MAS NOTICE 637 (AMENDMENT NO. 2) 2020

Issued on: 23 September 2020

RISK BASED CAPITAL ADEQUACY REQUIREMENTS FOR BANKS INCORPORATED IN SINGAPORE

Introduction

1 This document reflects amendments made to MAS Notice 637 to:

(a) define regulatory loss allowance which is recognised as Tier 2 Capital;

(b) revise the capital treatment for public sector entities; and

(c) implement other technical revisions to the credit and market risk framework.

2 For presentational purposes, the amendments in this document are compared with the version of MAS Notice 637 issued on 14 September 2012, as last revised on 31 March 2020 (the "Original Notice").

3 This document shall be interpreted as follows:

(a) Text which is coloured and struck through represent deletions;

(b) Text which is coloured and underlined represent insertions;

(c) Text which is highlighted in yellow are annotations to describe changes, and will not appear in the published untracked version of MAS Notice 637. For instance, where amendments have been made to a selected paragraph of an Annex, only that paragraph will be reflected in this document, prefaced with the following explanatory text in yellow highlights:

[Amendments to paragraph xx];

(d) Any inserted portions are inserted in numerical or alphabetical order (as appropriate) with the existing text in the Original Notice;

(e) Any inserted definitions in the Glossary at Annex 2A are inserted in alphabetical order with the existing definitions in the Original Notice; and

(f) Portions of the Original Notice which are not reflected in this document are unchanged.

4 The amendments reflected in this document shall take effect from 1 October 2020.

5 In the event of discrepancies between the amendments in this document and the published version of MAS Notice 637 revised on 23 September 2020 (with effect from 1 October 2020), the published version of MAS Notice 637 shall prevail. This document is to be used for reference only.

Amendments to Part II: Definitions

Insertions of and amendments to the following definitions in Annex 2A

bank	means – (a) any company which holds a valid licence under section 7 or 79 of the Banking Act; or (b) any entity established or incorporated in a foreign jurisdiction which is approved, licensed, registered or otherwise regulated by a bank regulatory agency of the foreign jurisdiction to carry on banking business under the laws of the foreign jurisdiction; [MAS Notice 637 (Amendment No. 2) 2020]
banking institution	means – (a) any bank ~~licensed under the Banking Act~~; or (b) any finance company licensed under the Finance Companies Act (Cap. 108); ~~or~~ ~~(c) any entity which is approved, licensed, registered or otherwise regulated by a bank regulatory agency in a foreign jurisdiction to carry on banking business as defined in the Banking Act;~~ [MAS Notice 637 (Amendment No. 2) 2020]
general allowance	means loss allowance for credit exposures that do not fall within the definition of "credit-impaired financial asset" under FRS 109[CA]; [MAS Notice 637 (Amendment No. 3) 2017]
regulatory loss allowance	means loss allowance held in excess of Accounting Loss Allowance, maintained in a non-distributable regulatory loss allowance reserve account mentioned in paragraph 6.3.8 of MAS Notice 612, including any loss allowance held in excess of the minimum level of loss allowance mentioned in paragraph 6.3.7 of MAS Notice 612; [MAS Notice 637 (Amendment No. 2) 2020]
securitisation exposure	means any exposure of a Reporting Bank to a securitisation, and includes – (a) any on-balance sheet exposure to securities issued pursuant to a securitisation (e.g. asset-backed securities, mortgage-backed securities and collateralised debt obligations), regardless of whether it was retained by the Reporting Bank at, or repurchased by the Reporting Bank after, the origination of the securitisation;

[CA] For avoidance of doubt, general allowances include loss allowances maintained by a Reporting Bank~~bank~~ in excess of the Accounting Loss Allowance.

[MAS Notice 637 (Amendment No. 3) 2017]
[MAS Notice 637 (Amendment No. 2) 2020]

(b) any off-balance sheet exposure to a securitisation (e.g. through credit enhancements, liquidity facilities, credit derivatives, tranched cover, interest rate swaps or currency swaps); and

(c) reserve accounts (e.g. cash collateral accounts) recorded as an asset by a Reporting Bank acting as an originator~~the originating bank~~;

[MAS Notice 637 (Amendment No. 2) 2017]
[MAS Notice 637 (Amendment No. 2) 2020]

Amendments to Part III: Scope of Application

Division 1: Capital Adequacy Ratio Requirements

[MAS Notice 637 (Amendment) 2014]

Requirements to Apply at both the Solo and Group Levels

[MAS Notice 637 (Amendment No. 2) 2020]

3.1.1 A Reporting Bank shall comply with the capital adequacy ratio requirements in this Notice at two levels:

(a) the bank standalone ("Solo") level capital adequacy ratio requirements, which measure the capital adequacy of a Reporting Bank based on its standalone capital strength and risk profile; and

(b) the consolidated ("Group") level capital adequacy ratio requirements, which measure the capital adequacy of a Reporting Bank based on its capital strength and risk profile after consolidating the assets and liabilities of its banking group entities, taking into account –

(i) any exclusions of certain banking group entities provided for under paragraphs 3.1.2 and 3.1.3; and

(ii) any adjustments pursuant to Division 6 of Part VII.

Non-consolidation of Certain Subsidiaries at the Group Level

3.1.2 A Reporting Bank shall –

(a) not consolidate its investment in an insurance subsidiary; and

(b) account for such investment at cost,

when preparing the consolidated financial statements of the banking group for the purpose of calculating its capital adequacy ratio requirements at the Group level.

3.1.3 Subject to paragraph 3.1.2 and Part VI, a Reporting Bank may exclude from consolidation its investment in any other subsidiary when preparing the consolidated financial statements of the banking group for the purpose of calculating its capital adequacy ratio requirements at the Group level only if such non-consolidation is permitted under the Accounting Standards. Notwithstanding the provisions set out in this paragraph, the exemption in paragraph 4(a) of Singapore Financial Reporting Standards 110 ("SFRS 110") Consolidated Financial Statements[3A] shall not apply for the purpose of complying with paragraph 3.1.1(b).

[MAS Notice 637 (Amendment) 2014]

Issuers of covered bonds

3.1.4 Where the Reporting Bank issues covered bonds (as defined in MAS Notice 648), the Reporting Bank shall continue to hold capital against its exposures in respect of the assets included in a cover pool (as defined in MAS Notice 648) in accordance with this Notice. In the case where the Reporting Bank uses an SPE to issue covered bonds or where the cover pool is held by an SPE, the Reporting Bank shall apply a "look through" approach for the purpose of computing capital requirements under this Notice. Under the "look through" approach, the Reporting Bank and the SPE shall be treated as a single entity for the purposes of this Notice[3B].

[MAS Notice 637 (Amendment) 2013]
[MAS Notice 637 (Amendment) 2014]

Division 2: Leverage Ratio Requirements

[MAS Notice 637 (Amendment No. 3) 2017]

Requirements to Apply at both the Solo and Group Levels

[MAS Notice 637 (Amendment No. 2) 2020]

3.2.1 A Reporting Bank shall comply with the leverage ratio requirements in this Notice at two levels:

(a) the bank standalone ("Solo") level, which measures the leverage ratio of a Reporting Bank based on its standalone capital strength; and

(b) the consolidated ("Group") level, which measures the leverage ratio of a Reporting Bank based on its capital strength after consolidating the assets and liabilities of its banking group entities, taking into account –

3A Paragraph 4(a) of SFRS 110 exempts a parent from presenting consolidated financial statements, subject to certain conditions.

[MAS Notice 637 (Amendment) 2014]

3B This means, for example, that (a) the assets of the cover pool held in the SPE (if any) shall be deemed as assets of the Reporting Bank, at both the ~~bank~~ Solo and ~~bank~~ Group levels; and (b) transactions between the Reporting Bank and the SPE would be deemed to be eliminated.

[MAS Notice 637 (Amendment) 2014]
[MAS Notice 637 (Amendment No. 2) 2020]

(i) any exclusions of certain banking group entities provided for under paragraphs 3.2.2 and 3.2.3; and

(ii) any adjustments pursuant to Division 6 of Part VII.

[MAS Notice 637 (Amendment No. 3) 2017]

Non-consolidation of Certain Subsidiaries at the Group Level

3.2.2 A Reporting Bank shall –

(a) not consolidate its investment in an insurance subsidiary; and

(b) account for such investment at cost,

when preparing the consolidated financial statements of the banking group for the purpose of calculating its leverage ratio at the Group level.

3.2.3 Subject to paragraph 3.2.2 and Part VI, a Reporting Bank may exclude from consolidation its investment in any other subsidiary when preparing the consolidated financial statements of the banking group for the purpose of calculating its leverage ratio at the Group level only if such non-consolidation is permitted under the Accounting Standards. Notwithstanding the provisions set out in this paragraph, the exemption in paragraph 4(a) of Singapore Financial Reporting Standards 110 ("SFRS 110") Consolidated Financial Statements[3A] shall not apply for the purpose of complying with paragraph 3.2.1(b).

[MAS Notice 637 (Amendment) 2014]

Amendments to Part IV: Capital Adequacy Ratios and Leverage Ratio

Division 1: Capital Adequacy Ratios

Amendment to footnote 7 of paragraph 4.1.9

[7] The distribution constraints imposed on Reporting Banks when their capital adequacy ratios fall within the Capital Conservation Buffer range increase as the ~~banks'~~Reporting Banks' capital adequacy ratios approach the minimum ratios. By design, the constraints imposed on Reporting Banks with capital adequacy ratios at the top of the Capital Conservation Buffer range would be minimal.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendment to footnote 18 of paragraph 4.1.22

[18] The Authority may implement a range of additional macroprudential tools. This includes setting a countercyclical buffer requirement in respect of Singapore in excess of 2.5% or before 1 January 2016 to be applicable only to ~~banks incorporated in Singapore~~a Reporting Bank in its calculation of its Countercyclical Buffer.

[MAS Notice 637 (Amendment No. 2) 2020]

Annex 4A

CALCULATION OF THE LEVERAGE RATIO

Section 1: Overview

Amendment to paragraph 1.2

1.2 A Reporting Bank shall calculate its leverage ratio at both the ~~Group~~Solo and ~~Solo~~Group levels as set out in Division 2 of Part III as at the end of each quarter. Where a Reporting Bank does not consolidate its investment in an entity in accordance with Division 2 of Part III, the Reporting Bank shall only include the investment in the capital of such entity (i.e. only the carrying amount of the investment, and not the underlying assets and other exposures of the entity) in its EM.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendment to footnote 23 of paragraph 1.4

[23] This means, for example, that (a) the assets of the cover pool held in the SPE (if any) shall be deemed as assets of the Reporting Bank, at both the ~~bank~~ Solo and ~~bank~~ Group levels; and (b) transactions between the Reporting Bank and the SPE would be deemed to be eliminated.

[MAS Notice 637 (Amendment No. 2) 2020]

Section 2: EM

Amendment to footnote 29E of paragraph 2.17

[29E] For a written credit derivative not covered by a qualifying bilateral netting agreement, a Reporting Bank may set the add-on factor applied to compute the amount for potential future exposure to zero. For a written credit derivative which is covered by a qualifying bilateral netting agreement, a Reporting Bank may reduce A_{GROSS} by the individual add-on amounts for the portion of the written credit derivative whose notional amounts are included in the exposure measure in respect of the written credit derivative. The Reporting ~~bank~~Bank shall not make any adjustments to NGR.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendments to Part VI: Definition of Capital

Division 1: Common Equity Tier 1 Capital

Amendments to paragraph 6.1.1

Components of CET1 Capital

6.1.1 CET1 Capital of a Reporting Bank shall be the sum of the following items, ~~whether~~calculated at the Solo or Group level, as the case may be:

[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment No. 2) 2020]

(a) paid-up ordinary shares of the Reporting Bank that comply with the requirements in paragraph 6.1.2;

(b) share premium, resulting from the issuance of ordinary shares which fall within sub-paragraph (a), if any;

[MAS Notice 637 (Amendment No. 2) 2014]

(c) retained earnings, after deducting any interim or final dividends which have been declared by the Board of the Reporting Bank or any banking group entity on any class of shares and any interim losses incurred since the end of the last financial reporting period and may include any interim profits earned since the end of the last financial reporting period where the following conditions are met:

   (i) every quarterly financial statement is prepared using the same accounting policies and practices applied in the preparation of the year-end financial statements, unless the change in the accounting policy or practice is in accordance with any statutory requirement;

   (ii) every quarterly financial statement and every significant transaction is reviewed in a timely manner by an external auditor; and

   (iii) the external auditor of the Reporting Bank has not expressed a qualified opinion on any of the quarterly financial statements in the preceding 12 months of the end of the interim financial reporting period;

[MAS Notice 637 (Amendment No. 2) 2014]

(d) accumulated other comprehensive income and other disclosed reserves, other than revaluation surpluses on land and building assets, accumulated revaluation gains from investment properties and ~~balances maintained in a non-distributable regulatory loss allowance reserve account pursuant to paragraph 6.3 of MAS Notice 612~~regulatory loss allowances;

[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment No. 3) 2017]
[MAS Notice 637 (Amendment No. 2) 2020]

(e) 45% of revaluation surpluses on land and building assets and accumulated revaluation gains from investment properties, where the following conditions pertaining to revaluations are satisfied:

(i) the valuation of any land and building asset or investment property is obtained from a qualified property valuer and the increase in value is recorded as a revaluation surplus or gain in the financial statements;

(ii) a new valuation from a qualified property valuer in respect of the land and building asset or investment property is obtained -

(A) at least once every 3 years; or

(B) where the value of the land and building asset or investment property has been substantially impaired by any event,

whichever is earlier;

(iii) impairment charges taken against any land and building asset or investment property are not netted against revaluation surplus or gain from any other asset; and

(iv) the external auditor of the Reporting Bank has not expressed a qualified opinion on the revaluation of any land and building asset or investment property;

[MAS Notice 637 (Amendment No. 2) 2014]

(f) paid-up ordinary shares issued by fully consolidated subsidiaries of the Reporting Bank and held by third party investors (i.e. minority interest) that meet the criteria for inclusion in CET1 Capital pursuant to paragraph 6.1.4; and

(g) regulatory adjustments set out in paragraph 6.1.3.

