterparty to secure the facilities or that are contractually obliged to be posted when the counterparty draws down the facility⁴⁶. This is provided that the FHC is legally entitled to and operationally capable of, re-using the collateral in new cash raising transactions once the facility is drawn, and there is no undue correlation between the probability of drawing the facility and the market value of the collateral. The FHC may net the collateral against the outstanding amount of the facility to the extent that this collateral is not already counted in the stock of HQLA.

103 A committed liquidity facility is defined as any committed, undrawn back-up facility that would be utilised to refinance the debt obligations of a customer in situations where such a customer is unable to rollover that debt in financial markets⁴⁷. An FHC must treat the amount of commitment that backs currently outstanding debt issued by the customer (or proportionate share, if a syndicated facility) maturing within the 30-day LCR horizon as a committed liquidity facility.

⁴⁵ For example, a special purpose vehicle (“SPV”), conduit or structured investment vehicle (“SIV”).

⁴⁶ For example, a liquidity facility structured as a repo facility.

⁴⁷ For example, pursuant to commercial paper programmes, secured financing transactions or obligations to redeem units.

104 Subject to paragraph 105, an FHC must treat the following as committed credit facilities:

- (a) any additional capacity of a committed facility that is not meant to be utilised to refinance the debt obligations of a customer in situations where such a customer is unable to rollover that debt in financial markets; and
- (b) general working capital facilities for corporate entities⁴⁸.

105 Despite paragraphs 103 and 104, an FHC must treat any committed facility provided to hedge funds, money market funds and special purpose funding vehicles or conduits, or other vehicles used to finance the FHC's own assets as a committed liquidity facility to other legal entities.

106 For the portion of financing programs issued by an FHC that are captured under paragraphs 99 and 100 (i.e. are maturing or have liquidity puts that may be exercised within the 30-day LCR horizon), the FHC that is the provider of the associated liquidity facilities does not need to double count the maturing financing instrument and the liquidity facility for consolidated programs.

107 An FHC must apply the following cash outflow rates to any contractual and estimated loan drawdowns from a committed facility within the 30-day LCR horizon, regardless of the maturity of the facility⁴⁹:

- (a) committed credit and liquidity facilities to retail and small business customers: 5% of the undrawn portion of these facilities;
- (b) committed credit facilities to non-financial corporates, sovereigns and central banks, PSEs and multilateral development banks: 10% of the undrawn portion of these credit facilities;
- (c) committed liquidity facilities to non-financial corporates, sovereigns and central banks, PSEs, and multilateral development banks: 30% of the undrawn portion of these liquidity facilities;

⁴⁸ For example, revolving credit facilities in place for general corporate or working capital purposes.

⁴⁹ Committed facilities can have long-term or short-term maturities, with short-term facilities frequently renewing or automatically rolling-over. In a stressed environment, it will likely be difficult for customers drawing on committed facilities of any maturity, even short-term maturities, to be able to quickly pay back the borrowings. Therefore, any contractual and estimated loan drawdowns from a committed facility within the 30-day LCR horizon are assumed to remain outstanding throughout the 30-day LCR horizon without any repayment, regardless of the maturity of the facility.

- (d) committed credit and liquidity facilities extended to banks, and merchant banks in Singapore, subject to prudential supervision: 40% of the undrawn portion of these facilities;
- (e) committed credit facilities to other financial institutions including securities firms, insurance companies, fiduciaries, and beneficiaries: 40% of the undrawn portion of these credit facilities;
- (f) committed liquidity facilities to other financial institutions including securities firms, insurance companies, fiduciaries, and beneficiaries: 100% of the undrawn portion of these liquidity facilities;
- (g) committed credit and liquidity facilities to other legal entities (including SPEs, conduits and special purpose vehicles, and other entities not included in the prior categories): 100% of the undrawn portion of these facilities.

(XI) Contractual obligations to extend funds within the 30-day LCR horizon

108 An FHC must apply a cash outflow rate of 100% to any contractual lending obligation to financial institutions not captured elsewhere in Part II – LCR.

109 If the total of all contractual obligations to extend funds to customers that are not financial institutions within the 30-day LCR horizon not captured elsewhere in Part II – LCR exceeds 50% of the total contractual cash inflows due in the 30-day LCR horizon from these customers, an FHC must report the difference at a cash outflow rate of 100%.

(XII) Other contingent funding obligations⁵⁰

110 An FHC must apply a cash outflow rate of 100% to the full amount of the contingent funding obligations that is expected to materialise within the 30-day LCR horizon under stressed conditions.

111 An FHC must treat all of the following as contingent funding obligations:

⁵⁰ Contingent funding obligations may be either contractual or non-contractual and are not lending commitments. Non-contractual contingent funding obligations include associations with, or sponsorship of, products sold or services provided that may require the support or extension of funds in the future under stressed conditions. Non-contractual obligations may be embedded in financial products and instruments sold, sponsored, or originated by the institution that can give rise to unplanned balance sheet growth arising from support given for reputational risk considerations. These include products and instruments for which the customer or holder has specific expectations regarding the liquidity and marketability of the product or instrument and for which failure to satisfy customer expectations in a commercially reasonable manner would likely cause material reputational damage to the institution or otherwise impair ongoing viability.

- (a) facilities that are unconditionally revocable by the FHC (in particular, those without a precondition of a material change in the credit condition of the borrower);
- (b) debt instruments issued by the FHC that mature if a pre-determined market-based event occurs at a pre-determined date^{50A}.

[MAS Notice FHC-N649 (Amendment) 2024]

112 Where an FHC has identified any contingent funding obligations that are explicitly contingent upon an event that is not related to a liquidity event, including debt instruments issued by the FHC that mature if a pre-determined market-based event occurs at a pre-determined date^{50B}, the FHC must inform the Authority not later than the last day of the calendar year in which such contingent funding obligation is identified.

