

## MAS NOTICE 1015

11 June 2021

Last revised on 27 September 2021

NOTICE TO MERCHANT BANKS

BANKING ACT, CAP. 19

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

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1 This Notice is issued pursuant to section 38(1) as applied by section 55ZG(1) and section 65A(2) of the Banking Act (Cap. 19) (“the Act”), and applies to all merchant banks in Singapore (“Merchant Banks”). Except where specifically mentioned in the paragraph, the requirements set out in this Notice are issued under section 38(1) as applied by section 55ZG(1).<sup>1</sup>

2 In this Notice –

“Accounting Standards” has the same meaning as in section 4(1) of the Companies Act (Cap. 50);

“banking group”, in relation to a Merchant Bank, means the Merchant Bank and its banking group entities;

“banking group entity”, in relation to a Merchant Bank, means any subsidiary or any other entity which is treated as part of the Merchant Bank’s group of entities according to the Accounting Standards;

“business day” means any day on which a Merchant Bank carries on business;

“country-level group”, in relation to a Merchant Bank, means a group comprising any combination of the Merchant Bank and any bank in Singapore or any other Merchant Bank that is a related corporation of the first-mentioned Merchant Bank approved by the Authority to be part of the group;

“Current Account” means the current account opened and maintained by the Authority for the Merchant Bank;

“holding company” has the same meaning as in section 5 of the Companies Act;

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<sup>1</sup> A Merchant Bank should ensure its liquidity risk management is sound and commensurate with the size, nature and complexity of its activities, including meeting the guidelines in Appendix 8.

“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 (Cap. 329A); and

“significant currency”, in relation to a Merchant Bank, means a currency where the aggregate liabilities of the Merchant Bank denominated in that currency as at the end of the month amounts to 5% or more of the Merchant Bank’s total liabilities.

- 3 A Merchant Bank only needs to comply with Part II – LCR if it has been notified by the Authority that it is a domestic systemically important bank<sup>2</sup> (“D-SIB”).
- 4 A Merchant Bank that does not fall within paragraph 3 above 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 a Merchant Bank 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, a Merchant Bank that has chosen to comply with Part II – LCR will have to write in to the Authority for approval to comply with Part I – MLA subsequently. The Authority will not ordinarily grant such an approval except in exceptional circumstances.
- 5 A Merchant Bank that has to comply with Part II – LCR may, with the Authority’s approval, comply with the requirements set out in this Notice on a country-level group basis. The Authority will subject the Merchant Bank and the entities which are in the country-level group to an assessment before granting any approval for the Merchant Bank to comply with this Notice on a country-level group basis.
- 6 The expressions used in this Notice shall, except where expressly defined in this Notice or where the context otherwise requires, have the same meanings as in the Act.

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<sup>2</sup> 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>.

## **PART I – MLA**

### **Definitions**

7 In Part I – MLA –

“associate” has the same meaning as in the Fifth Schedule to the Act, with each reference in that Fifth 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 (Cap. 23);

“computation day” means the business day on which a Merchant Bank computes the minimum amount of liquid assets that the Merchant Bank has to maintain on the relevant maintenance day;

“counterparty related to a Merchant Bank” means –

- (a) a related corporation of the Merchant Bank;
- (b) an associate of the Merchant Bank;
- (c) an entity which is treated as part of the Merchant Bank’s group of entities according to the Accounting Standards; and
- (d) a subsidiary or associate of any holding company of the Merchant Bank;

“limited purpose e-money” has the same meaning as given by Part 3 of the First Schedule to the Payment Services Act 2019 (Act 2 of 2019);

“maintenance day”, in relation to any computation day, means the day occurring two 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 (Cap. 186);

“Qualifying Liabilities”, in relation to a Merchant Bank, means the aggregate of –

- (a) all liabilities of the Merchant Bank<sup>3</sup> denominated in the relevant currency or currencies, as the case may be, due to non-bank customers, computed on a gross basis;
- (b) all liabilities of the Merchant Bank denominated in the relevant currency or currencies, as the case may be, due to the Authority within one month from the computation day, 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 Merchant Bank on the Authority maturing within one month from the computation day, and where this is a net asset, the net asset amount may be deducted from Qualifying Liabilities;
- (c) all liabilities of the Merchant Bank denominated in the relevant currency or currencies, as the case may be, due to banks (whether licensed in Singapore or not), other Merchant Banks, and where the Merchant Bank is incorporated outside Singapore, the Merchant Bank’s head office and other branches of the Merchant Bank’s head office, within one month from the computation day, 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 Merchant Bank on banks and other Merchant Banks maturing within one month from the computation day, and where this is a net asset, the net asset amount must not be deducted from Qualifying Liabilities and must be treated as zero;
- (d) 15% of all undrawn commitments 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 Merchant Bank 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 Merchant Bank may use the sub-limit amount for its computation of its Singapore Dollar Qualifying Liabilities;
- (e) all liabilities of the Merchant Bank 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

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<sup>3</sup> To avoid doubt, this excludes any contingent liability of the Merchant Bank.

- (f) all liabilities of the Merchant Bank denominated in the relevant currency or currencies, as the case may be, arising from –
  - (i) the provision of any e-money issuance service as defined in section 2(1) of the Payment Services Act 2019 (Act 2 of 2019); and
  - (ii) the issuance of any limited purpose e-money;

but does not include any liability of the Merchant Bank arising from –

- (A) any funds received through repurchase agreements of Singapore Government Securities or MAS Bills;
- (B) any funds received through currency, interest rate and foreign exchange swaps; and
- (C) any funds raised through the discounting of any bill of exchange which satisfies the requirements set out in Appendix 1, with banks in Singapore, finance companies (as defined in section 2 of the Finance Companies Act, Cap. 108), or other Merchant Banks;

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

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

[MAS Notice 1015 (Amendment) 2021]

“Tier-1 liquid asset” means –

- (a) for the purposes of the Singapore Dollar MLA requirement, the assets listed in paragraph 8(a), (b), (c), (d) and (e), other than assets maintained and held for the purposes of section 40 as applied by section 55ZG(2) of the Act; or
- (b) for the purposes of the all currency MLA requirement, the assets listed in paragraph 8(a), (b), (c), (d), (e) and (f), other than assets maintained and held for the purposes of section 40 as applied by section 55ZG(2) of the Act; and

“undrawn commitment” means –

- (a) in the case where a Merchant Bank is incorporated in Singapore, any arrangement of the Merchant Bank with any person; or
- (b) in the case where the Merchant Bank is incorporated outside Singapore, any arrangement of the Merchant Bank with any person, the Merchant Bank’s head office, or any other branch of the Merchant Bank’s head office that is located outside Singapore,

that will pose liquidity risk to the Merchant Bank in the event the person, the Merchant Bank’s head office, the branch of the Merchant Bank’s head office, or a third party in whose favour the arrangement is made, as the case may be, utilises or calls upon the commitment<sup>4</sup>, but does not include any arrangement where the drawdown or utilisation is subject to the approval of the Merchant Bank at the point of drawdown, and the Merchant Bank has the unconditional right to refuse drawdown.

#### **Assets approved as “liquid assets”**

8 For the purposes of section 38(9) as applied by section 55ZG(1) of the Act, “liquid assets” are –

- (a) currency notes and coins of Singapore which are legal tender in Singapore, or foreign currency;
- (b) cash balances in a Merchant Bank’s Current Account maintained with the Authority<sup>5</sup>;
- (c) any Singapore Government Securities (“SGS”) and any SGS held under a reverse repurchase agreement;
- (d) any sukuk issued by Singapore Sukuk Pte Ltd;
- (e) any MAS Bills and any MAS Bills held under a reverse repurchase agreement;
- (f) any debt securities or sukuk<sup>6</sup> denominated in the relevant currency or currencies, as the case may be, not being a sukuk which is a liquid asset by virtue of sub-

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<sup>4</sup> 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 Merchant Bank and any liquidity facilities granted by the Merchant Bank.

<sup>5</sup> To avoid doubt, this does not include overnight deposits or term deposits placed with the Authority.

<sup>6</sup> To avoid doubt, only sukuk that demonstrates characteristics similar to a debt security are approved by the Authority as liquid assets.

paragraph (d), that is issued by a sovereign or a central bank and assigned a credit rating of at least AA- by Fitch, Inc, or Standard and Poor's Corporation or a credit rating of at least Aa3 by Moody's Investor Services, and includes any such debt securities or sukuk held under a reverse repurchase agreement;

(g) any debt securities or sukuk denominated in the relevant currency or currencies, not being a sukuk which is a liquid asset by virtue of sub-paragraph (d), and not being a debt security or sukuk defined in sub-paragraph (f), that are –

(i) issued by a statutory board in Singapore, with a minimum issue size of S\$200 million, at 90% of its value;

(ii) with a minimum issue size of S\$200 million which satisfies either the long-term issue or short-term issue credit ratings and at the relevant value set out in Appendix 3;

(iii) issued by a sovereign, a supranational (i.e. an entity that is both of a governmental and international character), or a sovereign-guaranteed company (where the sovereign or government is not the Singapore Government) and the debt securities or sukuk are assigned a credit rating of AAA by Fitch, Inc, or Standard and Poor's Corporation or a credit rating of Aaa by Moody's Investor Services; or

(iv) issued by a AAA-rated PSE and accorded a risk weight of 0% under paragraph 7.3.17 of MAS Notice 637,

and includes any such debt securities or sukuk held under a reverse repurchase agreement<sup>7</sup>; or

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

provided always that –

(i) the asset is free from any prior encumbrances;

(ii) where the asset is a debt security or sukuk, it is not a convertible debt security or sukuk and if a Merchant Bank holds more than 20% of the total market of a particular issue of debt securities or sukuk (including issues from different

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<sup>7</sup> 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.

tranches), the Merchant Bank must treat as liquid assets, 50% of the value of those debt securities or sukuk; and

- (iii) the asset does not arise or result from any contractual or other arrangements with, or investments in, a counterparty related to the Merchant Bank.