Amendment to paragraph 6.1.3(p)

6.1.3 A Reporting Bank shall apply the following regulatory adjustments in the calculation of CET1 Capital at the Solo or Group level, as the case may be:

[MAS Notice 637 (Amendment No. 2) 2014]

(p) certain investments in the ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries ~~at the Solo and Group levels~~), shall be deducted in the calculation of CET1 Capital, in accordance with sub-paragraphs (i) and (ii) below, unless a deduction has been made pursuant to sub-paragraph (l) above:

(i) the amount of such investments to be deducted in the calculation of CET1 Capital shall be the amount by which such investments in aggregate exceed the threshold amount. In this sub-paragraph, the threshold amount is the lower of[49]:

(A) 10% of the Reporting Bank's common equity, calculated by applying the regulatory adjustments set out in sub-paragraphs (a) to (o) above to the sum of elements set out in paragraph 6.1.1(a) to (f); and

(B) 15% of the Reporting Bank's CET1 Capital[50];

(ii) the investments in aggregate referred to in sub-paragraph (i) above shall be calculated as follows:

(A) direct, indirect[37] and synthetic holdings shall be included. For example, the Reporting Bank shall look through holdings of index securities to determine the underlying holdings of ordinary shares[43];

(B) the net long positions in both the banking book and trading book shall be included. In this regard, the gross long position can be offset against the short position in the same underlying exposure, if the maturity of the short position either matches the maturity of the long position or has a residual maturity of at least one year[44,45,46];

(C) underwriting positions held for a period longer than five working days shall be included, while those positions held for five working days or less can be excluded;

(D) if the capital instrument of the entity in which the Reporting Bank has invested does not meet the criteria for CET1 Capital, AT1 Capital or Tier 2 Capital of the Reporting Bank, the capital instrument is to be considered as ordinary shares for the purpose of this regulatory adjustment[50A];

[49] For the period from 1 January 2013 to 31 December 2017, the threshold amount is based on sub-paragraph (A) only. The requirement to calculate the threshold amount based on the lower of sub-paragraph (A) and sub-paragraph (B) will take effect from 1 January 2018.

[50] This is equivalent to 17.65% of the Reporting Bank's common equity after (a) applying all regulatory adjustments set out in paragraphs 6.1.3(a) to (o); and (b) deducting in full such investments described in paragraph 6.1.3(p)(ii).

[50A] For the avoidance of doubt,

(E) the maximum amount that could be paid out on any guarantee or capital enhancement, through which capital support is provided by the Reporting Bank to a financial institution shall be included. The Reporting Bank shall consult the Authority if there is uncertainty whether such guarantee or capital enhancement is to be considered as ordinary shares for the purpose of the regulatory adjustment; and

(F) certain investments where these have been made in the context of resolving or providing financial assistance to reorganise a distressed institution may be temporarily excluded with the approval of the Authority; and

(iii) the amounts of such investments that do not exceed the thresholds set out in sub-paragraph (i) above and are not deducted shall be risk-weighted at 250%;

[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment) 2016]
[MAS Notice 637 (Amendment No. 2) 2020]

Division 2: Additional Tier 1 Capital

Amendment to paragraph 6.2.1

Components of AT1 Capital

6.2.1 AT1 Capital of a Reporting Bank shall be the sum of the following items, ~~whether~~calculated at the Solo or Group level, as the case may be:

[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment No. 2) 2020]

(a) capital instruments issued by the Reporting Bank which comply with the requirements in paragraph 6.2.2, and are not included in CET1 Capital;

[MAS Notice 637 (Amendment No. 2) 2014]

(a) a capital instrument would be deemed to have met the criteria for CET1 Capital, AT1 Capital or Tier 2 Capital of the Reporting Bank, if it satisfies the applicable regulatory capital criteria imposed by a bank regulatory agency that has implemented the Basel III standards;
(b) if the entity in which the Reporting Bank has invested is a financial institution that is subject to minimum prudential standards and supervision by a regulatory agency and the investment is not included as regulatory capital of the entity, the investment can be excluded for the purpose of this regulatory adjustment; and
(c) if the entity in which the Reporting Bank has invested is a financial institution that is not a bank, the entity is subject to minimum prudential standards and supervision by a regulatory agency and the investment is not in the form of ordinary shares but is nevertheless recognised as Tier 1 capital (or its equivalent) or Tier 2 capital (or its equivalent) of the entity, the capital instrument shall be considered as an AT1 capital instrument or Tier 2 capital instrument, respectively, for the purpose of this regulatory adjustment.

[MAS Notice 637 (Amendment) 2016]

(b) share premium, resulting from the issuance of capital instruments which fall within sub-paragraph (a), if any. Any share premium that is not eligible for inclusion in CET1 Capital shall be included in AT1 Capital only if the shares giving rise to the share premium comply with the requirements in paragraph 6.2.2;

[MAS Notice 637 (Amendment No. 2) 2014]

(c) capital instruments issued by fully consolidated subsidiaries of the Reporting Bank and held by third party investors that meet the criteria for inclusion in AT1 Capital pursuant to paragraphs 6.2.4 and 6.2.5, and are not included in CET1 Capital; and

(d) regulatory adjustments set out in paragraph 6.2.3.

Amendment to paragraph 6.2.3(e)

6.2.3 A Reporting Bank shall apply the following regulatory adjustments in the calculation of AT1 Capital at the Solo or Group level, as the case may be:

[MAS Notice 637 (Amendment No. 2) 2014]

(e) investments in the AT1 capital instruments of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries ~~at the Solo and Group levels~~), shall be deducted in the calculation of AT1 Capital[64G]. The total of such investments shall be calculated as follows:

(i) direct, indirect[37] and synthetic holdings shall be included. For example, the Reporting Bank shall look through holdings of index securities to determine the underlying holdings of AT1 capital instruments[43];

(ii) the net long positions in both the banking book and trading book shall be included. In this regard, the gross long position can be offset against the short position in the same underlying exposure, if the maturity of the short position either matches the maturity of the long

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[64G] For the avoidance of doubt,

(a) a capital instrument would be deemed to have met the criteria for AT1 Capital of the Reporting Bank, if it satisfies the applicable regulatory capital criteria imposed by a bank regulatory agency that has implemented the Basel III standards;

(b) if the entity in which the Reporting Bank has invested is a financial institution that is subject to minimum prudential standards and supervision by a regulatory agency and if the investment is not included as regulatory capital of the entity, the investment can be excluded for the purpose of this regulatory adjustment; and

(c) if the entity in which the Reporting Bank has invested is a financial institution that is not a bank, the entity is subject to minimum prudential standards and supervision by a regulatory agency and the investment is not in the form of ordinary shares but is nevertheless recognised as Tier 1 capital (or its equivalent) of the entity, the capital instrument shall be considered as an AT1 capital instrument for the purpose of this regulatory adjustment.

[MAS Notice 637 (Amendment) 2016]

position or has a residual maturity of at least one year[44,45,46];

(iii) underwriting positions held for a period longer than five working days shall be included, while those positions held for five working days or less can be excluded; and

(iv) certain investments where these have been made in the context of resolving or providing financial assistance to reorganise a distressed institution may be temporarily excluded with the approval of the Authority;

[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment) 2016]
[MAS Notice 637 (Amendment No. 2) 2020]

Division 3: Tier 2 Capital

Amendments to paragraphs 6.3.1 to 6.3.1AB

Components of Tier 2 Capital

6.3.1 Tier 2 Capital of a Reporting Bank shall be the sum of the following items, ~~whether~~calculated at the Solo or Group level, as the case may be:

[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment No. 2) 2020]

(a) capital instruments issued by the Reporting Bank that comply with the requirements in paragraph 6.3.2, and are not included in Tier 1 Capital;

(b) share premium, resulting from the issuance of capital instruments which fall within sub-paragraph (a), if any. Any share premium that is not eligible for inclusion in Tier 1 Capital shall be included in Tier 2 Capital only if the shares giving rise to the share premium comply with the requirements in paragraph 6.3.2;

[MAS Notice 637 (Amendment No. 2) 2014]

(c) capital instruments issued by fully consolidated subsidiaries of the Reporting Bank and held by third party investors that meet the criteria for inclusion in Tier 2 Capital pursuant to paragraphs 6.3.4 and 6.3.5, and are not included in Tier 1 Capital;

(d) subject to paragraph 6.3.1A, in the case where the Reporting Bank has adopted the SA(CR), SA(EQ), SEC-ERBA, SEC-SA or the approach for securitisation exposures to which the SEC-IRBA, SEC-ERBA and SEC-SA cannot be applied, general allowances that are held against future, presently unidentified losses, and that are freely available to meet losses which subsequently materialise.[69] Allowances ascribed to the identified deterioration of particular assets or known liabilities, whether individual or grouped, shall be excluded. The general allowances eligible for inclusion shall not exceed 1.25% of the sum of (i) the credit RWA set out in paragraph 7.1.1(a), and (ii) its SEC-ERBA RWA, SEC-SA RWA, and RWA from securitisation exposures to which the SEC-IRBA, SEC-ERBA, and SEC-SA cannot be applied and which are set out in paragraph 7.1.1(ba);

(e) subject to paragraph 6.3.1A, in the case where the Reporting Bank has adopted the IRBA, any excess of the TEP maintained by the Reporting Bank over the EL amount calculated by the Reporting Bank. The amount eligible for inclusion shall not exceed 0.6% of the sum of (i) the credit RWA set out in paragraph 7.1.1(b) and (ii) its SEC-IRBA RWA set out in paragraph 7.1.1(ba)[69,71,72]; and

(f) regulatory adjustments set out in paragraph 6.3.3.

[MAS Notice 637 (Amendment No. 3) 2017]

6.3.1AA Despite paragraph 6.3.1(d), between 31 March 2020 and 30 September 2021 (both dates inclusive), the general allowances eligible for inclusion may exceed 1.25% of the sum of (i) the credit RWA set out in paragraph 7.1.1(a), and (ii) its SEC-ERBA RWA, SEC-SA RWA, and RWA from securitisation exposures to which the SEC-IRBA, SEC-ERBA, and SEC-SA cannot be applied and which are set out in paragraph 7.1.1(ba), if it is exceeded because of ~~the balances maintained in a non-distributable regulatory loss allowance reserve account pursuant to paragraph 6.3 of MAS Notice 612~~regulatory loss allowances.

[MAS Notice 637 (Amendment) 2020]
[MAS Notice 637 (Amendment No. 2) 2020]

6.3.1AB Despite paragraph 6.3.1(e), between 31 March 2020 and 30 September 2021 (both dates inclusive), the amount eligible for inclusion may exceed 0.6% of the sum of (i) the credit RWA set out in paragraph 7.1.1(b) and (ii) its SEC-IRBA RWA set out in paragraph 7.1.1(ba), if it is exceeded because of ~~the balances maintained in a non-distributable regulatory loss allowance reserve account pursuant to paragraph 6.3 of MAS Notice 612~~regulatory loss allowances.

[MAS Notice 637 (Amendment) 2020]
[MAS Notice 637 (Amendment No. 2) 2020]

69 For the avoidance of doubt, any deferred tax assets associated with these general allowances or TEP maintained by the Reporting Bank shall be deducted in the calculation of CET1 Capital, as set out in paragraph 6.1.3(c).

[MAS Notice 637 (Amendment No. 3) 2017]

70 [Deleted by MAS Notice 637 (Amendment No. 3) 2017]

71 For the purpose of this sub-paragraph, in calculating the credit RWA, the 1.06 scaling factor set out in paragraph 7.1.1(b) does not apply.

72 Where the Authority is not satisfied that the EL amount fully reflects the conditions in the market in which the Reporting Bank operates, such excess amounts shall not be included as Tier 2 Capital. This also applies where the excess amounts on defaulted assets are used to offset the EL amount on non-defaulted assets.

Amendment to paragraph 6.3.3(e)

6.3.3 A Reporting Bank shall apply the following regulatory adjustments in the calculation of Tier 2 Capital at the Solo or Group level, as the case may be:

[MAS Notice 637 (Amendment No. 2) 2014]

(e) investments in the Tier 2 capital instruments and other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries~~ at the Solo and Group levels~~), shall be deducted in the calculation of Tier 2 Capital[77AA]. The total of such investments shall be calculated as follows:

(i) direct, indirect[37] and synthetic holdings shall be included. For example, the Reporting Bank shall look through holdings of index securities to determine the underlying holdings of Tier 2 capital instruments and other TLAC liabilities[43];

(ii) the net long positions in both the banking book and trading book shall be included. In this regard, the gross long position can be offset against the short position in the same underlying exposure, if the maturity of the short position either matches the maturity of the long position or has a residual maturity of at least one year[44, 45, 46];

(iii) underwriting positions held for a period longer than five working days shall be included, while those positions held for five working days or less can be excluded; and

(iv) certain investments where these have been made in the context of resolving or providing financial assistance to reorganise a distressed institution may be temporarily excluded with the approval of the Authority; and

[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment) 2016]
[MAS Notice 637 (Amendment No. 2) 2018]
[MAS Notice 637 (Amendment No. 2) 2020]

[77AA] For the avoidance of doubt,
(a) a capital instrument would be deemed to have met the criteria for Tier 2 Capital of the Reporting Bank, if it satisfies the applicable regulatory capital criteria imposed by a bank regulatory agency that has implemented the Basel III standards;
(b) if the entity in which the Reporting Bank has invested is a financial institution that is subject to minimum prudential standards and supervision by a regulatory agency and if the investment is not included as regulatory capital of the entity, the investment can be excluded for the purpose of this regulatory adjustment; and
(c) if the entity in which the Reporting Bank has invested is a financial institution that is not a bank, the entity is subject to minimum prudential standards and supervision by a regulatory agency and the investment is not in the form of ordinary shares and is recognised as Tier 2 capital (or its equivalent) of the entity, the capital instrument shall be considered as a Tier 2 capital instrument for the purpose of this regulatory adjustment.

[MAS Notice 637 (Amendment) 2016]

Amendments to Part VII: Credit Risk

Division 3: SA(CR)

Sub-division 3: Risk Weights

Amendments to paragraphs 7.3.17 to 7.3.17A

PSE Asset Class

7.3.16 Subject to paragraph 7.3.17 below, a Reporting Bank shall risk-weight any SA(CR) exposure in the PSE asset class in accordance with Table 7-2.