[MAS Notice FHC-N649 (Amendment) 2024]

113 An FHC must treat non-contractual contingent funding obligations related to potential liquidity draws from joint ventures or investments in entities, which are not consolidated, as contingent funding obligations where there is the expectation that the FHC will be the main liquidity provider when the entity is in need of liquidity. The FHC must seek the Authority's approval for the methodology for quantifying such potential liquidity draws, in particular, those arising from the need to support investments in times of stress out of reputational concerns.

114 For contingent funding obligations stemming from trade finance instruments⁵¹ that are not lending commitments, an FHC must apply a cash outflow rate of 3%.

115 For contingent funding obligations stemming from trade finance instruments that are lending commitments⁵², an FHC must apply the cash outflow rates specified in paragraph 107 for such commitments.

116 An FHC must apply a cash outflow rate of 50% to contingent obligations where the FHC has covered customers' short positions using other customers' collateral which does not

^{50A} For example, autocallable notes.

[MAS Notice FHC-N649 (Amendment) 2024]

^{50B} For example, autocallable notes.

[MAS Notice FHC-N649 (Amendment) 2024]

⁵¹ Trade finance instruments consist of trade-related obligations, directly underpinned by the movement of goods or the provision of services, such as –

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

⁵² For example, direct import or export financing for non-financial corporates.

qualify as Level 1 or Level 2 HQLA, and the FHC may be obligated to find additional sources of funding for these positions in the event of customers' withdrawals.

(F) Other contractual cash outflows

117 An FHC must apply a cash outflow rate of 100% to all other contractual cash outflows within the 30-day LCR horizon, where such cash outflows are not captured elsewhere in Part II – LCR⁵³, except for cash outflows related to operating costs. The FHC must, if called upon at any time by the Authority, explain to the Authority, what these cash outflows are.

Cash inflows

118 When considering its available cash inflows, an FHC must only include contractual cash inflows (including interest payments) from outstanding exposures that are fully performing and for which the FHC has no reason to expect a default within the 30-day LCR horizon. The FHC must not include contingent inflows in total net cash inflows.

(A) Cap on total expected cash inflows

119 An FHC must, in its computation of its total net cash outflows, cap the amount of total expected cash inflows that can offset the amount of total expected cash outflows at 75% of the amount of total expected cash outflows, in accordance with paragraph 39.

(B) Secured lending, including reverse repos, securities borrowing and margin loans

120 Subject to paragraph 122, for reverse repurchase or securities borrowing agreements that are maturing within the 30-day LCR horizon, an FHC must apply the following cash inflow rates:

- (a) if the agreement is secured by Level 1 HQLA, 0%;
- (b) if the agreement is secured by Level 2 HQLA, the relevant haircut for the specific HQLA as set out in paragraph 34; or
- (c) if the agreement is secured by assets that are not HQLA, 100%.

121 Subject to paragraph 122, an FHC must treat collateralised loans extended to customers for the purposes of taking leveraged trading positions ("margin loans") as secured lending, and must apply the cash inflow rates in paragraph 120 to margin loans maturing

⁵³ For example, cash outflows to cover unsecured collateral borrowings, uncovered short positions, dividends or contractual interest payments.

within the 30-day LCR horizon, except in the case of margin loans secured by assets that are not HQLA, to which the FHC must apply a cash inflow rate of 50%.

122 Despite paragraphs 120 and 121, if the collateral obtained through reverse repurchase, securities borrowing, margin loans or collateral swaps is used to cover short positions that could be extended beyond the 30-day LCR horizon, an FHC must assume that such reverse repurchase or securities borrowing arrangements will be rolled-over and apply a cash inflow rate of 0%, reflecting the need to continue to cover the short position or to re-purchase the relevant securities.

**Table 2: Cash inflow rates for maturing secured lending
in accordance with paragraphs 120 to 122**

	Cash inflow rate (if collateral is not used to cover short positions that could be extended beyond the 30-day LCR horizon)	Cash inflow rate (if collateral is used to cover short positions that could be extended beyond the 30-day LCR horizon)
Maturing secured lending backed by Level 1 HQLA	0%	0%
Maturing secured lending backed by Level 2A HQLA	15%	0%
Maturing secured lending backed by Level 2B HQLA		
• Eligible RMBS	25%	0%
• Other Level 2B HQLA	50%	0%
Maturing margin loans backed by assets that are not HQLA	50%	0%
Maturing reverse repurchase or securities borrowing arrangements backed by assets that are not HQLA	100%	0%

123 Where an FHC's short position is being covered by an unsecured security borrowing, the FHC must assume the unsecured security borrowing of collateral from financial market participants would run-off in full, leading to a 100% outflow of either cash or HQLA to secure the borrowing, or cash to close out the short position by buying back the security, and apply a cash outflow rate of 100% in accordance with paragraph 117 to the short position. Where the FHC's short position is being covered by a collateralised securities financing transaction, the FHC must assume the short position will be maintained throughout the 30-day LCR horizon and apply a cash inflow rate of 0% to the short position.

124 If a pool of assets is used as collateral for a secured lending transaction, and an FHC is unable to determine specifically which assets are used to collateralise the transaction, the FHC must assume that the assets are encumbered in the following order:

- (a) firstly, assets that are not HQLA;
- (b) secondly, Level 2B(II) HQLA;
- (c) thirdly, Level 2B(I) HQLA;
- (d) fourthly, Level 2A HQLA;
- (e) fifthly, Level 1 HQLA.