### **Valuation of Liquid Assets**

- 9 When computing the amount of liquid assets held by a Merchant Bank on any maintenance day, the Merchant Bank 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.

### **MLA Framework**

- 10 Every Merchant Bank must hold, at all times –
  - (a) liquid assets denominated in any currency amounting to no less than 16% of the value of its Qualifying Liabilities denominated in all currencies (“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”).
- 11 A Merchant Bank must treat every business day as a computation day. On a maintenance day, a Merchant Bank 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, a Merchant Bank must hold for that day, the Singapore Dollar MLA requirement and the all currency MLA requirement of the immediately preceding maintenance day which is a business day. Appendix 4 sets out the computation and maintenance schedules for a Merchant Bank determining its MLA requirements.

### **Minimum Amount of Tier-1 assets**

- 12 A Merchant Bank must hold, at all times, at least 50% of its liquid assets held for the purposes of complying with the Singapore Dollar MLA requirement and the all currency MLA requirement, respectively, in Tier-1 liquid assets.

### **Utilisation of liquid assets**

- 13 A Merchant Bank must notify the Authority in writing of its intent to utilise its MLA in a liquidity stress situation prior to the utilisation. The Merchant Bank must ensure that the notification is signed by its chief executive, chief financial officer or any equivalent senior management.

- 14 A Merchant Bank must –

- (a) provide its justification for the utilisation of MLA;
- (b) set out the cause of the liquidity stress situation and to 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.

- 15 A Merchant Bank must keep the Authority informed of material developments during the liquidity stress situation.

### **Submission of liquidity returns**

- 16 A Merchant Bank must prepare the appropriate liquidity returns set out at Appendix 5 as at the last day of each month.

- 17 A Merchant Bank must submit all returns prepared in accordance with paragraph 16 to the Authority electronically through MASNET not later than 14 days after the last day of each month.

- 18 Despite paragraph 17, if the day on which a Merchant Bank has to submit any return is not a business day, the Merchant Bank may submit the return on the next business day.

## **PART II – LCR**

### **Definitions**

19 In Part II – LCR –

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

“cash management activity”, in relation to a Merchant Bank, means –

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

in the context of a relationship where the Merchant Bank 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 activity”, in relation to a Merchant Bank, means –

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

in the context of a relationship where the Merchant Bank 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 81;

“custody activity”, in relation to a Merchant Bank, means –

- (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) client subscriptions and redemptions;
- (g) asset and corporate trust servicing; and
- (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 Merchant Bank provides the above services to a customer in connection with the customer's transactions in and holdings of financial assets;

"external credit assessment institution" or "ECAI" has the same meaning as in MAS Notice 637;

"high quality liquid assets" or "HQLA" means any asset –

- (a) listed in paragraph 25 that satisfies the requirements set out in paragraph 28; and
- (b) which is available on a Merchant Bank's balance sheet as at the end of the day immediately preceding the 30-day LCR horizon;

"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 specific capital adequacy requirements set out in a direction issued by the Authority under section 28 of the Monetary Authority of Singapore 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 specific capital adequacy requirements set out in a direction issued by the Authority under section 28 of the Monetary Authority of Singapore Act;

“Level 1 HQLA” means any HQLA listed in paragraph 25(a), (b), (c), (d), (g), (h) or (n) which satisfies the requirements set out in paragraph 28;

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

“Level 2A HQLA” means any HQLA listed in paragraph 25(e), (i) or (o) which satisfies the requirements set out in paragraph 28;

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

“Level 2B(I) HQLA” means any HQLA listed in paragraph 25(j) or (o) which satisfies the requirements set out in paragraph 28;

“Level 2B(II) HQLA” means any HQLA listed in paragraph 25(f), (k), (l), (m) and (o) which satisfies the requirements set out in paragraph 28;

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

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

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

“parent bank”, in relation a Merchant Bank, means a bank (whether licensed in Singapore or not), of which the Merchant Bank is a subsidiary;

“recognised ECAI” has the same meaning as in MAS Notice 637;

“retail deposit” has the same meaning as in paragraph 40;

“secured funding” has the same meaning as in paragraph 65;

“small business customer” means any customer that enters into a transaction with a Merchant Bank with total exposures of less than S\$2 million (on a consolidated basis where applicable) and are managed by the Merchant Bank as retail exposures<sup>8</sup>;

“stable deposit” has the same meaning as in paragraph 42; and

“unsecured wholesale funding” has the same meaning as in paragraph 47.

## **LCR Framework**

20 A Merchant Bank that has been notified by the Authority that it is a D-SIB and which parent bank is incorporated in Singapore must maintain at all times –

(a) a Singapore Dollar LCR of at least 100%; and

(b) an all currency LCR of at least 100%.

21 Pursuant to section 65A(2) of the Act, a Merchant Bank referred to in paragraph 20 must comply with the requirements on Singapore Dollar LCR and all currency LCR on a consolidated (“Group”) level, which consolidates the assets and liabilities of all its banking group entities, other than those of the following banking group entities (“excluded entities”), if any:

(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 Merchant Bank for the purposes of complying with this paragraph.

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<sup>8</sup> “Small business customers” are defined in line with the definition of loans extended to small businesses in footnote 124 of MAS Notice 637 that are managed as retail exposures and are generally considered as having similar liquidity risk characteristics to retail accounts provided the total aggregated funding raised from one small business customer is less than S\$2 million (on a consolidated basis where applicable). Where a Merchant Bank does not have any exposure to a small business customer that would enable it to use the definition under footnote 124 of MAS Notice 637, the Merchant Bank may include such a deposit in this category provided that the total aggregate funding raised from the customer is less than S\$2 million (on a consolidated basis where applicable) and the deposit is managed as a retail deposit. This means that the Merchant Bank treats such deposits in its internal risk management systems consistently over time and in the same manner as other retail deposits, and that the deposits are not individually managed in a way comparable to larger corporate deposits.

- 22 Pursuant to paragraph 21, and for the purposes of the requirements on Singapore Dollar LCR and all currency LCR at the Group level in Part II – LCR (other than paragraph 21), a Merchant Bank must deem –
- (a) all assets, liabilities, equity, transactions, exposures and operations of a banking group entity of the Merchant Bank to be that of the Merchant Bank (per the scope of consolidation in paragraph 21); and
  - (b) all collateral held by a banking group entity of the Merchant Bank to be collateral held by the Merchant Bank (per the scope of consolidation in paragraph 21).
- 23 Any other Merchant Bank that is not referred to in paragraph 20 and has been notified by the Authority that it is a D-SIB, or a Merchant Bank that elects to comply with the LCR framework, must maintain at all times –
- (a) a Singapore Dollar LCR of at least 100%; and
  - (b) an all currency LCR of at least –
    - (i) 100% in the case where the Merchant Bank’s head office or parent bank is incorporated in Singapore; or
    - (ii) 50% in the case where the Merchant Bank’s head office or parent bank is incorporated outside Singapore.
- 24 A Merchant Bank must only use liquid assets 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 must only include total net cash outflows denominated in Singapore dollars.

**Assets approved as “Liquid Assets”**

- 25 For the purposes of section 38(9) as applied by section 55ZG(1) of the Act, “liquid assets” are –
- (a) currency notes and coins of Singapore which are legal tender in Singapore, or foreign currency;
  - (b) reserves held with the Authority and other central banks, which include –
    - (i) cash balances in a Merchant Bank’s Current Account maintained with the Authority;

- (ii) a Merchant Bank's overnight deposits with a central bank; and
- (iii) a Merchant Bank's term deposits with a central bank where –
  - (A) the Merchant Bank has a contractual agreement with the central bank to repay such deposits on notice from the Merchant Bank; or
  - (B) the deposits constitute a loan against which the Merchant Bank may borrow on a term basis or on an overnight but automatically renewable basis<sup>9</sup>,

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

- (c) any sukuk issued by Singapore Sukuk Pte Ltd;
- (d) any marketable security representing a claim on or guaranteed by a sovereign, a central bank, a PSE, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European 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 of MAS Notice 637 or paragraphs 7.3.17 to 7.3.20 of MAS Notice 637;
  - (ii) it is traded in large, deep and active repurchase agreement ("repo") or cash markets characterised by a low level of concentration;
  - (iii) it has a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions;
  - (iv) it is not an obligation of a financial institution or any of its related corporations;
- (e) any marketable security representing a claim on or guaranteed by, a sovereign, a central bank, a PSE or a multilateral development bank, which satisfies the following conditions:
  - (i) it is assigned a 20% risk weight under paragraphs 7.3.13 to 7.3.20 of MAS Notice 637;

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<sup>9</sup> Other term deposits with central banks are not eligible as liquid assets. However, if the term expires within the 30-day LCR horizon, the term deposit could be considered as an inflow per paragraph 108.