Table 7-2: Risk Weights for the PSE Asset Class

Credit Quality Grade	1	2	3	4	5	6	Unrated
Risk Weight	20%	50%	50%	100%	100%	150%	50%

[MAS Notice 637 (Amendment No. 2) 2018]

7.3.17 A Reporting Bank shall risk-~~-~~weight any SA(CR) exposure in the PSE asset class in accordance with Table 7-3 if –

(a) in the case of a PSE in Singapore, the exposure to the PSE is treated as an exposure to the Singapore Government and ~~the exposures to~~ the Singapore Government ~~have~~has a credit quality grade of "1" or "2" as set out in Table 7R-1 of Annex 7R of this Part~~[129A]~~; and

[MAS Notice 637 (Amendment No. 2) 2018]
[MAS Notice 637 (Amendment No. 2) 2020]

(b) in the case of a PSE outside Singapore, the bank regulatory agency of the jurisdiction where the PSE is established has exercised the national discretion to treat the ~~claim on~~ exposure to the PSE as ~~a claim on~~ an exposure to the central government and ~~the exposures to~~ the central government of the jurisdiction of that PSE ~~have~~has a credit quality grade of "1" or "2" as set out in Table 7R-1 of Annex 7R of this Part.

[MAS Notice 637 (Amendment No. 2) 2020]

Table 7-3: Risk Weights for Exposures to PSEs where the Central Government has a Credit Quality Grade of "1" or "2"~~[129A]~~

Credit Quality Grade	1	2	3	4	5	6	Unrated

129A [Deleted by MAS Notice 637 (Amendment No. 2) 2020]~~An exposure to a PSE in Singapore that is risk-weighted at 0% pursuant to paragraph 7.3.17(a) and Table 7-3 is treated as an exposure to the Singapore Government.~~

~~[MAS Notice 637 (Amendment No. 2) 2018]~~

Risk Weight **where the Central Government has a Credit Quality Grade of "1"**	0%	~~20%~~ 0%	~~20%~~ 0%	100%	100%	150%	~~20%~~ 0%
Risk Weight where the Central Government has a Credit Quality Grade of "2"	20%	20%	20%	100%	100%	150%	20%

[MAS Notice 637 (Amendment No. 2) 2020]

7.3.17A For the purposes of paragraph 7.3.17(a), an exposure to a PSE in Singapore is treated as an exposure to the Singapore Government only if the exposure is an exposure to a statutory board in Singapore (other than the Authority).

[MAS Notice 637 (Amendment No. 2) 2020]

Division 4: IRBA

Sub-division 4: Categorisation of IRBA Exposures

Amendments to paragraph 7.4.15

7.4.15 The IRBA wholesale asset class consists of the following asset sub-classes:

(a) corporate asset sub-class, which consists of -

(i) any IRBA exposure to a corporation, partnership, limited liability partnership, sole proprietorship or trustee in respect of a trust, other than an exposure belonging to an asset sub-class set out in sub-paragraphs (b), (c), (d), (e) or (f) of this paragraph, sub-paragraph (c) of paragraph 7.4.16 or sub-paragraphs (a), (b) or (c) of paragraph 7.4.18; and

[MAS Notice 637 (Amendment) 2012]

(ii) any IRBA exposure to an individual, other than an exposure belonging to an asset sub-class set out in sub-paragraphs (b), (c), (d), (e) or (f) of this paragraph, sub-paragraphs (a), (b) or (c) of paragraphs 7.4.16 or sub-paragraphs (a), (b) or (c) of paragraph 7.4.18;

[MAS Notice 637 (Amendment No. 2) 2014]

(b) corporate small business asset sub-class, which consists of any IRBA exposure to a small business, other than an exposure belonging to an asset sub-class set out in sub-paragraphs (c), (d), (e) or (f) of this paragraph, sub-paragraph (c) of paragraph 7.4.16 or sub-paragraphs (a), (b) or (c) of paragraph 7.4.18. For the purposes of determining whether the $100 million reported annual sales threshold is met, the Reporting Bank shall -

(i) if the small business is part of a group of companies as defined in section 209A of the Companies Act, use the reported annual consolidated sales of the group of companies;

(ii) have in place rigorous information gathering and timely updating processes to help ensure that the reported annual sales figure used is timely and relevant;

(iii) use an audited reported annual sales figure, except in the case of –

(A) companies incorporated in Singapore or partnerships, limited liability partnerships, sole proprietorships or trusts registered in Singapore which are not required under the relevant legislation to maintain audited financial statements; or

(B) companies incorporated outside Singapore or partnerships, limited liability partnerships, sole proprietorships or trusts registered outside Singapore which are not required under the relevant legislation to maintain audited financial statements,

whereupon the unaudited accounts may be used to ascertain the reported annual sales figure. All exemptions from the use of audited financial statements under (B) above shall be subject to an internal or external independent verification conducted on an annual basis;

[MAS Notice 637 (Amendment) 2013]

(iv) use a reported annual sales figure taken from the most recent full-year financial statements, which should be for a financial period ending not more than 18 months before the time when the credit risk-weighted exposure amount for that IRBA exposure is calculated[150].

Subsequent to the Reporting Bank's initial categorisation of an IRBA exposure into the corporate small business asset sub-class, a Reporting Bank which is unable to obtain updated financial statements may use a reported annual sales figure taken from full-year financial statements which are for a financial period ending more than 18 months before the time when the credit risk-weighted exposure amount for that IRBA exposure is calculated. In such a case, the Reporting Bank may continue to categorise such exposures under the corporate small business asset sub-class but shall not be

[150] For example, the sales figure for the 12 months ending 31 Dec 2004 may not be used for calculating credit risk-weighted exposure amounts after 30 Jun 2006. Audited figures which are not more than 24 months old are admissible only under exceptional circumstances.

permitted to use the total reported annual sales of the obligor in the K_{sm} formulas stated in paragraph 7.4.22; and

[MAS Notice 637 (Amendment) 2013]

(v) not categorise an exposure as a corporate small business asset sub-class if it becomes aware of any event after the date of the financial statements referred to in sub-paragraph (iv) above that would reasonably cause the $100 million reported annual sales threshold to be breached;

[MAS Notice 637 (Amendment) 2013]

(c) sovereign asset sub-class, which consists of any IRBA exposure to –

(i) a central government~~,~~;

(ii) a central bank~~,~~;

(iii) a PSE, where such an exposure would qualify for a 0% or 20% risk weight under the SA(CR) pursuant to paragraph 7.3.17 and Table 7-3;

(iv) a qualifying MDB; or

(v) an international organisation listed in paragraph 7.3.20;

[MAS Notice 637 (Amendment No. 2) 2020]

(d) bank asset sub-class, which consists of any IRBA exposure to –

(i) a banking institution~~,~~;

(ii) a PSE other than an exposure referred to in sub-paragraph (c)(iii) of this paragraph; or

(iii) an MDB not listed in Annex 7S of this Part;

[MAS Notice 637 (Amendment No. 2) 2020]

(e) SL asset sub-class, which consists of any IRBA exposure that meets the characteristics set out in Annex 7U of this Part, other than an exposure belonging to the asset sub-class set out in sub-paragraph (f) of this paragraph; and

(f) HVCRE asset sub-class, which consists of any IRBA exposure that meets the characteristics set out in Annex 7U of this Part.

Division 6: Securitisation

Sub-division 4: Internal Ratings-Based Approach (SEC-IRBA)

Amendment to paragraph 7.6.25

7.6.24 For funded synthetic securitisations, a Reporting Bank shall include in the calculation of K_{IRB} any proceeds of the issuances of credit-linked notes or any other funded obligations of the SPE which serve as collateral for the repayment of the securitisation exposure if -

(a) the Reporting Bank cannot demonstrate to the Authority that these are immaterial; and

(b) the default risk of such collateral is subject to the tranched loss allocation in the securitisation transaction.

7.6.25 ~~The~~For the purposes of paragraph 7.6.24, the Reporting Bank shall include, in the computation of the IRB capital requirement of the underlying pool used in calculating K_{IRB}, the exposure amount of the collateral multiplied by its risk weight and 8%. The Reporting Bank shall not include such collateral in the computation of the exposure amount of the underlying pool used in calculating K_{IRB}.

[MAS Notice 637 (Amendment No. 2) 2020]

Sub-division 11: Treatment of Credit Risk Mitigation

Amendment to paragraph 7.6.97

7.6.97 A Reporting Bank that synthetically securitises exposures held on its balance sheet by purchasing tranched credit protection shall treat maturity mismatches between the synthetic securitisation and the underlying exposures in the following manner –

(a) for securitisation exposures that are assigned a risk weight of 1250%, maturity mismatches are not taken into account; and

(b) for all other securitisation exposures, the ~~bank~~Reporting Bank shall determine its capital requirements as described in this Sub-division, after adjusting the value of credit protection for any maturity mismatches in accordance with Section 6 of Annex 7F.

[MAS Notice 637 (Amendment No. 2) 2020]

Section 2: Recognition of Collateral

Amendments to paragraphs 2.2 to 2.2B

2.2 For a Reporting Bank using the FC(SA), eligible financial collateral comprises[226A] –

(a) cash (as well as certificates of deposit or other similar instruments[226B] issued by the Reporting Bank)[227] on deposit with the Reporting Bank;[228]

(b) gold;

(c) any debt security[228A] –

(i) with an original maturity of one year or less that has a credit quality grade of "III" or better as set out in Table 7R-2 of Annex 7R of Part VII, where the credit quality grade is determined based on an issue-specific external credit assessment of the debt security and in accordance with paragraph 7.3.4; ~~or~~

[MAS Notice 637 (Amendment No. 2) 2020]

(ii) with an original maturity of more than one year that has a credit quality grade of "4" or better as set out in Table 7R-1 of Annex 7R of Part VII if it is issued by a central government or central bank, where the credit quality grade is determined based on an issue-specific external credit assessment of the debt security and in accordance with paragraph 7.3.4;

[MAS Notice 637 (Amendment No. 2) 2020]

(iii) with an original maturity of more than one year that has~~or~~ a credit quality grade of "3" or better as set out in Table 7R-1 of Annex 7R

226A This shall exclude any CET1 capital instrument, AT1 capital instrument or Tier 2 capital instrument issued by the Reporting Bank which is held by the Reporting Bank or any of its banking group entities as collateral. Please also note section 29(3) of the Banking Act which prohibits a Reporting Bank from granting any credit facility against the security of its own shares.

[MAS Notice 637 (Amendment) 2014]

226B This shall not include any structured deposits. Structured deposit has the same meaning as in Regulation 2 of the Financial Advisers (Structured Deposits – Prescribed Investment Product and Exemption) Regulations 2005.

[MAS Notice 637 (Amendment No. 2) 2014]

227 Cash-funded credit-linked notes issued by a Reporting Bank against exposures in the banking book which fulfill the criteria for eligible credit derivatives shall be treated as cash collateralised transactions.

228 When cash on deposit, certificates of deposit or other similar instruments issued by the lending Reporting Bank are held as collateral at a third-party banking institution in a non-custodial arrangement and are pledged or assigned to the lending Reporting Bank, the Reporting Bank shall apply the risk weight of the third-party banking institution to the exposure covered by such collateral (after any necessary haircuts for currency risk). This is subject to the pledge or assignment being unconditional and irrevocable.

228A This includes any structured note.

of Part VII if it is issued by any ~~other~~ entity other than a central government or central bank, where the credit quality grade is determined based on an issue-specific external credit assessment of the debt security and in accordance with paragraph 7.3.4. To avoid doubt, a debt security issued by a PSE which is risk-weighted at 0% or 20% under the SA(CR) pursuant to paragraph 7.3.17 and Table 7-3 is an eligible financial collateral pursuant to this sub-paragraph, if such debt security has a credit quality grade of "3" or better;

[MAS Notice 637 (Amendment No. 2) 2020]

(d) any equity security (including convertible bonds) that is included in a main index; and

(e) any unit in a collective investment scheme where –

(i) a price for the units is publicly quoted daily; and

(ii) the collective investment scheme is limited to investing in the instruments listed in this paragraph.[229]

[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment) 2018]
[MAS Notice 637 (Amendment No. 2) 2018]

2.2A For the purposes of paragraph 2.2(c)(ii) of this Annex, when determining the credit quality grade of a debt security issued by a central government or central bank, the Reporting Bank may rely on the issuer external credit assessment to determine the credit quality grade of the debt security where no issue-specific external credit assessment is available.

[MAS Notice 637 (Amendment No. 2) 2020]

2.2~~A~~B Resecuritisations, irrespective of any credit ratings, are not eligible financial collateral. This prohibition applies whether the Reporting Bank is using the supervisory haircuts method, the own estimates of haircuts method, the repo VaR method or the internal model method.

[MAS Notice 637 (Amendment No. 2) 2020]

229 The use or potential use by a collective investment scheme of derivative instruments solely to hedge investments listed in paragraph 2.2 shall not prevent units in that collective investment scheme from being recognised as eligible financial collateral for a Reporting Bank using FC(SA).