125 Despite paragraphs 120 to 122, an FHC must manage its collateral such that it is able to fulfil obligations to return collateral whenever the counterparty decides not to roll-over any reverse repo or securities lending transaction.

126 An FHC must include forward reverse repurchase transactions and collateral swaps that start prior to, but mature within, the 30-day LCR horizon in this category.

127 Paragraphs 120 to 126 do not apply to any transaction where there is a possibility of the cash inflow occurring after the 30-day LCR horizon.

(C) Committed facilities

128 An FHC must apply a cash inflow rate of 0% to credit facilities, liquidity facilities or other contingent funding facilities that the FHC holds at other institutions for its own purposes.

(D) Other cash inflows by counterparty

129 An FHC must, in relation to loan payments, include, in its computation of its total expected cash inflows, only cash inflows from fully performing loans. An FHC must include, in its computation of its total expected cash inflows, only cash inflows at the latest possible date based on the contractual rights available to counterparties. An FHC must, in relation to revolving credit facilities, assume that the existing loan will be rolled over and any remaining balances are treated as a committed facility in accordance with paragraph 107.

130 An FHC must not include, in its computation of its total expected cash inflows, cash inflows from loans that have no specific maturity, except for minimum payments of principal, fee or interest associated with open maturity loans that are contractually due within the 30-day LCR horizon. The FHC must capture these minimum payment amounts as cash inflows at the cash inflow rates in paragraphs 131 and 132.

(I) Retail and small business customer cash inflows

131 An FHC must –

- (a) assume that all payments (including interest payments and instalments) from retail and small business customers that are fully performing and contractually due within the 30-day LCR horizon will be received in full;
- (b) assume that it will continue extending loans to retail and small business customers at a rate of 50% of contractual cash inflows; and
- (c) apply a cash inflow rate of 50% to the contractual cash inflows from retail and small business customers as a result of sub-paragraphs (a) and (b).

(II) Other wholesale cash inflows

132 An FHC must –

- (a) assume that all payments (including interest payments and instalments) received from wholesale customers that are fully performing and contractually due within the 30-day LCR horizon will be received in full;
- (b) assume that it will continue extending loans to wholesale customers at a rate of 0% of contractual cash inflows from financial institutions and central banks, and at a rate of 50% of contractual cash inflows from other wholesale customers⁵⁴; and
- (c) apply a cash inflow rate of 100% to the contractual cash inflows from financial institutions and central bank counterparties, and 50% to the contractual cash inflows from other wholesale customers, as a result of sub-paragraphs (a) and (b).

133 An FHC must apply a cash inflow rate of 100% to cash inflows from securities maturing within the 30-day LCR horizon that are not HQLA.

134 An FHC must apply a cash inflow rate of 0% to operational deposits of the FHC placed with other financial institutions for operational purposes. An FHC that is a member of an institutional network of cooperative banks must apply a cash inflow rate of 0% to deposits placed with a central institution or a specialised service provider in the institutional network arising from statutory minimum deposit requirements or in the context of common task

⁵⁴ This includes non-financial corporates, sovereigns, multilateral development banks, and PSEs.

sharing and legal, statutory or contractual arrangements, so long as both the FHC that has placed the deposits and the central institution or the specialised service provider of the institutional network that has received the deposits participate in the same institutional network's mutual protection scheme against illiquidity and insolvency of its members. Where an FHC has placed a deposit with a bank or financial institution (the "receiving financial institution"), the FHC must apply the methodology in paragraphs 62 to 70 to determine if these deposits are operational deposits.⁵⁵

(E) Unsecured precious metals assets cash inflows

135 Unsecured precious metals assets are assets (excluding assets related to derivative contracts) in precious metals and are not secured lending.⁵⁶

136 An FHC must treat cash inflows from unsecured precious metals assets that must be settled by cash settlement in the same way as loans to retail customers and wholesale customers, and apply the appropriate cash inflow rates in accordance with paragraphs 131 and 132.

137 An FHC must apply a cash inflow rate of 0% to unsecured precious metals assets that must be settled by physical delivery or where contractual arrangements allow the FHC to choose cash settlement or physical delivery.

138 Despite paragraph 137, an FHC may treat cash inflows from an unsecured precious metals asset referred to in paragraph 137 in the same way as loans to retail customers and wholesale customers, and apply the appropriate cash inflow rates in accordance with paragraphs 131 and 132, if –

- (a) contractual arrangements allow the FHC to choose between cash settlement and physical delivery and –
 - (i) physical delivery results in a significant penalty; or
 - (ii) both parties expect cash settlement; and
- (b) there are no market practices or reputational factors that may limit the FHC's ability to choose cash settlement.

⁵⁵ As a general principle, if the deposit has been classified by the receiving financial institution as an operational deposit, the FHC should also consider the deposit as an operational deposit.

⁵⁶ For example, unsecured loans in precious metals extended by an FHC or deposits in precious metals placed by an FHC.

(F) Other cash inflows

(I) Cash inflows from derivative contracts

139 An FHC must –

- (a) apply a cash inflow rate of 100% to the sum of all cash inflows from derivative contracts; and
- (b) compute the amounts of cash inflows from derivative contracts by doing the following:
 - (i) compute such amounts in accordance with its existing valuation methodologies;
 - (ii) assume that options are exercised at the point when they are ‘in the money’ to the option buyer.

140 Where –

- (a) an FHC has entered into a valid master netting agreement with its counterparty and elected to compute the cash outflows from derivative contracts with that counterparty on a net basis with cash inflows from derivative contracts with the same counterparty in accordance with paragraph 88(a), the FHC must compute the cash inflows from such derivative contracts on a net basis with cash outflows from such derivative contracts; and
- (b) an FHC has, for the purposes of its computation of its all currency LCR, elected to compute the cash outflows from a foreign exchange derivative contract not covered by a master netting agreement, where the foreign exchange derivative contract involves a full exchange of principal amounts within the same day, on a net basis with cash inflows from the foreign exchange derivative contract, in accordance with paragraph 88(b), the FHC must compute the cash inflows from the foreign exchange derivative contract on a net basis with cash outflows from the foreign exchange derivative contract.