- (ii) it is traded in large, deep and active repo or cash markets characterised by a low level of concentration;
  - (iii) it has a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 10 percentage points over a 30-day period of significant liquidity stress;
  - (iv) it is not an obligation of a financial institution or any of its related corporations;
- (f) any marketable security representing a claim on or guaranteed by a sovereign, a central bank or a PSE, which satisfies the following conditions:
- (i) it –
    - (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, i.e. a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress;
  - (iv) it is not an obligation of a financial institution or any of its related corporations;
- (g) where a sovereign has a non-0% risk weight as determined in accordance with Table 7-1 of MAS Notice 637, any sovereign or central bank debt security issued in domestic currencies by the sovereign or its central bank –
- (i) if the sovereign or central bank is from a Merchant Bank’s home country or jurisdiction; or

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

up to the amount of a Merchant Bank’s stressed net cash outflows in that specific foreign currency arising from the operations of the Merchant Bank or its subsidiary in the country or jurisdiction where the Merchant Bank has a branch or subsidiary;
- (i) any corporate debt security, covered bond or sukuk, which satisfies the following conditions:
  - (i) in the case of a corporate debt security or sukuk, it is not a complex structured product or a subordinated debt security and it is not issued by a financial institution or any of its related corporations;
  - (ii) in the case of a covered bond, it is not issued by the Merchant Bank 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, i.e. a maximum price decline or increase in haircut not exceeding 10 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;
  - (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, i.e. a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress;
- (k) any corporate debt security or sukuk, which satisfies the following conditions:
- (i) it is not a complex structured product or a subordinated debt security;
  - (ii) it is not issued by a financial institution or any of its related corporations;
  - (iii) it –
    - (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, i.e. a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress;
- (I) any residential mortgage-backed security (“RMBS”) which satisfies the following requirements:
- (i) it is not issued by, and the underlying assets have not been originated by, the Merchant Bank or any of its related corporations;
  - (ii) it has a long-term credit rating from a recognised ECAI of AA or higher or, in the absence of a long-term rating, a short-term rating equivalent in quality to the long-term rating;
  - (iii) it is traded in large, deep and active repo or cash markets characterised by a low level of concentration;
  - (iv) it has a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 20 percentage points over a 30-day period of significant liquidity stress;
  - (v) the underlying asset pool is restricted to residential mortgages and does not contain structured products;
  - (vi) the underlying residential mortgages are “full recourse” loans (i.e. in the case of foreclosure the mortgage owner remains liable for any shortfall in sales proceeds from the property) and have a maximum weighted average<sup>10</sup> loan-to-value ratio (LTV) of 80% at the time of issuance of the RMBS;

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<sup>10</sup> Weighted average LTV is computed as follows:

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

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

- (vii) the securitisations are subject to risk retention laws and regulations which require issuers to retain an interest in the assets they securitise;
- (m) 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) if the stock is held in a country or jurisdiction outside of Singapore where a Merchant Bank has a branch or subsidiary and the Merchant Bank or its subsidiary takes liquidity risk in that country or jurisdiction, an index that the banking supervisor 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 for which a Merchant Bank can demonstrate to the satisfaction of the Authority that the stock is as liquid and readily marketable as equities traded on the indices in sub-paragraph (m)(iii)(A);
  - (iv) denominated in the domestic currency of a Merchant Bank’s home country or jurisdiction or in the currency of the country or jurisdiction where the Merchant Bank has a branch or subsidiary and the Merchant Bank or its subsidiary takes liquidity risk in that country or jurisdiction;
  - (v) traded in large, deep and active repo or cash markets characterised by a low level of concentration;
  - (vi) have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions, i.e. a maximum price decline or increase in haircut not exceeding 40 percentage points over a 30-day period of significant liquidity stress;

- (n) any liquid assets recognised as alternative liquid assets in countries or jurisdictions that implement the Alternative Liquidity Approaches<sup>11</sup> and which the banking supervisor of that country or jurisdiction recognises for purposes of including the liquid assets as Level 1 HQLA, subject to the requirements specified in paragraph 120; and
  - (o) any liquid assets recognised as alternative liquid assets in countries or jurisdictions that implement the Alternative Liquidity Approaches<sup>11</sup> and which the banking supervisor of that country or jurisdiction recognises for purposes of including the liquid assets as Level 2 HQLA, subject to the requirements specified in paragraph 120.
- 26 For the purposes of paragraph 25(f)(i)(A), (i)(iii)(A), (j)(iii)(A), (k)(iii)(A) and (l)(ii), in the event of split ratings, a Merchant Bank must determine the applicable rating in accordance with the method used in paragraph 7.3.4 of MAS Notice 637.
- 27 Despite paragraph 25(f)(i)(A), (i)(iii)(A), (j)(iii)(A), (k)(iii)(A) and (l)(ii), a Merchant Bank may recognise local rating scales (rather than international ratings) of a recognised ECAI if corporate debt securities or covered bonds are held by a Merchant Bank for local currency liquidity needs arising from its operations in that local country or jurisdiction.

### **Operational requirements**

- 28 A Merchant Bank must treat a liquid asset as HQLA only if the liquid asset complies with the following operational requirements<sup>12</sup>:
- (a) the liquid asset is unencumbered<sup>13</sup> and is not pledged whether explicitly or implicitly, to secure, collateralise or credit-enhance any transaction, nor be designated to cover operational costs<sup>14</sup>;
  - (b) the liquid asset is under the control of the function<sup>15</sup> charged with managing the liquidity of the Merchant Bank. 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

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<sup>11</sup> Please refer to paragraphs 55-67 of the “Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring Tools”.

<sup>12</sup> A Merchant Bank should periodically monetise a representative proportion of the assets in the stock through repo or outright sale, in order to test its access to the market, the effectiveness of its processes for monetisation, the availability of the assets, and to minimise the risk of negative signalling during a period of actual stress.

<sup>13</sup> “Unencumbered” means free of legal, regulatory, contractual or other restrictions on the ability of the Merchant Bank to liquidate, sell, transfer or assign the assets.

<sup>14</sup> For example, rents and salary.

<sup>15</sup> For example, the treasurer.

contingent funds or if the Merchant Bank 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 strategy<sup>16</sup>;

- (c) any liquid asset received in reverse repo and securities financing transactions and which has not been rehypothecated and is legally and contractually available for the Merchant Bank to sell or deal with such assets, may be included as HQLA;
- (d) any liquid asset which has been deposited with, or pledged to, a central bank or a PSE, but which has not been used to generate liquidity, may be included as HQLA;
- (e) any liquid asset held to meet statutory liquidity requirements at a Merchant Bank's branch or subsidiary level (where applicable) may be included as HQLA at the consolidated level only if the expected cash flows as measured by the Merchant Bank's branch or subsidiary are also reflected in the consolidated LCR. Any surplus of HQLA held at the branch or subsidiary can only be included in the consolidated stock if those HQLA would also be freely available to the banking group in times of stress;
- (f) any asset received as collateral for derivatives transactions that are not segregated and are legally available and not yet rehypothecated may be included as HQLA provided that the Merchant Bank records an appropriate outflow for the associated risks in accordance with paragraph 71;
- (g) the portion of liquid assets received as part of a basket of collateral as security for a transaction may be included as HQLA to the extent that it can be monetised separately;
- (h) the unused portion of liquid assets which are pledged as collateral, as at the end of the day, except assets in a pool that is intended to collateralise derivatives transaction, may be included as HQLA. If a Merchant Bank 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;

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<sup>16</sup> For example, a Merchant Bank 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 Merchant Bank to breach minimum solvency requirements, or an asset which the Merchant Bank 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.

- (iii) thirdly, Level 2B(I) HQLA;
  - (iv) fourthly, Level 2A HQLA;
  - (v) fifthly, Level 1 HQLA;
- (i) any liquid asset received as part of a securities borrowing transaction that is not a reverse repo or collateral swap, where the liquid assets can be returned or recalled within the 30-day LCR horizon must not be included as HQLA.

### **Composition of HQLA**

- 29 A Merchant Bank must measure its Level 1 HQLA at an amount not greater than the current market value.
- 30 A Merchant Bank 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.
- 31 Where a liquid asset can be categorised into different categories of HQLA, a Merchant Bank must categorise the liquid asset into the HQLA category with the highest haircut except where expressly provided or where the Merchant Bank has obtained the approval of the Authority to do otherwise<sup>17</sup>.
- 32 A Merchant Bank must apply a cap on its Level 2 HQLA, Level 2B HQLA and Level 2B(II) HQLA, to ensure that they do not exceed 5%, 15% and 40% of total HQLA respectively. The Merchant Bank must calculate 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.