METHODS AND HAIRCUTS FOR RECOGNISING COLLATERAL

Section 2: Standard Supervisory Haircuts

Amendments to paragraphs 2.1 and 2.1A

2.1 The standard supervisory haircuts, H_E, H_C and H_S (assuming daily remargining and daily revaluation (i.e. mark-to-market) and a ten-business day holding period), are as follows:

Table 7J-1 - Standard Supervisory Haircuts

<table>
<tr><th colspan="2">Eligible Financial Collateral</th><th colspan="3">Standard Supervisory Haircuts</th></tr>
<tr><th>Issue Rating for Debt Securities</th><th>Residual Maturity</th><th>~~Central Governments or Central Banks~~Sovereign Issuers</th><th>Other Issuers</th><th>Securitisation Exposures</th></tr>
<tr><td rowspan="3">Any debt security with a credit quality grade of "1" or short-term credit quality grade of "I"</td><td>≤ 1 year</td><td>0.005</td><td>0.01</td><td>0.02</td></tr>
<tr><td>> 1 year, ≤ 5 years</td><td>0.02</td><td>0.04</td><td>0.08</td></tr>
<tr><td>> 5 years</td><td>0.04</td><td>0.08</td><td>0.16</td></tr>
<tr><td rowspan="3">Any debt security with a credit quality grade of "2" and "3" or short-term credit quality grade of "II" and "III"</td><td>≤ 1 year</td><td>0.01</td><td>0.02</td><td>0.04</td></tr>
<tr><td>> 1 year, ≤ 5 years</td><td>0.03</td><td>0.06</td><td>0.12</td></tr>
<tr><td>> 5 years</td><td>0.06</td><td>0.12</td><td>0.24</td></tr>
<tr><td>Any debt security with a credit quality grade of "4"</td><td>All</td><td>0.15</td><td>NA</td><td>NA</td></tr>
<tr><td colspan="2">Gold</td><td colspan="3">0.15</td></tr>
<tr><td colspan="2">Any equity (including a convertible bond) in a main index</td><td colspan="3">0.15</td></tr>
<tr><td colspan="2">Any other equity (including a convertible bond) listed on an approved exchange or an overseas exchange</td><td colspan="3">0.25</td></tr>
<tr><td colspan="2">Any unit in a collective investment scheme</td><td colspan="3">0.25 or highest haircut applicable to any security in which the fund can invest</td></tr>
<tr><td colspan="2">Cash in the same currency as the underlying exposure</td><td colspan="3">0</td></tr>
<tr><td colspan="2">Instruments in the trading book other than those listed above (for pre-settlement counterparty exposures arising from repo-style transactions, i.e. repo, reverse repo, securities lending or</td><td colspan="3">0.25</td></tr>
</table>

Eligible Financial Collateral	Standard Supervisory Haircuts
securities borrowing transactions, included in the trading book)	

[MAS Notice 637 (Amendment) 2014]
[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment) 2018]
[MAS Notice 637 (Amendment No. 2) 2018]
[MAS Notice 637 (Amendment No. 2) 2020]

2.1A For the purposes of Table 7J-1 –

(a) in the case of a debt security issued by a central government or a central bank, a Reporting Bank must ensure that the credit quality grade is determined based on an issue-specific external credit assessment of the debt security and in accordance with paragraph 7.3.4. Where no issue-specific external credit assessment is available, the Reporting Bank may rely on the issuer external credit assessment to determine the credit quality grade of such a debt security;

(b) "sovereign issuer" refers to:

(i) any central government;

(ii) any central bank;

(iii) any qualifying MDB; or

(iv) any PSE, the exposure to which would qualify for a 0% or 20% risk weight under the SA(CR) pursuant to paragraph 7.3.17 and Table 7-3.

[MAS Notice 637 (Amendment No. 2) 2020]

REQUIREMENTS FOR USE OF VAR MODELS

A Reporting Bank using VaR models shall -

(a) use a minimum holding period of 10-business days except in the case of repos, reverse repos, securities lending or securities borrowing transactions, for which it shall use a minimum holding period of five business days[277];

[MAS Notice 637 (Amendment) 2012]

(b) backtest its output by -

(i) identifying a sample of 20 counterparties, on an annual basis, which shall include the ten largest counterparties as determined by the ~~bank~~Reporting Bank according to its own exposure measurement approach and ten others selected at random;

[MAS Notice 637 (Amendment No. 2) 2020]

(ii) comparing, for each day and for the sample of 20 counterparties, the VaR estimate of the previous day for the counterparty portfolio to the difference between the net value of the previous day's portfolio using today's market prices and the net value of that portfolio using the previous day's market prices; and

(iii) counting it as an exception, where this difference exceeds the previous day's VaR estimate; and

(c) calculate the add-on for the purposes of paragraph 1.3(b) of Annex 7J of Part VII as follows:

Add-on = (VaR output) x (VaR multiplier),

where the VaR multiplier is determined by the number of exceptions in the observations for a sample of 20 counterparties over the most recent 250 days (encompassing 5,000 observations) using the table below[278]:

277 A Reporting Bank should adjust the minimum holding period upwards for any financial instrument where the specified holding period would be inappropriate given the liquidity of the instrument concerned. At a minimum, where the Reporting Bank has a transaction or netting set which meets the criteria set out in paragraph 6.5 of Annex 7Q, the minimum holding period shall be the margin period of risk that applies under that paragraph.

278 When the outcome of the model consistently results in a large number of exceptions, either overall or for one significant counterparty, the Reporting Bank is expected to review the model assumptions and make modifications as appropriate.

Table 7M-1 - VaR multiplier

Zone	Number of exceptions	Multiplier
Green	0-19	1.00
	20-39	1.00
	40-59	1.00
	60-79	1.00
	80-99	1.00
Yellow	100-119	1.13
	120-139	1.17
	140-159	1.22
	160-179	1.25
	180-199	1.28
Red	200 or more	1.33

Annex 7N

QUALIFYING BILATERAL NETTING AGREEMENTS AND QUALIFYING CROSS-PRODUCT NETTING AGREEMENTS

Section 3: Requirements for Netting Agreements

Amendment to footnote 278A of paragraph 3.1(a)

3.1 A Reporting Bank shall –

(a) obtain a written independent legal opinion[278A] that satisfies the requirements set out in paragraphs 4.1 to 4.3 of this Annex confirming that the netting agreement is valid, effective and enforceable for each of the following jurisdictions:

(i) the jurisdiction in which the counterparty is incorporated or established;

(ii) if a foreign branch of the Reporting Bank or the counterparty has entered or will be entering into the Transaction, the jurisdiction in which the branch of the Reporting Bank or the counterparty, as the case may be, is located;

(iii) the jurisdiction whose law governs the netting agreement; and

(iv) the jurisdiction whose law governs any Transaction subject to the netting agreement if different from sub-paragraph (iii),

(referred to as "relevant jurisdictions" in this Annex) and which satisfies the requirements set out in Section 4 of this Annex;

[278A] While a Reporting Bank may use either an in-house or external legal counsel for the purpose of obtaining a written independent legal opinion, it should consider whether or not an in-house counsel opinion is appropriate. In the case of an in-house legal counsel, such a party should be independent of the parties originating transactions covered by the ~~on-balance sheet~~ netting agreement.

[MAS Notice 637 (Amendment) 2019]

[MAS Notice 637 (Amendment No. 2) 2020]

CCR INTERNAL MODELS METHOD

Section 7: Model Validation Requirements

Amendment to paragraph 7.3

7.3 A Reporting Bank shall ensure a level of management with sufficient seniority and authority to:

(a) enforce both reduction of positions taken by individual traders and reductions in the ~~bank's~~Reporting Bank's overall risk exposure;

[MAS Notice 637 (Amendment No. 2) 2020]

(b) review the daily reports prepared by the independent risk control unit; and

(c) periodically review the ongoing validation of models and backtesting and decide the course of action that will be taken to address model weaknesses.

CREDIT QUALITY GRADES

[MAS Notice 637 (Amendment) 2014]

Table 7R-1 - Credit Quality Grades for SA(CR) Exposures

Credit Quality Grade	1	2	3	4	5	6
Fitch Ratings	AAA AA+ AA AA-	A+ A A-	BBB+ BBB BBB-	BB+ BB BB-	B+ B B-	CCC+ CCC CCC- CC C D
Moody's Investors Services	Aaa Aa1 Aa2 Aa3	A1 A2 A3	Baa1 Baa2 Baa3	Ba1 Ba2 Ba3	B1 B2 B3	Caa1 Caa2 Caa3 Ca C
Standard & Poor's Ratings Services	AAA AA+ AA AA-	A+ A A-	BBB+ BBB BBB-	BB+ BB BB-	B+ B B-	CCC+ CCC CCC- CC C D

[MAS Notice 637 (Amendment) 2014]

Table 7R-2 - For Credit Quality Grades for Short-term SA(CR) Exposures

Short-term Credit Quality Grade	I	II	III	IV
Fitch Ratings	F-1	F-2	F-3	Others
Moody's Investors Services	P-1	P-2	P-3	Others
Standard & Poor's Ratings Services	A-1	A-2	A-3	Others

[MAS Notice 637 (Amendment) 2014]

Table 7R-3 - Credit Quality Grades for SEC-ERBA Exposures

Credit Quality Grade	Fitch Ratings	Moody's Investors Services	Standard & Poor's Ratings Services
1	AAA	Aaa	AAA
2	AA+	Aa1	AA+
3	AA	Aa2	AA
4	AA-	Aa3	AA-
5	A+	A1	A+
6	A	A2	A
7	A-	A3	A-
8	BBB+	Baa1	BBB+
9	BBB	Baa2	BBB
10	BBB-	Baa3	BBB-
11	BB+	Ba1	BB+
12	BB	Ba2	BB
13	BB-	Ba3	BB-
14	B+	B1	B+
15	B	B2	B
16	B-	B3	B-
17	CCC+/CCC/CCC-	Caa1/Caa2/Caa3	CCC+/CCC/CCC-
18	Below CCC-	Below ~~CCC-~~ Caa3	Below CCC-

[MAS Notice 637 (Amendment) 2014]
[MAS Notice 637 (Amendment No. 2) 2017]
[MAS Notice 637 (Amendment No. 2) 2020]

Table 7R-4 - Credit Quality Grades for Short-term SEC-ERBA Exposures

Short-term Credit Quality Grade	I	II	III	IV
Fitch Ratings	F-1	F-2	F-3	Others
Moody's Investors Services	P-1	P-2	P-3	Others
Standard & Poor's Ratings Services	A-1	A-2	A-3	Others

[MAS Notice 637 (Amendment) 2014]
[MAS Notice 637 (Amendment No. 2) 2017]

Table 7R-5 - Claims Paying Ability Grades for AMA Exposures

Claims Paying Ability Grade	1
Fitch Ratings	AAA, AA, A
Moody's Investor Services	Aaa, Aa, A1, A2
Standard & Poor's Ratings Services	AAA, AA, A+,A

[MAS Notice 637 (Amendment) 2014]

Annex 7T

QUALIFYING MORTGAGE INSURANCE

Amendment to footnote 308 of paragraph (e)(ii)

308 Exclusions relating to the non-payment by the Reporting Bank of money due in respect of the mortgage insurance contract, and clearly defined non-credit related events (e.g. exclusions relating to ~~bank~~any negligence and fraud of the Reporting Bank, title defects, physical damage to the collateral, acts of war and rebellion, and claims contrary to law) is not normally regarded by the Authority as a failure to meet this condition.

[MAS Notice 637 (Amendment No. 2) 2020]

Annex 7U

DEFINITION OF SL ASSET SUB-CLASS AND HVCRE ASSET SUB-CLASS

Amendment to paragraph 1.10(h)

Case Studies

1.10 Some case studies on the categorisation of IRBA exposures based on the definitions above are as follows[311]:

Commodities Finance

(h) The Reporting Bank extends short-term documentary trade credit to a small independent trading company ("trader") that acts as an intermediary between producers and their customers. The trader specialises in a single commodity and a single region. Each commodity shipment handled by the trader is financed and secured separately. Credit is extended upon delivery of the commodity to the trader, who has already contracted for the resale of the commodity shipment. A trust-worthy third party controls the shipment of the commodity, and the ~~bank~~Reporting Bank controls payment by the customer. This loan would be categorised as an exposure in the SL asset sub-class, since repayment depends primarily on the proceeds of the sale of the commodity.

[MAS Notice 637 (Amendment No. 2) 2020]

311 The examples are for illustrative purposes only and not intended to be definitive or exhaustive. The actual operation of the principles embodied in paragraphs 1.1 to 1.9 of this Annex may vary depending on the circumstances in each case.

SUPERVISORY SLOTTING CRITERIA FOR SL ASSET SUB-CLASS AND HVCRE ASSET SUB-CLASS

Amendments to Table 7V-4

Table 7V-4 – Guidelines on Supervisory Rating Categories for IPRE and HVCRE Lending

	Strong	Good	Satisfactory	Weak
Financial Strength				
Market conditions	The supply and demand for the project's type and location are currently in equilibrium. The number of competitive properties coming to market is equal or lower than forecasted demand	The supply and demand for the project's type and location are currently in equilibrium. The number of competitive properties coming to market is roughly equal to forecasted demand	Market conditions are roughly in equilibrium. Competitive properties are coming on the market and others are in the planning stages. The project's design and capabilities may not be state of the art compared to new projects	Market conditions are weak. It is uncertain when conditions will improve and return to equilibrium. The project is losing tenants at lease expiration. New lease terms are less favourable compared to those expiring
Financial ratios and advance rate	The property's debt service coverage ratio (DSCR) is considered strong (DSCR is not relevant for the construction phase) and its loan to value ratio (LTV) is considered low given its property type. Where a secondary market exists, the transaction is underwritten to market standards	The DSCR (not relevant for development real estate) and LTV are satisfactory. Where a secondary market exists, the transaction is underwritten to market standards	The property's DSCR has deteriorated and its value has fallen, increasing its LTV	The property's DSCR has deteriorated significantly and its LTV is well above underwriting standards for new loans
Stress analysis	The property's resources,	The property can meet its	During an economic	The property's financial

	Strong	Good	Satisfactory	Weak
	contingencies and liability structure allow it to meet its financial obligations during a period of severe financial stress (e.g. interest rates, economic growth)	financial obligations under a sustained period of financial stress (e.g. interest rates, economic growth). The property is likely to default only under severe economic conditions	downturn, the property would suffer a decline in revenue that would limit its ability to fund capital expenditures and significantly increase the risk of default	condition is strained and is likely to default unless conditions improve in the near term
Cash-flow predictability				
(a) For complete and stablilised property	The property's leases are long-term with creditworthy tenants and their maturity dates are scattered. The property has a track record of tenant retention upon lease expiration. Its vacancy rate is low. Expenses (maintenance, insurance, security, and property taxes) are predictable	Most of the property's leases are long-term, with tenants that range in creditworthiness. The property experiences a normal level of tenant turnover upon lease expiration. Its vacancy rate is low. Expenses are predictable	Most of the property's leases are medium rather than long-term with tenants that range in creditworthiness. The property experiences a moderate level of tenant turnover upon lease expiration. Its vacancy rate is moderate. Expenses are relatively predictable but vary in relation to revenue	The property's leases are of various terms with tenants that range in creditworthiness. The property experiences a very high level of tenant turnover upon lease expiration. Its vacancy rate is high. Significant expenses are incurred preparing space for new tenants
(b) For complete but not stabilised property	Leasing activity meets or exceeds projections. The project should achieve	Leasing activity meets or exceeds projections. The	Most leasing activity is within projections; however, stabilisation	Market rents do not meet expectations. Despite achieving target occupancy