141 Where derivative contracts are collateralised by HQLA, an FHC must compute the cash inflows from the derivative contracts net of any corresponding cash or contractual collateral outflows.

142 An FHC must treat options which must be settled by physical delivery as a secured lending transaction, and apply the appropriate cash inflow rates in accordance with paragraphs 120 to 127. The FHC may assume cash settlement, if the contractual arrangements

allow for both physical delivery and cash settlement. Where contractual arrangements require physical delivery as the mode of settlement, the FHC may assume that the security of lowest value will be delivered, unless the derivative contract provides otherwise.

(II) Other contractual cash inflows

143 An FHC must apply a cash inflow rate of 0% to all other contractual cash inflows within the 30-day LCR horizon, where such cash inflows are not captured in paragraphs 120 to 142, or excluded in paragraph 144. The FHC must, if called upon at any time by the Authority, explain to the Authority, what these cash inflows are.

144 An FHC must not include the following items as contractual cash inflows:

- (a) any cash inflow related to non-financial revenues;
- (b) any forward repurchase agreement, forward reverse repurchase agreement or forward collateral swap that starts and matures within the 30-day LCR horizon;
- (c) any forward repurchase agreement, forward reverse repurchase agreement or forward collateral swap that starts prior to and matures after the 30-day LCR horizon;
- (d) any forward sale of HQLA.

Scope of Application

145 Where an FHC has a subsidiary⁵⁷ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in a foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction and the foreign country or jurisdiction does not apply the Basel Committee on Banking Supervision's global framework for liquidity risk, the FHC must apply the parameters outlined in Part II – LCR for its computation of its LCR for deposits from retail and small business customers of that subsidiary. Where an FHC has a subsidiary⁵⁸ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in a foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction and the foreign country or jurisdiction applies the Basel Committee on Banking Supervision's global framework for liquidity risk, the FHC must interpret paragraphs 44 to 57 and the definition of "small business customers" in paragraph 25 (read with paragraph 26) in accordance with the foreign country's or jurisdiction's equivalent LCR rules for its computation of its LCR for deposits from retail and small business customers of that subsidiary.

⁵⁷ To avoid doubt, this includes a branch of the subsidiary.

⁵⁸ To avoid doubt, this includes a branch of the subsidiary.

146 Where an FHC has a subsidiary⁵⁹ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in a foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction and the foreign country or jurisdiction adopts the Alternative Liquidity Approaches, the FHC may include the HQLA recognised in the foreign country or jurisdiction for its computation of its LCR, up to the amount of the FHC's total net cash outflows stemming from the operations of the subsidiary in the foreign country or jurisdiction, and in the domestic currency of the foreign country or jurisdiction.

147 The Authority may, by notice in writing to an FHC, impose stricter parameters than that set out in Part II – LCR, on the FHC, under section 34(1) read with section 34(3) of the Act.

Utilisation of HQLA

148 An FHC must –

- (a) give prior written notification to the Authority of its intent to utilise its HQLA in a liquidity stress situation, where such utilisation will cause the FHC's LCR to fall below the prevailing minimum requirements as described in paragraph 27; and
- (b) ensure that the notification is signed by its chief executive, chief financial officer or any equivalent senior management.

149 An FHC must –

- (a) provide its justification for the utilisation of HQLA;
- (b) set out the cause of the liquidity stress situation and provide supporting documents, where available; and
- (c) detail the steps which it has taken and is going to take to resolve the liquidity stress situation,

to the Authority within one business day after the utilisation of its HQLA.

150 An FHC must also keep the Authority informed of material developments during the liquidity stress situation.

⁵⁹ To avoid doubt, this includes a branch of the subsidiary.

Submission of liquidity returns

151 An FHC must prepare the appropriate liquidity returns set out in Appendix 5 as at the last day of each month.

152 An FHC must submit to the Authority electronically through MASNET the liquidity returns prepared in accordance with paragraph 151 and not later than 14 days after the last day of each month.

153 Despite paragraph 152, if the day on which an FHC has to submit any return is not a business day, the FHC may submit the return on the next business day.

Effective date

154 This Notice takes effect on 1 July 2022.

Exclusion as Qualifying Liabilities

1 Subject to paragraph 2 of this Appendix, an FHC may exclude a bill of exchange as its Qualifying Liabilities if –

- (a) the bill of exchange is denominated in Singapore dollars. Where the underlying transaction referred to the bill of exchange is denominated in a foreign currency, the bill must be substituted for the first time into a Singapore dollar usance bill;
- (b) the bill of exchange relates to a trade transaction and reference to such a transaction appears on the face of the bill. The trade transaction must be in respect of imports into or exports from, Singapore and includes trade transactions between foreign exporters and foreign importers arranged by companies in Singapore. The FHC must verify that the first discounting bank or first discounting merchant bank in Singapore has ascertained that the bill of exchange is in fact related to trade transactions by examining the appropriate documents and obtaining written declarations from their customers that they have not sought or obtained other means of financing; and
- (c) the outstanding period to maturity of the bill of exchange is 3 months or less.