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<sup>17</sup> A Merchant Bank may apply to the Authority for such approval with evidence supporting the less conservative treatment.

- 33 If a liquid asset no longer qualifies as HQLA<sup>18</sup>, a Merchant Bank is permitted to keep such liquid assets as HQLA for an additional 30 days. This would allow the Merchant Bank additional time to adjust its HQLA as needed or replace the liquid asset.
- 34 A Merchant Bank must compute HQLA in accordance with the formula in Appendix 6.

### **Total net cash outflows**

- 35 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.
- 36 A Merchant Bank must not include transactions between entities in a country-level group for the purposes of computing total net cash outflows referred to in paragraph 35.
- 37 Except where otherwise stated, a Merchant Bank must compute expected cash outflows and inflows by multiplying the outflow and 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, a Merchant Bank must apply the outflow and inflow rates in paragraphs 40 to 119 and Appendix 7 to each category of cash outflows and cash inflows.
- 38 A Merchant Bank must not double count assets and liabilities in the computation of the LCR. If a liquid asset is included as part of HQLA, the cash inflows associated with that liquid asset cannot be counted as part of the total expected cash inflows.
- 39 Where transactions can be categorised into multiple categories with different inflow or outflow factors, a Merchant Bank must apply the higher outflow factor or lower inflow factor, as the case may be, except where expressly provided otherwise or where the Merchant Bank has obtained the approval of the Authority to do otherwise.

### **Cash outflows**

#### **(A) Retail deposit cash outflows**

- 40 Retail deposits are deposits placed by a natural person. Deposits from legal entities, sole proprietorships or partnerships are captured in the wholesale funding categories. Retail

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<sup>18</sup> For example, due to a rating downgrade.

deposits that may be included as part of the LCR computation include demand deposits and term deposits, unless otherwise excluded under the criteria set out in paragraphs 45 and 46.

- 41 Retail deposits are divided into “stable” and “less stable” as described in paragraphs 42 and 44.

**(I) Stable deposits**

- 42 Stable deposits are those which are fully insured<sup>19</sup> by the Singapore Deposit Insurance Corporation Limited (SDIC)<sup>20</sup>, or an effective government deposit insurance scheme<sup>21</sup>, where –

(a) the depositors have established relationships with the Merchant Bank such that the deposits are highly unlikely to be withdrawn (“established relationships”); or

(b) the deposits are in transactional accounts<sup>22</sup>.

- 43 Where a Merchant Bank has a branch or subsidiary in other countries or jurisdictions carrying on banking business, and has stable deposits that are fully insured by other effective government deposit insurance schemes, the Merchant Bank must follow the relevant treatment adopted in the host country or jurisdiction where the branch or subsidiary operates.

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<sup>19</sup> Fully insured means that the deposit amount, up to the deposit insurance limit, will be fully paid out by an effective deposit insurance scheme. Deposit balances up to the deposit insurance limit can be treated as “fully insured” or “stable” even if a depositor has a balance in excess of the deposit insurance limit. However, any amount in excess of the deposit insurance limit is to be treated as “less stable”.

<sup>20</sup> The current cash outflow rate for stable deposits fully insured by the Singapore Deposit Insurance Corporation Limited (SDIC) is 5%. This may change to 3% when the insurance scheme meets the additional criteria of (i) the insurance scheme is based on a system of prefunding via the periodic collection of levies on banks with insured deposits and; (ii) the scheme has adequate means of ensuring ready access to additional funding in the event of a large call on its reserves, e.g. an explicit and legally binding guarantee from the government, or a standing authority to borrow from the government; and (iii) access to insured deposits is available to depositors no more than 7 business days once the deposit insurance scheme is triggered.

<sup>21</sup> Effective deposit insurance scheme means – A scheme (i) that guarantees that it has the ability to make prompt payouts, (ii) for which the coverage is clearly defined and (iii) of which public awareness is high. The deposit insurer in an effective deposit insurance scheme has formal legal powers to fulfil its mandate and is operationally independent, transparent and accountable. A country or jurisdiction with an explicit and legally binding sovereign deposit guarantee that effectively functions as deposit insurance can be regarded as having an effective deposit insurance scheme.

<sup>22</sup> For example, an account where salaries are automatically credited.

## **(II) Less stable deposits**

44 Less stable deposits are deposits that are not stable deposits.

## **(III) Retail term deposits**

45 A Merchant Bank 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. If a Merchant Bank allows a depositor to withdraw such deposits within the 30-day LCR horizon without applying any penalty that is materially greater than the loss of interest, notwithstanding a clause that says the depositor has no legal right to withdraw, the entire category of such deposits would then have to be treated as stable or less stable deposits, depending on their fulfilment of the criteria in paragraphs 40 to 44.

46 Where a Merchant Bank has a branch or subsidiary in other countries or jurisdictions carrying on banking business, the Merchant Bank must apply the cash flow rates outlined in Part II – LCR when it calculates its LCR except for deposits from retail and small business customers where the Merchant Bank must follow the relevant treatment adopted in the host country or jurisdiction where the branch or subsidiary operates, subject to the requirements in paragraph 120.

## **(B) Unsecured wholesale funding cash outflows**

47 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 that 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.

48 A Merchant Bank must include the cash outflow from an unsecured wholesale funding in the total expected cash outflow, if the funding is callable within the 30-day LCR horizon, has its earliest possible contractual maturity date situated within the 30-day LCR horizon<sup>23</sup>, 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 Merchant Bank's discretion, the Merchant Bank must consider reputational factors that may limit its ability not to exercise the option and its impact on unsecured wholesale funding cash outflows.

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<sup>23</sup> For example, maturing term deposits and unsecured debt securities.

49 A Merchant Bank 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 outflow.

**(I) Unsecured wholesale funding provided by small business customers**

50 A Merchant Bank 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 activities**

51 Subject to paragraphs 52, 53, 54 and 57, a Merchant Bank may, with the Authority's approval –

(a) apply a cash outflow rate that is the same as the cash outflow rate applied to “stable” retail deposits, to the portion of operational deposits from customers with qualifying clearing, custody and cash management accounts with the Merchant Bank (“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.

52 For the purposes of paragraph 51, qualifying clearing, custody or cash management activities must meet the following criteria:

(a) the customer is reliant on the Merchant Bank to perform these services as an independent third party intermediary in order to fulfil its normal banking activities over the 30-day LCR horizon<sup>24</sup>;

(b) the Merchant Bank is providing these services under a legally binding agreement to customers;

(c) the customer may only terminate such agreements either by giving prior notice of at least 30 days or paying significant switching costs<sup>25</sup> if the operational deposits are withdrawn within the 30-day LCR horizon.

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<sup>24</sup> For example, this condition would not be met if the Merchant Bank is aware that the customer has adequate back-up arrangements.

<sup>25</sup> For example, those related to transaction, information technology, early termination or legal costs.

- 53 For the purposes of paragraph 51, qualifying operational deposits generated from the qualifying clearing, custody and cash management activities must meet the following criteria:
- (a) the deposits are by-products of the underlying services provided by the Merchant Bank 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 customer (not limited to paying market interest rates) to leave any excess funds 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. A Merchant Bank should be particularly aware that during prolonged periods of low interest rates, excess balances (as defined below) could be significant.
- 54 For the purposes of paragraph 51, a Merchant Bank must not treat any excess balances that may be withdrawn while still leaving sufficient funds to fulfil the qualifying clearing, custody and cash management activities as qualifying operational deposits.
- 55 For the purposes of paragraph 54, a Merchant Bank 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.
- 56 The methodology referred to in paragraph 55(a) must take into account relevant factors<sup>26</sup>, and consider appropriate indicators<sup>27</sup> to identify those customers that are not actively managing account balances efficiently.

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<sup>26</sup> For example, the likelihood that wholesale customers have above average balances in advance of specific payment needs.

<sup>27</sup> For example, ratios of account balances to payment or settlement volumes or to assets under custody.

- 57 For the purposes of paragraph 51, a Merchant Bank must not treat any deposit arising out of correspondent banking<sup>28</sup> or from the provision of prime brokerage services as qualifying operational deposits.

### **(III) Deposits in institutional networks of cooperative banks**

- 58 An institutional network of cooperative (or otherwise named) banks is a group of legally autonomous banks with a statutory framework of cooperation with common strategic focus and brand where specific functions are performed by central institutions or specialised service providers. A Merchant Bank that is a central institution or a specialised service provider of an institutional network of cooperative bank, 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 Merchant Bank 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 Merchant Bank 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.
- 59 Despite paragraph 58, a Merchant Bank, that is a central institution or a specialised service provider of an institutional network of cooperative bank, must apply a cash outflow rate of 100% to the amount of deposits that members of the institutional network have placed with the Merchant Bank for –
- (a) correspondent banking activities; or
  - (b) clearing, custody or cash management activities.