	Strong	Good	Satisfactory	Weak
	stabilisation in the near future	project should achieve stabilisation in the near future	will not occur for some time	rate, cash flow coverage is tight due to disappointing revenue
(c) For construction phase	The property is entirely pre-leased through the tenor of the loan or pre-sold to an investment grade tenant or buyer, or the ~~bank~~Reporting Bank has a binding commitment for take-out financing from an investment grade lender	The property is entirely pre-leased or pre-sold to a creditworthy tenant or buyer, or the ~~bank~~Reporting Bank has a binding commitment for permanent financing from a creditworthy lender	Leasing activity is within projections but the building may not be pre-leased and there may not exist a takeout financing. The ~~bank~~Reporting Bank may be the permanent lender	The property is deteriorating due to cost overruns, market deterioration, tenant cancellations or other factors. There may be a dispute with the party providing the permanent financing
Asset characteristics				
Location	Property is located in highly desirable location that is convenient to services that tenants desire	Property is located in desirable location that is convenient to services that tenants desire	The property location lacks a competitive advantage	The property's location, configuration, design and maintenance have contributed to the property's difficulties
Design and condition	Property is favoured due to its design, configuration, and maintenance, and is highly competitive with new properties	Property is appropriate in terms of its design, configuration and maintenance. The property's design and capabilities are competitive with new properties	Property is adequate in terms of its configuration, design and maintenance	Weaknesses exist in the property's configuration, design or maintenance

	Strong	Good	Satisfactory	Weak
Property is under construction	Construction budget is conservative and technical hazards are limited. Contractors are highly qualified	Construction budget is conservative and technical hazards are limited. Contractors are highly qualified	Construction budget is adequate and contractors are ordinarily qualified	Project is over budget or unrealistic given its technical hazards. Contractors may be under qualified
Strength of Sponsor/Developer				
Financial capacity and willingness to support the property.	The sponsor or developer made a substantial cash contribution to the construction or purchase of the property. The sponsor or developer has substantial resources and limited direct and contingent liabilities. The sponsor or developer's properties are diversified geographically and by property type	The sponsor or developer made a material cash contribution to the construction or purchase of the property. The sponsor or developer's financial condition allows it to support the property in the event of a cash flow shortfall. The sponsor or developer's properties are located in several geographic regions	The sponsor or developer's contribution may be immaterial or non-cash. The sponsor or developer is average to below average in financial resources	The sponsor or developer lacks capacity or willingness to support the property
Reputation and track record with similar properties.	Experienced management and high sponsors' quality. Strong reputation and lengthy and successful record with similar properties	Appropriate management and sponsors' quality. The sponsor or management has a successful record with similar properties	Moderate management and sponsors' quality. Management or sponsor track record does not raise serious concerns	Ineffective management and substandard sponsors' quality. Management and sponsor difficulties have contributed to difficulties in

	Strong	Good	Satisfactory	Weak
				managing properties in the past
Relationships with relevant real estate actors	Strong relationships with leading actors such as leasing agents	Proven relationships with leading actors such as leasing agents	Adequate relationships with leasing agents and other parties providing important real estate services	Poor relationships with leasing agents and/or other parties providing important real estate services
Security Package				
Nature of charge	Perfected first charge[312]	Perfected first charge[312]	Perfected first charge[312]	Ability of lender to foreclose is constrained
Assignment of rents (for projects leased to long-term tenants)	The lender has obtained an assignment. They maintain current tenant information that would facilitate providing notice to remit rents directly to the lender, such as a current rent roll and copies of the project's leases	The lender has obtained an assignment. They maintain current tenant information that would facilitate providing notice to the tenants to remit rents directly to the lender, such as current rent roll and copies of the project's leases	The lender has obtained an assignment. They maintain current tenant information that would facilitate providing notice to the tenants to remit rents directly to the lender, such as current rent roll and copies of the project's leases	The lender has not obtained an assignment of the leases or has not maintained the information necessary to readily provide notice to the building's tenants
Quality of the insurance coverage	Appropriate	Appropriate	Appropriate	Substandard

312 Lenders in some markets extensively use loan structures that include junior charges. Junior charges may be indicative of this level of risk if the total LTV inclusive of all senior positions does not exceed a typical first loan LTV.

[MAS Notice 637 (Amendment) 2013]
[MAS Notice 637 (Amendment No. 2) 2020]

IRBA VALIDATION STANDARDS

Section 4: Rating Systems Operations

Amendment to paragraph 4.1

4.1 Coverage for Wholesale Exposures

(a) A Reporting Bank shall ensure that every new and existing borrower of an exposure categorised under the IRBA wholesale asset class, and every eligible protection provider recognised for purposes of calculating credit RWA for the wholesale component is assigned a rating as part of the credit approval process.[352]

(b) A Reporting Bank shall ensure that every exposure categorised under the IRBA wholesale asset class is associated with a facility rating as part of the credit approval process.[353]

(c) A Reporting Bank shall ensure that each separate legal entity to which it has a credit exposure is assigned a separate borrower grade. The Reporting Bank shall have clear and appropriate policies regarding the assignment of ratings to separate legal entities in a connected group, including –

(i) the circumstances under which the Reporting Bank may or may not assign the same rating to separate legal entities within a connected group; and

(ii) the definition of a connected group of legal entities for purposes of rating assignment.

(d) A Reporting Bank shall ensure that the policies regarding the assignment of ratings include a process for the identification of specific wrong-way risk for each legal entity to which the ~~bank~~Reporting Bank is exposed.

[MAS Notice 637 (Amendment No. 2) 2020]

352 *[This footnote has been intentionally left blank.]*
353 *[This footnote has been intentionally left blank.]*

EXPOSURES TO CENTRAL COUNTERPARTIES

Section 2: CCP Trade Exposures

Amendment to paragraph 2.3

2.3 Notwithstanding paragraph 2.2 of this Annex, for a Reporting Bank calculating E or EAD, whichever is applicable, using the CCR internal models method or SA-CCR, the 20-day floor for the margin period of risk and the minimum holding period for a netting set where the number of trades exceeds 5,000 at any point during a quarter, as set out in paragraph 6.5 of Annex 7Q and Table 7J-2 of Annex 7J, shall not apply if there are no disputed trades within the netting set and the netting set does not contain any illiquid collateral or exotic trades, subject to the following –

(a) in all cases, a minimum margin period of risk of 10 business days shall apply to the calculation of RWA for trade exposures to CCPs for OTC derivative transactions; and

(b) where CCPs retain variation margin against certain trades and collateral posted by a clearing member is not protected against the insolvency of the CCP, the minimum time risk horizon applied to ~~banks'~~the Reporting Bank's trade exposures on such trades shall be the lesser of one year and the remaining maturity of the transaction, subject to a floor of 10 business days.

[MAS Notice 637 (Amendment) 2016]
[MAS Notice 637 (Amendment No. 2) 2020]

[405] [Deleted by MAS Notice 637 (Amendment) 2016]

Amendments to Part VIII: Market Risk

Division 2: SA(MR)

Sub-division 2: Equity Position Risk

Amendment to paragraph 8.2.30

8.2.30 In the case of the futures-related arbitrage strategies described below, a Reporting Bank shall apply ~~the~~an additional 2% risk charge ~~referred to in paragraph 8.2.29~~ to only one index with the opposite position exempt from the market risk capital requirement. Such futures-related arbitrage strategies are –

(a) when the Reporting Bank takes an opposite position in exactly the same index at different dates or in different market centres; or

(b) when the Reporting Bank takes an opposite position in contracts at the same date in a different but similar index, subject to approval by the Authority. The Authority will not normally grant approval for a Reporting Bank to use this treatment unless the Reporting Bank is able to demonstrate that the two indices contain sufficient common components to justify offsetting.

[MAS Notice 637 (Amendment No. 2) 2020]

Sub-division 12: Incremental Risk

Amendment to paragraph 8.3.166

8.3.166 There is no specific modelling approach for capturing incremental risk. The approach that a Reporting Bank uses to measure the IRC is subject to the "use test". Specifically, the approach shall be consistent with the ~~bank's~~Reporting Bank's internal risk management methodologies for identifying, measuring, and managing trading risks.

[MAS Notice 637 (Amendment No. 2) 2020]

DERIVATION OF NOTIONAL POSITIONS FOR INTEREST RATE-RELATED DERIVATIVES

Amendments to paragraph 1.5

1.5 A Reporting Bank should treat interest rate swaps or foreign exchange swaps[551] as two notional positions as follows –

	Notional position 1	Notional position 2
Reporting Bank receives fixed and pays floating	A short position in a zero-specific-risk security with a coupon equal to the floating rate and a maturity equal to the reset date.	A long position in a zero-specific-risk security with a coupon equal to the fixed rate of the swap and a maturity equal to the maturity of the swap.
Reporting Bank receives floating and pays fixed	A short position in a zero-specific-risk security with a coupon equal to the fixed rate of the swap and a maturity equal to the maturity of the swap.	A long position in a zero-specific-risk security with a coupon equal to the floating rate and a maturity equal to the reset date.
Reporting Bank receives and pays floating	A short position in a zero-specific-risk security with a coupon equal to the floating rate and a maturity equal to the reset date.	A long position in a zero-specific-risk security with a coupon equal to the floating rate and a maturity equal to the reset date.

[MAS Notice 637 (Amendment No. 2) 2020]

[551] For a foreign exchange swap, the two notional zero-specific-risk securities would be denominated in different currencies.

Annex 8B

TREATMENT OF CREDIT DERIVATIVES IN THE TRADING BOOK

Amendments to paragraphs 1.2 to 1.2A

1.2 A Reporting Bank that is a protection seller (buyer) should treat its position in a total rate of return swap as –

(a) for the purpose of calculating the general market risk capital requirement –

(i) a notional long (short) position in the reference obligation with a maturity equal to the expiry date of the swap, subject to paragraph 1.2A of this Annex; and

(ii) where any periodic premiums or interest payments are due under the swap, a notional short (long) position in a zero-specific-risk security with a coupon equal to the appropriate fixed or floating rate and a maturity equal to the expiry date of the swap or the date on which the interest rate will be reset respectively; and

[MAS Notice 637 (Amendment No. 2) 2020]

(b) for the purpose of calculating the specific risk capital requirement, a notional long (short) position in the reference obligation with a maturity equal to the expiry date of the swap.

[MAS Notice 637 (Amendment No. 2) 2014]

1.2A Where a long cash position is hedged by a total rate of return swap (or vice versa) and there is an exact match between the reference obligation and the underlying instrument (i.e. the cash position), a Reporting Bank that is a protection buyer (seller) may, for the purposes of calculating the general market risk capital requirement, treat its position in the total rate of return swap as a notional short (long) position in the reference obligation with a maturity equal to the maturity date of the reference obligation.

[MAS Notice 637 (Amendment No. 2) 2020]

Annex 8C

APPLICABLE RISK CHARGES OR MATCHING FACTORS FOR CALCULATION OF SPECIFIC RISK AND GENERAL MARKET RISK CAPITAL REQUIREMENTS UNDER THE SA(MR)

Table 8C-1 – Specific Risk Capital Requirement - Specific Risk Charges for Positions other than Securitisation Exposures

Category	Credit Quality Grade as set out in Table 7R-1	Residual term to final maturity	Specific risk charge
Government[552]	1	N.A.	0.00%
	2 or 3	6 months or less	0.25%
		more than 6 and up to and including 24 months	1.00%
		more than 24 months	1.60%
	4 or 5	N.A.	8.00%
	6	N.A.	12.00%
	Unrated	N.A.	8.00%
Qualifying[553]		6 months or less	0.25%

552 The "government" category includes –
(a) all forms of ~~government-issued~~ securities, including bonds, treasury bills and other short-term instruments, issued by a central government or central bank; and
(b) ~~securities~~ any security issued by a PSE~~s~~ which ~~qualify for a~~ is risk-weighted at 0% ~~risk weight~~ under the SA(CR) pursuant to paragraph 7.3.17 and Table 7-3.
~~An exposure to any security issued by –~~
~~(i) the Government or the Authority; or~~
~~(ii) other central governments with a credit quality grade of "3" or better as set out in Table 7R-1,~~
~~which is denominated in the domestic currency and funded by the Reporting Bank in the same currency shall be assigned a 0% specific risk charge.~~
~~The Authority may, at its discretion, assign a higher risk charge other than the above to securities issued by certain governments, especially in cases where the securities are denominated in a currency other than that of the issuing government.~~

[MAS Notice 637 (Amendment No. 2) 2017]
[MAS Notice 637 (Amendment No. 2) 2020]

553 The "qualifying" category includes –
(a) any security that is issued by an MDB;
(b) any security issued by a PSE which has a credit quality grade of "3" or better as set out in Table 7R-1, ~~or any unrated security issued by a PSE which belongs to a country with a credit quality grade of "1" as set out in Table 7R-1~~ other than any security issued by a PSE which falls under the "government" category in footnote 552(b);
(c) any unrated security issued by a PSE outside Singapore, for which the bank regulatory agency of the jurisdiction where the PSE is established has exercised the national discretion to treat the exposure to the PSE as an exposure to the central government and the central government of the jurisdiction of that PSE has a credit quality grade of "2".

Category	Credit Quality Grade as set out in Table 7R-1	Residual term to final maturity	Specific risk charge
		more than 6 and up to and including 24 months	1.00%
		more than 24 months	1.60%
Others[554]	4	N.A.	8.00%
	5 or 6	N.A.	12.00%
	Unrated	N.A.	8.00%

[MAS Notice 637 (Amendment No. 2) 2017]

(~~c~~d) any security which has a credit quality grade of "3" or better as set out in Table 7R-1, from external credit assessments by at least two recognised ECAIs; and
(~~d~~e) subject to supervisory monitoring, any security which has a credit quality grade of "3" or better as set out in Table 7R-1.
Where a security has more than one external credit assessment and these map into different credit quality grades, a Reporting Bank shall apply paragraph 7.3.4 ~~shall apply~~. A Reporting Bank adopting the IRBA may also include an unrated security in this category if the security is internally rated and associated with a PD equivalent to a credit quality grade of "3" or better as set out in Table 7R-1, and the issuer has securities listed on any regulated exchange.

[MAS Notice 637 (Amendment No. 2) 2017]
[MAS Notice 637 (Amendment) 2018]
[MAS Notice 637 (Amendment) 2019]
[MAS Notice 637 (Amendment No. 2) 2020]

554 For securities which have a high yield to redemption relative to government debt securities issued in the same country, the Authority will have the discretion to do either or both of the following –
(a) ~~to~~ apply a higher specific risk charge to such instruments; ~~and/or~~
(b) ~~to~~ disallow offsetting for the purpose of defining the extent of general market risk between such instruments and any other debt instruments.