2 Despite paragraph 1 of this Appendix, an FHC must not exclude the following bills of exchange from its Qualifying Liabilities:

- (a) any bill which originates from a “switch transaction” where the transaction is solely between a foreign exporter and a foreign importer and the foreign currency trade bill is “switched” into a Singapore dollar bill and financed here;
- (b) any bill which is a bill drawn for a trade transaction in Singapore where all parties are in Singapore;
- (c) any bill which is a bill relating to services;
- (d) any bill which relates to a trade transaction where the supporting invoice has been paid by the customer prior to presentation of the bill to the first discounting bank or first discounting merchant bank in Singapore for discounting;
- (e) any bill which is overdue or been extended beyond the maturity date and a new bill has been drawn to substitute or roll-over the matured bill, regardless

of whether the original bill had 3 months or less to maturity at the time it was discounted by the first discounting bank or first discounting merchant bank in Singapore;

- (f) any bill which is drawn for imports where the importer is also receiving credit from the seller for the same period, as the imports would effectively be financed by the seller and not from proceeds of the bill.

Bill of Exchange eligible as Liquid Assets

1 An FHC that purchases a bill of exchange denominated in Singapore dollars from a bank in Singapore or a merchant bank in Singapore may include such a bill as Liquid Assets if

–

- (a) the bill has been endorsed by one or more banks in Singapore or merchant banks in Singapore;
- (b) the FHC has obtained a written confirmation from the first discounting bank or first discounting merchant bank in Singapore that –
 - (i) the first discounting bank or first discounting merchant bank in Singapore has taken necessary and sufficient steps to ascertain that the bills are in fact related to trade transactions as evidenced on the bills;
 - (ii) the bill does not originate from a “switch transaction” where the transaction is solely between a foreign exporter and a foreign importer and the foreign currency trade bill is “switched” into a Singapore dollar bill and financed in Singapore;
 - (iii) the bill is not drawn for a trade transaction in Singapore where all parties are in Singapore;
 - (iv) the bill does not relate to services;
 - (v) the bill does not relate to a trade transaction where the supporting invoice has been paid by the customer prior to presentation of the bill to the first discounting bank or first discounting merchant bank in Singapore for discounting;
 - (vi) the bill has not become overdue or been extended beyond the maturity date and no new bill has been drawn to substitute or roll-over the matured bill, regardless of whether the original bill had 3 months or less to maturity at the time it was discounted by the first discounting bank or first discounting merchant bank in Singapore; and
 - (vii) the bill is not drawn for imports where the importer is also receiving credit from the seller for the same period (as the imports would effectively be financed by the seller and not from proceeds of the bills); and

- (c) the outstanding period to maturity of the bill is 3 months or less. A bill originally drawn for more than 3 months is only eligible as Liquid Asset when there is 3 months or less to maturity.

Credit Ratings and Relevant Values

Description	Moody's Investors Services	Standard & Poor's Ratings Services	Fitch Ratings	Percentage
Long-Term Issue Ratings	Aaa	AAA	AAA	90%
	Aa1	AA+	AA+	
	Aa2	AA	AA	
	Aa3	AA-	AA-	
	A1	A+	A+	80%
	A2	A	A	
	A3	A-	A-	
	Baa1	BBB+	BBB+	70%
	Baa2	BBB	BBB	

Description	Moody's Investors Services	Standard & Poor's Ratings Services	Fitch Ratings	Percentage
Short-Term Issue Ratings	P-1	A-1	F-1	90%
	P-2	A-2	F-2	80%
	P-3	A-3	F-3	70%

1 For the purposes of determining the eligibility of a debt security or sukuk as a Liquid Asset under paragraph 11(e)(ii) of the Notice and determining the percentage to be applied when computing the amount of Liquid Assets held by an FHC on a maintenance day under paragraph 13(b)(iii) of the Notice, –

- (a) where there are 2 credit ratings for a particular issue of the debt security or sukuk, the FHC must use the poorer credit rating for that particular issue of the debt security or sukuk;
- (b) where there are more than 2 credit ratings for a particular issue of the debt security or sukuk, the FHC must use either the poorest credit rating or the higher of the 2 poorest credit ratings for that particular issue of the debt security or sukuk; and
- (c) where there are both long-term issue ratings and short-term issue ratings for a particular issue of the debt security or sukuk, the FHC must use the issue

rating which map into the lower percentage for that particular issue of the debt security or sukuk.

Schedules for Computation and Maintenance of MLA Requirements

For a 5-day business week –

Computation Day	Maintenance Day
Monday	Wednesday
Tuesday	Thursday
Wednesday	Friday, Saturday and Sunday
Thursday	next Monday
Friday	next Tuesday
next Monday	next Wednesday
next Tuesday	next Thursday
... ..	

Example 1: If Thursday is a public holiday

Computation Day	Maintenance Day
Monday	Wednesday and Thursday
Tuesday	Friday, Saturday and Sunday
Wednesday	next Monday
Friday	next Tuesday
next Monday	next Wednesday
next Tuesday	next Thursday
... ..	

Example 2: If Friday is a public holiday

Computation Day	Maintenance Day
Monday	Wednesday
Tuesday	Thursday, Friday, Saturday and Sunday
Wednesday	next Monday
Thursday	next Tuesday
next Monday	next Wednesday
next Tuesday	next Thursday
... ..	

Example 3: If next Monday is a public holiday

Computation Day	Maintenance Day
Monday	Wednesday
Tuesday	Thursday
Wednesday	Friday, Saturday, Sunday and next Monday
Thursday	next Tuesday
Friday	next Wednesday
next Tuesday	next Thursday
next Wednesday	next Friday
... ..	

Example 4: If next Tuesday is a public holiday

Computation Day	Maintenance Day
Monday	Wednesday
Tuesday	Thursday
Wednesday	Friday, Saturday and Sunday
Thursday	next Monday and Tuesday
Friday	next Wednesday
next Monday	next Thursday
next Wednesday	next Friday
... ..	