### **(IV) Deposits contractually pledged to a Merchant Bank as collateral to secure other transactions**

- 60 Despite paragraphs 40 to 59, if a deposit is contractually pledged to a Merchant Bank as collateral to secure a credit facility or loan granted by the Merchant Bank ("pledged deposit") that will not mature or settle within the 30-day LCR horizon, the Merchant

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<sup>28</sup> Correspondent banking refers to arrangements under which one bank or merchant bank (correspondent) holds deposits owned by other banks or merchant banks (respondents) and provides payment and other services in order to settle foreign currency transactions (e.g. so-called nostro and vostro accounts used to settle transactions in a currency other than the domestic currency of the respondent bank or merchant bank for the provision of clearing and settlement of payments). Prime brokerage is a package of services offered to large active investors, particularly institutional hedge funds. These services usually include: clearing, settlement and custody, consolidated reporting, financing (margin, repo or synthetic), securities lending, capital introduction, and risk analytics.

Bank may exclude the pledged deposit from the 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 the LCR does not exceed the outstanding balance of the loan or drawn portion of the credit facility.

61 Paragraph 60 does not apply to a deposit that is pledged against an undrawn facility, in which case the Merchant Bank 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 corporate and sovereigns, central banks, multilateral development banks and PSEs**

62 A Merchant Bank must apply a cash outflow rate of 20% on 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 Merchant Bank must apply a cash outflow rate of 40% on such unsecured wholesale funding.

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

63 A Merchant Bank must apply a cash outflow rate of 100% on all unsecured wholesale funding that are not included in paragraphs 47 to 62<sup>29</sup>. A Merchant Bank may compute outflows from unsecured wholesale funding over the 30-day LCR horizon and provided by intragroup banking entities on a net basis with inflows from unsecured wholesale funding over the 30-day LCR horizon provided by intragroup banking entities.

64 A Merchant Bank 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 as identified in paragraph 57, from any required segregated balances related to client protection regimes imposed on the Merchant Bank or its banking group

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<sup>29</sup> For example, deposits and other funding, that are not qualifying operational deposits, from banks (whether licensed in Singapore or not), securities firms, insurance companies, fiduciaries, beneficiaries, conduits and special purpose vehicles, affiliated entities of the Merchant Bank and other entities.

entities by the laws and regulations of any country or jurisdiction to which the Merchant Bank or its banking group entities is subject and such cash balances must not be netted against other customer exposures included in LCR. A Merchant Bank must treat segregated balances related to client protection regimes imposed by the laws and regulations of any country or jurisdiction to which the Merchant Bank or its banking group entities is subject as inflows in accordance with paragraph 111 and must exclude these segregated balances from HQLA.

**(C) Secured funding cash outflows**

- 65 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.
- 66 A Merchant Bank must include forward repurchase transactions and collateral swaps that start prior to, but mature within, the 30-day LCR horizon in this category.
- 67 A Merchant Bank 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. A Merchant Bank must compute the net outflow for collateral swaps based on the net cash outflow that will result from an equivalent repurchase and reverse repurchase transaction, floored at 0. The Merchant Bank must treat any collateral lent to its customers to effect short positions as a form of secured funding.
- 68 If a pool of assets is used as collateral for a secured funding transaction, and a Merchant Bank 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.
- 69 A Merchant Bank must apply the relevant cash outflow rates in 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.

## **(D) Additional requirements**

### **(I) Cash outflows from derivative contracts**

- 70 A Merchant Bank must apply a cash outflow rate of 100% to the sum of all net cash outflows from derivative contracts. The Merchant Bank must calculate, in accordance with its existing valuation methodologies, expected cash inflows and outflows from its derivative contracts. The Merchant Bank may calculate its cash flows with its counterparty on a net basis (i.e. derivative inflows within the 30-day LCR horizon can offset derivative outflows within the 30-day LCR horizon), where it has entered into a valid master netting agreement with that counterparty. In determining its all currency LCR, the Merchant Bank may calculate its cash flows on a net basis for foreign exchange derivative contracts not covered by a master netting agreement, where it involves a full exchange of principal amounts within the same day. The Merchant Bank must exclude from such calculations those liquidity requirements that would result from increased collateral needs due to market value movements or falls in value of collateral posted. The Merchant Bank must assume that options are exercised at the point when they are 'in the money' to the option buyer.
- 71 Where derivative payments are collateralised by HQLA, a Merchant Bank must calculate cash outflows 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 Merchant Bank, if the Merchant Bank is legally entitled to, and is operationally capable of, re-using the collateral in new cash raising transactions once the collateral is received.
- 72 A Merchant Bank must treat outflows from options which must be settled by physical delivery, if exercised, as secured borrowing transactions, where the delivered assets are treated as collateral in secured transactions or collateral swaps, with the appropriate outflow factors applied in accordance with paragraphs 65 to 69. The Merchant Bank 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 Merchant Bank may assume that the security of lowest value ("cheapest to deliver") 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**

- 73 For each contract in which downgrade triggers<sup>30</sup> exist, a Merchant Bank must assume that 100% of this additional collateral or cash outflow as stated in the governing contract will be posted for any downgrade during the 30-day LCR horizon up to and including a 3-notch downgrade of the Merchant Bank's long-term credit rating. For the purposes of the assumption above, where a downgrade trigger is linked to the Merchant Bank's short-term rating, the Merchant Bank must map such short-term rating to the corresponding long-term rating in accordance with published ratings criteria. The Merchant Bank 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.

**(III) Increased liquidity needs related to the potential for valuation changes on posted collateral securing derivative and other transactions<sup>31</sup>**

- 74 When a Merchant Bank posts Level 1 HQLA as collateral in respect of a derivative transaction, the Merchant Bank is not required to maintain additional HQLA for potential valuation changes. If however, the Merchant Bank posts other forms of collateral to cover the potential loss of market value on those securities, the Merchant Bank must include, in its calculation of its expected cash outflows, 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). A Merchant Bank must calculate 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. A Merchant Bank must only use collateral that is in a segregated margin account to offset outflows that are associated with payments that are eligible to be offset from that same account. A Merchant Bank must calculate the notional amount to be collateralised based on the contractual terms of the transaction. The Merchant Bank must not net collateral inflows and outflows across counterparties. The Merchant Bank must compute the amount of collateral to be posted in accordance with the relevant contract governing the respective transactions.

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<sup>30</sup> Downgrade triggers are clauses that require the posting of additional collateral, drawdown of contingent facilities, or early repayment of existing liabilities upon an entity's downgrade by a recognised credit rating organisation.

<sup>31</sup> Counterparties in derivatives and other transactions are typically required to post collateral to secure the mark-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 Merchant Bank that could contractually be called at any time by the counterparty**

75 A Merchant Bank must include, in its calculation of its expected cash outflows, 100% of the non-segregated collateral amount 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**

76 A Merchant Bank must include, in its calculation of its expected cash outflows, 100% of the collateral amount 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**

77 A Merchant Bank must –

- (a) include, in its calculation of its expected cash outflows, a cash outflow equivalent to the market value of the initial HQLA collateral received multiplied by the difference in haircuts (as defined in paragraph 30) of the received collateral and the potential substitute collateral; and
- (b) compute the contingent outflow resulting from collateral substitution in secured lending or borrowing transactions in accordance with the relevant contract governing the transactions.

78 Paragraph 77(a) applies to initial HQLA collateral received that is counted in the Merchant Bank's HQLA, and that can be substituted for assets that are not HQLA or lower-quality HQLA without the Merchant Bank's consent, where such HQLA collateral has been received to secure transactions that have not been segregated.

**(VII) Increased liquidity needs related to market valuation changes on derivative or other transactions<sup>32</sup>**

- 79 A Merchant Bank may treat inflows and outflows of transactions executed under the same master netting agreement on a net basis.
- 80 A Merchant Bank must –
- (a) include any outflow generated by increased needs related to market valuation changes in its calculation of the LCR by identifying the largest absolute net 30-day collateral flow realised during the preceding 24 months;
  - (b) compute the contingent outflow resulting from market valuation changes in accordance with the relevant contract governing the transactions;
  - (c) determine the absolute net 30-day collateral flow based on both realised outflows and inflows, including payments and receipts which are deemed to settle outstanding exposures from exchange-traded and over-the-counter derivatives structured as “settled-to-market”; and
  - (d) assess the largest absolute net 30-day collateral flow on a portfolio level.

**(VIII) Drawdowns on committed credit and liquidity facilities**

- 81 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.
- 82 A Merchant Bank must calculate the currently 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 facility<sup>33</sup>. This is provided that the Merchant Bank 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. A Merchant Bank 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.

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<sup>32</sup> As market practice requires collateralisation of mark-to-market exposures on derivative and other transactions, a Merchant Bank faces potentially substantial liquidity risk exposures to these valuation changes.

<sup>33</sup> For example, a liquidity facility structured as a repo facility.