[MAS Notice 637 (Amendment No. 2) 2020]

554A [Deleted by MAS Notice 637 (Amendment No. 2) 2017]
554B [Deleted by MAS Notice 637 (Amendment No. 2) 2017]
554C [Deleted by MAS Notice 637 (Amendment No. 2) 2017]
554D [Deleted by MAS Notice 637 (Amendment No. 2) 2017]
554E [Deleted by MAS Notice 637 (Amendment No. 2) 2017]
554F [Deleted by MAS Notice 637 (Amendment No. 2) 2017]
554G [Deleted by MAS Notice 637 (Amendment No. 2) 2017]
554H [Deleted by MAS Notice 637 (Amendment No. 2) 2017]

Notwithstanding Table 8C-1, a Reporting Bank shall assign a 0% specific risk charge to an exposure to any security issued by –

(a) the Singapore Government or the Authority, which is denominated in Singapore dollars and funded by the Reporting Bank in Singapore dollars;

(b) other central governments with a credit quality grade of "3" or better as set out in Table 7R-1, which is denominated in the domestic currency and funded by the Reporting Bank in the same currency; or

(c) a PSE which is risk-weighted at 0% under the SA(CR) pursuant to paragraph 7.3.17 and Table 7-3.

The Authority may, at its discretion, assign a higher specific risk charge other than the specific risk charges mentioned above and in Table 8C-1 to securities issued by certain governments or PSEs, especially in cases where the securities are denominated in a currency other than that of the issuing government, or that of the government of the issuing PSE, respectively.

[MAS Notice 637 (Amendment No. 2) 2020]

Table 8C-2 – General Market Risk Capital Requirement - Maturity Bands, General Risk Charges and Assumed Changes in Yield for the Maturity Method

Maturity Band	Coupon 3% or more	Coupon less than 3%	General Risk Charge	Assumed change in yield
	Zone 1			
1	Up to 1 month	Up to 1 month	0.00%	1.00
2	More than 1 month but not more than 3 months	More than 1 month but not more than 3 months	0.20%	1.00
3	More than 3 months but not more than 6 months	More than 3 months but not more than 6 months	0.40%	1.00
4	More than 6 months but not more than 12 months	More than 6 months but not more than 12 months	0.70%	1.00
	Zone 2			
5	More than 1 year but not more than 2 years	More than 1.0 year but not more than 1.9 years	1.25%	0.90
6	More than 2 years but not more than 3 years	More than 1.9 years but not more than 2.8 years	1.75%	0.80
7	More than 3 years but not more than 4 years	More than 2.8 years but not more than 3.6 years	2.25%	0.75
	Zone 3			
8	More than 4 years but not more than 5 years	More than 3.6 years but not more than 4.3 years	2.75%	0.75

9	More than 5 years but not more than 7 years	More than 4.3 years but not more than 5.7 years	3.25%	0.70
10	More than 7 years but not more than 10 years	More than 5.7 years but not more than 7.3 years	3.75%	0.65
11	More than 10 years but not more than 15 years	More than 7.3 years but not more than 9.3 years	4.50%	0.60
12	More than 15 years but not more than 20 years	More than 9.3 years but not more than 10.6 years	5.25%	0.60
13	More than 20 years	More than 10.6 years but not more than 12 years	6.00%	0.60
14		More than 12 years but not more than 20 years	8.00%	0.60
15		More than 20 years	12.50%	0.60

Table 8C-3 – General Market Risk Capital Requirement - Duration Bands and Assumed Changes in Yield for the Duration Method

Duration Band		Assumed change in yield
	Zone 1	
1	Up to 1 month	1.00
2	More than 1 month but not more than 3 months	1.00
3	More than 3 months but not more than 6 months	1.00
4	More than 6 months but not more than 12 months	1.00
	Zone 2	
5	More than 1.0 year but not more than 1.9 years	0.90
6	More than 1.9 years but not more than 2.8 years	0.80
7	More than 2.8 years but not more than to 3.6 years	0.75
	Zone 3	
8	More than 3.6 years but not more than 4.3 years	0.75
9	More than 4.3 years but not more than 5.7 years	0.70
10	More than 5.7 years but not more than 7.3 years	0.65
11	More than 7.3 years but not more than 9.3 years	0.60
12	More than 9.3 years but not more than 10.6 years	0.60
13	More than 10.6 years but not more than 12 years	0.60
14	More than 12 years but not more than 20 years	0.60
15	More than 20 years	0.60

Table 8C-4 – General Market Risk Capital Requirement - Matching Factors for the Maturity and Duration Methods

Maturity Band Matching Factor	Duration Band Matching Factor
10%	5%

<table>
<tr><th>Zone</th><th>Zone Matching Factor</th><th>Adjacent Zone Matching Factor</th><th>Non-adjacent Zone Matching Factor</th></tr>
<tr><td>1</td><td>40%</td><td rowspan="3">40%</td><td rowspan="3">100%</td></tr>
<tr><td>2</td><td>30%</td></tr>
<tr><td>3</td><td>30%</td></tr>
</table>

Annex 8P

GUIDELINES ON STRESS TESTING FOR THE CORRELATION TRADING PORTFOLIO (CTP)

Amendment to paragraph 1.2

1.2 The goal of the stress testing standards described below is to provide estimates of the mark-to-market changes that would be experienced by the current CTP in the event of credit-related shocks. The standards encompass both prescribed regulatory stress scenarios and high-level principles governing a ~~bank's~~Reporting Bank's internal stress testing. The prescribed scenarios are not intended to capture all potential sources of stress. Rather, their primary focus is on valuation changes involving large, broad-based movements in spreads for single-name bonds and credit default swaps, which could accompany major systemic financial or macroeconomic shocks, and associated spillovers to prices for index and bespoke tranches and other complex correlation positions. In addition to the prescribed scenarios, a Reporting Bank is expected to implement a rigorous internal stress testing process to address other potential correlation trading risks, including bank-specific risks related to its underlying business model and hedging strategies.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendment to Paragraph 1.16

1.16 In cases where the historical value of a risk factor at date t or t+M is not known (perhaps because the current pricing model differs from that used over the interval t to t+M), the risk factor value will need to be 'backfilled'. Subject to the Authority's approval, the backfilling method used by the ~~bank~~Reporting Bank should be consistent with the current pricing model and observed historical prices at t and t+M.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendments to Part IX: Operational Risk

Division 2: BIA

Amendment to paragraph 9.2.3

9.2.3 A Reporting Bank shall calculate its annual gross income for the most recent year by aggregating the gross income of the last four financial quarters. A Reporting Bank shall calculate its annual gross income for each of the two years preceding the most recent year in the same manner[608]. Table 9-1 sets out an illustration of the calculation of the annual gross income for the previous three years, for a Reporting ~~bank~~Bank calculating its operational RWA as at end Nov 2008:

Table 9-1: Illustration of Calculation of Annual Gross Income

	Year 3	Year 2	Year 1
Gross Income for financial quarter ending	Sep'08 (GI_{3a})	Sep'07 (GI_{2a})	Sep'06 (GI_{1a})
	Jun'08 (GI_{3b})	Jun'07 (GI_{2b})	Jun'06 (GI_{1b})
	Mar'08 (GI_{3c})	Mar'07 (GI_{2c})	Mar'06 (GI_{1c})
	Dec'07 (GI_{3d})	Dec'06 (GI_{2d})	Dec'05 (GI_{1d})
Total	$GI_3 = GI_{3a} + GI_{3b} + GI_{3c} + GI_{3d}$	$GI_2 = GI_{2a} + GI_{2b} + GI_{2c} + GI_{2d}$	$GI_1 = GI_{1a} + GI_{1b} + GI_{1c} + GI_{1d}$

where GI = Gross Income

[MAS Notice 637 (Amendment No. 2) 2020]

Division 3: SA(OR)

Amendment to paragraph 9.3.5(a)

9.3.5 A Reporting Bank shall not use the SA(OR) to calculate its operational risk capital requirement unless[612] -

(a) the Reporting Bank has an operational risk management system that is conceptually sound and is implemented with integrity, and with clear responsibilities assigned to an operational risk management function. The Reporting Bank shall ensure that the operational risk management function -

[608] A Reporting Bank shall consult the Authority on the appropriate method for calculating the operational risk capital requirement if – (a) it is currently undertaking an acquisition or merger; or (b) it has completed an acquisition or merger within the last three years from the date on which the Reporting Bank is required to comply with Part IX.

[612] The Authority may impose a requirement on the Reporting Bank to monitor its implementation of the SA(OR) Approach for a specified period and for the results of the monitoring to be subject to review by the Authority before the Reporting Bank may use the SA(OR) for regulatory capital purposes.

(i) develops strategies to identify, assess, monitor, control and mitigate operational risk;

(ii) codifies ~~bank-level~~ policies and procedures concerning operational risk management and controls;

[MAS Notice 637 (Amendment No. 2) 2020]

(iii) designs and implements the operational risk assessment methodology and operational risk-reporting system of the Reporting Bank; and

(iv) has sufficient resources for the use of the SA(OR), as well as the control and audit areas.

Division 5: AMA

Amendment to footnote 620 of paragraph 9.5.17

620 A Reporting Bank that is a subsidiary of a bank outside Singapore and not using an allocation mechanism for the purpose of determining its operational RWA, shall not incorporate group-wide diversification benefits in its AMA (e.g. the ~~banking subsidiary~~Reporting Bank may incorporate the diversification benefits of its own operations but not that of its parent).

[MAS Notice 637 (Amendment No. 2) 2020]

Amendments to paragraph 9.5.27(g)

9.5.27 The Reporting Bank shall develop and adhere to procedures for reviewing the ORM framework that covers all significant activities (including any outsourced activity) that would expose the Reporting Bank to material operational risk. A Reporting Bank shall ensure that the procedures are regularly updated and include the following areas:

(g) integrating the ORMS into the day-to-day risk management processes. The Reporting Bank shall ensure that the ORMS is an integral part of the process of monitoring and controlling the ~~bank's~~Reporting Bank's operational risk profile and the information plays a prominent role in risk reporting, management reporting, internal capital allocation and risk analysis. The Reporting Bank shall have techniques for allocating operational risk capital to major business lines and for creating incentives to improve the management of operational risk throughout the ~~firm~~Reporting Bank;

[MAS Notice 637 (Amendment No. 2) 2020]

Amendment to paragraph 9.5.112

9.5.112 A Reporting Bank shall establish one or more appropriate *de minimis* gross loss thresholds, which may vary in the Reporting ~~bank~~Bank across business lines or loss event types, for the collection of internal loss data in accordance with the following:

[MAS Notice 637 (Amendment No. 2) 2020]

(a) the Reporting Bank is responsible for defining the thresholds for an operational risk class. The Reporting Bank shall be able to demonstrate that the established thresholds -

(i) are reasonable and appropriate for the operational risk management and measurement principles;

(ii) do not adversely impact the credibility and accuracy of the operational risk measure (i.e. any internal loss data below the *de minimis* gross loss threshold not captured, both individually and in combination, would not have a material impact on the overall operational risk estimates);

(iii) will result in a significant proportion of the internal operational risk losses being captured; and

(iv) are broadly consistent with the thresholds used by peer banks;

(b) in determining a threshold, the Reporting Bank should also take into account its approach to operational risk management and measurement for regulatory capital purposes, the use of the internal loss data for ORM, the data needed to justify the predictability and stability of EL offset amounts, and the administrative requirements placed on the business lines and operational risk resources as a consequence of the data collection and management processes. The Authority will review the thresholds set by the Reporting Bank against these factors and with relevant external sources including peer Reporting Banks; and

(c) the Reporting Bank shall be able to demonstrate that it avoids potential biases in the estimation of model parameters, explicitly taking into account the incompleteness of the calculation data set due to the presence of thresholds.

Amendments to Part X: Supervisory Review Process

Division 2: ICAAP

Amendments to paragraph 10.2.5(d)

10.2.5 The ultimate responsibility for ensuring a sound risk management framework and a robust ICAAP, setting capital targets that are commensurate with the Reporting Bank's risk profile and control environment, and ensuring that a Reporting Bank has adequate capital to support its risks beyond the regulatory requirements resides with the Board and senior management of a Reporting Bank. In this regard, the Reporting Bank shall ensure that the Board defines the Reporting Bank's risk appetite and establishes an acceptable level of risks that the Reporting Bank may take, as well as the capital strategy of the Reporting Bank. The Reporting Bank shall ensure that senior management -

(d) ensure that the Reporting Bank's risk management framework includes detailed policies that set specific ~~firm-wide~~bank-wide prudential limits on the ~~banks'~~Reporting Bank's activities, which are consistent with its risk taking appetite and capacity;

[MAS Notice 637 (Amendment No. 2) 2020]

SPECIFIC ISSUES IN ICAAP FOR MAIN RISK CATEGORIES AND TOPICS

Section 4: Market Risk and Valuation Practices

Amendments to paragraphs 4.1 to 4.2

4.1 A Reporting Bank shall use methodologies that enable it to assess and actively manage all material market risks, wherever they arise - at position, desk, business line and ~~bank~~ group-wide level. For further guidance, a Reporting Bank should refer to relevant publications on the management of market risk issued by the BCBS and the Authority[717].

[MAS Notice 637 (Amendment No. 2) 2020]

4.2 A Reporting Bank shall, in its assessment of the adequacy of the capital it maintains for market risk, base its assessment, at a minimum, on both VaR modelling and appropriate stress testing. This is especially relevant to ~~banks~~a Reporting Bank with significant treasury trading activities. A Reporting Bank shall also assess the market concentration risk these instruments might pose and the impact of market illiquidity of such instruments under stressful market scenarios.

[MAS Notice 637 (Amendment No. 2) 2014]
[MAS Notice 637 (Amendment No. 2) 2020]

Section 5: Interest Rate Risk in the Banking Book

Amendment to paragraph 5.10

5.10 Where the Board has made a delegation under paragraph 5.9 of this Annex, the Reporting Bank shall do the following –

(a) where the task for developing IRRBB policies and practices is delegated to an ALCO, ensure that the ALCO meets regularly and includes representatives from each major department connected to IRRBB[718];

(b) ensure that the Board clearly identifies the delegates for managing IRRBB and oversees the adequate separation of responsibilities in key elements of the risk management process to avoid potential conflicts of interest;

(c) ensure that the delegates have clear lines of authority over the units responsible for establishing and managing IRRBB positions and that there is a clear communication channel to convey the delegates' directives to these units;

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[717] For example, the "Supervisory guidance for managing risks associated with the settlement of foreign exchange transactions" issued by the BCBS in February 2013.