Example 5: If next Wednesday is a public holiday

Computation Day	Maintenance Day
Monday	Wednesday
Tuesday	Thursday
Wednesday	Friday, Saturday and Sunday
Thursday	next Monday
Friday	next Tuesday and Wednesday
next Monday	next Thursday
next Tuesday	next Friday, Saturday and Sunday
next Thursday	Monday, a fortnight later
... ..	

Submission Requirements**Summary of forms**

	Title
Form 1 Section 1	Assets and Liabilities by Currency
Form 1 Section 2	Top 20 individual depositors
Form 1 Section 3	Top 20 corporate depositors
Form 1 Section 4	Top 20 interbank lenders
Form 2 Section 1A	Liquidity Coverage Ratio
Form 2 Section 1B	Minimum Liquid Assets
Form 2 Section 2	Contractual cash flow for on and off-balance sheet items
Form 2 Section 3	Contractual residual maturity of on and off-balance sheet items
Form 2 Section 4	Behavioural cash flow of on and off-balance sheet items
Form 2 Section 5	Available unencumbered liquid assets

1 An FHC must submit a copy of Form 1, and as many copies of Form 2 as there are significant currencies on a Group level. The FHC may, with the Authority's approval, determine an alternate methodology to determine its significant currencies if the default methodology, which is based on whether the aggregate liabilities of the FHC denominated in the currency as at the end of the month amounts to 5% or more of the FHC's total liabilities, does not properly reflect the funding structure of the FHC. The forms to submit are given in the table below.

Forms to submit

- Form 1
 - All sections
- Form 2 (All Currency)
 - Section 1A (for FHCs complying with LCR)
 - Section 1B (for FHCs complying with MLA; All Currency section for Part 3)
 - Section 2
 - Section 3
 - Section 4 (for D-SIB FHCs)
 - Section 5
- Form 2 (Singapore Dollar)
 - Section 1A (for FHCs complying with LCR)
 - Section 1B (for FHCs complying with MLA; Singapore Dollar section for Part 3)
 - Section 2
 - Section 3
 - Section 4 (for D-SIB FHCs)
 - Section 5
- Form 2 (For each significant currency)
 - Section 1A (for FHCs complying with LCR)
 - Section 2
 - Section 3
 - Section 4 (for D-SIB FHCs)
 - Section 5

Computation of the cap on Level 2 HQLA with regard to short-term securities financing transactions

1 An FHC must apply the method described in this Appendix for its computation of the cap on Level 2A, Level 2B and Level 2B(II) HQLA with regard to short-term securities financing transactions.

2 As stated in paragraph 36 of the Notice, an FHC must, in its computation of the 40% cap on Level 2 HQLA, take into account the impact on the stock of HQLA of the amounts of Level 1 and Level 2 HQLA involved in secured funding, secured lending and collateral swap transactions maturing within the 30-day LCR horizon. The FHC must ensure that the maximum amount of adjusted Level 2 HQLA in the stock of HQLA is equal to two-thirds of the adjusted amount of Level 1 HQLA after haircuts have been applied. The FHC must ensure that its computation of the 40% cap on Level 2 HQLA takes into account any reduction in eligible Level 2B HQLA on account of the 15% cap on Level 2B HQLA.

3 An FHC must, in its computation of the 15% cap on Level 2B HQLA, take into account the impact on the stock of HQLA of the amounts of HQLA involved in secured funding, secured lending and collateral swap transactions maturing within the 30-day LCR horizon. The FHC must ensure that the maximum amount of adjusted Level 2B HQLA in the stock of HQLA is equal to $15/85$ of the sum of the adjusted amounts of Level 1 and Level 2A HQLA, or, in cases where the 40% cap is binding, up to a maximum of $1/4$ of the adjusted amount of Level 1 HQLA, both after haircuts have been applied.

4 An FHC must, in its computation of the 5% cap on Level 2B(II) HQLA, take into account the impact on the stock of HQLA of the amounts of HQLA involved in secured funding, secured lending and collateral swap transactions maturing within the 30-day LCR horizon. The FHC must ensure that the maximum amount of adjusted Level 2B(II) HQLA in the stock of HQLA is equal to $5/95$ of the sum of the adjusted amounts of Level 1, Level 2A and Level 2B(I) HQLA, or in cases where the 15% cap is binding, up to a maximum of $5/85$ of the adjusted amount of Level 1 and Level 2A HQLA, or in cases where the 40% cap is binding, up to a maximum of $5/60$ of the adjusted amount of Level 1 and, after haircuts have been applied.

5 The adjusted amount of Level 1, Level 2A, Level 2B(I) and Level 2B(II) HQLA is defined as the amount of Level 1, Level 2A, Level 2B(I) and Level 2B(II) HQLA that would result after unwinding secured funding, secured lending and collateral swap transactions maturing within the 30-day LCR horizon involving the exchange of any HQLA for any Level 1, Level 2A, Level 2B(I) and Level 2B(II) HQLA (including cash) that meet, or would meet if held unencumbered, the operational requirements for HQLA set out in paragraph 42 of the Notice. Relevant haircuts would be applied prior to the computation of the caps on Level 2 HQLA, Level 2B HQLA and Level 2B(II) HQLA set out in paragraphs 2 to 4 of this Appendix respectively.

6 A reference to “unadjusted” in this Appendix refers to the value of the relevant category of HQLA, after accounting for the haircuts as specified in paragraph 34 of the Notice and before accounting for the exchange of assets in secured funding, secured lending and collateral swap transactions maturing within the 30-day LCR horizon.