- 83 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 markets<sup>34</sup>. A Merchant Bank 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 the committed liquidity facility.
- 84 A Merchant Bank must treat 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 as a committed credit facility. A Merchant Bank must not classify general working capital facilities for corporate entities<sup>35</sup> as committed liquidity facilities, but as committed credit facilities.
- 85 Despite paragraphs 83 and 84, a Merchant Bank 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 Merchant Bank's own assets as a committed liquidity facility to other legal entities.
- 86 A Merchant Bank 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 facility<sup>36</sup>:
- (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;

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<sup>34</sup> For example, pursuant to a commercial paper programme, secured financing transactions, obligations to redeem units.

<sup>35</sup> For example, revolving credit facilities in place for general corporate or working capital purposes.

<sup>36</sup> 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 (whether licensed in Singapore or not) 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.

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

- 87 A Merchant Bank must apply a cash outflow rate of 100% to any contractual lending obligation to financial institutions not captured elsewhere in Part II – LCR.
- 88 If the total of all contractual obligations to extend funds to retail and non-financial corporate clients within the 30-day LCR horizon not captured elsewhere in Part II – LCR exceeds 50% of the total contractual inflows due in the 30-day LCR horizon from these clients, a Merchant Bank must report the difference at a cash outflow rate of 100%.

**(X) Other contingent funding obligations<sup>37</sup>**

- 89 A Merchant Bank must apply a cash outflow rate of 100% to the full amount of the contingent funding obligations that is expected to materialise.
- 90 A Merchant Bank must treat facilities that are unconditionally cancellable by the Merchant Bank (in particular, those without a precondition of a material change in the credit condition of the borrower) as contingent funding obligations.

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<sup>37</sup> 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.

- 91 Where a Merchant Bank has identified any contingent funding obligations that are explicitly contingent upon an event that is not related to a liquidity event, the Merchant Bank must inform the Authority not later than the last day of the year in which such contingent funding obligation is identified.
- 92 A Merchant Bank 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 Merchant Bank will be the main liquidity provider when the entity is in need of liquidity. The Merchant Bank 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.
- 93 For contingent funding obligations stemming from trade finance instruments<sup>38</sup> that are not lending commitments, a Merchant Bank must apply a cash outflow rate of 3%.
- 94 For contingent funding obligations stemming from trade finance instruments that are lending commitments<sup>39</sup>, a Merchant Bank must apply the cash outflow rates specified in paragraph 86 for such commitments.
- 95 A Merchant Bank must apply a cash outflow rate of 50% on contingent obligations where the Merchant Bank has covered customers' short positions using other customers' collateral which does not qualify as Level 1 or Level 2 HQLA, and the Merchant Bank may be obligated to find additional sources of funding for these positions in the event of customers' withdrawals.

**(E) Other contractual cash outflows**

- 96 A Merchant Bank must apply a cash outflow rate of 100% to all other contractual cash outflows within the 30-day LCR horizon, where such outflows are not captured elsewhere in Part II – LCR<sup>40</sup>, except for outflows related to operating costs. The Merchant Bank must, if called upon at any time by the Authority, explain to the Authority, what these cash outflows are.

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<sup>38</sup> 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.

<sup>39</sup> For example, direct import or export financing for non-financial corporate firms.

<sup>40</sup> For example, outflows to cover unsecured collateral borrowings, uncovered short positions, dividends or contractual interest payments.

## Cash inflows

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

### (A) Cap on total inflows

98 In order to prevent Merchant Banks from relying solely on anticipated inflows to meet their liquidity requirement, and also to ensure a minimum level of HQLA holdings, a Merchant Bank must cap the amount of inflows that can offset outflows at 75% of total expected cash outflows as calculated in Part II – LCR.

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

99 For reverse repurchase or securities borrowing agreements that are maturing within the 30-day LCR horizon, the Merchant Bank 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 30; or
- (c) if the agreement is secured by assets that are not HQLA, 100%.

100 A Merchant Bank 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 99 to margin loans maturing within the 30-day LCR horizon, except in the case of margin loans secured by assets that are not HQLA, to which a Merchant Bank must apply a cash inflow rate of 50%.

101 Despite paragraphs 99 and 100, 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, a Merchant Bank 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: Inflow rates for maturing secured lending in accordance with paragraphs 99 to 101**

	Inflow rate (if collateral is not used to cover short positions that could be extended beyond the 30-day LCR horizon)	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%

102 Where a Merchant Bank's short position is being covered by an unsecured security borrowing, the Merchant Bank 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 96. Where the Merchant Bank's short position is being covered by a collateralised securities financing transaction, the Merchant Bank 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.

103 If a pool of assets is used as collateral for a secured lending transaction, and a Merchant Bank is unable to determine specifically which assets are used to collateralise the transaction, the Merchant Bank 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.

104 Despite paragraphs 99 to 101, a Merchant Bank 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.

105 A Merchant Bank must include forward reverse repurchase transactions and collateral swaps that start prior to, but mature within, the 30-day LCR horizon in this category.

106 Paragraphs 99 to 105 do not apply to any transaction where there is a possibility of the inflow occurring after the 30-day LCR horizon.

**(C) Committed facilities**

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

**(D) Other inflows by counterparty**

108 A Merchant Bank must, in relation to loan payments, include, in its calculation of expected cash inflows, only cash inflows from fully performing loans. A Merchant Bank must include, in its calculation of expected cash inflows, only cash inflows at the latest possible date based on the contractual rights available to counterparties. A Merchant Bank 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 86.

109 A Merchant Bank must not include, in its calculation of its 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. A Merchant Bank must capture these minimum payment amounts as inflows at the rates prescribed in paragraphs 110 and 111.

**(I) Retail and small business customer inflows**

110 A Merchant Bank 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 inflows; and
- (c) apply a cash inflow rate of 50% of the contractual amount as a result of sub-paragraphs (a) and (b).

**(II) Other wholesale inflows**

111 A Merchant Bank 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 inflows for financial institutions and central banks, and at a rate of 50% of contractual inflows for other wholesale customers<sup>41</sup>; and
- (c) apply a cash inflow rate of 100% of the contractual amount for financial institutions and central bank counterparties, and 50% of the contractual amount for other wholesale customers, as a result of sub-paragraphs (a) and (b).

112 A Merchant Bank must apply a cash inflow rate of 100% to inflows from securities maturing within the 30-day LCR horizon that are not HQLA.

113 A Merchant Bank must apply a cash inflow rate of 0% to operational deposits of the Merchant Bank placed with other financial institutions for operational purposes. A Merchant Bank that is a member of an institutional network of cooperative banks must apply a cash inflow rate of 0% to deposits placed with a centralised institution or a specialised service provider in the institutional network of banks 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 Merchant Bank that has placed the deposits and the centralised 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 a Merchant Bank has placed a deposit with a bank (whether licensed in Singapore or not) or financial institution (the “receiving financial institution”),

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<sup>41</sup> This includes non-financial corporates, sovereigns, multilateral development banks, and PSEs.

the Merchant Bank must apply the methodology in paragraphs 51 to 57 to determine if these deposits are operational deposits<sup>42</sup>.

- 114 A Merchant Bank may compute inflows from intragroup banking entities on a net basis with outflows from intragroup banking entities.

**(E) Other cash inflows**

**(I) Cash inflows from derivative contracts**

- 115 A Merchant Bank must apply a cash inflow rate of 100% to the sum of all net cash inflows from derivative contracts. The Merchant Bank must not double-count liquidity inflows or outflows. The Merchant Bank must calculate the amounts of cash inflows from derivative contracts in accordance with the methodology described in paragraphs 70 to 72.

- 116 Where derivatives are collateralised by HQLA, a Merchant Bank must calculate the cash inflows for the derivatives net of any corresponding cash or contractual collateral outflows.

- 117 A Merchant Bank must treat inflows from options which must be settled by physical delivery, if exercised, as a secured lending transaction, with the appropriate inflows applied in accordance with paragraphs 99 to 106. The Merchant Bank may assume cash settlement, if the contractual arrangements allow for both physical delivery and cash settlement, cash settlement may be assumed. Where contractual arrangements require physical delivery as the mode of settlement, the Merchant Bank may assume that the security of lowest value (“cheapest to deliver”) will be delivered, unless the derivative contract provides otherwise.

**(II) Other contractual cash inflows**

- 118 A Merchant Bank must apply a cash inflow rate of 0% to all other contractual cash inflows within the 30-day LCR horizon, where such inflows are not captured in paragraphs 99 to 117, or excluded in paragraph 119. The Merchant Bank must, if called upon at any time by the Authority, explain to the Authority, what these cash inflows are.

- 119 A Merchant Bank must not include the following items as contractual cash inflows:

- (a) any cash inflow related to non-financial revenues;

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<sup>42</sup> As a general principle, if the deposit that has been classified by the receiving financial institution as an operational deposit, the Merchant Bank should also consider the deposit as an operational deposit.

- (b) any forward repurchase, forward reverse repurchase agreements or forward collateral swap that starts and matures within the 30-day LCR horizon;
- (c) any forward repurchase, forward reverse repurchase agreements or forward collateral swap that starts prior to and matures after the 30-day LCR horizon;
- (d) any forward sales of HQLA.