[MAS Notice 637 (Amendment No. 2) 2017]

[718] For example, this includes a department which is –

(a) responsible for the risk identification, measurement, monitoring or control of IRRBB; or
(b) responsible for risk-taking functions that contribute to the Reporting Bank's IRRBB.

(d) ensure that the Board puts in place an organisational structure that enables the delegates to carry out their responsibilities effectively and facilitates effective decision-making and good governance. The Board should encourage discussions between its members and the delegates, as well as between the delegates and others in the ~~bank~~Reporting Bank, regarding the IRRBB management process.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendment to paragraph 5.12(a)

5.12 For the purposes of paragraph 5.7 of this Annex, a Reporting Bank shall do the following as part of its IRRBB management process –

(a) implement adequate internal controls that promote effective and efficient operations, reliable financial and regulatory reporting, and compliance with relevant laws, regulations and ~~bank~~internal policies of the Reporting Bank;

[MAS Notice 637 (Amendment No. 2) 2020]

Amendment to paragraph 5.35

5.35 In respect of the products set out in column (A) of Table 10A-1, the other dimensions referred to under paragraph 5.34(b) may include the dimensions set out in column (B) of Table 10A-1.

Table 10A-1 – Dimensions influencing the exercise of embedded behavioural options

(A) Product	(B) Dimensions influencing the exercise of the embedded behavioural options
Fixed rate loans subject to prepayment risk	Loan size, loan-to-value (LTV) ratio, borrower characteristics, contractual interest rates, seasoning, geographical location, original and remaining maturity, other historical factors, and other macroeconomic variables such as stock indices, unemployment rates, GDP, inflation and housing price indices.
Fixed rate loan commitments	Borrower characteristics, geographical location (including competitive environment and local premium conventions), customer relationship with ~~bank~~the Reporting Bank as evidenced by cross-products, remaining maturity of the commitment, seasoning and remaining term of the mortgage.
Term deposits subject to early redemption risk	Deposit size, depositor characteristics, funding channel (for example, direct or brokered deposit), contractual interest rates, seasonal factors, geographical location and competitive environment, remaining maturity,

	other historical factors and other macroeconomic variables such as stock indices, unemployment rates, GDP, inflation and housing price indices.
Non-maturity deposits (NMDs)	Responsiveness of product rates to changes in market interest rates, current level of interest rates, spread between the Reporting Bank's offer rate and market rate, competition from other firms, the Reporting Bank's geographical location and demographic and other relevant characteristics of its customer base.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendment to paragraph 5.40(c)

5.40 A Reporting Bank shall ensure that the measurement outcomes of IRRBB and hedging strategies are reported to the Board or its delegates on a regular basis, at relevant levels of aggregation, by consolidation level and currency. The Reporting Bank should –

(c) ensure that reports detailing its IRRBB exposures are provided to the Board or its delegates, as the case may be, on a timely basis and reviewed regularly. The Reporting Bank should ensure that such IRRBB reports provide aggregate information as well as sufficient supporting detail to enable the Board or its delegates, as the case may be, to assess the sensitivity of the Reporting Bank to changes in market conditions, with particular reference to portfolios that may potentially be subject to significant mark-to-market movements. The Board or its delegates, as the case may be, should review the ~~bank's~~Reporting Bank's IRRBB management policies and procedures in light of the reports, to ensure that they remain appropriate and sound. The Board or its delegates, as the case may be, should also ensure that analysis and risk management activities related to IRRBB are conducted by competent staff with technical knowledge and experience, consistent with the nature and scope of the Reporting Bank's activities.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendments to paragraphs 5.46 to 5.48

5.46 For the purpose of the Authority's supervisory review[718N], the Authority may require from a Reporting Bank the following information relating to the Reporting Bank's IRRBB –

(a) the modelling of NMDs for IMS purposes and the sensitivity of a Reporting Bank's economic value and earnings to changes in NMD assumptions;

(b) the impact of assumptions used regarding products with behavioural options;

[718N] In its supervisory review, the Authority would consider the matters listed under paragraphs 80 to 85 of the "Standards - Interest Rate Risk in the Banking Book" issued by BCBS in April 2016.

(c) the treatment of own equity in internal calculations and the extent to which this impacts the ΔEVE number disclosed under Part XI of this Notice;

(d) repricing gaps of cash flows associated with their interest rate-sensitive assets, liabilities and off-balance sheet items (by significant currencies);

(e) exposures to automatic interest rate options;

(f) the types of yield curve used for IMS purposes;

(g) the level of ΔEVE if calculated using the SA(IR) set out in Annex 10B;

(h) economic value and earnings-based measures for interest rate shock and stress scenarios in addition to those prescribed in Annex 10C (including results based on ~~banks'~~the Reporting Bank's internally developed or other interest rate shock or stress scenarios).

[MAS Notice 637 (Amendment No. 2) 2020]

5.47 A Reporting Bank that has been identified as an outlier ~~bank~~Reporting Bank by the Authority in accordance with paragraph 5.48 of this Annex shall be subject to further review by the Authority on the Reporting Bank's management of IRRBB and adequacy of capital relative to the Reporting Bank's IRRBB exposures.

[MAS Notice 637 (Amendment No. 2) 2020]

5.48 For the purpose of determining if a Reporting Bank is an outlier ~~bank~~Reporting Bank, the Authority will compare the Reporting Bank's maximum ΔEVE calculated in accordance with paragraph 5.49 of this Annex, under the six interest rate shock scenarios set out in Annex 10C, with 15% of the Reporting Bank's Tier 1 capital.

[MAS Notice 637 (Amendment No. 2) 2020]

Section 7: Liquidity Risk

Amendment to paragraph 7.1(a)

7.1 A Reporting Bank shall adopt sound liquidity risk management practices that are commensurate with its size and sophistication, and with the risk and complexity of its activities. Liquidity is crucial to the ongoing viability of any banking organisation. A Reporting Bank shall manage its liquidity risk and maintain sufficient liquidity to withstand a range of stress events and to weather prolonged periods of financial market stress and illiquidity. A Reporting Bank shall consider the relationship between liquidity and capital since liquidity risk can impact capital adequacy which, in turn, can aggravate a Reporting Bank's liquidity profile. In addition, a Reporting Bank's capital position can have an effect on its ability to obtain liquidity, especially in a crisis. A Reporting Bank shall evaluate its capital adequacy taking into account its liquidity profile and the liquidity of the markets in which it operates. For any size or scope of operation, the liquidity risk management framework of a Reporting Bank shall cover, at a minimum, the following elements:

(a) a Reporting Bank shall have in place a liquidity strategy. This shall set out specific liquidity management policies, such as the composition of assets and liabilities, the approach to managing liquidity across currencies and locations, the use of specific financial instruments and the liquidity and marketability of assets. The Reporting Bank shall ensure that its policies and processes for managing liquidity include the consideration of how other risks (e.g. credit, market, operational and reputation risk) impact the ~~banks'~~Reporting Bank's overall liquidity strategy;

[MAS Notice 637 (Amendment No. 2) 2020]

Section 8: Reputational Risk

Amendment to paragraph 8.1

8.1 Reputational risk can be defined as the risk arising from negative perception on the part of customers, counterparties, shareholders, investors, debt-holders, market analysts, other relevant parties or regulators that can adversely affect a Reporting Bank's ability to maintain existing, or establish new, business relationships and continued access to sources of funding (e.g. through the interbank or securitisation markets). Furthermore, it exists throughout a Reporting Bank and exposure to reputational risk is essentially a function of the adequacy of the Reporting Bank's internal risk management processes, as well as the manner and efficiency with which ~~bank~~the Reporting Bank's management responds to external influences on bank-related transactions.

[MAS Notice 637 (Amendment No. 2) 2020]

Section 10: Stress Testing Practices

Amendments to paragraphs 10.1 to 10.2

10.1 Stress testing is an important tool that can be used as part of a Reporting Bank's internal risk management that alerts ~~bank~~the Reporting Bank's management to adverse unexpected outcomes related to a broad variety of risks, and provides an indication of how much capital might be needed to absorb losses should large shocks occur. Moreover, stress testing provides a complementary risk perspective and supplements other risk management approaches and measures so that ~~bank~~the Reporting Bank's management may have a more complete understanding of the Reporting Bank's risks and the interaction of those risks under stressed conditions. It plays a particularly important role in -

(a) providing forward looking assessments of risk;

(b) overcoming limitations of models and historical data;

(c) supporting internal and external communication;

(d) feeding into capital and liquidity planning procedures;

(e) informing the setting of a Reporting Bank's risk tolerance;

(f) addressing existing or potential, bank-wide risk concentrations; and

(g) facilitating the development of risk mitigation or contingency plans across a range of stressed conditions.

Stress testing is especially important after long periods of benign risk, which can lead to complacency and the underpricing of risk, and when innovation leads to the rapid growth of new products for which there is limited or no loss data.

[MAS Notice 637 (Amendment No. 2) 2020]

10.2 Board and senior management involvement in setting stress testing objectives, defining scenarios, discussing the results of stress tests, assessing potential actions and decision-making is critical in ensuring the appropriate use of stress testing in ~~banks'~~a Reporting Bank's risk governance and capital planning. The Reporting Bank shall ensure that senior management takes an active interest in the development and operation of stress testing. The results of stress tests should contribute to strategic decision-making and foster internal debate regarding assumptions, such as the cost, risk and speed with which new capital could be raised or that positions could be hedged or sold. Board and senior management involvement in the stress testing programme is essential for its effective operation.

[MAS Notice 637 (Amendment No. 2) 2020]

Annex 10B

STANDARDISED APPROACH FOR INTEREST RATE RISK IN THE BANKING BOOK (SA(IR))

Section 2: Components of SA(IR)

Amendment to footnote 728 of paragraph 2.11

[728] For example, a floating rate loan or debt security with a floor shall be treated as if there were no floor; hence, it shall be treated as if it was fully repriced at the next reset date, and its full outstanding balance slotted into the corresponding time band. Similarly, a callable bond issued by a ~~bank~~Reporting Bank at a fixed yield shall be treated as if it matured at its longest contractual term, ignoring the call option.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendments to footnote 731 of paragraph 3.2(c)

[731] "Small business customers" are defined in line with the definition of loans extended to small businesses in footnote 124 of Part VII that are managed as retail exposures and are generally considered as having similar interest rate risk characteristics to retail accounts provided the total aggregated liabilities raised from one small business customer is less than S$2 million (on a consolidated basis where applicable). Where a ~~bank~~Reporting Bank does not have any exposure to a small business customer that would enable it to use the definition under footnote 124 of Part VII, the ~~bank~~Reporting Bank may include such a deposit in this category provided that the total aggregated liabilities 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 ~~bank~~Reporting 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.

[MAS Notice 637 (Amendment No. 2) 2020]

Amendments to Part XI: Public Disclosure Requirements

Amendments to Table 11-1A

Table 11-1A: Key Metrics

Purpose	To provide an overview of a Reporting Bank's prudential regulatory metrics.
Scope of application	This table is mandatory for all Reporting Banks.
Content	Key prudential metrics related to regulatory capital, leverage ratio and liquidity standards. Reporting Banks are required to disclose each metric's value using the corresponding standard's specifications for the reporting period-end (designated by T in the template below) as well as the four previous quarter-end figures (T-1 to T-4).
Frequency	Quarterly
Format	Fixed. If Reporting Banks wish to add rows to provide additional regulatory or financial metrics, they must provide definitions for these metrics and a full explanation of how the metrics are calculated (including the scope of consolidation and the regulatory capital used if relevant). The additional metrics must not replace the metrics in this disclosure requirement.
Accompanying narrative	A Reporting Bank shall supplement the template with a narrative commentary to explain any significant change in each metric's value compared with previous quarters, including the key drivers of such changes.[800C]

		(a)	(b)	(c)	(d)	(e)
		T	T-1	T-2	T-3	T-4
	Available capital (amounts)					
1	CET1 capital					
2	Tier 1 capital					
3	Total capital					
	Risk weighted assets (amounts)					
4	Total RWA					
	Risk-based capital ratios as a percentage of RWA					
5	CET1 ratio (%)					
6	Tier 1 ratio (%)					
7	Total capital ratio (%)					
	Additional CET1 buffer requirements as a percentage of RWA					
8	Capital conservation buffer requirement (2.5% from 2019) (%)					

[800C] For example, whether the changes are due to changes in the regulatory framework, or the group structure or business model of the Reporting Bank.

9	Countercyclical buffer requirement (%)					
10	~~Bank~~ G-SIB and/or D-SIB additional requirements (%)					
11	Total of ~~bank~~ CET1 specific buffer requirements (%) (row 8 + row 9 + row 10)					
12	CET1 available after meeting the Reporting Bank's minimum capital requirements (%)					
	Leverage Ratio					
13	Total Leverage Ratio exposure measure					
14	Leverage Ratio (%) (row 2 / row 13)					
	Liquidity Coverage Ratio					
15	Total High Quality Liquid Assets					
16	Total net cash outflow					
17	Liquidity Coverage Ratio (%)					
	Net Stable Funding Ratio					
18	Total available stable funding					
19	Total required stable funding					
20	Net Stable Funding Ratio (%)					

[MAS Notice 637 (Amendment No. 3) 2017]
[MAS Notice 637 (Amendment No. 2) 2020]

Amendment to Table 11-20

Table 11-20: IRBA – Backtesting of PD per Portfolio

Purpose	To provide backtesting data to validate the reliability of PD calculations. This table compares the PD used in IRBA capital calculations with the effective default rates of ~~bank~~the Reporting Bank's obligors. A Reporting Bank shall use, at a minimum, a five-year average annual default rate to compare the PD with a more stable default rate. The Reporting Bank may use a longer historical period that is consistent with its actual risk management practices.
Scope of application	This table is mandatory for Reporting Banks using the A-IRBA, F-IRBA, IRBA for the IRBA retail asset class or IRBA(EQ) – PD/LGD method for some or all of their credit risk exposures. To provide meaningful or relevant information to users on the backtesting of its internal models, the Reporting Bank shall include the key models used, in accordance with the regulatory scope of consolidation and explain how the scope of the described models was determined. The commentary shall include the percentage of RWA covered by the models for which backtesting results are shown for each of the Reporting Bank's regulatory portfolios.
Content	Modelling parameters used in IRBA calculation
Frequency	Annually
Format	Flexible. A Reporting Bank shall disclose one table for portfolios using F-IRBA, and one table for portfolios using A-IRBA and IRBA for the IRBA retail asset class.
Accompanying narrative	A Reporting Bank shall explain any significant change over the annual reporting period and the key drivers of such changes. The Reporting Bank could disclose the amount of exposure and number of obligors whose defaulted exposures have been cured in the annual reporting period.