7 A reference to “adjusted” in this Appendix refers to the value of the relevant category of HQLA, after accounting for the haircuts as specified in paragraph 34 of the Notice and the exchange of assets in secured funding, secured lending and collateral swap transactions maturing within the 30-day LCR horizon.

8 The formula for the computation of HQLA is as follows:

HQLA = Unadjusted Level 1 HQLA + Unadjusted Level 2A HQLA + Unadjusted Level 2B(I) HQLA + Unadjusted Level 2B(II) HQLA – Adjustment for 5% Level 2B(II) HQLA cap – Adjustment for 15% Level 2B HQLA cap – Adjustment for 40% Level 2 HQLA cap,

where –

- (a) Adjustment for 5% Level 2B(II) HQLA cap = MAX (Adjusted Level 2B(II) HQLA – (5/95)*(Adjusted Level 1 HQLA + Adjusted Level 2A HQLA + Adjusted Level 2B(I) HQLA), Adjusted Level 2B(II) HQLA – (5/85)*(Adjusted Level 1 HQLA + Adjusted Level 2A HQLA), Adjusted Level 2B(II) HQLA – (5/60)*Adjusted Level 1 HQLA, 0);
- (b) Adjustment for 15% Level 2B HQLA cap = MAX ((Adjusted Level 2B(I) HQLA + Adjusted Level 2B(II) HQLA – Adjustment for 5% Level 2B(II) HQLA cap) – (15/85)*(Adjusted Level 1 HQLA + Adjusted Level 2A HQLA), Adjusted Level 2B(I) HQLA + Adjusted Level 2B(II) HQLA – Adjustment for 5% Level 2B(II) HQLA cap – (15/60)*Adjusted Level 1 HQLA, 0); and
- (c) Adjustment for 40% Level 2 HQLA cap = MAX ((Adjusted Level 2A HQLA + Adjusted Level 2B(I) HQLA + Adjusted Level 2B(II) HQLA – Adjustment for 5% Level 2B(II) HQLA cap – Adjustment for 15% Level 2B(I) HQLA cap) – (2/3)*Adjusted Level 1 HQLA, 0).

HQLA haircuts, cash outflow and cash inflow rates

Item	Rate
HQLA	
A. Level 1 HQLA:	
- Notes and coins - Qualifying marketable securities from sovereigns, central banks, PSEs, and multilateral development banks - Qualifying central bank reserves - Domestic sovereign or central bank debt for non-0% risk-weighted sovereigns	100%
B. Level 2 HQLA (maximum of 40% of HQLA):	
Level 2A HQLA	
- Sovereign, central bank, multilateral development banks, and PSE assets qualifying for a 20% risk weight - Qualifying corporate debt securities rated AA- or higher - Qualifying covered bonds rated AA- or higher	85%
Level 2B HQLA (maximum of 15% of HQLA)	
Level 2B(I) HQLA	
- Qualifying corporate debt securities rated at least A-	50%
Level 2B(II) HQLA (maximum of 5% of HQLA)	
- Qualifying corporate debt securities rated between BBB+ and BBB-	50%
- Qualifying sovereign, central bank and PSE debt securities rated at least BBB-	50%
- Qualifying Ordinary shares, excluding preference shares and treasury shares	50%
- Qualifying RMBS	75%
Total value of HQLA	

Item	Rate
Cash Outflows	
A. Retail deposits:	
Demand deposits and term deposits (less than 30 days maturity) - Stable deposits (fully insured by SDIC) - Stable deposits (fully insured by effective government deposit insurance schemes in foreign countries or jurisdictions) - Less stable deposits	5% To follow foreign country's or jurisdiction's rate 10%
Term deposits with residual maturity greater than 30 days	0%
B. Unsecured wholesale funding:	
Demand and term deposits (less than 30 days maturity) provided by small business customers: - Stable deposits - Less stable deposits	3%/5% 10%
Operational deposits generated by clearing, custody and cash management services: - Portion covered by deposit insurance	25% 3%/5%
Qualifying deposits provided by members of an institutional network of cooperative banks	25%
Non-financial corporates, sovereigns, central banks, multilateral development banks, and PSEs - If the entire amount fully covered by deposit insurance scheme	40% 20%
Other legal entity customers not included above	100%
Retail and small business customer deposits in foreign countries or jurisdictions	To follow foreign country's or jurisdiction's rate
C. Secured funding:	
- Secured funding transactions with central bank counterparty or backed by Level 1 HQLA with any counterparty - Secured funding transactions backed by Level 2A HQLA, with any counterparty - Secured funding transactions backed by assets other than Level 1 or Level 2A HQLA, with domestic sovereigns, multilateral development banks, or domestic PSEs with a risk weight of 20% or lower under paragraphs 7.3.47 and 7.3.48 of MAS Notice 637 as applied by paragraph 7.1 of MAS Notice FHC-N637 - Backed by RMBS eligible for inclusion in Level 2B HQLA - Backed by other Level 2B HQLA - All other secured funding transactions	0% 15% 25% 25% 50% 100%