### **Scope of Application**

- 120 Where a Merchant Bank has a branch or subsidiary in countries or jurisdictions that do not apply the Basel Committee's global framework for liquidity risk, the Merchant Bank must apply the parameters outlined in Part II – LCR for its calculation of the LCR. Where a Merchant Bank has a branch or subsidiary in countries or jurisdictions that apply the Basel Committee's global framework for liquidity risk, paragraphs 40 to 46 and footnote 8 must be interpreted in accordance with the host country's or jurisdiction's equivalent LCR rules.
- 121 Where a Merchant Bank has a branch or subsidiary in countries or jurisdictions that adopt the Alternative Liquidity Approaches, the Merchant Bank may include the HQLA recognised in these countries or jurisdictions for its calculation of the LCR, up to the amount of the Merchant Bank's stressed net cash outflows stemming from the Merchant Bank or its subsidiary's operations in these countries or jurisdictions, and in the domestic currency of these countries or jurisdictions.
- 122 The Authority may, by notice in writing to a Merchant Bank, impose stricter parameters than that set out in Part II – LCR, on the Merchant Bank, under section 38(1) read with section 38(2A), as applied by section 55ZG(1) of the Act.

### **Utilisation of HQLA**

- 123 A Merchant Bank 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 Merchant Bank's LCR to fall below the prevailing minimum requirements as described in paragraphs 20 and 23; and
  - (b) ensure that the notification is signed by its chief executive, chief financial officer or any equivalent senior management.
- 124 A Merchant Bank must –

- (a) provide its justification for the utilisation of HQLA;
- (b) set out the cause of the liquidity stress situation and to 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.

125 A Merchant Bank must also keep the Authority informed of material developments during the liquidity stress situation.

### **Frequency of calculation and reporting**

126 Every Merchant Bank must prepare the appropriate liquidity returns set out in Appendix 5 as at the last day of each month.

127 A Merchant Bank must submit to the Authority electronically through MASNET the following liquidity returns prepared in accordance with paragraph 126 and at the following time, as the case may be:

- (a) in the case of a Merchant Bank that is –
  - (i) referred to in paragraph 20; or
  - (ii) approved under paragraph 5 to comply with LCR on a country-level group basis –
    - (A) not later than 14 days after the last day of each month, the Merchant Bank’s Group level or country-level group level returns, as the case may be; and
    - (B) not later than 20 days after the last day of each month, the Merchant Bank’s entity-level returns;
- (b) in the case of a Merchant Bank that does not fall under sub-paragraph (a), the Merchant Bank’s entity-level returns not later than 14 days after the last day of each month.

128 Despite paragraph 127, if the day on which a Merchant Bank has to submit any return is not a business day, the Merchant Bank may submit the return on the next business day.

## **Effective date and savings provisions**

129 This Notice takes effect on 1 July 2021 (“effective date”).

130 Any approval –

(a) granted under paragraphs 3, 4, 27 and 34 of MAS Notice 1015 dated 16 December 2015 and last revised on 22 January 2020; and

(b) in force immediately before the effective date,

is treated as an approval granted under paragraphs 4, 5, 31 and 39 respectively, and is subject to all conditions which the approval was subject to immediately before the effective date.

**Exclusion as Qualifying Liabilities**

- 1 Subject to paragraph 2 of this Appendix, a Merchant Bank 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 Merchant Bank must verify that the first discounting bank or first discounting Merchant Bank 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, a Merchant Bank 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 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;

- (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.

**Qualification as Approved Liquid Assets**

- 1 A Merchant Bank that purchases a bill of exchange denominated in Singapore dollars from another 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;
  - (b) the purchasing Merchant Bank obtained a written confirmation from the first discounting bank or first discounting Merchant Bank that –
    - (i) the first discounting bank or first discounting Merchant Bank had 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 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; 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	S&P	Fitch	Percentage
Long-Term Issue Ratings	Aaa	AAA	AAA	90%
	Aa1	AA+	AA+	
	Aa2	AA	AA	
	Aa3	AA-	AA-	80%
	A1	A+	A+	
	A2	A	A	
	A3	A-	A-	
	Baa1	BBB+	BBB+	70%
	Baa2	BBB	BBB	

Description	Moody's	S&P	Fitch	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%

If more than one rating is available, a Merchant Bank must use the lowest rating. Where a particular debt issue is assigned both long-term and short-term ratings, a Merchant Bank must apply the lower percentage.

### 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 A Merchant Bank must submit 1 copy of Form 1, but as many copies of Form 2 as there are significant currencies on an entity level and a Group level or country-level group level, if any. A Merchant Bank may, in consultation with the Authority, determine an alternate methodology to determine its significant currencies if the default methodology in paragraph 2 of the Notice does not properly reflect the funding structure of the Merchant Bank. The forms to submit are given in the table below.

**Country level compliance**

- 2 As per paragraph 5 of the Notice, a Merchant Bank on the LCR framework may elect to comply with the LCR on a country-level group basis, by consolidating the balance sheets of related corporations of the Merchant Bank that are banks in Singapore or Merchant Banks. Each Merchant Bank within the country-level group must submit the same set of forms as if they were complying with the LCR on an individual level.
- 3 Each Merchant Bank within a country-level group must select an entity to perform the country-level submission, and this choice has to be made known to the Authority. The country level submission must follow the steps as per the individual entity submission, but the details of the entities in the country-level group must be indicated in Section 1 of both Form 1 and Form 2.

FI type	Forms to submit
D-SIB Merchant Bank  Individual/Group submission	<ul style="list-style-type: none"> <li>• Form 1               <ul style="list-style-type: none"> <li>○ All sections</li> </ul> </li> <li>• Form 2 (All Currency)               <ul style="list-style-type: none"> <li>○ Section 1A</li> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 4</li> <li>○ Section 5</li> </ul> </li> <li>• Form 2 (Singapore Dollar)               <ul style="list-style-type: none"> <li>○ Section 1A</li> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 4</li> <li>○ Section 5</li> </ul> </li> </ul>
D-SIB Merchant Bank (Currency X is a significant currency)  Individual/Group submission	<ul style="list-style-type: none"> <li>• Form 1               <ul style="list-style-type: none"> <li>○ All sections</li> </ul> </li> <li>• Form 2 (All Currency)               <ul style="list-style-type: none"> <li>○ Section 1A</li> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 4</li> <li>○ Section 5</li> </ul> </li> <li>• Form 2 (Singapore Dollar)               <ul style="list-style-type: none"> <li>○ Section 1A</li> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 4</li> <li>○ Section 5</li> </ul> </li> <li>• Form 2 (Currency X)               <ul style="list-style-type: none"> <li>○ Section 1A</li> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 4</li> <li>○ Section 5</li> </ul> </li> </ul>

<b>FI type</b>	<b>Forms to submit</b>
<p>Non-D-SIB Merchant Bank</p> <p>Individual/Group submission</p> <p>Merchant Bank is on LCR framework</p>	<ul style="list-style-type: none"> <li>• Form 1 <ul style="list-style-type: none"> <li>o All sections</li> </ul> </li> <li>• Form 2 (All Currency) <ul style="list-style-type: none"> <li>o Section 1A</li> <li>o Section 2</li> <li>o Section 3</li> <li>o Section 5</li> </ul> </li> <li>• Form 2 (Singapore Dollar) <ul style="list-style-type: none"> <li>o Section 1A</li> <li>o Section 2</li> <li>o Section 3</li> <li>o Section 5</li> </ul> </li> </ul>
<p>Non-D-SIB Merchant Bank (Currency X is a significant currency)</p> <p>Individual/Group submission</p> <p>Merchant Bank is on LCR framework</p>	<ul style="list-style-type: none"> <li>• Form 1 <ul style="list-style-type: none"> <li>o All sections</li> </ul> </li> <li>• Form 2 (All Currency) <ul style="list-style-type: none"> <li>o Section 1A</li> <li>o Section 2</li> <li>o Section 3</li> <li>o Section 5</li> </ul> </li> <li>• Form 2 (Singapore Dollar) <ul style="list-style-type: none"> <li>o Section 1A</li> <li>o Section 2</li> <li>o Section 3</li> <li>o Section 5</li> </ul> </li> <li>• Form 2 (Currency X) <ul style="list-style-type: none"> <li>o Section 1A</li> <li>o Section 2</li> <li>o Section 3</li> <li>o Section 5</li> </ul> </li> </ul>

<b>FI type</b>	<b>Forms to submit</b>
<p>Non-D-SIB Merchant Bank</p> <p>Individual submission Merchant Bank is on MLA framework</p>	<ul style="list-style-type: none"> <li>• Form 1 <ul style="list-style-type: none"> <li>○ All sections</li> </ul> </li> <li>• Form 2 (All Currency) <ul style="list-style-type: none"> <li>○ Section 1B (All Currency section for part 3)</li> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 5</li> </ul> </li> <li>• Form 2 (Singapore Dollar) <ul style="list-style-type: none"> <li>○ Section 1B (Singapore Dollar section for part 3)</li> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 5</li> </ul> </li> </ul>
<p>Non-D-SIB Merchant Bank (Currency X is a significant currency)</p> <p>Individual submission Merchant Bank is on MLA framework</p>	<ul style="list-style-type: none"> <li>• Form 1 <ul style="list-style-type: none"> <li>○ All sections</li> </ul> </li> <li>• Form 2 (All Currency) <ul style="list-style-type: none"> <li>○ Section 1B (All Currency section for part 3)</li> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 5</li> </ul> </li> <li>• Form 2 (Singapore Dollar) <ul style="list-style-type: none"> <li>○ Section 1B (Singapore Dollar section for part 3)</li> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 5</li> </ul> </li> <li>• Form 2 (Currency X) <ul style="list-style-type: none"> <li>○ Section 2</li> <li>○ Section 3</li> <li>○ Section 5</li> </ul> </li> </ul>