(a)	(b)	(c)			(d)	(e)	(f)		(g)	(h)	(i)
							Number of obligors				
Portfolio X	PD Range	S&P	Fitch's Rating	Moody's Rating	Weighted average PD	Arithmetic average PD by obligors	End of previous annual reporting period	End of the annual reporting period	Defaulted obligors in the annual reporting period	of which: new defaulted obligors in the annual reporting period	Average historical annual default rate

[MAS Notice 637 (Amendment No. 2) 2020]

Amendments to Table 11B-2

Table 11B-2: Explanatory Notes to Composition of Regulatory Capital

Explanatory Notes	
1	This is the sum of components calculated in accordance with paragraph 6.1.1(a) and 6.1.1(b) of the Notice.
2	This is as defined under paragraph 6.1.1(c) of the Notice.
3	This is the sum of components calculated in accordance with paragraph 6.1.1(d) and 6.1.1(e) of the Notice.
4	This is only applicable to non-joint stock companies.
5	This is as defined under paragraph 6.1.1(f) of the Notice.
6	This is the sum of rows 1 to 5.
7	This is as defined under paragraph 6.1.3(n) of the Notice.
8	This is as defined under paragraph 6.1.3(a) of the Notice.
9	This is as defined under paragraph 6.1.3(b) of the Notice.
10	This is as defined under paragraph 6.1.3(c) of the Notice.
11	This is as defined under paragraph 6.1.3(d) of the Notice.
12	This is as defined under paragraph 6.1.3(e) of the Notice.
13	This is as defined under paragraph 6.1.3(f) of the Notice.
14	This is as defined under paragraph 6.1.3(g) of the Notice.
15	This is as defined under paragraph 6.1.3(h) of the Notice.
16	This is as defined under paragraph 6.1.3(i) of the Notice.
17	This is as defined under paragraph 6.1.3(j) of the Notice.
18	This is as defined under paragraph 6.1.3(o) of the Notice.
19	This is as defined under paragraph 6.1.3(p) of the Notice.
20	Not applicable. This is the amount of mortgage servicing rights which is subject to threshold deduction in accordance with paragraphs 87 to 88 of Basel III. Mortgage servicing rights are required to be fully deducted.
21	Not applicable. This is the amount of deferred tax assets arising from temporary differences which is subject to threshold deduction in accordance with paragraphs 87 to 88 of Basel III. Deferred tax assets arising from temporary differences are required to be fully deducted.
22	This is the total amount by which the three threshold items exceed the 15% threshold, excluding amounts reported in rows 19 to 21, calculated in accordance with paragraph 6.1.3(p)(i)(B) of the Notice.
23	The amount reported in row 22 that relates to investments in the ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries~~ at the Solo and Group levels~~).
24	Not applicable. This is the amount reported in row 22 that relates to mortgage servicing rights. Mortgage servicing rights are required to be fully deducted.
25	Not applicable. This is the amount reported in row 22 that relates to deferred tax assets arising from temporary differences. Deferred tax assets arising from temporary differences are required to be fully deducted.
26	This is the sum of rows 26A to 26C.
26A	This is as defined under paragraph 6.1.3(l) of the Notice.

Explanatory Notes	
26B	This is as defined under paragraph 6.1.3(m) of the Notice.
26C	This is as defined under paragraph 6.1.3(q) of the Notice.
27	This is as defined under paragraph 6.1.3(r) of the Notice.
28	This is the total regulatory adjustments to CET1 Capital, to be calculated as the sum of rows 7 to 22 plus rows 26 and 27.
29	This is CET1 Capital, to be calculated as row 6 minus row 28.
30	This is the sum of components calculated in accordance with paragraphs 6.2.1(a) and 6.2.1(b) of the Notice.
31	The amount in row 30 classified as equity under the Accounting Standards.
32	The amount in row 30 classified as liabilities under the Accounting Standards.
33	This is the sum of capital instruments directly issued by the Reporting Bank that no longer qualify as AT1 Capital calculated in accordance with paragraphs 6.5.3 and 6.5.4 of the Notice.
34	This is as defined under paragraph 6.2.1(c) of the Notice.
35	The amount reported in row 34 that relates to instruments subject to phase out from AT1 Capital in accordance with the requirements of paragraphs 6.5.3 and 6.5.4 of the Notice.
36	This is the sum of rows 30, 33 and 34.
37	This is as defined under paragraph 6.2.3(a) of the Notice.
38	This is as defined under paragraph 6.2.3(b) of the Notice.
39	This is as defined under paragraph 6.2.3(d) of the Notice.
40	This is as defined under paragraph 6.2.3(e) of the Notice.
41	This is as defined under paragraph 6.2.3(f) of the Notice.
42	This is as defined under paragraph 6.2.3(g) of the Notice.
43	This is the sum of rows 37 to 42.
44	This is Additional Tier 1 Capital, to be calculated as row 36 minus row 43.
45	This is Tier 1 Capital, to be calculated as row 29 plus row 44.
46	This is the sum of components calculated in accordance with paragraph 6.3.1(a) and 6.3.1(b) of the Notice.
47	This is the sum of capital instruments directly issued by the Reporting Bank that no longer qualify as Tier 2 Capital calculated under paragraph 6.5.3 and 6.5.4 of the Notice.
48	This is as defined under paragraph 6.3.1(c) of the Notice.
49	The amount reported in row 48 that relates to instruments subject to phase out from Tier 2 Capital in accordance with the requirements of paragraphs 6.5.3 and 6.5.4 of the Notice.
50	This is the sum of components calculated in accordance with paragraphs 6.3.1(d) and 6.3.1(e) of the Notice.
51	This is the sum of rows 46 to 48 and row 50.
52	This is as defined under paragraph 6.3.3(a) of the Notice.
53	This is as defined under paragraph 6.3.3(b) of the Notice.
54	This is as defined under paragraph 6.3.3(d) of the Notice.
54a	Investments in other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake, previously designated for

Explanatory Notes	
	the 5% threshold but no longer meeting the conditions under paragraph 6.3.3(d)(iii) of the Notice, measured on a gross long basis. The amount to be deducted will be the amount of other TLAC liabilities designated to the 5% threshold but not sold within 30 business days, no longer held in the trading book or now exceeding the 5% threshold (e.g. in the instance of decreasing CET1 capital). Amounts designated to this threshold may not subsequently be moved to the 10% threshold.
55	This is as defined under paragraph 6.3.3(e) of the Notice.
56	This is as defined under paragraph 6.3.3(f) of the Notice.
57	This is the sum of rows 52 to 56.
58	This is Tier 2 Capital, to be calculated as row 51 minus row 57.
59	This is Total capital, to be calculated as row 45 plus row 58.
60	This is the floor-adjusted total risk weighted assets of the Reporting Bank, after incorporating the floor adjustment set out in Table 11-3A(m).
61	This is CET1 CAR, to be calculated as row 29 divided by row 60 (expressed as a percentage).
62	This is Tier 1 CAR, to be calculated as row 45 divided by row 60 (expressed as a percentage).
63	This is Total CAR, to be calculated as row 59 divided by row 60 (expressed as a percentage).
64	This is the bank-specific buffer requirement (minimum CET1 requirement plus capital conservation buffer requirement plus countercyclical buffer requirement plus G-SIB and/or D-SIB buffer requirement, expressed as a percentage of risk weighted assets). This is to be calculated as the sum of (i) the minimum CET1 requirement calculated in accordance with paragraph 4.1.4; (ii) the capital conservation buffer requirement calculated in accordance with paragraphs 4.1.5 to 4.1.13; (iii) the bank-specific countercyclical buffer requirement calculated in accordance with paragraphs 4.1.14 to 4.1.25; and (iv) the buffer requirement for G-SIBs and/or D-SIBs (if applicable)[815]. This row will show the CET1 CAR below which the Reporting Bank will become subject to constraints on distributions.
65	The amount in row 64 (expressed as a percentage of risk weighted assets) that relates to the capital conservation buffer).
66	The amount in row 64 (expressed as a percentage of risk weighted assets) that relates to the bank-specific countercyclical buffer requirement.
67	The amount in row 64 (expressed as a percentage of risk weighted assets) that relates to the Reporting Bank's G-SIB and/or D-SIB requirement, where relevant.
68	This is to be calculated as the CET1 of the Reporting Bank (as a percentage of floor-adjusted risk weighted assets), less any CET1 capital used to meet the Reporting Bank's CET1, Tier 1 and Total capital requirements.
69	A Reporting Bank shall report the minimum CET1 CAR requirement applicable at that reporting date [pursuant to paragraph 4.1.4 of the Notice.]
70	A Reporting Bank shall report the minimum Tier 1 CAR requirement applicable at that reporting date [pursuant to paragraph 4.1.4 of the Notice.]

[815] This is set out in the BCBS' publication on "Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement" (revised July 2013).

Explanatory Notes	
71	A Reporting Bank shall report the minimum Total CAR requirement applicable at that reporting date [pursuant to paragraph 4.1.4 of the Notice.]
72	This is the Reporting Bank's investments in the ordinary shares, AT1 Capital, Tier 2 Capital and other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake, the total amount of such holdings that are not reported in row 18, row 39, row 54 and row 54a.
73	This is the Reporting Bank's investments in the ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries~~ at the Solo and Group levels~~), the total amount of such holdings that are not reported in row 19 and row 23.
74	Not applicable. This is the amount of mortgage servicing rights not reported in row 20 and row 24.
75	Not applicable. This is the amount of deferred tax assets arising from temporary differences not reported in row 21 and row 25.
76	This is the provisions eligible for inclusion in Tier 2 Capital in respect of exposures subject to SA(CR), calculated in accordance paragraph 6.3.1(d) of the Notice, prior to the application of the cap.
77	This is the cap on inclusion of provisions in Tier 2 Capital in respect of exposures subject to SA(CR), calculated in accordance paragraphs 6.3.1(d) and 6.3.1AA of the Notice.
78	This is the provisions eligible for inclusion in Tier 2 Capital in respect of exposures subject to IRBA, calculated in accordance paragraph 6.3.1(e) of the Notice, prior to the application of the cap.
79	This is the cap for inclusion of provisions in Tier 2 Capital in respect of exposures subject to IRBA, calculated in accordance paragraphs 6.3.1(e) and 6.3.1AB of the Notice.
80	This is only applicable to non-joint stock companies. This is the current cap on CET1 capital instruments subject to transitional arrangements.
81	This is only applicable to non-joint stock companies. This is the amount excluded from CET1 Capital due to cap (excess over cap after redemptions and maturities).
82	This is the cap on ineligible AT1 capital instruments subject to transitional arrangements, see paragraph 6.5.3 of the Notice.
83	This is the amount excluded from AT1 Capital due to cap (excess over cap after redemptions and maturities), see paragraph 6.5.3 of the Notice.
84	This is the current cap on ineligible Tier 2 capital instruments subject to transitional arrangements, see paragraph 6.5.3 of the Notice.
85	This is the amount excluded from Tier 2 Capital due to cap (excess over cap after redemptions and maturities), see paragraph 6.5.3 of the Notice.

[MAS Notice 637 (Amendment No. 3) 2017]
[MAS Notice 637 (Amendment No. 2) 2018]
[MAS Notice 637 (Amendment) 2020]
[MAS Notice 637 (Amendment No. 2) 2020]

Amendments to Part XII: Reporting Schedules

Amendments to Schedule 2-7

MAS NOTICE 637: CREDIT RISK REPORTING SCHEDULES
SCHEDULE 2-7

SECURITISATION

Name of the Reporting Bank:	
Statement as at:	
Scope of Reporting:	Solo/Group

	Before CRM Bought		CRM Adjustments		After CRM			
	Exposures Gross of Specific Allowances	**Exposures net of Specific Allowances**	**Due to Credit Protection Bought**	**Due to Recognition of Financial Collateral**	**Net Exposures Net of Specific Allowances**	**Notional Amounts**	**RWA**	
1. Breakdown by Capital Computation Approach								
(a) Exposures Treated Under SEC-IRBA								
Adjusted Securitisation RWA (after application of para 7.1.12 to 7.1.17 on maximum risk-weighted exposure amounts)								A1
Cash Advance Facilities Extended to Securitisation Transactions								
of which, total undrawn amounts of cash advance facilities extended that are unconditionally cancellable (subject to ~~10%~~ 0% CCF)								
SEC-IRBA RWA								A = A1
(b) Exposures Treated Under SEC-ERBA								
Adjusted Securitisation RWA (after application of para 7.1.12 to 7.1.17 on maximum risk-weighted exposure amounts)								B1
Cash Advance Facilities Extended to Securitisation Transactions								
of which, total undrawn amounts of cash advance facilities extended that are unconditionally cancellable (subject to ~~10%~~ 0% CCF)								
SEC-ERBA RWA								B = B1
(c) Exposures Treated Under SEC-SA								
Adjusted Securitisation RWA (after application of para 7.1.12 to 7.1.17 on maximum risk-weighted exposure amounts)								C1
Cash Advance Facilities Extended to Securitisation Transactions								
of which, total undrawn amounts of cash advance facilities extended that are unconditionally cancellable (subject to ~~10%~~ 0% CCF)								
SEC-SA RWA								C = C1
(d) Securitisation Exposures to which the SEC-IRBA, SEC-ERBA, and SEC-SA cannot be applied								D
Total Securitisation RWA								E = A + B + C + D
2. Breakdown by Exposure Type								
Senior and Non-Senior Exposures								
(i) Senior Securitisation Exposures								
(ii) Non-Senior Securitisation Exposures								
Securitisation and Resecuritisation Exposures								
(iii) Securitisation (Non-Resecuritisation) Exposures								
(iv) Resecuritisation Exposures								
STC and Non-STC Exposures								
(v) STC Securitisation Exposures								
(vi) Non-STC Securitisation Exposures								

	Amount Deducted in Calculation of CET1 Capital
3. Amounts Deducted in Calculation of CET1 Capital	
(i) Gain on sale	
(ii) Credit-enhancing interest-only strips net of gain on sale	

[MAS Notice 637 (Amendment No. 3) 2017]
[MAS Notice 637 (Amendment No. 2) 2020]