Item	Rate
D. Additional requirements:	
Liquidity needs (e.g. collateral calls) related to financing transactions, derivatives and other contracts	3 notch downgrade
Market valuation changes on derivatives transactions (largest absolute net 30-day collateral flows realised during the preceding 24 months)	Look back approach
Valuation changes on posted collateral that are not Level 1 HQLA securing derivatives	20%
Excess collateral held by an FHC related to derivative transactions that could contractually be called at any time by its counterparty	100%
Liquidity needs related to collateral contractually due from the FHC on derivatives transactions	100%
Increased liquidity needs related to derivative transactions that allow collateral substitution to assets that are not HQLA	100%
ABCP, SIVs, conduits, SPVs, etc.:	
- Liabilities from maturing ABCP, SIVs, SPVs, etc. (applied to maturing amounts and returnable assets)	100%
- Asset Backed Securities (including covered bonds) applied to maturing amounts	100%
Undrawn committed credit and liquidity facilities provided to:	
- Retail and small business customers	5%
- Non-financial corporates, sovereigns and central banks, multilateral development banks, and PSEs	10% for credit, 30% for liquidity
- Banks, and merchant banks in Singapore, subject to prudential supervision	40%
- Other financial institutions (include securities firms, insurance companies)	40% for credit, 100% for liquidity
- Other legal entity customers, credit and liquidity facilities	100%
Other contingent funding liabilities (such as guarantees, letters of credit, revocable credit and liquidity facilities, etc.)	
- Trade finance	3%
- Customers' short positions covered by other customers' collateral	50%
- Others	100% of expected amount unless otherwise stated
Any additional contractual outflows	100%
Net derivatives cash outflows	100%
Any other contractual cash outflows	100%
Total expected cash outflows	

Item	Rate
Cash Inflows	
Maturing secured lending transactions backed by the following collateral:	
- Level 1 HQLA	0%
- Level 2A HQLA	15%
- Level 2B HQLA (eligible RMBS)	25%
- Level 2B HQLA (Others)	50%
Margin loans backed by assets that are not HQLA	50%
Maturing reverse repurchase or securities borrowing arrangements backed by assets that are not HQLA	100%
Credit or liquidity facilities provided to the FHC	0%
Operational deposits held at other financial institutions (include deposits held at a central institution or a specialised service provider of an institutional network of cooperative banks)	0%
Other cash inflows by counterparty:	
- Amount to be received from retail customers	50%
- Amount to be received from wholesale customers other than financial institutions and central banks, from transactions other than those listed in above inflow categories	50%
- Amount to be received from financial institutions and central banks, from transactions others than those listed in above inflow categories	100%
Net derivatives cash inflows	100%
Other contractual cash inflows not included above	0%
Total expected cash inflows	
Total net cash outflows = Total expected cash outflows minus min [total expected cash inflows, 75% of total expected cash outflows]	
LCR = HQLA / Total net cash outflows	

[MAS Notice FHC-N649 (Amendment) 2024]

Principles for Sound Liquidity Risk Management

- 1 The guidelines referred to in footnotes 10 and 11 of the Notice are as follows:
 - (a) an FHC should actively monitor and control liquidity risk exposures and funding needs at the level of individual legal entities, foreign subsidiaries, and the FHC group as a whole, taking into account legal, regulatory and operational limitations to the transferability of liquidity;
 - (b) where an FHC has a subsidiary⁶⁰ in a foreign country or jurisdiction, the FHC should have processes in place to capture all existing liquidity transfer restrictions to the extent practicable, and to monitor the rules and regulations in the foreign countries or jurisdictions and assess their liquidity implications for the FHC group as a whole;
 - (c) an FHC should conduct their own stress tests to assess the level of liquidity they should hold, and construct their own scenarios that could cause difficulties for their specific business activities. Such internal stress tests should incorporate time horizons longer than 30 days. An FHC that is an internationally active designated financial holding company or is an entity within a group that is designated by the Authority as a D-SIB should share the results of these additional stress tests with the Authority;
 - (d) an FHC should monitor the legal entity and physical location where collateral is held and how it may be mobilised in a timely manner. Specifically, it should have a policy in place that identifies legal entities, geographical locations, currencies and specific custodial or bank accounts where liquid assets are held;
 - (e) an FHC should actively manage its intraday liquidity positions and risks to meet payment and settlement obligations on a timely basis under both normal and stressed conditions and thus contribute to the smooth functioning of payment and settlement systems;
 - (f) an FHC should meet their liquidity needs in each currency and maintain liquid assets consistent with the distribution of their liquidity needs by currency. The FHC should be able to use the liquid assets to generate liquidity in the currency and in the country or jurisdiction in which the net cash outflows arise. In managing foreign exchange liquidity risk, the FHC should take into account the risk that its ability to swap currencies and access the relevant foreign exchange

⁶⁰ To avoid doubt, this includes a branch of the subsidiary.

markets may erode rapidly under stressed conditions. The FHC should be aware that sudden, adverse exchange rate movements could sharply widen existing mismatched positions and alter the effectiveness of any foreign exchange hedges in place;

- (g) an FHC should ensure that liquid assets held are well diversified within the asset classes themselves (except for sovereign debt from Singapore or from a foreign country or jurisdiction where the FHC has a subsidiary⁶¹ that is approved, licensed, registered or otherwise regulated by a bank regulatory agency in the foreign country or jurisdiction to carry on banking business under the laws of the foreign country or jurisdiction, central bank reserves, central bank debt securities, and cash). The FHC should have policies and limits in place in order to avoid concentration with respect to asset types, issue and issuer types, and currency (consistent with the distribution of net cash outflows by currency) within asset classes;
- (h) an FHC should monitor the concentration of cash inflows across wholesale customers in the context of the FHC's liquidity management in order to limit overreliance on the arrival of cash inflows from one or a limited number of wholesale customers.

2 In this Appendix, "liquid assets" means –

- (a) in relation to an FHC that has chosen to comply with Part I – MLA of the Notice, any Liquid Asset as defined in paragraph 10 of the Notice; and
- (b) in relation to an FHC that must comply with or has chosen to comply with Part II – LCR of the Notice, any high quality liquid asset or HQLA as defined in paragraph 25 of the Notice.

⁶¹ To avoid doubt, this includes a branch of the subsidiary.

*** Notes on History of Amendments**

1. MAS Notice FHC-N649 (Amendment) 2024 dated 16 May 2024 with effect from 1 July 2024.