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

- 1 A Merchant Bank must apply the method described in this Appendix for the calculation 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 32 of the Notice, the Merchant Bank must, in the calculation 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 maximum amount of adjusted Level 2 HQLA in the stock of HQLA must be equal to two-thirds of the adjusted amount of Level 1 HQLA after haircuts have been applied. The calculation of the 40% cap on Level 2 HQLA must take into account any reduction in eligible Level 2B HQLA on account of the 15% cap on Level 2B HQLA.
- 3 The Merchant Bank must, in the calculation 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 maximum amount of adjusted Level 2B HQLA in the stock of HQLA must be equal to  $\frac{15}{85}$  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  $\frac{1}{4}$  of the adjusted amount of Level 1 HQLA, both after haircuts have been applied.
- 4 The Merchant Bank must, in the calculation 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 maximum amount of adjusted Level 2B(II) HQLA in the stock of HQLA must be equal to  $\frac{5}{95}$  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  $\frac{5}{85}$  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  $\frac{5}{60}$  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 28 of the Notice. Relevant haircuts would be applied prior to calculation of

the caps on Level 2 HQLA, Level 2B HQLA and Level 2B(II) HQLA set out in paragraphs 2, 3 and 4 of this Appendix respectively.

- 6 A reference to “unadjusted” refers to the value of the relevant category of HQLA, after accounting for the haircuts as specified in paragraph 30 of the Notice.
- 7 A reference to “adjusted” refers to the value of the relevant category of HQLA after accounting for 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 calculation 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, outflow and inflow rates

Item	Rate
<b>HQLA</b>	
<b>A. Level 1 HQLA:</b>	
<ul style="list-style-type: none"> <li>- Notes and coins</li> <li>- Qualifying marketable securities from sovereigns, central banks, PSEs, and multilateral development banks</li> <li>- Qualifying central bank reserves</li> <li>- Domestic sovereign or central bank debt for non-0% risk-weighted sovereigns</li> </ul>	100%
<b>B. Level 2 HQLA (maximum of 40% of HQLA):</b>	
<b>Level 2A HQLA</b>	
<ul style="list-style-type: none"> <li>- Sovereign, central bank, multilateral development banks, and PSE assets qualifying for 20% risk weighting</li> <li>- Qualifying corporate debt securities rated AA- or higher</li> <li>- Qualifying covered bonds rated AA- or higher</li> </ul>	85%
<b>Level 2B HQLA (maximum of 15% of HQLA)</b>	
<b>Level 2B(I) HQLA</b>	
<ul style="list-style-type: none"> <li>- Qualifying corporate debt securities rated at least A-</li> </ul>	50%
<b>Level 2B(II) HQLA (maximum of 5% of HQLA)</b>	
<ul style="list-style-type: none"> <li>- Qualifying corporate debt securities rated between BBB+ and BBB-</li> </ul>	50%
<ul style="list-style-type: none"> <li>- Qualifying sovereign, central bank and PSE debt securities rated at least BBB-</li> </ul>	50%
<ul style="list-style-type: none"> <li>- Qualifying Ordinary shares, excluding preference shares and treasury shares</li> </ul>	50%
<ul style="list-style-type: none"> <li>- Qualifying RMBS</li> </ul>	75%
<b>Total value of HQLA</b>	

Item	Rate
<b>Cash Outflows</b>	
<b>A. Retail deposits:</b>	
Demand deposits and term deposits (less than 30 days maturity)	
- Stable deposits (fully insured by the Singapore Deposit Insurance Corporation Limited - SDIC)	5%
- Stable deposits (fully insured by other effective government deposit insurance scheme)	To follow host country's or jurisdiction's rate
- Less stable retail deposits	10%
Term deposits with residual maturity greater than 30 days	0%
<b>B. Unsecured wholesale funding:</b>	
Demand and term deposits (less than 30 days maturity) provided by small business customers:	
- Stable deposits	5%
- Less stable deposits	10%
Operational deposits generated by clearing, custody and cash management activities:	25%
- Portion covered by deposit insurance	5%
Cooperative banks in an institutional network (qualifying deposits with the centralised institution)	25%
Non-financial corporates, sovereigns, central banks, multilateral development banks, and PSEs	40%
- If the entire amount fully covered by deposit insurance scheme	20%
Other legal entity customers not included above	100%
Retail/Small Business Customer deposits in other countries or jurisdictions	To follow host country's or jurisdiction's rate
<b>C. Secured funding:</b>	
- Secured funding transactions with central bank counterparty or backed by Level 1 HQLA with any counterparty	0%
- Secured funding transactions backed by Level 2A HQLA, with any counterparty	15%
- Secured funding transactions backed by non-Level 1 or non-Level 2A HQLA, with domestic sovereigns, multilateral development banks, or domestic PSEs with risk weight of 20% or lower as a counterparty	25%
- Backed by RMBS eligible for inclusion in Level 2B	25%
- Backed by other Level 2B HQLA	50%
- All other secured funding transactions	100%

Item	Rate
<b>D. Additional requirements:</b>	
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 non-Level 1 posted collateral securing derivatives	20%
Excess collateral held by a Merchant Bank related to derivative transactions that could contractually be called at any time by its counterparty	100%
Liquidity needs related to collateral contractually due from the Merchant Bank 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%
Currently undrawn committed credit and liquidity facilities provided to:	
- Retail and small business customers	5%
- Non-financial corporate, sovereigns and central banks, multilateral development banks, and PSEs	10% for credit, 30% for liquidity
- Bank 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%
<b>Total cash outflows</b>	

Item	Rate
<b>Cash Inflows</b>	
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 Merchant Bank	0%
Operational deposits held at other financial institutions (include deposits held at centralised institution of network of co-operative banks)	0%
Other inflows by counterparty:	
- 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%
<b>Total cash inflows</b>	
<b>Total net cash outflows = Total cash outflows minus min [total cash inflows, 75% of gross outflows]</b>	
<b>LCR = HQLA / Total net cash outflows</b>	

## Principles for Sound Liquidity Risk Management and Supervision

- 1 The guidelines referred to in footnote 1 of the Notice are as follows:
  - (a) a Merchant Bank should actively monitor and control liquidity risk exposures and funding needs at the level of individual legal entities, foreign branches and subsidiaries, and the banking group as a whole, taking into account legal, regulatory and operational limitations to the transferability of liquidity;
  - (b) where applicable, a Merchant Bank 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 countries or jurisdictions in which the banking group operates and assess their liquidity implications for the group as a whole;
  - (c) a Merchant Bank 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. D-SIBs should share the results of these additional stress tests with supervisors;
  - (d) a Merchant Bank should monitor the legal entity and physical location where collateral is held and how it may be mobilised in a timely manner. Specifically, it should have a policy in place that identifies legal entities, geographical locations, currencies and specific custodial or bank accounts where liquid assets are held;
  - (e) a Merchant Bank should actively manage its intraday liquidity positions and risks to meet payment and settlement obligations on a timely basis under both normal and stressed conditions and thus contribute to the smooth functioning of payment and settlement systems;
  - (f) a Merchant Bank should meet their liquidity needs in each currency and maintain liquid assets consistent with the distribution of their liquidity needs by currency. The Merchant Bank should be able to use the liquid assets to generate liquidity in the currency and country or jurisdiction in which the net cash outflows arise. In managing foreign exchange liquidity risk, the Merchant Bank should take into account the risk that its ability to swap currencies and access the relevant foreign exchange markets may erode rapidly under stressed conditions. A Merchant Bank 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) a Merchant Bank should ensure that liquid assets held are well diversified within the asset classes themselves (except for sovereign debt of the Merchant Bank's home country or jurisdiction or from the country or jurisdiction in which the Merchant Bank operates, central bank reserves, central bank debt securities and cash). The Merchant Bank 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) a Merchant Bank should monitor the concentration of expected inflows across wholesale customers in the context of the Merchant Bank's liquidity management in order to limit overreliance on the arrival of expected inflows from one or a limited number of wholesale customers.
- 2 In this Appendix, "liquid assets" means, in relation to a Merchant Bank that must comply with –
- (a) Part I – MLA of the Notice, assets approved under paragraph 8 of the Notice; and
  - (b) Part II – LCR of the Notice, assets approved under paragraph 25 of the Notice.

**\* Notes on History of Amendments**

1. MAS Notice 1015 (Amendment) 2021 dated 27 September 2021 with effect from 28 September 2021.